DOCTORAL (PHD) DISSERTATION

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PRACTICUM IN PRESERVICE TEACHER EDUCATION IN MYANMAR

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Abstract

The study aims to explore how the practicum is implemented in pre-service teacher education in Myanmar, with the goal of improving the quality of the practicum and the university program. Exploratory sequential mixed method design is used to answer the main research questions of (1) What are the main characteristics of practicum in initial teacher education in Myanmar? (2) How do the different actors perceive the practicum in teacher education in Myanmar? The study employs snowball sampling, cluster sampling, and purposive random sampling methods to select participants, and data is collected through documents, focus group interviews, photo-elicitation interviews, participatory interviews, and questionnaires. The study gathered data from various sources, including practicum-related documents (n=19), student teachers (n=340), novice teachers (n=54), and teacher educators (n=4). The findings reveal that practicum within initial teacher education aims to equip student teachers with pedagogical skills in a real environment. The practicum structure is administered by the host university/college. However, the practicum period is shorter than international standards. Despite this, student teachers, novice teachers, and teacher educators have positive perceptions of the practicum period. Student teachers and novice teachers encountered challenges in their early teaching period such as insufficient teaching aids, using student-centered approaches, large class size and student misbehavior problems. Student teachers used six common coping strategies: problem-solving by self, avoidance, giving punishment, adaptation to the situation, seeking professional support, and getting emotional support to solve teaching-learning related problems during the practicum period. They perceive the curriculum content of the university/college as being more theoretical and ineffective in actual classroom situations, highlighting the disparity between theory and practice. Novice teachers also express a need for support or mentoring during their early teaching period. Teacher educators acknowledge the problems of student teachers in practicum but have limited time to support or evaluate their live performance. They also mention the need for more infrastructure and better-defined roles for cooperating teachers and principals to effectively support and evaluate student teachers. Despite the implementation of practicum being well-established in the Myanmar context, challenges arise in areas such as the support system, evaluation, and inadequate practical application of curriculum contents of teacher education programs. The findings of this study contribute to the understanding of the challenges in practicum implementation in

Myanmar and provide insights for policymakers, teacher education institutions, and practitioners to improve the quality of teacher education programs in the country.

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Acronyms

CS: Coping strategies

COE (old name and old system until October 2019): College of Education

EDC (new name and a new system from December 2019): Education Degree College

NT: Novice teacher

UOE: University of Education

ST: Student teacher

TE: Teacher Education

NESP: National Education Strategic Plan

CCA: child centered approach

Chapter 1 Introduction

Initial teacher preparation can be viewed from the complex system perspective as it involves the interactions of different actors such as policy makers, teacher educators, teachers, student teachers and things needed for accreditation and professional standards (OECD, 2019a). Thus, this study aims to view the practicum in preservice teacher education in terms of policy documents and different perspectives of actors.

The modern framework for teacher education incorporates both initial teacher training and ongoing professional development. Teacher education refers to studies before employment, mainly related to acquiring a higher education degree (Kopp & Pesti, 2022). In this current study, preservice/initial teacher education describes the undergraduate teacher training offered at Universities of Education and Education Degree Colleges.

Numerous titles are used to describe practicum such as “practicum,” “teaching practice,” “internship,” “school-based training/education,” “workplace learning,” “block teaching”, “practice teaching” and “school placement” (Rorrison, 2005). Practium in this study means the practice teaching time for student teachers in natural school environments to connect their pedagogical knowledge and actual experiences from the classrooms. Practicum period means the period (2-6 weeks) arranged for prospective teachers to conduct actual teaching in schools. The term "practicum components" in this study refers to the various elements integrated within the university/college program, encompassing activities such as lesson preparation, lesson study, peer group teaching, reflective writing through practicum diaries and journals, school visits, and practicum (school placements). These components collectively aim to enhance student teachers' pedagogical practice and foster their professional growth.

1.1 Problem statement

Teachers have to undertake complex tasks and learn, such as planning the lesson for the students, presenting the lesson in the classroom, working collaboratively with other teachers, analyzing their practice, and considering different approaches to learning (Mattsson et al., 2011). Thus, the challenge of preparing teachers for the profession is also complex and intricate. It is not easy to make decisions about the content structure, arrangement, course materials, the school experience, the preparation of students, working with the personnel, and the school's expectations. Teacher educators need help

thinking about how to provide academic and professional support to student teachers' educational requirements to achieve their goals.

Numerous studies (Smith & Lev-Ari, 2005; Cohen et al., 2013; Castañeda-Trujillo & Aguirre-Hernández, 2018; Pratiwi, 2020) in teacher education have proven the problem strands with inadequate professional knowledge of the classroom, limited time, ways to cope with current difficulties, evaluation of student teachers on practicum, courses at the university program, practicum supervisor, school principals, teaching approaches and interaction with cooperating teachers. However, Mattsson and others (2011) described that the same dissatisfaction with initial teacher education was found over time in different places and curricular and institutional contexts.

Linking theory and practice poses a significant challenge for initial teacher education. Upon examining initial teacher preparation in OECD member countries, with a specific focus on Korea and Wales, it was frequently reported that these nations encountered difficulties in integrating theory and practice in their programs. Moreover, concerns were expressed regarding the inadequate preparedness of candidates to adapt to diverse school cultures in countries such as Australia, Norway, and the United States. Additionally, insufficient training was provided to address the specific challenges of career jolt and work burden in Japan and the Netherlands (OECD, 2019b).

Regarding prospective teachers' formal learning, teacher preparation programs generally emphasized acquiring professional knowledge and skills throughout the career (Guerriero, 2017). The achievement of professional practice is more than just increasing the quantity of classroom teaching. Grossman and others (2009) argued that experiential or practice-based learning within formal education programs must draw on the actual practice situation, enabling students to link their knowledge to complex and interconnected nature of practice.

Similarly, there are still many challenges in teacher education in Myanmar though it started its reforms in 2011. Practicum in initial teacher education programs in Myanmar is still needed to be developed with the practice support systems (NESP, 2016). Besides, more supervision, feedback, or guidance must be needed during practicum. The university/college-based teacher training program has been criticized for the far distance of the theoretical content of the curriculum, teaching methods, and current practices in the classroom. Teacher education at Education Degree College needs to include more

classroom-based hands-on experience as an essential component of the training program. The teaching methods are more teacher-centered and fewer use of learner-centered approaches in EDCs (Lall, 2021).

As a teacher educator at one of the universities of Education, I am aware of the factors impacting the current teacher preparation program at the university of Education. The outdated curriculum and teaching methods, inadequate infrastructure, unattractive salary, and working conditions make the barrier to making a living as a teacher. During the lecture time at the university, student teachers discussed the unmotivating current curriculum and teaching methods. Student teachers complained about teaching methods, curriculum, and exam systems. The exam system is only focused on the evaluation of the knowledge level of students. While awaring these complaints and acknowledging the complexity of the teacher education system and the various contextual factors that influence it, I am interested in delving into a potential solution to address the issues within university-based teacher education programs.

As a teacher educator, and researcher, I plan to highlight the actual problems of implementing the curriculum to fill the gap between theoretically based university coursework and real situations in the classroom. I assume that the practicum period is the only thing that bridges university-based teacher education programs and the actual situation in schools. I also realize that other factors other than practicum might be overwhelming the quality of the teacher education program. As practicum is already embedded with the teacher education curriculum, it can directly improve it and indirectly promote the quality of the university-based teacher education program. I consider the practicum setting including the theoretical part: the structure, arrangement, support system, and evaluation of the practicum period and the practical part: the perspective of different actors including student teachers and teacher educators on the university site, and the role of the principal and cooperating teachers in the school site. Therefore, the foundation of this study is grounded in my research passion and fundamental beliefs, me to explore the implementation of practicum within the context of teacher education programs offered by universities and colleges.

1.2 Importance of the study

During the twentieth century, the division between theory and practice has become a challenge in both initial and continuous professional development phase of teacher

education. The integration and connection between practice and theory have been emphasized (Korthagen, 2016). Pre-service teachers' learning in teacher education institutions provides foundational theoretical and pedagogical knowledge for their careers, but it is not sufficient enough on its own. They need to engage in a real school setting for practicum experiences. Both theoretical and practical-based learning allowed student teachers to reflect and develop their knowledge from their studies and practice teaching (Darling-Hammond, 2007).

Teaching methodology needs a comprehensive understanding of the practice. It is crucial to seek insights into how teaching is conceptualized and practised. Practicum is a synergetic arrangement between two different contexts of schools and teacher education institutions; both agents need to recognize student teachers' challenges during this period to ensure the best learning opportunities for them (Kokkinos et al., 2016). Experiential-based learning from the practicum is the most important and powerful part of the initial teacher education program (Bullough et al., 2002; Russell & Loughran, 2007).

The practicum goes beyond serving as a place for applying theoretical knowledge in a practical setting. It offers teacher candidates a chance to develop personal teaching competence. Furthermore, student teachers can build relationships, share their practices, and get support from each other by working in a group in schools during the practicum period. However, school principals have the responsibility for student teachers groups to engage in school-based teacher education in their schools. The principals must see as their professional commitment to prepare new teacher candidates for the profession and provide them practical and emotional support (Mattsson et al., 2011).

Livingston and Flores (2017) compared research related to teacher education for four decades and criticized that most studies emphasize the perceptions of preservice teachers on the practicum. Many studies include the views of beginning teachers in their transition period. Less systematic research methods include personal memories, documentation, narratives, and visual methods. They suggested that it is necessary to develop more extensive studies with more significant samples using mixed-method approaches. In addition, few studies include different stakeholders in teacher education.

Research on teacher learning and practical application of teaching in teacher education is necessary to demonstrate the qualities of the program related to intended outcomes and to give helpful information to practitioners and policymakers (Zeichner,

2006). Most of the practicum research focused on the practicum's importance, the partition of theory and practice, and the collaboration of cooperating teachers during the practicum. Many scholars highlight practicum as a crucial component of teacher education programs. However, only a few publications in Myanmar are found that address the practicum and programs in teacher education in terms of their actors and features using a mixed-method approach. Based on the theory practice challenge, the literature gap and the methodology demands, this current study of practicum within university/college teacher education program is intended to conduct in Myanmar setting.

1.3 The aim of the study

This study aims to undertake an in-depth investigation of the implementation of the practicum within initial teacher education programs in Myanmar. It seeks to examine the various conditions, objectives, and approaches employed to enhance the quality of both the practicum and the overall program. Additionally, the study aims to investigate the practicum implementation by analyzing relevant policy documents and exploring the perspectives of different actors, including student teachers, novice teachers, and teacher educators. The study will delve into their unique experiences, challenges faced, coping strategies employed, competency development and opinions on various aspects of the practicum, including mentoring/support systems and the university program. Furthermore, the study intends to develop a scale for assessing student teachers' common coping strategies to navigate the teaching-learning dynamics during the practicum period.

1.4 Operational definitions

The following key terms and concepts will be utilized in this study to describe the terminology related to practicum structure and teacher education program throughout the study.

1. Adaptation: Adaptation is a coping strategy that student teachers and novice teachers use when they try to adapt or adjust to the situation to cope with teaching-learning problems.
2. Avoidance: Avoidance is a coping strategy in which student teachers and novice teachers utilize it to avoid problems associated with the teaching-learning process.
3. Block teaching: Block teaching is another term for the practicum period that officially counts from 2 to 6 weeks. However, it can extend to more than eight weeks, depending on the availability and requirement of the schools.

4. Chapter-end test: According to the monthly curriculum chart, after two or three chapters are finished, students must take the test to confirm their understanding of the chapters.
5. College-based teacher education: It means two year teacher education diploma program at Education Degree College (old system).
6. Competency: Competency refers to the collection of professional knowledge, skills, and dispositions that teacher candidates are intended to cultivate throughout their teacher education program.
7. Cooperating/Supervising teachers: In this study, it refers to experienced teachers in the practising school.
8. Coping strategies: the method or problem-solving used by individual student teachers and novice teachers related to the teaching-learning situation.
9. Dean or in charge: the teacher who manages each grade of K12 schools under the supervision of the principal. There is one dean for each Grade of K12 school (for example, the Grade 8 Dean is responsible for every matter related to Grade 8).
10. Experienced teacher: The teacher/ the schoolteacher from K12 schools who have been in the teaching profession for a long time and has more teaching experience.
11. K12 schools/Basic Education Schools: Government schools where students can attend from kindergarten to Grade 12.
12. Mentoring/Supporting: In this study, mentoring is seen as guiding or supporting. Official mentoring program during student teaching practicum is still developing stage. Student teachers in this study are unfamiliar with "mentoring/mentor." Thus, instead of using mentoring, the word "supporting" is replaced in some parts of this study.
13. Monthly curriculum chart: Based on the curriculum and syllabus, chapters and lessons are prescribed to be taught at the end of each month during the academic year.
14. Novice teacher: A new teacher who is a graduated teacher from UOEs and EDCs and currently working at K12-schools (1 to 3 years of teaching experience)
15. Practice teaching: Practice teaching is another term of the practicum period, and it officially counts for 2 to 6 weeks.
16. Practicum period: the period for student teachers to practice teaching in schools.

17. Practicum: The practice teaching time for student teachers in natural school environments to integrate their learned pedagogical knowledge from the university/college program and actual experiences from the classrooms.
18. Preservice/Initial teacher education: Teacher education program offered to undergraduate teacher trainees from UOEs and EDCs.
19. Principal: The principal, as the head of the K-12 school who holds the responsibility for the overall well-being of students, teachers, and all affairs pertaining to the school.
20. Problem-solving coping strategy: a coping strategy that student teachers and novice teachers use to cope with problems related to the teaching-learning situation.
21. School placement is another term of the practicum period that officially counts as 2 to 6 weeks.
22. Seeking social support: a coping strategy that student teachers and novice teachers use when they ask or get support from others to cope with the problems related to the teaching-learning situation.
23. Student teacher: Teacher candidate or prospective teacher studying at one of the UOEs and EDCs to become a teacher.
24. Subject dean: The subject leader from the K12 schools usually appoints the teacher from the upper secondary level as the subject leader or subject dean.
25. Teacher education program: In this study, a teacher education program is seen as a teacher preparation program or teacher education program that prepares prospective teachers/student teachers to become a teacher in the profession.
26. Teacher educator: The teacher serving at the UOE or EDC and offering education to student teachers.
27. The practicum-related documents: The practicum-related documents from Initial teacher education included the practicum component in the curriculum, practicum guidebooks, administrative and arrangement procedures, and evaluation forms of student teachers' practicum.
28. University/college program: curriculum including courses, methods, and practicum components offered at UOEs and EDCs as part of teacher preparation program.
29. University-based teacher education: The University of Education offers a 5-year undergraduate teacher education program.

1.5 Summary of the dissertation

The current study is to investigate the implementation of the practicum within initial teacher education in Myanmar to enhance the overall quality of the practicum and the university program. Since teaching practice is connected to the complex nature of the teacher education system, it is influenced by the system's different features and perspectives. In this study, the implementation of the practicum is overviewed from the perspectives of the actors in their activities and the features of the practicum context. The actors include student teachers, teacher educators, and novice teachers. The features include perceptions of the actors on mentoring, practicum period, and university programs. Novice teachers are included to confirm the role of teaching practicum and university program for their professional knowledge and readiness to teach in their early period of teaching. Experiential learning theory (to understand ST and NT learning based on their experience), social cognitive learning theory (ST and NT develop their thinking and learing through socializing), ecosystem theory (seeing practicum from different level perspectives), and coping theory (to understand ST and NT's coping strategies) are used as the theoretical background to understand the characteristics of student teachers' and novice teachers' responses to the teaching-learning situation.

Exploratory sequential mixed method design is used to answer the main research questions of (1) What are the main characteristics of practicum in Initial teacher education in Myanmar? (2) How do the different actors perceive the practicum in teacher education in Myanmar?

The findings can be summarized that practicum in initial teacher education aimed at student teachers to equip them with pedagogical skills in a natural and controlled environment. The practicum structure is administered from the host university/college. The practicum component comprises lesson planning, lesson study, peer group teaching, portfolio, school visits, and placement. The practicum period is shorter than the international practicum. Mentoring/supporting system is not prescribed in the documents and the evaluation/assessment of the practicum is not explicitly described.

Student teachers perceived that the practicum period was essential for gaining classroom experience, and they had the opportunity to learn how to prepare and teach a lesson. Student teachers faced problems making the group, allocating insufficient teaching aids, and managing students' misbehavior. Student teachers got informal support

from schoolteachers regarding subject matter, teaching methods, and classroom management. Student teachers highlighted that the university program helped with the practicum. However, there needed to be more practice in schools.

Novice teachers had micro-teaching and peer group teaching practice at the university/college and during the practicum period. Novice teachers wished it would be better if the curriculum content of the university/college was integrated with the practical lesson in preparing for the practicum. Novice teachers faced behavioral problems among the students, linguistic barrier with teaching students who spoke one ethnic language, problems with competition between teachers, and teaching with diverse needs of students. Novice teachers get support from their colleagues and senior teachers in preparing the lesson and writing lesson plans. Novice teachers felt that teaching methods, problem-solving, discussion, and lesson planning in their undergraduate university program are ineffective in the actual classroom situation. They perceived practicum as the place where they could learn to select and adapt various teaching methods to the characteristics of learners to engage in learning activities individually or collaboratively with others.

Teacher educators assumed that the practicum period was essential and a time for student teachers to learn from their teaching practice and apply their knowledge in the classroom. Teacher educators believe that student teachers need to make more effort to prepare themselves for future challenges. Teacher educators could only partially support or supervise student teachers for part of the practicum period as they had teaching tasks for other students. Teacher educators consider that the practicum period will be more successful if there is an extended time for the bloc teaching period, student teachers prepare themselves well, the principal and teachers from the respective school and the teacher educators from the university have the chance to supervise and assist student teachers during thier practiucm period.

This study concludes that both student teachers and novice teachers percieved that they developed the required competency studying from their university program and practicum. According to the teacher education policy document, practicum in initial teacher education is well arranged and structured except mentoring/support system and the role clarification of the evaluation/assessment of the practicum. Student teachers and novice teachers had problems in their early teaching period, and they tried to cope with them. While certain coping strategies may lead to success, there are also those that may not be effective in dealing with the given situation. Student teachers and novice teachers

need support or mentoring during their early period of teaching. Besides, student teachers and novice teachers mentioned the weak points of the university/college curriculum especially in the areas of much theoretical contents and incompatible teaching methods. Teacher educators see student teachers' problems in practicum but have limited time to support or evaluate their live performance. Teacher educators mentioned the need for more infrastructure and some weak points in defining the clarified roles of the teachers and principals in schools to support and evaluate student teachers.

Thus, this study suggests curriculum developers and policymakers of teacher education in Myanmar the valuable and practical points to improve the practicum system and teacher education program in Myanmar.

1.6 The structure of the dissertation

This doctoral dissertation is conducted within the framework of the EDiTE program to fulfill doctoral degree requirements at Eötvös Loránd University to explore the implementation of practicum to improve the practicum system and teacher education program. The dissertation's structure includes an introduction, the context of the study, a literature review, research design and methodology, findings, discussion, and conclusion.

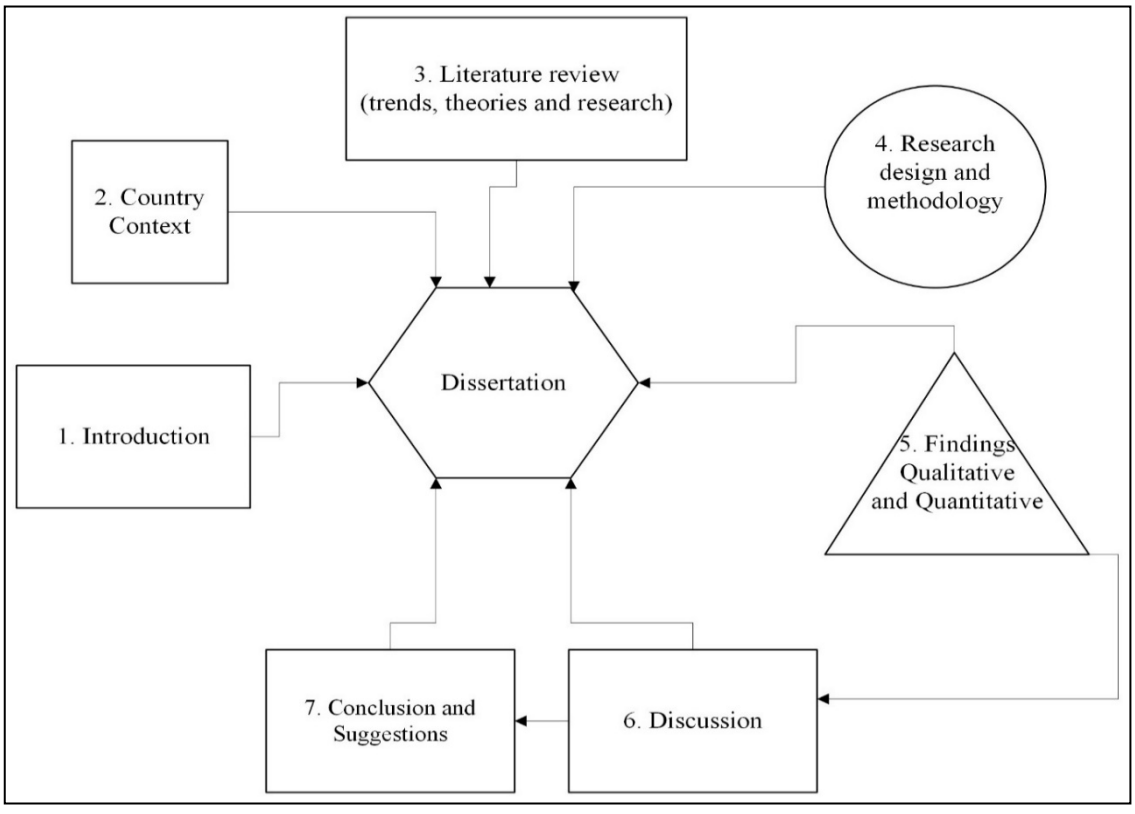


Figure 1 The structure of the dissertation. Source: Author.

The components of the dissertation are separated into chapters 1, 2, 3, 4, 5, 6, and 7. However, they are the parts supporting the whole dissertation's stem.

The introduction comprises the problem statement, the study's importance, the aim, operational definitions, the current study's summary, and the dissertation's structure.

The country context part presented a brief description of the country where the research is taking place: the context, the public education and teacher preparation system, the structure of the practicum in Myanmar, the evaluation/assessment of the practicum, the status of the teaching profession, the role of teachers in Myanmar, and research on teacher education in Myanmar.

The literature review section attempts to explain the topics related to the theoretical backgrounds of the dissertation, including general trends in teacher education, research about teacher education, the complexity of teacher education, conceptualization of the practicum, models of the practicum, the role of actors in the practicum, the feature of teacher education program: university-based teacher education program, mentoring, induction, coping theories and research about coping.

The research design and methodology part explains the research framework, research questions, research design, data collection procedures, pilot study, data collection method, reliability and validity, data analysis method, and ethical considerations of the research.

Results and the findings part offer the findings of qualitative data and the results of quantitative data of the dissertation. The qualitative section presents the findings of document analysis, photo interviews, focused group interviews, and participatory interviews. The quantitative part illustrates the descriptive analysis, inferential analysis of the variables of the two sets of questionnaires and development of scales for future research.

The discussion outlines answering the research questions and discussion about the findings and limitations of the study.

The conclusion summarizes the study's findings, suggestions, recommendations for further research, and future direction.

Summary of the chapter

This chapter introduces the problem statement, importance of the study, research aim, operational definitions, summary and the structure of the dissertation. The next chapter will present the country context of the study.

Chapter 2 Context

Preview of the chapter

This chapter reviews the general background of the country part based on its historical, political, economic, cultural, and political information. The education system of Myanmar is briefly described. After that, the Public Education and the teacher education system, Myanmar Teacher Education System, the structure of practicum in teacher education in Myanmar, Evaluation/assessment of the practicum, Teacher Competencey Standards, the prestige of the teaching profession referring to Guerriero (2017), and the role of teachers in Myanmar are presented. Next, teacher education research in Myanmar and the research context are discussed.

2.1 Country Context (Myanmar)

Figure 2 Map of Myanmar. Source: Jelli, in the public domain, *https://commons.wikimedia.org/w/index.php?curid=2868552*

Myanmar /ˌmjɑːnˈmɑːr/ (known as Burma) is a Southeast Asian country and it has 54 million people and more than 100 ethnic groups. India, Bangladesh, China, Laos, and Thailand are the countries that border Myanmar.The GDP per capita is 1209.0 USD (World Bank, 2021). For thousands of years, individuals have inhabited Myanmar. The first significant cultural and social development was started by the Pyu, who arrived and settled in Southern China in 200 BC. The Pyu are assumed to have brought Theravada Buddhism to the country (12go. Asia, n.d.). Although Myanmar has no official religion, most of the population follows Buddhism. Many ethnic languages are spoken in

Myanmar. The official language is Burmese (Myanmar), spoken by the people from the plains regions but the ethnic people of the hilly region used as a second language (Steinberg et al., 2023).

Myanmar encountered significant changes in its governance structure, society, education system, and other institutions during British colonization from 1824 to 1948 (Lall, 2021). Myanmar has been under military rule for nearly 50 years. In 2011, a nominally civilian government was installed. The new government made education reform a top priority to enhance human resources, and it marked the beginning of the country's education reform. In the landmark 2015 election, the democratic party won the general election. As democracy develops in Myanmar, all sectors need to be aligned with the necessary standards of the democratic system. There was a national election in 2021 for the new government for an on-5-year elections cycle. There have been some political conflicts in the country since February 2021. Currently, the Burmese military remains a powerful force in politics.

Figure 3 Myanmar and its neighboring countries. Source: in public domain

2.2 Education system in Myanmar

Despite Myanmar's increase in expenditure on its education system in recent times, the amount still remains relatively low when compared to that of neighboring

states. Myanmar has higher student-to-teacher ratios in primary and secondary education than the border states. As one of the Education reforms, a new public education system of KG+12 (5-4-3) was replaced the previous education structure (5-4-2) from the 2016-17 academic year. The new system of KG+12(5-4-3) comprises kindergarten, five years of primary education, four years of lower secondary education and three years of upper secondary education. In primary schools, the official medium of instruction is the Myanmar language, but regional languages are permitted to use in classroom setting (Regional Research Paper, 2017). Myanmar language is the official medium of instruction for all subjects in secondary schools except Mathematics and Science subjects from grade 9 on which are taught in English.

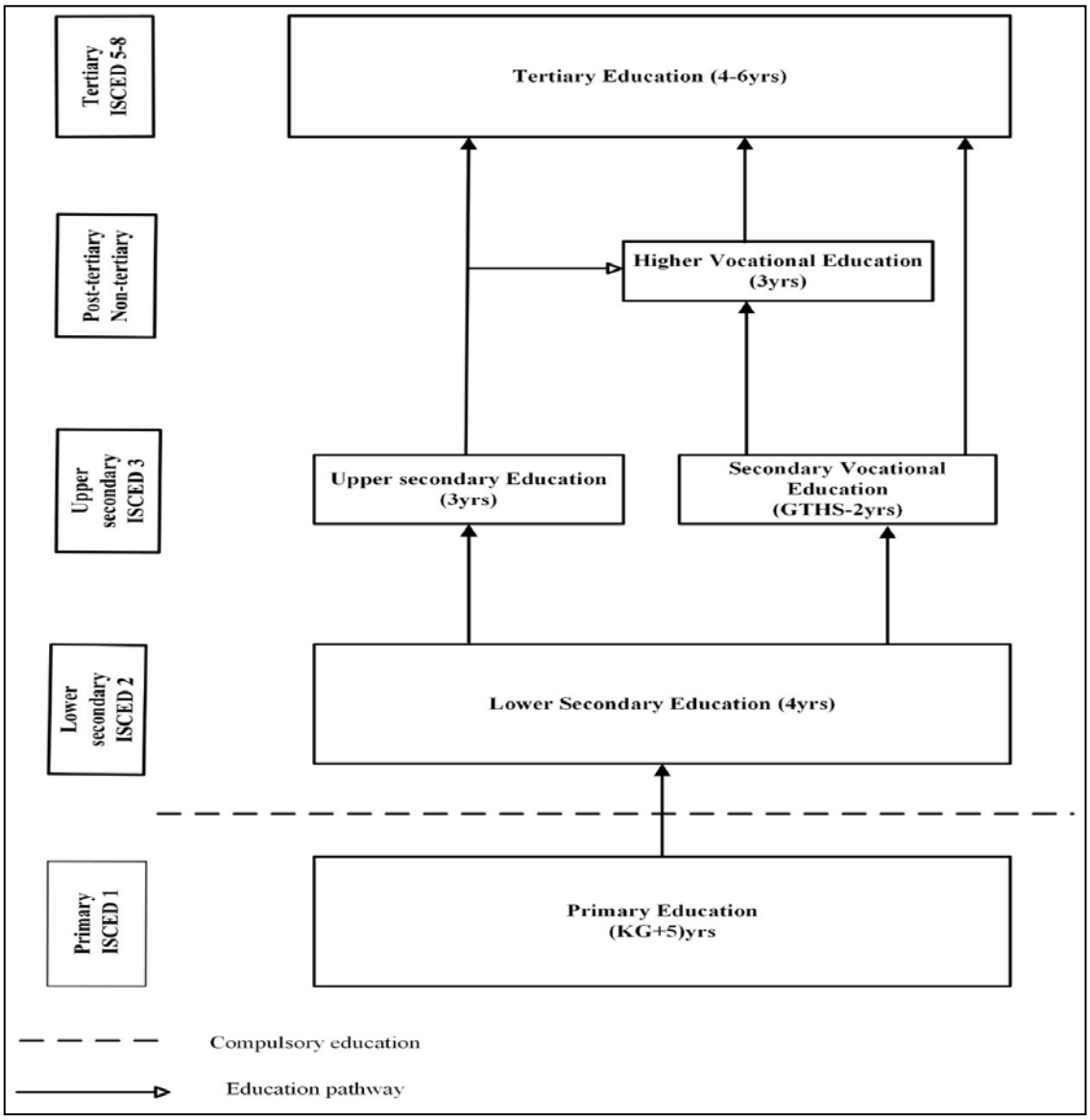


Figure 4 Education System in Myanmar. Adopted from (TVET Country Profiles 2018 and Bai & Wu, 2019).

Primary education is compulsory, and nearly all schools are government-operated. Free education is offered to all primary, secondary, and higher education. The quality, competency, and professional development of teachers, pupil-teacher ratio, curriculum materials, and infrastructure influence the quality of education. There are three types of school in Myanmar Basic Education: primary school (only primary education), middle school (primary and lower secondary education) and high school (primary to upper secondary education). The government appointed more teachers at every level of education to reduce the ratio of teachers to pupils. In rural and remote areas, university graduates from these local areas were recruited as primary school teachers to fill teacher requirements in 2013 and 2014. As there has been more schools across the country, the number of appointed teachers has increased in the 2015-2016 academic year (Regional Research Paper, 2017).

2.3 Teacher Education and Education System in Myanmar

Prospective teachers are trained to teach the core curriculum of Basic Education Schools. The teacher education system includes all teacher education components from kindergarten to high school. It is mandatory to complete upper secondary school education and obtained a matriculation certificate (the high school leaving certificate) for individuals who want to become teachers in Myanmar.

The figure 5 illustrates the relation between the teacher education and public education in Myanmar. Primary school teachers are offered KG training at the country level, district level and township level by the academic staff from higher education to teach kindergarten students. Education Degree Colleges trains primary school teachers to teach Grade 1 to Grade 5 students. Besides, EDC train lower secondary (middle) school teachers to teach Grade 6-9 students to and UoEs and UNDR train upper secondary school (high school) teachers to teach Grade 10-12 students. Academic staff at higher education level (e g., from technical, vocational instituttions, arts and science universities) do not need teacher education. However, those who wants to become teacher educators at teacher education universities and colleges need at least master degree level teacher education.

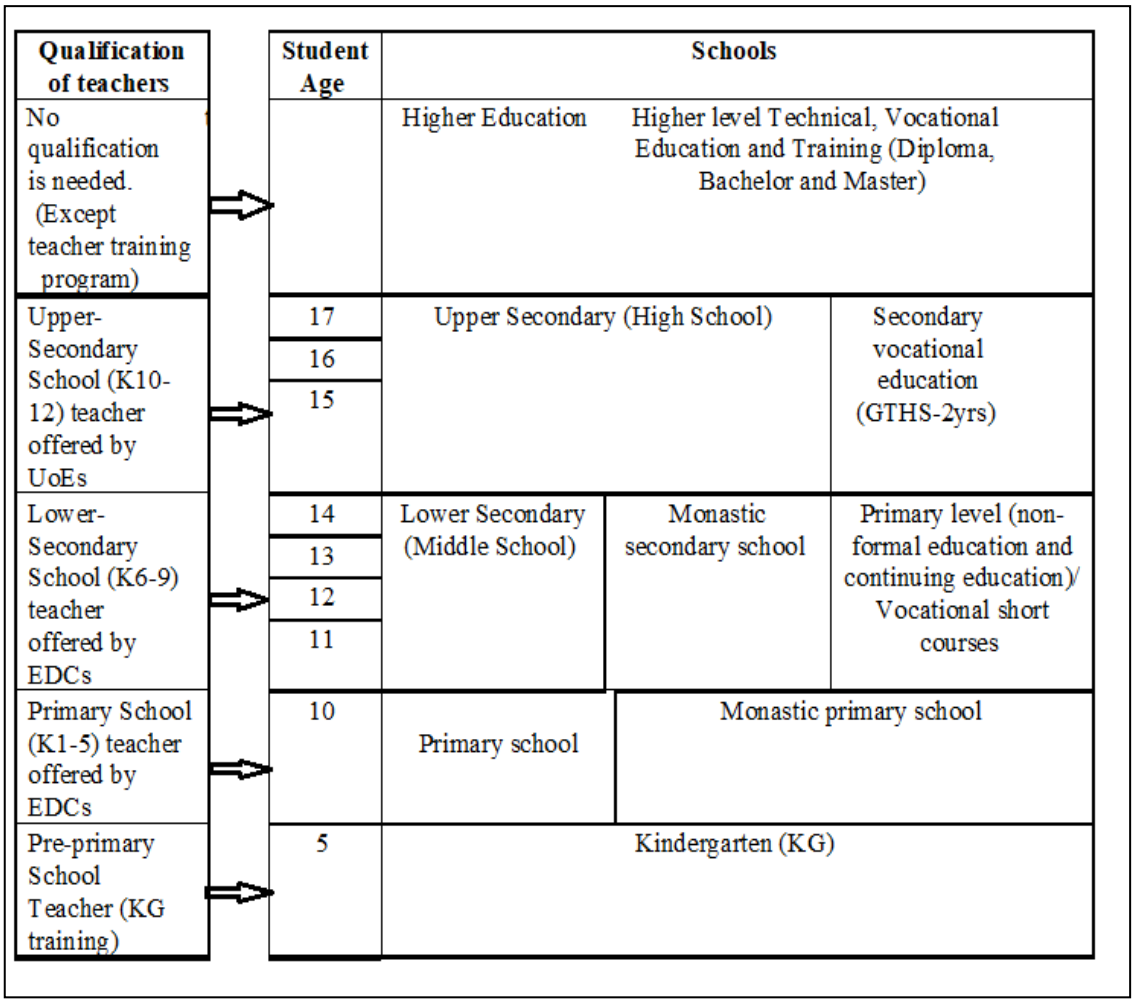


Figure 5 TE and Public Education System in Myanmar. Source: Author.

2.3.1 Teacher Education System in Myanmar

Multiple pathways and training programs are offered to become a teacher. But all teachers are expected to have necessary qualifications which include a four-year Bachelor of Education degree course at Education Degree College. Teacher education courses are delivered at universities and colleges (Ministry of Education, 2016). The figure 6 represents the organization of teacher education system in Myanmar.

- Two Universities of Education (UoEs) offer a five-year Bachelor of Education degree (B.Ed) program to become qualified secondary school teachers
- Ethnic minorities can attend at the University of Development of National Races (UDNR) and it offers a five-year Bachelor's of Education degree program
- The new system of 25 Education Degree Colleges (EDCs) provides a four-year Bachelor of Education degree B. A (Education) to become qualified primary and lower secondary/middle school teachers. The new system started from December,

2019 and the implementation level is still developing because of the pandemic situation.

- Previously, Education Colleges (ECs) offered the Diploma in Teacher Education (DTEd), a two-year post-matriculation course for student teachers to teach at the lower secondary level.
- Graduates who inspire to become primary teachers can participate in pre-primary teacher education (PPTT) at EDCs for four months.

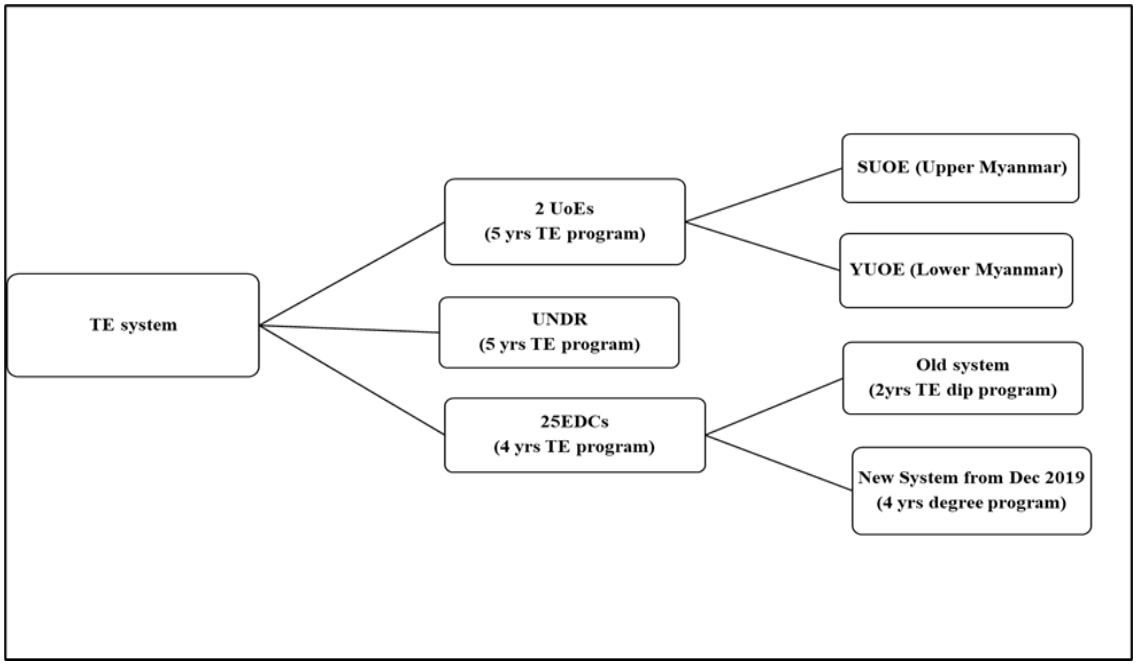


Figure 6 Teacher Education System in Myanmar. Source: Author

Moreover, the teacher education system intends to provide flexible learning pathways, such as concurrent or consecutive. Under Education Degree College's new design, student teachers must participate in one specialized teacher education program for primary or lower secondary education.

The Ministry of Education offers a one-year Education College-based Teacher education Course, as well as a Township-based Primary School Teacher education program for uncertified teachers. The program is conducted in collaboration with Township Education Officers on weekends and during long vacations (Ministry of Education, 2004).

University of Education offered diplomas program for postgraduate students which include Diploma in Teaching and Diploma in Multimedia Arts (Education). Both programs accept preservice and in-service teachers. Graduate trainees are assigned as

lower secondary teachers to effectively manage multimedia classrooms (Ministry of Education, 2016).

Teachers advanced in their careers according to their teaching service, certificates and degrees. Their salaries increased, and based on their growing experience, they moved from primary to secondary schools. The following figure illustrates the different learning pathways of teacher education system.

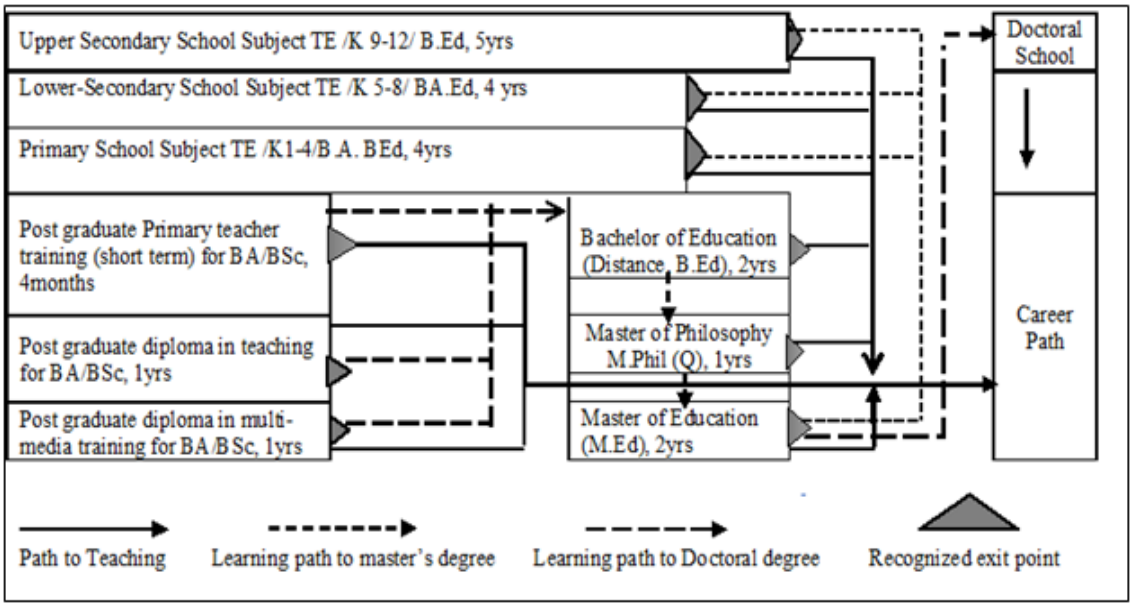


Figure 7 Teacher Education System and Different Learning Pathways in Myanmar.
Source: Author

2.4 Teacher Competency Standard Framework

The teacher competency standards mean teachers' knowledge, skills, attitudes, and required performance levels through the teacher continuum. The teacher competency standards in Myanmar are organized into four categories: student teachers must be fulfilled knowledge and understanding about the profession, competent in skills and practices of the profession, infused with values and dispositions about the profession, and dedicated in continuous development in the field (Ministry of Education, 2019). The standard competency framework helps assess preservice teachers to confirm the minimum criteria for accreditation. Practicum teacher competency standards are developed based on the four domains of Myanmar's teacher competency standard framework.

2.5 The Arrangement and Structure of the Practicum in Initial Teacher Education in Myanmar

Teacher educators especially from the curriculum studies and methodology department at UoEs and the educational studies department of EDCs prepared and arranged the practicum period in thier teacher education program. Referring the initial teacher preparation report (OECD, 2019b), Myanmar follows a traditional approach to teacher education, wherein the content is predominantly influenced by the academic knowledge tradition rooted in the epistemological beliefs of various disciplines across different faculties. Consequently, the knowledge base pertaining to teaching and learning remains fragmented. Teacher education content in Myanmar is structured in classical disciplines such as educational theory, philosophy and management offered from Educational Theory and Management Department, educational psychology from Department of Educational Psychology and teaching methods, curriculum, pedagogy and practicum from Department of Curriculum and Methodology (OECD, 2019b). As the practicum component is under the discipline of the Department of Curriculum and Methodology, teacher educators from Methodology department take the leading role in the practicum arrangement.

However, the permission from the Department of Education at the Ministry level is needed to conduct the process. After that, teacher educators contacted township education officers, school principals, and teachers in Basic Education Schools (practicing schools), which student teachers are intended to send for their practice teaching. In Myanmar, Basic Education schools are assumed the practicing schools for student teachers to pracitce thier teaching during practicum period. In this case, teacher education universities/colleges get permission from Ministry of Education and the principal of Basic Education High schools.

In Myanmar, University of Education arrange the practicum structure for student teachers from the undergraduate program to participate in practicum I (school visit) in 3rd year (5th semester) and Practicum II (bloc teaching) in the 6th semester, and Practicum III (peer group teaching) in the 4th year-7th semester and Practicum IV (school placement) in the 8th semester. Each of the practicum component has been arranged to get one credit unit in the curriculum. However, student teachers actually need to practice their teaching at the Basic Education High schools near their regions only for Practicum II (bloc teaching for 4 weeks). Besides, the university allocated the group of student

teachers to selected high schools in Yangon Region to participate in Practicum IV (school placement for 2 weeks). In Education Degree college, the practicum schedule of two year diploma program (old system) includes at the end of Year I, Practicum I (6-weeks for practice teaching) and at the end of Year II, Practicum II (6 weeks at school placement).

Student teachers from Education Colleges (old system) had to conduct their practice teaching in schools at the end of their first-year program (6 weeks at primary schools) and at the end of their second-year college program (6 weeks at lower secondary schools). The practicum structure of Universities of Education (UoEs) and Education Degree College (EDCs) are illustrated in Figure 8.

The practicum structure of Education Degree Colleges (new system) started in December 2019. The Practicum module in EDC is designed for four years program and student teachers will have the school practice experience in their 3rd year and 4th year. The new program arrange more practice teaching periods (17 weeks in practice school) for preservice teachers and the practicum is included a separate module in the curriculum structure. Because of the pandemic period, the new system is still in process (Chaw et al., 2022). Thus, we will not count this new system case in this study. Thus, the participants from Education Degree Colleges are student teachers from the cohort of the old system.

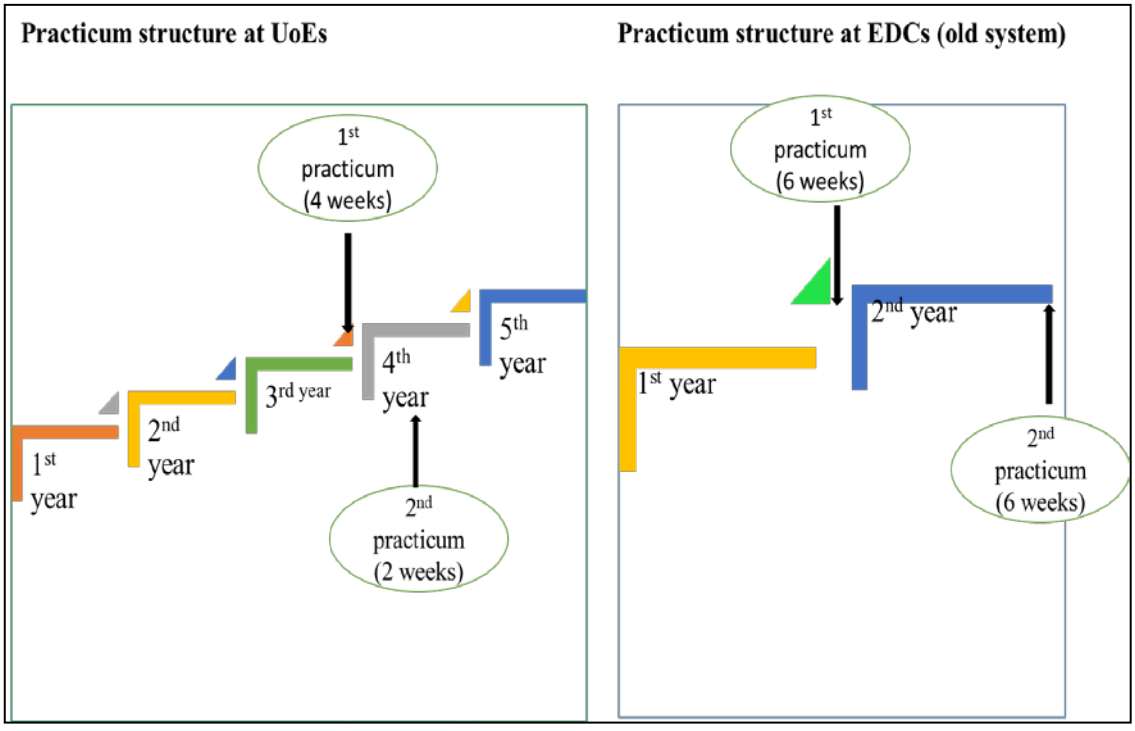


Figure 8 The Practicum Structure of University of Education and Education Degree College (old system). Source: Author

2.6 Evaluation/the assessment of the Practicum Component

The practicum arrangement is organized from the host university or education degree college with the cooperation of the school principals and township education officers. Teacher educators are also responsible for monitoring and evaluating student teachers from the preparation stage to the end of the practicum.

In UoEs and EDCs, teacher educators from the curriculum studies and methodology department initiated the arrangement process. The University and College of Education send official letters to township education officers and school principals to cooperate student teachers' practicum. Both initial teacher education program from UoEs and EDCs prepared sealed envelopes that include the evaluation form for each student teachers and handed those letters to school principals through student teachers. Thus, the school principals and cooperating teachers are supposed to evaluate or supervise student teachers' performance during the practicum. Though teacher educators from UoEs and EDCs are assigned to visit the schools, they could visit one or two times to student teachers' practicum and meet with the principal. Student teachers need to write a practicum journal and submit to the UoEs and EDCs. Teacher educators are supposed to evaluate the practicum journal and discussed the issues written it.

2.7 The Prestige of the Teaching Profession in Myanmar

Guerriero (2017) discussed the characteristics of the heart of the profession such as teaching governance, and autonomy, public perceptions, accessibility, compensation, overrepresentation of gender, and career prospects that can impact the prestigious of the profession. The heart of a profession is defined by three key attributes, a specialized body of professional knowledge, an extensive period of training and induction, ongoing professional development, and professional autonomy. Although there are many characteristics that can impact the prestigious of the profession, some characteristics that are relevant to the context of teaching profesion in Myanmar will be discussed in the following paragraphs.

The governance of the teaching profession impact on the decision-making power of teachers. The limited decision-making authority of teachers can be perceived as the profession needs more autonomy and prestige. Besides, salary and working conditions are also factors that can influence the status of the profession. Public perceptions of the profession can be seen through media sources and reviews of the social status of students.

Based on the international report, teaching can be seen as predominantly a women's profession. Moreover, teaching is generally perceived as more readily approachable than other professional occupations. Parallelly, problems related to teacher recruitment and retention can result from poor teaching status.

Referring to these issues, the scientific knowledge base that can inform the daily activities of student teachers still requires improvement in Myanmar. Teacher education programs introduced an extended training period, but the essential components of induction and continuous professional development still need to be addressed in the teaching profession. Moreover, the independence and decision-making power of teachers are underdeveloped in Myanmar.

The teaching profession in Myanmar is primarily female, and the percentage of female primary education teachers is 82.7% (World bank, 2018). The salaries for teachers need to be more attractive. The low salary levels for teachers are discouraging male graduates to pursue a teaching career, as they feel they need to earn more to provide financial support for themselves and their families. However, teachers are strongly incentivized to offer paid private tutoring classes after school time and on holidays. Many educational institutions across the country are in poor condition. This lack of resources can make it challenging for teachers to provide quality education, particularly regarding library and laboratory resources. In addition, many teachers are burdened with large class sizes, although this is less of a concern in more remote areas with lower student enrolment (Thomas, 2012).

The management of the education system is characterized by a hierarchical approach, where decisions are made at the top and passed down, rather than encouraging collaboration and input from teachers and staff at all levels. Textbooks and materials are prescribed centrally. The Basic Education High School Examination determines the transition from uppersecondary education to higher education. Against restricted resource availability, teacher-centered approaches are commonly adopted and dominated in classrooms across Myanmar. Student-centered approaches are being encouraged by the Ministry of Education (Lall, 2011). The effectiveness of these approaches is contingent on students and teachers having greater access to the Internet and on the availability of sufficient library resources, both of which are crucial factors for their success.

According to Lall (2021), the implementation of CCA in Myanmar schools faced challenges due to the existing exam system from Grade 1 to Grade 8, which is designed to ensure that the entire class passes final exams with a basic understanding of each lesson. This reconciliation issue has prevented the successful implementation of CCA in schools. The exam system included weekly exams, monthly exams, and final exams at the end of the academic year. However, some things needed to be clarified in following that system. The Ministry of Education set the exact target dates for the primary and high school exams. To ensure that all the curricula were covered in time for exams, teachers often selectively choose specific lessons to teach. The educational system evaluated student success primarily based on their ability to memorize and reproduce what had been taught in class on exams. Student pass rates were often used to evaluate the performance of both teachers and schools. Large class sizes, the lack of space and time, infrastructure, and curriculum-related were the constraints for teachers to use the CCA method.

With the increase in social media usage in Myanmar, negative opinions and criticisms about the teaching profession and teachers have become more frequent and widely shared on various online platforms.

In general, teaching is generally considered to be an accessible profession in Myanmar. There are many pathways to becoming a teacher in Myanmar with a low level of competition for entry into teacher education programs. Besides, most students choose the teaching profession because of occupational opportunities.

2.8 The Role of Teachers in Myanmar

Myanmar society is significantly influenced by Buddhism and Confucianism philosophies. Teachers are regarded with great respect and seen as "substitute parents" entrusted with educating and nurturing young minds. As a predominantly Buddhist country, Myanmar traditionally upholds this view, holding teachers in the same high regard as the Buddha, the Scriptures, monks, and parents. It means teachers have a significant amount of responsibility for students. In Myanmar, the teaching profession is widely perceived as a service-oriented profession, where teachers are expected to serve society and act as role models for their local communities.

The social roles of teachers and students in Myanmar are so strictly defined that students' participation in dialogue and decision-making is often considered inappropriate. The instruction of elders is rarely questioned or challenged. It is a widely acknowledged

reality in education that teachers can have a significant and lasting impact on the lives of their students. The role of teachers is essential as they are responsible for introducing critical values to future generations and ensuring their students' holistic development (Han Tin, 2004).

Confucianism recognizes social hierarchy in the relations of subordination and superiority. The teacher has to take care of the students, and the students should be obedient to teachers and should not be questioned (Zhan & Wan, 2016). Similarly, this Confucianism has been adopted in Myanmar society and it is natural for students to respect their teachers and never question or criticize teachers. Nowadays, the status and the role of teachers have declined in Myanmar because of many reasons including low salaries, lack of material support such as housing and transportation, and inadequate academic support such as pre-service and in-service training (Lwin, 2000).

2.9 Previous Studies Related to Teacher Education in Myanmar

The study by Moe and Yee (2020) complemented the supplementary part of student teachers from the teacher education diploma program at an Education college in Myanmar. Those student teachers conduct the practice teaching in their township's selected primary, middle, and high schools for about two months. Taking practice teaching at the end of the first year/second year made the student teachers' practice teaching skills efficient as they learned the educational subjects and academic subjects within the academic year. The practice teaching period matches the October examination in K12 schools. Thus, regular lessons are not being carried out during exam periods, and student teachers cannot practice their teaching.

Chaw and Kopp (2021a) conducted a pilot study of teacher education students' experiences during the practicum in Myanmar. The authors summarized their findings that teacher education students positively perceived their activities during the practicum period. Many participants have expressed dissatisfaction with the need for more connection between theoretical concepts taught in the program and their practical application in school environments. They relied on the guidance and support of experienced teachers to solve various teaching-related problems. Similar research focusing on the obstacles of preservice teachers during the practicum in Education Colleges was conducted (Kyaw, 2020). The author points out the problems associated with students, the host school, themselves, instruction, education college (no supervision

of teacher educators from education colleges and the duration of practicum was too short).

Lall (2021) presented that the existing practicum system in teacher education colleges in Myanmar has many weak points in preparing student teachers for the real world, giving support or feedback. Student teachers needed help using teaching methods for large class sizes, managing behavioral issues, insufficient resources, and communication challenges. There needs to be a systemic ICT training and continuous professional development framework in place. During the teaching practice period, student teachers rarely got support from the principal or the teacher educators. Many student teachers found that the theory differs from the school practice. The joint partnership between education colleges and regional education officers can be seen in attending graduation ceremonies and arranging practicum placements for students at education colleges.

Chaw and Kopp (2019) studied novice teachers' challenges in their first-year teaching and their coping strategies in Myanmar. Beginning teachers in their study reported that their past practicum experiences were helpful to their first-year teaching. However, beginning teachers needed help in teaching and classroom management and problems with principals, parents, and other teachers. Beginning teachers coped with most of their challenges with the support of principals and experienced teachers.

Union Catalog of Myanmar Academic Libraries (UCMAL) can be accessed from the University of Education library website. However, only the title and abstract can be seen in all the electronic versions of University research journal research papers, and publication dates cannot be found. Thus, all the data related to the current study are listed, and the reports of the thesis and university journal publications are summarized and presented in the following paragraph.

Related to initial teacher education research, scholars have studied (San Win and Hnin Hay Man Thein, n.d.; Khin Mar Khine and Thaw Thaw Zun Htein,n.d.; May Wah Linn and Ei Ei Phyo,n.d.; May Thu Nyein and Moe Moe Khine, n.d.; Thae Phyu Htwe and Moe Moe Naing, n.d.; Theingi Aung and Su Su Thwin,n.d.; Khin Phyu Phyu and Aye Aye Nyein Mya, n.d.; Su Mon Oo, n.d.; Zin Minn Thu , Khin Mar Ni and Su Chan Myae, n.d.; Cherry Zin Oo, n.d.) have studied quantitative research of the skills of student teachers in education colleges, factors affecting the pedagogical reasoning skill of

preservice teacher trainees, competencies and attitudes of preservice teacher during teacher education, the use of technology in learning, the relationship between social support and mental health of preservice teachers, the professional identity of prospective teachers, teachers' coping styles and classroom management strategies on students' misbehavior, reading habits of teacher education students across institutions in Myanmar; mixed method research of student teachers' knowledge and practices on physical education, preservice teachers' perceptions of teacher competency standards for upper secondary teachers, awareness on sustainable development, and qualitative research of implementation of assessment for learning strategies in preservice teachers' practicum.

In general, teacher education research in Myanmar focused on precisely the areas of the comparative study of teacher education (management and curriculum in teacher education), reforms in teacher education and training, influencing factors on teacher education programs in Education Colleges, and researching teacher educators (sources of stress and job satisfaction, professional development of teacher educators). Most studies in the preservice teacher education field conducted quantitative studies, and only one study approached qualitative trends. Some mixed-method studies were found, but the authors highlighted only the quantitative results.

2.10 Research Context

The study aims to get information on implementing the practicum in preservice teacher education to improve teacher education programs in Myanmar. The actors of practicum include student-teachers and teacher educators in teacher education universities and colleges, principals, and teachers in Basic Education Schools (practicing schools) where student-teachers practice their teaching. However, this study explores the role of practicum from the actors from university and degree college, especially from the prospective teachers and teacher educators. Student-teachers from the University of Education and Education Degree Colleges (old system) and teacher educators with experience in preparing, arranging, and evaluating practicum processes from the University of Education and Education Degree Colleges participated in this study. This study also includes novice teachers to get their reflections and feedback related to practicum experience during their undergraduate program. Novice teachers graduated from the University of Education or got a diploma from Education Degree College and had one or two years of teaching experience at Basic Education Schools in the country.

Summary of the chapter

The general information about the country explains to the readers Myanmar's cultural, economic, social, and political trends. The education system, teacher education system, teaching profession, and the role of teachers in Myanmar topics are expeated inform the readers to conceptualize the background of this study. The brief description of teacher education research in Myanmar and the research context illuminates the readers to comprehend the research background of the current study. The next chapter will discuss the literature review section of the study.

Chapter 3 Literature Review

Conceptualization and organization of literature

The overview of the literature begins with teacher education and its complex system. The paradigm of teacher education is also added to describe the philosophy and changes in teacher education. Next, models of teacher professionalism are summarized to describe how teachers have prepared through the different teacher professionalism models or paradigms and compared to Myanmar teacher preparation models. Subsequently, the research on teacher education is synthesized to comprehend the scientific investigation of the teaching methods and educational programs designed for prospective teachers.

In the second part of the review, teacher education is viewed from the program perspective, including its features such as teacher education institutions' programs, mentoring, induction, and practicum. As the study intends to explore the practicum implementation to improve the practicum and teacher education program, the practicum context and the various facets of the teacher education program should be emphasized. When conceptualizing the practicum context, it is essential to consider the perspectives of those involved, including the functions of student teachers, teacher educators, and novice teachers. Coping theories and research-based coping strategies are included in the literature to understand early-stage professionals' challenges and analyze their coping methods to improve their practices and teacher education program. The following figure shows the considerations of the literature structure of the study.

The study's theoretical framework, research methodology, analytical approach, and operational definitions are explained in the third part.

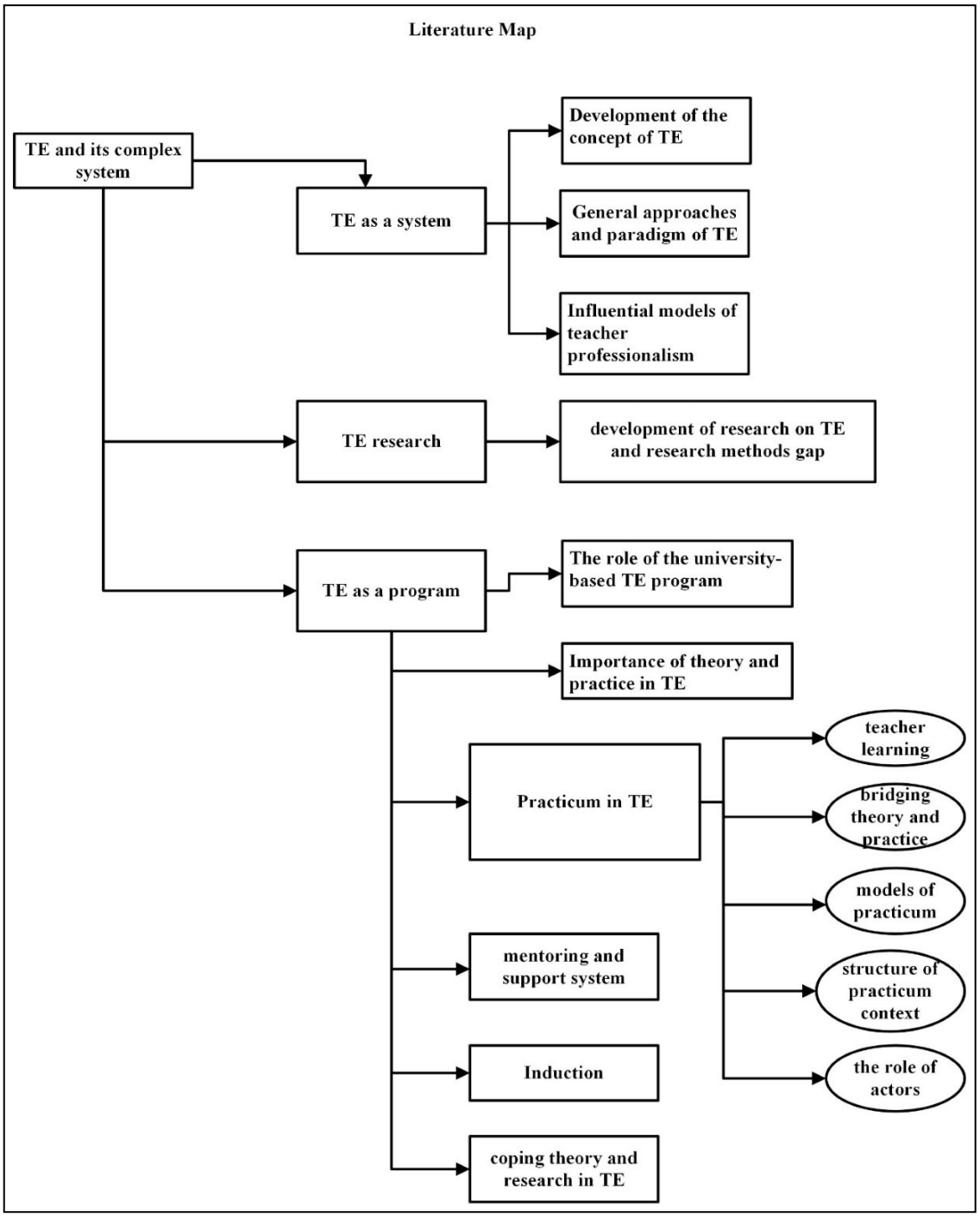


Figure 9 Literature Structure of the dissertation. Source: Author

3.1 Teacher Education and Complex systems

The concepts and principles from complexity theory can prove advantageous in comprehending teacher education as a complex and self-organizing multilevel system. Complexity theory posits that various elements of education, such as different stakeholders, learning environments, educational institutions, training settings,

pedagogical programs, and mentorship opportunities, are interconnected and can be viewed as intricate systems (Cochran-Smith et al., 2014).

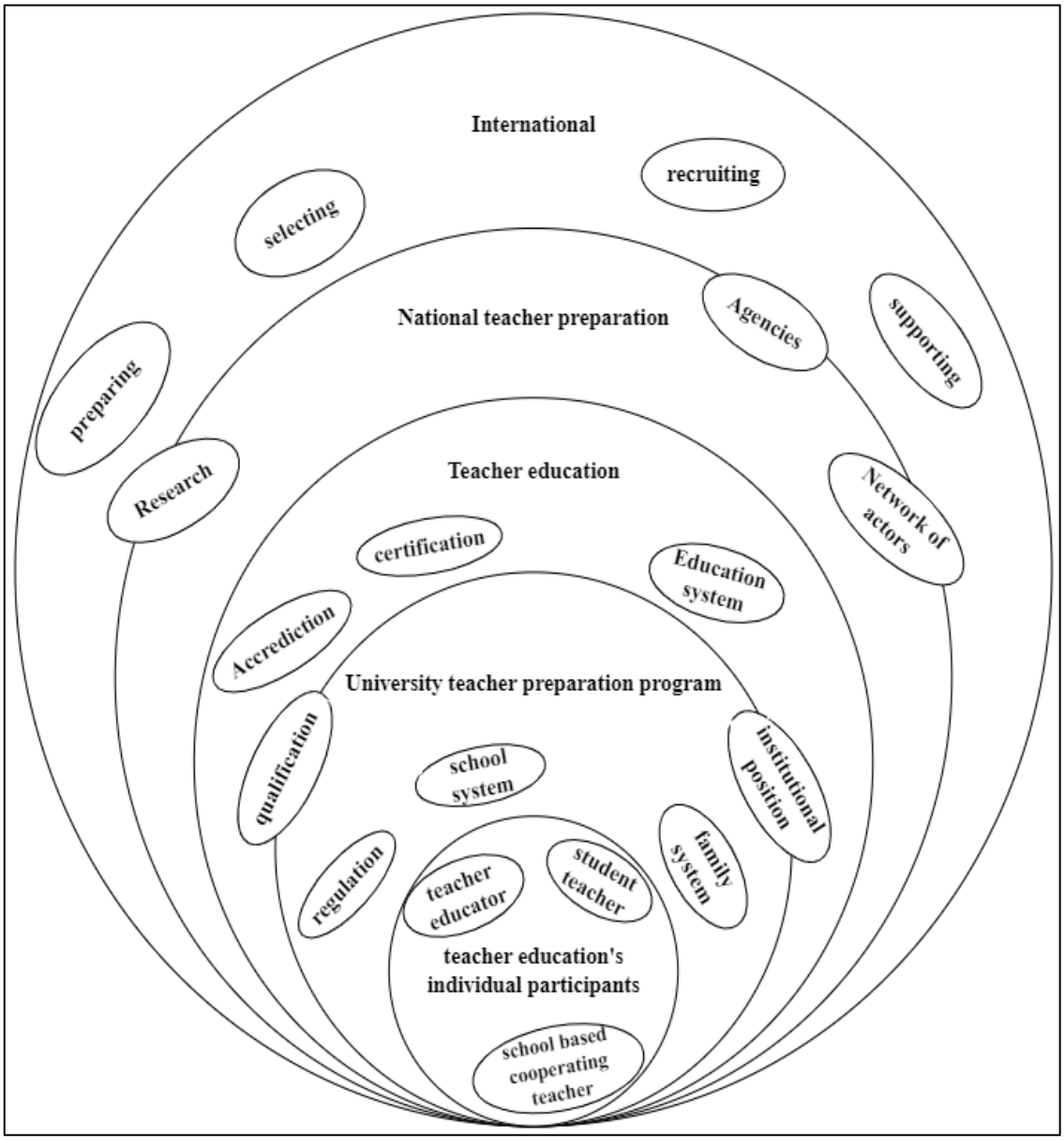


Figure 10 Teacher Education and its Complex System. Source: Author

As a multifaceted system, teacher education generates itself through interactions at numerous levels and is influenced by the surrounding and internal systems that interact within it. Teacher education system is also influenced by the system's history and the external environment. The learning and practice of teachers are shaped by multiple factors, which cannot be precisely anticipated or assumed to unfold in a singular manner (Cochran-Smith et al., 2014).

Within this complex framework, teacher education programs should acknowledge the requirements of both pre-service and in-service teachers and establish links between

research and their everyday teaching practice. A safe place should be created where teachers can self-reflect on their practice and should be given a sense of ownership in education research (Guerriero 2017, p.65). Nevertheless, it is crucial to consider coordination and efficacious interventions across different levels of change (e.g., micro, meso, and macro) and the pivotal role of strategic communication in facilitating, coordinating, and supporting change within a complex system (Best and Holmes, 2011).

3.2 Teacher Education as a System

3.2.1. Development of the Concept of Teacher Education through the History

In viewing teacher education as a system, it is essential to comprehend the societal perceptions of teacher education and how teacher education has developed to its current state.

Teacher education first developed as the Normal schools affiliated with the Church in France during the nineteenth century and subsequently in various other nations. These Normal schools prepare for primary school teaching, but other schools in European countries prepare teachers for secondary education or both. The Normal school programs were considerably shaped by the apprenticeship model, which was pivotal in their design and implementation (Korthagen, 2016).

During the 1960s and 1970s, the competency-based teacher education model became popular, and there was an increased emphasis on clearly defined, observable behavioural criteria that were deemed essential for the practical training of novice teachers. Around 1970, the humanistic-based teacher education (HBTE) model emerged, which shifted the focus from the teacher as a professional to the teacher as an individual with distinctive needs and experiences. The HBTE approach emphasizes the individual teacher’s needs and experiences, which was a crucial step forward in the evolution of teacher education and has since remained a dominant perspective in the field. The realistic approach to the teacher education program is intended to tackle the challenges and questions at hand. The realistic model focuses on the importance of structured reflection and collaboration between students, incorporating multiple disciplines, and fostering strong collaboration between university-affiliated teacher educators and mentor teachers in educational institutions (Korthagen, 2016).

3.2.2 General Approaches and Paradigm of Teacher Education

According to Zeichner's (1983) identification of the paradigm of teacher education, the behavioristic paradigm is the predominant and most influential approach, which emphasizes the cultivation of concrete and measurable pedagogical skills. Essential knowledge, competencies, and skills pertinent to the teaching profession must be explicitly outlined and aligned with the current demands of the role.

Following the behavioristic model, the prospective teacher is viewed as a compliant receiver of professional knowledge and is not actively involved in shaping the content and trajectory of their teacher preparation program. The personalistic paradigm is the second prominent approach to teacher education, and it prioritizes the psychological development of teacher candidates by concentrating on reshaping their beliefs and perceptions rather than solely focusing on acquiring specific behaviours, skills, and content knowledge. Under the personalistic paradigm, prospective teachers are encouraged to discover their unique ways of functioning as teachers rather than conforming to a prescribed set of behaviours or techniques.

The traditional craft model, the third paradigm of teacher education, utilizes a master-apprentice relationship to transfer the cultural knowledge and expertise of experienced teachers to novices. Effective teaching requires professional knowledge and a deep understanding of the context and culture of the profession. The final approach to teacher education is the inquiry-oriented model, which prioritizes the development of student teachers' inquiry skills and their ability to critically reflect on and investigate the contexts in which teaching occurs. Prospective teachers are fostered to engage in self-reflection and critical inquiry into the underlying reasons and consequences of all the customs, procedures and practices of both campus-based and school-based teacher education.

Prospective teachers in Myanmar are expected to meet the teachers' competency standards framework requirement. The teacher education program emphasizes developing the required competency standards of preservice teachers. Referring to Zeichner's paradigm of teacher education, it can be assumed that the behavioristic paradigm is still influential in teacher education in Myanmar.

3.2.3 Influential Paradigms/ Models of teacher professionalism

Menter and others (2010) emphasized the crucial role of initial teacher education as the cornerstone of teacher professionalism. They identified four models of teacher professionalism, namely the effective teacher, the reflective teacher, the enquiring teacher, and the transformative teacher. These paradigms represent the conceptualization of teaching, teachers' roles, identity and teacher development in different contexts of the teaching profession.

The effective teacher model emphasizes the importance of teacher and teaching techniques to enhance students' learning outcomes. This approach aligns well with the behavioristic model as it has a specific curriculum and a concrete measurement system that evaluates performance. The reflective teacher paradigm emphasizes the importance of critical reflection and self-evaluation in teacher development. This paradigm is closely aligned with the personalistic model of teacher education as it focuses on teachers' personal and continuous development through practice.

The enquiring teacher model focuses the role of the inquiry skills and research in teacher development. This paradigm is closely aligned with the inquiry-oriented paradigm of teacher education. The transformative teacher model emphasizes the role of the teaching profession and teachers to contribute to the transformation of society through education and prepare their pupils to contribute to societal change (Menter et al., 2010).

The effective teacher model is still practised in Myanmar teacher education from the previous years as Myanmar has prescribed a national curriculum and assessment system for Basic Education. Nevertheless, the reflective and enquiring teaching model has been introduced in the postgraduate program at the Universities of Education in Myanmar. However, the reflective teaching model became famous from the previous decades in Myanmar teacher education with the reform of the Education process of Myanmar. Action research has been partly introduced in the curriculum of undergraduate university programs since 2013. These days, the enquiring teacher model has been introduced in Myanmar teacher education by including research-based content in the curriculum of university/college teacher preparation program. Adams (2008) argued that the effective teacher model represents one end of a spectrum of teacher professionalism, with the reflective, enquiring, and transformative models existing at along the extended end.

In the 21st century, teacher education in Myanmar is gradually shifting toward the extended end of the spectrum of teacher professionalism. The reflective and enquiring models are being introduced and partly applied, trying to move away from practising solely the practical model.

3.3 Research on Teacher Education

Cochran-Smith (2004) distinguished four phases in the growth of teacher education. (1) During the early to mid-20th century, teacher education was seen as a curriculum problem. As teacher preparation expanded, studies of the teacher preparation curriculum also began to emerge. There were several massive investigations into the teacher education curriculum using surveys, interviews, and observations of teacher preparation schools. At that time, teacher education was expected to identify effective teachers' key characteristics and skills and develop these characteristics in the curriculum across institutions. (2) Teacher education was primarily viewed as a training issue from the late 1950s to the early 1980s. At that time, teacher education was conceptualized as a formal educational process, and teacher candidates are ensured to be effective educators. Teacher educators were responsible for training teacher candidates to have effective teaching behaviours.

(3) Scholars viewed teacher education as a learning challenge from the early 1980s through the early 2000s. In this perspective, effective teachers were considered knowledgeable about the subject matter and pedagogy, able to make decisions, develop curriculum, and engage in ongoing professional development. Teacher preparation programs were expected to be designed, including different contexts for teacher trainees to develop the required competencies to perform as decision-makers. (4) Until the late 1990s, teacher education had been viewed as a political issue. During that time, teacher education was intended to identify the general guidelines of teacher education policy for institutions and states and ensure its practices positively affect desired outcomes.

During the nineteenth century, teacher education laid the foundation for school practices. However, there was a shift in the development of teacher education towards a more academic approach in the twentieth century, and currently, it leads back to the practice (Korthagen, 2016; Kopp & Kálmán, 2015).

According to Korthagen (2016), the earliest research in teacher education focused on the microteaching approach, following computer-based simulations of classroom

situations and video technology to promote student-teacher learning. He argued that researchers hardly replicate each other's work or collaborate with others from different universities and countries. The self-study movement rarely utilizes numerical research methods in its methodology.

Zeichner (2006) mentioned that teacher education research necessitates more emphasis on the impact of teaching experience in initial teacher education for teachers' professional knowledge and practices and how teachers are affected over time by their preparation. He highlighted three priorities in teacher education research: the construction of an up-to-date and specific national database detailing information about various kinds of pre-service programs and the curricular requirements of these programs, initiating foundations and government funding agencies to make strategic investments in some of the studies and improving the preparation of teacher education researchers.

Research conducted by teachers and practitioners and action research influenced teacher education in the 1970s. In the 1970s and 80s, a concerted effort was made to gather empirical evidence on effective teaching practices by conducting classroom-based research. This eventually led to policy changes in the 1980s, further accelerated in the 1990s, resulting in a new wave of policy (Menter et al., 2010). They argued that research related to teacher education are required to be fully developed and needs a strong foundation of theory and methodology. Furthermore, teacher education research is often conducted by those who are also its practitioners, whether as teacher educators, managers, or policy analysts of teacher education and training programs. They argue that teacher education research is a field that has yet to be fully developed and lacks a strong foundation in theory and methodology. Additionally, the individuals who conduct research in this area often have a vested interest in the outcomes of their studies, as they are also involved in teacher education, whether as teacher educators, program managers, or policy analysts.

Menter and others (2010) reviewed research articles (N=446) undertaken in the teacher education field in the UK from 2000-2008. They found that the studies are more likely to be small-scale, qualitative, and practice-based, and interviews are the most common data-gathering method. In Menter's (2017) study, three distinct methods for examining teacher education were identified: (i) teacher education research, which is commonly carried out by professionals in the field; (ii) research on teacher education,

which education policy makers primarily conduct; and (iii) research about teacher education, which is undertaken by experts from diverse disciplines in order to examine the broader collective impacts of teacher preparation.

The study of Blömeke and others (2012) compared primary teacher education to 527 teacher education programs in 15 countries in the past four decades. The studies used various methodologies that can be broadly classified into three main categories: (i) empirical studies (employing diverse methods such as quantitative, qualitative, or mixed-methods), (ii) theoretical papers (comprising individual reflections, theoretical analyses, or assessments of particular teacher education programs), and (iii) literature review papers (such as systematic reviews or reviews of existing studies). Different research designs are found (i) quantitative studies, (ii) qualitative research, (iii) mixed method approach, (iv) exploratory and pilot studies with small samples; (v) longitudinal studies and small-scale studies appear to be the most common. Many studies used questionnaires, interviews, and action research methods, but meta-analysis, self-study designs, and comparative studies are rarely found.

Cohen et al. (2013) also systematically reviewed 113 research works published between 1996 and 2009 related to various practicum in initial teacher preparation program. As the data collection tool, the studies used document analyses (n = 91), interviews (n = 64), questionnaires (n=47), and observations (n = 37).

Referring to the study (Zeichner, 2006; Menter et al., 2010; Blömeke et al., 2012; Cohen et al., 2013; Korthagen, 2016), it can be concluded that researchers in the teacher education field rarely replicated other studies or collaborated each other's, most of the independent research are done by practitioners and primarily qualitative. Small-scale studies with recurrent questionnaires and interviews are primarily conducted, and the most common data collection method is interviewing.

3.4 Teacher Education as a Program

3.4.1 The Role of the University-based Teacher Education Program

In the 1980s and 1990s, many countries shifted the responsibility and location of teacher education from colleges providing teacher education to universities offering teacher education programs. The reform of teacher education in Europe was greatly influenced by the significant role played by the Bologna Process, especially in renewing

the quality and professionalism of initial teacher education and increasing the prestige of the teaching profession (Stéger, 2014). The teacher education program at the university is planned to prepare exemplary teachers successfully to have an equal set of experiences of content and pedagogical knowledge under supervised school practice. However, the strength of university-based teacher education to access children's education quality has been doubted, and scholars have examined the challenges (Tatto & Menter, 2019).

Each teacher's education system can significantly differ across countries because of unique educational customs, organizational setting, and social and cultural environments. Moreover, there are substantial dissimilarities in the structure of teacher education within each country (Livingston & Flores, 2017).

Halasz (2016) indicated that national contexts, culture and traditions, rules and regulations, the framework of educational investigations and advancement, and the specific features of national educational reform and innovation policies exert a substantial impact on the cooperation and practices of the schools and universities in teacher education.

Zeincher (2010) outlines recent efforts to cross-boundary crossings to blend theoretical and empirical knowledge in teacher education curriculum of colleges and universities to support student teacher learning. Colleges and universities can hire academic educators for required courses for their teacher education programs. School teachers can be invited to teacher education institutions to provide opportunities for portrayal of teaching practices integrated into lessons. In turn, academic educators from the university can act as moderators for offering a part or whole university methods course in schools.

However, institutional and cultural problems (e.g., lower status, no recognition for exemplary performance, insufficient funding) also matter in determining the quality of teacher education in colleges, universities, and schools for many years (Zeichner, 2010). The university-based teacher education is expected to prepare outstanding teachers successfully through academic knowledge, methodology and adequate supervision in-school practice to teach the school curriculum effectively. However, in some nations, the value and quality of university-based teacher education have been an ongoing discussion topic (Tatto & Menter, 2019).

Teacher education universities have been criticized for being ineffective in teacher preparation, without consideration of new demands, distant from practice, and for quantitative-focused recruitment of new candidates into the profession (Darling-Hammond in Roth, 2005). Examinations of university programs could assess the gaps in students' knowledge base. The performance-based area of the University program could be seen only in the students' practice teaching phase (Roth, 2005).

The university contributes to many areas in the development of a teacher in initial teacher education. Both school and teacher education programs can offer research-based teacher preparation and effective teaching. Adequate preparation of teachers requires a comprehensive set of components that can be delivered through a college or university program connected to local schools. The program should include a clearly defined conceptualization of teachers' knowledge and skills, a coherent curriculum, a performance assessment to support candidate development, and collaborative relationships among faculties, teacher educators and cooperating teachers in schools (Roth, 2005).

Goodlad (1994) suggested the program's quality improvement conditions that could evaluate student teachers' knowledge and performance-based assessment. These conditions comprise early and supervised contact with classrooms and schools (providing these orientation and visitation opportunities in the early weeks), expanded opportunities for prospective teachers to have experience having racial and income diversity among the students (urban setting and inclusive students), cohort grouping of students (socializing experience and feedback opportunity), partner schools (selected schools to have an ongoing relationship), internships or student teaching experiences (providing at least two semesters of school experience), feedback and follow-up to allow a formative evaluation of ongoing programs (Roth, 2005).

Initial teacher preparation can be viewed from the complex system perspective as it involves the interactions of different actors such as policymakers, teacher educators, teachers, student teachers and things needed for accreditation and professional standards (OECD, 2019a). The structure of initial teacher education is different within and across countries. The countries are struggling to balance subject matter and pedagogical knowledge. However, it was found that the two: concurrent models and consecutive models have been widely used (OECD, 2014).

Some counties, especially Japan, Korea and Norway, aligns with an academic knowledge tradition whereby the content is organized in traditional subjects such as educational psychology, sociology, history and philosophy. The subject matter is established by the epistemological belief of each discipline from different departments (Whitty and Furlong, 2017). Thus, the foundational knowledge associated to the instruction is separated and abstract. Student teachers should receive comprehensive preparation of diverse knowledge areas and practical skills to make professional decisions and effective delivery of instruction.

To enhance the effectiveness of initial teacher preparation programs worldwide, it is advised to strengthen the interrelationship between content and process. Additionally, there is a need to establish stronger connections between subject-specific knowledge, pedagogical content knowledge, and general pedagogical knowledge, ensuring improved articulation across these domains (OECD, 2019b). Besides, initial teacher preparation education has little connection with the realities of the schools. New developments in school curricula should be addressed in designing teacher education (OECD, 2019c). Finding an excellent way to balance accountability and assurance has been recommended, offering training to improve the quality of initial teacher preparation.

3.4.2 The Importance of Theory and Practice in Teacher Education

The current structure of many teacher education programs separates theory and practice. As a result, courses need to be more balanced in preparing teachers. Countries such as Korea, Wales had the problem of theory-practice gap; teacher candidates from Australia, Norway, the United States faced inadequate preparation for the school cultures and the conditions of workload overtasking was found in Japan and the Netherlands (OECD, 2019b).

A better approach is to analyze the interplay between theory and practice in which theory guides practice, and practice serves as a test of the theory. It is recommended to incorporate theory and practice into the course process (Livingston & Flores, 2017). From the earliest times, the tension between theory (academic knowledge) and practice (practical utility) has remained a central feature of both initial and continuous professional development phase of teacher education institutions (Korthagen, 2016).

Pre-service teachers encounter difficulties in applying the theories and concepts taught in their teacher education courses to the real-world context of their clinical work

(Hammerness et al., 2002). Zeincher (2010) points out the need for more connections between campus-based or university-based teacher education courses and field experiences in teacher education programs of colleges and universities. Student teachers are required to provide the time to conduct lesson observation, let them practice and get feedback on their teaching methods. Research has shown that focused field experiences integrated with univeristy lessons support student-teacher learning more effectively than unstructured and isolated practicum placements (Tatto, 1996; Darling-Hammond, 2006).

Successful initial teacher education programs should prepare their students to meet today's classroom challenges (Smith-Sherwood, 2018). Field experiences are the primary elements in equipping aspiring teachers to learn to integrate theory and practice, collaborate with peers and families (Hollins & Guzman, 2005) and develop teaching strategies and curricular approaches to meet the requirements of the students. Exemplary teacher education program is particularly well coherent teaching practice with course work to reinforce and reflect critical ideas, and established toward a sound understanding of teaching and learning (Darling-Hammond, 2005).

The epistemological tradition related to practice theory is how people do things daily (Reid, 2011). For teacher education to move forward within a practice theory framework, it is suggested to recognize their limitations and advantages and combine the apprenticeship, training, and discipline models. In this way, student teachers can study and practice teaching and develop expertise based on experience (Reid, 2011). However, both the coursework and fieldwork experiences provide complementary learning opportunities. Grossman and Richert (1988) revealed that pre-service teachers gained pedagogical knowledge from their fieldwork experiences. On the other hand, their coursework enabled them to develop a deep understanding of the subject matter and pedagogical practices that can be used to teach it effectively.

3.4.3 Practicum in Teacher Education

Practicum can be conceptualized in different terms and definitions. Many authors highlight the significance of practicum in student teachers' knowledge and learning and teacher education, practicum in bridging the theory-practice gap and the need for the collaboration of schools and universities and the critical role of stakeholders such as student teachers, teacher educators, school-based mentors or cooperating teachers and principals during the practicum.

Practicum refers to the period within initial teacher education in which teacher candidates are placed in actual teaching and learning settings. Prospective teachers need to engage in a range of activities, including observation and participation, which allows them to gain real classroom experience and develop their pedagogical skills (Rorrison, 2010).

3.4.3.1 Significance of practicum in pre-service teachers' knowledge and learning

Many authors (Shulman, 1987; Mattsson et al., 2011; Halasz, 2016; Tatto, 2021) highlight the cruciality of practicum in pre-service teachers' knowledge and learning. Shulman (1987) argues that teacher education programs must distinguish more clearly about a body of teacher knowledge. Teacher knowledge includes content knowledge, learning research, teaching techniques, and knowledge from social practice or personal experimentation. Teacher-knowledge is developed from student-teacher lives to teachers in slow motion and highlights the complex bodies of knowledge and skill to perform effectively as a teacher. The teacher preparation program at the university has the advantage of offering teachers the foundational knowledge necessary to enrich their teaching proficiency. Teacher education programs must look for ways to constantly provide teachers with adequate professional knowledge and skills development opportunities (Tatto, 2021).

Learning is a primary source of knowledge, and the nature of professional knowledge has significant implications for teacher learning. Professional knowledge is embedded into practice and cannot be separated from practice. Teacher professional knowledge is created and shared by communities involved in joint action. The complexity of school practices often requires the collective effort and collaboration of multiple stakeholders (Halasz, 2016).

Practicum intends to provide pre-service teachers opportunities to get acquainted with professional practice and learn about school culture. Mattsson et al. (2011) noted that pedagogical practice knowledge depends on the interactions among particular individuals, context, and structure. History, tradition, and common qualities are embedded in the profession's tradition. The relationship between theory and practice is controversial in teacher education. In university-based education, research-based theory and knowledge are mainly offered, and student teachers are intended to develop practical skills by actively participating in natural settings during their practicum.

3.4.3.2 Importance of practicum in teacher education and bridging theory and practice

Many studies have mentioned the significance of the practicum component in teacher education that helps to integrate the theory and practice (Bullough et al., 2002; Tuli & File, 2010; Thomas, 2012; Allen & Wright, 2014; Danner, 2014). For example, Danner (2014) points out that teaching encompasses numerous experiences that are unique to the school environment and teaching practice allows students to integrate the theory of education. Teaching practice within initial teacher education programs serves as a transformative experience, providing student teachers with an authentic initiation into the real-world setting of schools and the teaching profession.Teaching practice or practicum is vital to the teacher education program. The efficacy of every professional teacher education program is closely linked to the quality of the practicum component.

Practicum has been introduced in the teacher education program to prepare effective teachers worldwide. Practicum experiences are essential to the teacher education program because student teachers can understand the contextual factors underpinning education, have experience and knowledge about the school environment, and provide a frame of reference for professional skills. Teacher training programs need to prepare teachers in the professional competency of teachers, adequate content knowledge and practical teaching, and mismatch of a university course and real life. The practicum emerged to respond to the demand for enhanced teacher education, and a considerable amount of literature suggested that the practical school experience is the most effective way to prepare future teachers (Tuli & File, 2010).

Pre-service teachers often regard theoretical knowledge gained during their training and the practical experience they acquire in schools as equally valuable. However, once they become teachers, they prioritize practicum experience more (Allen, 2009). Practicum or professional or work experience is one of the traditional ways to communicate theory and practice in teacher education. Allen and Wright (2014) highlighted that coursework assessment in the practicum enhanced the student experience of integrating theory and practice. They recommended that teachers at the practising schools to support student teachers when they struggle with using teaching methods from their course to establish deep cooperation between schools and universities.

The practicum has been recognized as the most influential component in initial teacher education (Bullough et al., 2002). Pre-service teachers recognized and

appreciated the theoretical and practical components of their program. They noticed the connection between university coursework and teaching practices in school during the practicum.

Most teacher education institutes arrange the practicum for student teachers to practice teaching in real classroom contexts. The practicum course unit is composed of theoretical and practical aspects. The practicum experience consists of two distinct phases: receiving training and support for school placement, the preparation phase and applying their knowledge and skills in an actual classroom setting (the school experience phase). The practicum program involves three primary groups: the preservice teachers, the mentor teachers, and the teacher educators. Both presevice teachers and mentor teachers perceive the school-based practicum experiences as the most invaluable components of the teacher education program. They considered these experiences as an exposure to the context of teaching profession (Thomas, 2012).

3.4.3.3 Importance of development of teachers' identity and socialization

Allen (n.d) noted that socializing influences prospective teachers prior to teacher education, initial teacher preparation, and in the workplace. Johnston and Wetherill (2002) argue that socialization in a school organization is of great importance in the identity formation of most teachers. Being absorbed into school culture ensures the transmission of cultural heritage (Smith, 2005), and it raises preservice teachers' consciousness about immediate socialization when entering the school environment.

Immersed in the school culture, beginning teachers develop new knowledge through theories and beliefs and new behaviour from classroom practice. Hargreaves (2000) contends that beginning teachers benefit significantly from informal socialization among experienced teachers in contexts. This socialization process, which started in initial teacher training, certified the mindset of teacher practice through generations of teachers.

3.4.4 The Functions of Preservice Teachers during the Practicum

The most crucial aspect of initial teacher education lies in the school practices of aspiring teachers, as they enable the acquisition of professional skills. Pre-service teachers must engage in various activities such as lesson preparation, lesson planning, facilitating inclusive learning environments, assessing student progress, and exhibiting teacher-like behaviour in physical, mental, and cognitive aspects (Sağ, 2014). According

to Yüksek Öğretim Kurulu (1998), the crucial components of initial teacher training involve student teachers and supervising teachers creating a school environment where aspiring teachers can assume full teaching responsibilities.

In order to grasp the practicum setting, aspiring teachers need to engage in critical thinking and carefully consider various aspects of the context to make informed decisions about their teaching (Rivera & Gomez, 2017). This entails providing a comprehensive and detailed description of the school, the student population, the school's teaching plans and principles, the staff, the community atmosphere, and any ongoing projects or initiatives. Rivera and Gomez (2017) also emphasized the importance of conducting observation sessions to delve deeper into the context and uncover specific information relevant to teaching practice. These sessions can provide valuable insights into the student's individual needs, interests, and learning styles, as well as shed light on the teaching strategies and techniques employed by the experienced teachers in the school.

By critically examining and exploring the practicum context through observation sessions, student teachers can develop a comprehensive understanding of the environment they will be teaching. This knowledge will enable them to make well-informed decisions about instructional approaches, classroom management strategies, and the overall design of their teaching practices to meet the needs of the students and align with the school's principles and pedagogical approach.

3.4.5 The Structure of the Practicum Context in Teacher Education

Prospective teachers experienced the most prolonged and most exposure to the pedagogy field in the form of "field experience," "clinical teaching," and "mentoring programs" in teacher preparation programs. During the practicum, pre-service teachers are given opportunities to take their teaching practice with the support and supervision of school-based mentor teachers or university supervisors (Cohen et al., 2013). Initial teacher education programs require their student teachers to get a real teaching experience in a school or a college where they learn how to interact with actual learners during the practicum. The practicum is considered one of the critical elements in student-teacher education (Pratiwi, 2020).

The practicum is universally acknowledged as an essential and integral aspect of initial teacher education worldwide. It is a prominent feature incorporated into teacher education programs nationwide, ensuring that novice teachers gain firsthand experience

in school environments. During the practicum, beginning teachers gradually assume teaching responsibilities in classroom settings, often receiving guidance from both school-based teachers and visiting university educators involved in the program. The specific intricacies and arrangements of the practicum exhibit significant variations across different national and state contexts, as well as within them (Menter, 2022).

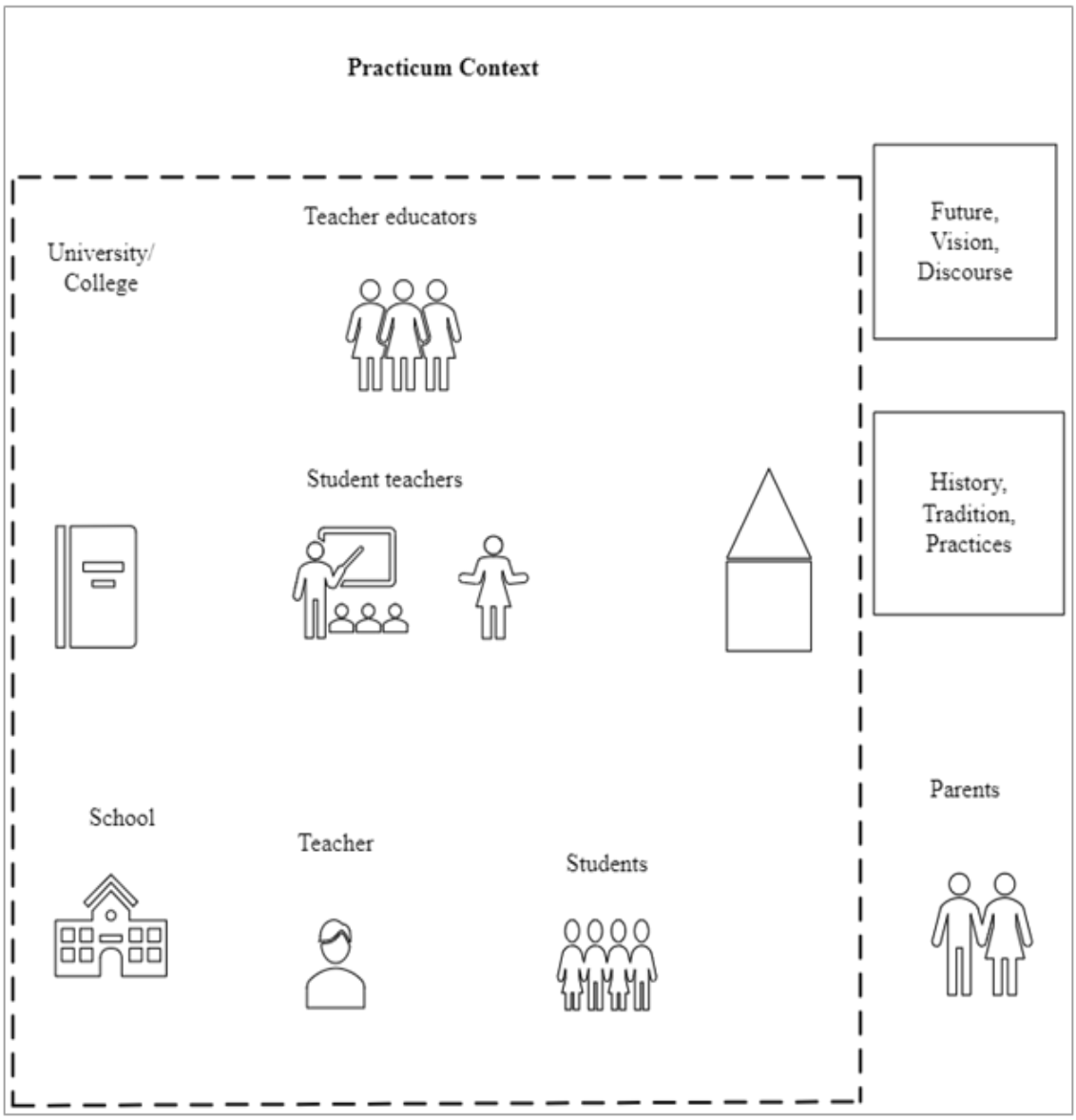


Figure 11 The Context of Student Teachers' Practicum. Source: adapted from Mattsson et al. (2011)

In Figure 11, teacher educators and programs/courses in university and colleges side, student teachers in the practicum school setting with the subject matter, teaching methods, relationship of the colleagues, the background of the family, the principal, teachers, and students in school side are the context in the inner boundary. The outer

boundary is surrounded by the parents, history, culture and practices and future visions. Everything in the figure impacted the context of student teachers' practicum.

The micro level considers the dispositions, values, and actions of individual prospective teachers who are learning and teaching to be teachers in the school setting. The Meso level reflects on the schools' and universities' commitments to the prospective teachers' education process. The macro level considers national institutions' policy and practice and educational institutions' roles (Menter, 2022).

Menter (2022) points out the importance of the macro, meso, and micro level alignments and the relationships between actors at one of these levels. Because the values, dispositions, orientations, and culture of the individuals and the institutions all contribute to the quality of teacher education. Berliner (2001) also noted that when studying teachers, context should be considered as an important factor on the development of teachers' expertise.

The practicum has different effects on teacher learning depending upon the nature of the program, its institutional contexts, and individual students' characteristics and dispositions. However, very little about these context-specific effects has been observed in the literature (Zeichner, 1986). It is difficult to interpret that evaluating student learning during the practicum aligns with intended outcomes for teachers, students, and schools. In some countries, the school-based mentor has the power to make the decisions to evaluate pre-service teachers' performance. In other systems, university-based teacher educators have the authority to assess student teachers' performance.

3.4.6 Models of Practicum

Practicum models are summarized in this part to understand and compare with the practicum model of this research context. Different teacher education systems have allocated resources, curricula, and practicum assessment procedures. Curricula differ, and the procedures for assessing professional practice knowledge differ. Distinct practicum models are implemented to cater to the specific needs and contexts of various nations, regions, and localities.

The extent of the practicum component in teacher education may be greater or lesser based on different country contexts. The proportion of time spent on professional training at university teacher education varies across the EU, ranging from 13% to 70% for primary school teachers. Ireland, Hungary, Malta, Finland, and Slovenia stand in the

highest proportion. Regarding lower secondary teachers, the range is between 9.1% and 58.3%, with only three countries surpassing the 50% mark: Belgium (French Community), Germany, and Malta. For upper secondary teachers, the proportion of professional training in teaching skills typically remains below 30%, except in Germany, Malta, and the UK. In most other EU/EFTA countries, the proportion fluctuates between 14% and 30% (ETUCE, 2008).

Mattsson and others (2011) reviewed different practicum model across the program.

(1) The Master-Apprentice model. Traditionally, teacher education students are expected to learn the profession from experienced teachers who mastered the profession. The masters are expected to grasp the practice knowledge and comprehend the cultural context.

(2) The Laboratory model. According to this model, pre-service teachers should participate in practicum experiences within high-quality professional settings under the guidance of experienced and skilled professional teachers. The university has attached a teacher education school for practicum learning.

(3) The Partnership model. This model relied on partnerships between teacher education institutions and local schools. Pre-service teachers are expected to offer an excellent educational environment at the local schools with appointed mentors or supervisors.

(4) The Community development model, which is frequently implemented in rural areas, emphasizes the role of pre-service teachers in introducing innovative ideas and teaching methods to schools and educators attempting to enhance their pedagogical practices. In parallel, pre-service teachers learn the profession related to their problems.

(5) The Integrated model (practised by universities and communities). Local authorities may take responsibility for introducing pre-service teachers to the field of practice. The university may oversee the assessment of practicum learning. Pre-service teachers are intended to learn from various schools and teachers with different qualities.

(6) The Case-based model. Pre-service teachers should encounter real-life cases to develop the competencies and their ability to think critically and make meaningful decisions.

(7) The Platform model. This model is more flexible and open to pre-service teachers' needs and interests. Pre-service teachers are arranged to take part in projects work that have more connection between universities and schools context.

(8) The Community of Practice model. Pre-service teachers are equipped with the required experiences and competencies and are given a chance to take part in various practices. As part of this model, pre-service teachers are immersed in a culture of inquiry and socialization.

(9) The Research and Development model. In this model, there is a consensus between teacher education institutions and communities to cooperate in refining research and school development.

These models demonstrate that teacher education and practicum experiences can be intentionally organized and structured to promote optimal learning opportunities for pre-service teachers. However, Rorrison (2010) complained that many learning opportunities are wasted, and research about practicum is often neglected because of disregarding practice knowledge among universities and research-based knowledge among many schoolteachers. Different practicum models can be applied based on the country context, but teacher education institutions should encourage practicum and allocate proper infrastructure for practicum.

3.4.7 Mentoring and Support system

Mentoring and support systems should be addressed in teacher education programs. This mentoring and support system is presented here to understand the mentoring and supporting concept of participants in this study. The scholars' anticipation of the role of the mentor, support system, mentoring relationship, mentoring context, and review of mentoring research will be briefly discussed in the following paragraphs.

Mentoring is a multifaceted and collaborative journey that encompasses encouragement, assistance, and direction. It necessitates dedication and extensive dialogue, fostering the cultivation of ever-evolving connections between individuals (Campbell-Evans & Maloney, 1997). Professional or teaching practice is decisive in beginning teachers' career development; therefore, mentoring as a form of support has become a defining element of practice. Student teaching period provides practical experience, and mentors help new teachers transition from student to professional

(Boreen, 2009). The popular word for mentoring is instructing and guiding. The mentoring process requires time and a plan (Holliday, 2001).

Orland-Barak (2016) presented different kinds of mentor roles, such as psychological support, academic difficulties, assessment and scaffolding, mediators of knowledge, supervision, assessment, sustaining relationships, and communication. All are intended for teachers' professional identity development. However, mentors are required to prepare for their roles and distinguish between the role of a classroom teacher and a mentor of teachers. He suggested that mentoring or support systems are successful when an alignment between a collegial, supportive school culture and the mentor's educational vision exists. Mentoring relationships consider providing supportive and critical feedback, establishing partnerships, making time for the mentee, building mutual trust, striking a balance between support and self-direction, addressing potential conflicts, and being a partner and critical friend.

Orland-Barak (2016) also pointed out the mentoring context in introducing mentoring in practicum placement. It is necessary to consider different cultural factors in schools and universities. Besides, mentoring programs must be assessed, revised, and financially supported. Problems related to formal mentoring include institutional barriers, limited time, lack of emotional support, poor interpersonal skills, and affect the mediation of learning. Moreover, successful mentoring practices have been contextualized in policy and program aspects of a particular system. Effective mentoring practices must consider the varying contexts, including pre-service education and in-service education with novice and experienced teachers.

Student teacher-mentor relationship also decides the quality of the practicum and student teachers' ability to cope with a professional placement. Teacher education programs and schools play a crucial role in fostering mentor-mentee relationships and providing practical, supportive interventions that help prospective teachers to develop their skills and knowledge. Teacher candidates who did not receive supervision or assistance from their mentor teachers tended to use non-productive coping strategies (Wilson & Huynh, 2019). Moreover, peer mentoring helps student teachers solve their specific professional problems.

The nature of mentoring during the induction phase varies from mentoring teacher candidates throughout their practicum (Aspfors & Fransson, 2015). Authors suggested

that it is necessary to have an equal role of evaluating and promoting professional development in mentoring of the induction stage to prevent contradictory objectives (Fransson & Gustafsson, 2008). Mentoring training, assigned mentors' mentoring experience, and role clarifications are also necessary. Ulvik and Smith (2011) claimed that mentors with mentor education demonstrated their recognition of their influence on the practical learning of student teachers.

Mentoring cannot be available for all teachers. According to the OECD report (2014), across the OECD countries, the principals reported that 60% of lower secondary teachers in Chile, Finland, Mexico or Portugal did not have mentoring or support system. Mentor teachers in those countries require adequate directions, instruction and cerditial. Besides, the absence of acknowledging with incentives or well-defined career opportunities make an obstacle to enhance assuring the quality of mentoring.

Moreover, one of the main challenges to sustaining mentoring programme is to attract experienced teachers and train them to be influential mentors. Mentoring can involve providing assistance, monitoring progress, and engaging in collaborative self-enhancement (Kemmis et al., 2014). However, the mentor and mentor training status is still an under-researched field in education. Finally, the lack of recognition in the form of clear incentives or career paths is an important barrier to improving the quality assurance of mentoring.

Many scholars have studied student teachers' perceptions of mentoring and the mentoring relationship, mentors' education, role, task clarification, and peer mentoring. The student teacher valued mentoring support they received and had positive attitudes toward their mentors (Douglas, 2014). The student teachers found some support in a stimulating and inclusive environment, and the local mentors provided them with the necessary support. Pre-service teachers developed awareness of their context and positive attitudes, reflected on their teaching practice, got satisfaction, and saw the importance of mentor teachers in providing theories (Castañeda-Trujillo & Aguirre-Hernández, 2018).

Yayli's (2018) findings differed from the pre-service teachers' expectations of mentoring support. After the practicum, many participants underscored that their mentor teachers wanted to act as something other than mentors. They expected their mentors to be very supportive and manage mentor and teacher roles well. Pre-service teachers were familiar with current theoretical knowledge at the faculty of education. They reported that

their mentor teachers must follow new methodologies and not stick to old practices. There needed to be more communication between the mentor and the mentee to improve the mentoring process.

Some authors (Allen & Wright, 2014; Yayli, 2018) found that mentors did not have a distinctive clarity of roles and responsibilities and suggested that mentor roles should be defined in detail and possible ways of motivating in-service teachers to become influential mentors as part of their duties in the professions. Leshem's (2012) findings also show that the students and the mentors entered their respective roles with assumptions and expectations about teaching and mentoring. However, the students' encounter with the reality of teaching and the role hierarchy of mentor-student impacts their previous perceptions.

3.4.8 The Role of Actors in Practicum

Practicum in initial teacher education can be assumed as a professional event. Many actors take their roles and perform their best in that professional event. The university program arranged the structure, and the event occurred in the schools. The main actors from the university include student teachers, but teacher educators perform supporting roles. Experienced teachers or cooperating teachers and principals are the supporting actors from the school site. As this study aims to improve the practicum system and teacher education program, the role of student teachers and teacher educators will be emphasized in this section. However, the role of graduated novice teachers can be considered a supporting role to determine the extent of the preparedness of the past practicum and university-based teacher education program for becoming a teacher in the profession. Thus, the role of student teachers, teacher educators, and novice teachers related to the professional event of the practicum will be discussed in the following paragraphs.

3.4.8.1 Student teacher

The primary participants in the practicum are the student teachers. During the practicum, student teachers are required to change their roles, activities, and practices from student-teacher lives at the university program to teacher lives in the school setting. Based on the literature, student teachers learned for their professional development, valued the importance of practicum, saw the theory-practice gap, got anxious, and encountered expected and unexpected problems during the practicum. Thus, the literature

under this topic will be summarized into student teachers' professional development through practicum, positive perceptions of the practicum, problems and anxiety during the practicum, and student teachers' coping strategies during their practicum.

Student teachers can learn and develop their professional knowledge and skills from the practicum. Writing reflective journals and seminars related to the practicum also supports their professional learning. Prospective teachers can develop comprehensive knowledge about their subject matter, apply diverse teaching techniques in a real classroom setting, develop effective communication skills with students and parents, collaborate with fellow educators, and transform into reflective practitioners in preparation for their future teaching careers (Li, 2016).

Thus, student teachers valued practicum components and assumed them as a bridge for them to understand theoretical knowledge and practical knowledge. The practicum is widely regarded as the most esteemed element within teacher education programs that strive to cultivate thoughtful, reflective, and inquisitive educators (Tuli & File, 2010) and enhance student teachers' practical classroom skills (Thomas, 2012). Geng and others (2016) suggested enhancing the program and the practicum part to fill the conceptual and practical gap in initial teacher education and teacher professional development.

The studies (Smith & Lev-Ari, 2005; Nwanekezi et al., 2011) show that student teachers have high and positive attitudes toward teaching practice, the significance of teacher education curriculum, and the critical assistance they received from academic educators from the university, peers and mentors in schools.

Student teachers demonstrated a positive outlook regarding their acquisition of knowledge and skills, self-efficacy, adaptability, spontaneity in performance and interactions, as well as their awareness of being reasonably accepted and recognized within the school community (Caires et al., 2012). Moreover, student teachers recognized the teaching practicum as a valuable avenue for implementing their theoretical learning into real-world school teaching practices (Sulistiyo et al., 2017). Pre-service teachers indicated that the practicum placements also facilitated their professional growth and development, as they progressed from observing experienced teachers to independently teaching full classes over an extended duration (Choy et al., 2014).

Although student teachers have positive perceptions of practicum, they face many problems and stressful situations during their first practicum. Murray-Harvey and others (2000) surveyed student teachers' stress in the practicum and sources of support to cope with the stress. Student teachers reported that student-supervising teacher relationships play a significant role in identifying their stress in the practicum, and seeking support was their primary coping strategy. The other study determined teacher candidates' academic procrastination by predicting coping strategies and academic motivation. The results revealed that the best predictors of academic procrastination were avoidance, self-transcendence, and discovery, among other predictor variables (Kaya & Kaya, 2014).

According to Maynard's (2001) finding, in the early days of student teachers' school placements, their main concern was personal survival. Personal conflicts and survival might occur when student teachers unwillingly accept the suggestions from the other teachers for managing things. During the school placement, they began to develop teacher identity, but they might have different conceptual understandings than their cooperating teachers. Managing the classroom was the main teaching stress, and pre-service teachers coped with that anxiety by consulting with their mentors teachers. They were concerned primarily with being observed by a mentor. Nevertheless, each participant developed different coping mechanisms (Han & Tulgar, 2019).

Danner (2014) discovered teachers candidates' the practicum related anxieties and found that cooperation, assessment, preparation, ineffective lesson, and classroom management. Three significant themes of student teachers' concerns include classroom management, student motivation, and parent involvement (He & Cooper, 2011). Student teachers experienced the same problems in the study (Rivera & Gomez, 2017): lack of motivation, vocabulary, and interaction.

Akdağ and Haser (2016) studied the classroom management concerns of pre-service early childhood education teachers and their coping strategies before graduation and after they started to work in public schools. The findings revealed that all the participants worried about classroom management because they felt unprepared. However, they encountered fewer problems than anticipated after they started to teach. Their coping strategies include establishing trust and close relationships with students and involving them in deciding on the problems to create a peaceful classroom environment.

O’Grady and others (2018) researched pre-service teachers’ power relations with university-based tutors and cooperating teachers during school placement. Pre-service coped with dysfunctional professional relationships through compliance and silence. The authors mentioned “biting one’s lip” and “distancing” to indicate pre-service teachers’ dysfunctional relationship with university-based tutors and cooperating teachers. As the practicum placement is conducted with a collaboration between two parties of practising schools and universities, both partners must recognize the challenges of student teachers during this period. Thus, measuring practicum-related stressors is critical to understanding student teachers’ difficulties (Kokkinos et al., 2016). However, the scholars highlighted needing more evidence on recently developed and theoretically sound scales and structured and organized ways of investigations on practicum issues for teacher education.

Practicum is stressful for the student teachers as it is a sudden change in their lives from the student role in university to the teacher role in school. Pre-service foreign language teachers encountered many challenges, including student misbehaviour problems and poor classroom conditions. They establish the rules and reinforce consequences for coping with student misbehaviour. However, alternatively, they contacted more actual classrooms and learned from experienced teachers to improve their classroom management skills (Macías & Sánchez, 2015).

In the study of Gustems-Carnicer and others (2019), many teacher-education students were stressed and used avoidance coping strategies. It was also found that the students who had less stress and engaged more in problem-focused coping were successful in their academics. Students under more stress affected their performance. The authors emphasize the importance of acknowledging and tackling the detrimental impact of stress on both the well-being and academic accomplishments of teacher education students to prevent enduring issues in their professional and personal lives.

3.4.8.2 Novice teacher

Novice teachers are recent graduates from the teacher education college/university program and beginners. It is also a miracle for novice teachers to suddenly change their role from student teachers' lives to beginners' lives in the profession. Researchers (Choy et al., 2013; Gaikhorst and others, 2017; Uugwanga, 2017; Gan, 2018) have highlighted the importance of positive experience, how novice teachers improve their pedagogical

knowledge, how they see their university program and their new duties and challenges during their early period of teaching.

The early period of teaching is the most challenging and essential stage of a novice teacher's career for their professional development. According to Gan's (2018) research, many newly qualified teachers encounter significant obstacles and feel daunted and ill-equipped to address the problems and difficulties that arise in early period of teaching.

Beginning teachers had a positive attitude toward teacher education programs. Beginning teachers felt that the course could have been made more professional. Teaching practice from university programs was considered essential, and the extension of that period was recommended by beginning teachers (Bezzina et al., 2004). Novice teachers improved their pedagogical knowledge in classroom management, lesson planning and instructional support at the end of the first year of teaching (Choy et al., 2013).

However, novice teachers had gained little direct value in teaching experience, pedagogical knowledge, and they needed help to apply their practicum experiences according to current teaching situations (McPherson, 2000). The first year of teaching is a survival time for novice teachers transitioning from teacher education to full-time teaching. Novice teachers were overloaded with the tasks and responsibilities given to them (Uugwanga, 2017) and experienced various challenges in coping with their new roles as professionals. Novice teachers needed support to address practical and technical problems, manage students with different backgrounds, and effectively use teaching methods (Caspersen & Raaen, 2014).

Schulze and Steyn (2005) reported that novice teachers needed help with isolation among many experienced schoolteachers, inadequate academic knowledge and proficiency, difficulty using teaching methods, and time and class management. Gaikhorst and others (2017) found that beginning teachers experienced high workloads and stress, no guidance and support, and no contact with parents. The authors suggested a support system for beginning teachers. Beginning teachers' challenges include misbehaviour of students, classroom management, and problems with principals, parents, and other teachers in their early teaching period. However, they can cope with most of their challenges with the support of principals and experienced teachers (Chaw & Kopp, 2019).

Generally, novice teachers perceive teacher education programs positively in their pedagogical knowledge development. However, they have to solve with many problems

related to the teaching-learning situation and find little difference between knowledge and experiences from the faculty and practices in the school situation. However, novice teachers' experiences during their early teaching and reflections on the past practicum and university program are essential factors for the practicum and program development.

3.4.8.3 Teacher educator

Teacher educators from the university and college of education steers the practicum context. Teacher educators' role include preparing prospective teachers to be acquainted with the theoretical and pedagogical knowledge at the university or college and practices such as peer group teaching and lesson planning. Teacher educators offer guided experiences and assist aspiring teachers in comprehending the comprehensive role of a teacher (Tuli & File, 2010).

Teacher education is conceptualized as a second-order field, and teacher educators are second-order practitioners (Murray, 2016). "Teacher educators design and implement the curriculum" and their experience assist their professional decisions with students in school. Teacher educators' practical knowledge, curricular decisions, and practices impose the work of preparing their pre-service teachers for diverse classroom contexts. The work of teacher educators has changed from schoolteachers to teachers of teachers in teacher education and working in different pedagogical, practical, and contextual settings. Besides, Cochran-Smith (2005) highlighted the role of teacher educators as both researchers and practitioners (Cochran-Smith, 2005; Murray, 2016).

3.4.9 Induction

Although induction programs are mostly related to novice teachers, this study used the terms "mentoring" and "induction" interchangeably to explain the novice teachers' getting support in their early teaching period.

Induction period may be defined as a teacher education program offered during the first year of teaching. Induction is a formal program for beginning teachers in contemporary education practice and policy discussions. However, the term induction is used to label a unique phase in learning to teach. According to Coolahan and Conway (2011), induction can happen with or without a formal program. The primary objective of an induction program is to provide both professional and personal support to beginner teachers, enabling them to shape their professional identity and facilitate continuous growth throughout their careers. This support system is implemented within the school

setting, where an experienced teacher collaborates with initial teacher education providers, assisting novice teachers in adapting to the local context and effectively resolving challenges (Coolahan & Conway, 2011).

The period of transitioning from initial teacher education and training institutions to actual school environments is considered the pivotal stage in the journey of becoming a teacher. The significance of practice and field experiences in teacher education has become a major focus. Various initiatives are being undertaken to make initial training preparation (ITP) more oriented towards practical application, aiming to bridge the gap between theory and practice in initial teacher education programs. These efforts aim to offer initial support to address specific challenges faced by novice teachers, such as workload, classroom management, insufficient collegial support, and limited knowledge of the school culture (OECD, 2014). To ensure that induction support for teachers is both positive and effective, it is crucial to enhance the integration of these programs within pre-service education and training. Furthermore, it is essential for these programs to extend well beyond the initial year of teaching experience in schools (OECD, 2014).

Mentoring programmes are the running head of the organization of induction of beginning teachers. Zulijan and Pozarnik described several necessary conditions to ensure the success of induction initiatives: financial support (reducing teachers over workload and mentor teachers for mentoring activities), clarifying the roles of novice teachers and mentors, principals, promoting collaboration among various stakeholders within the education system, implementing robust quality management practices, and fostering a culture that prioritizes schools as learning communities (OECD, 2014). The induction process supports teachers' further acquisition of skills, knowledge, and attitude (Britton, 2003). The induction process involves a range of activities aimed at helping new teachers adjust to their roles and responsibilities.

3.4.10 Understanding Coping Theories and Research in Teacher Education

The previous section mentioned the role of student and novice teachers who have encountered different challenges related to teaching and learning. Understanding teachers' experiences and problems is necessary to improve the practicum component and teacher education program. In addition, student teachers' ways of coping with their stress and problems should be addressed because unsuccessful coping strategies can negatively

affect their personal lives and environment. Thus, coping theories are briefly described in this section to explain the origin of coping theories and strategies.

3.4.10.1 Theories of coping

The concept of coping related to stress has been widespread in psychology between the 1960s and 1970s. From that time, scientists from different professional fields, such as developmental psychologists, sociologists, scientists, and professionals from mental health, tried to understand the concept of coping and conceptualized it in different ways. However, most scholars referred to the original coping theory of Lazarus and Folkman (Chaw & Kopp, 2021).

Coping encompasses an individual's cognitive, emotional, social, and ethical endeavors to regulate or minimize both external and internal demands and conflicts arising from cognitive judgments and stress-related interpersonal and intrapersonal interactions (Lazarus & Folkman, 1984). Coping approaches can be classified into a style approach and a process approach. In the style approach, coping is associated with personality traits, indicating that coping strategies are influenced by individual characteristics. Conversely, the process approach views coping as a dynamic process of stress management, where coping methods can evolve over time and are shaped by the adaptive context (Lazarus, 1993). Under the process approach, there are two theories of coping: the problem-focused coping theory, which focuses on contextual factors, and the emotion-focused coping theory, which originates from emotional responses to problems (Lazarus, 1993).

Coping models can be classfied as trait approaches, microanalytic and macro-analytic conceptions (Zeidner and Endler, 1996; Krohena 2004). Microanalytic approaches centre on many concrete coping strategies, but macro analytic analysis operates abstractly and theoretically based.

Folkman and Lazarus (1988) developed the "Ways of Coping Questionnaire (WOC)" based on the theory of the microanalytic approach. Microanalytic approaches focus on many specific coping strategies: confrontation, distancing, self-controlling, seeking social support, taking responsibility, escape avoidance, planned problem-solving, and positive reappraisal. Referring to that WOC, Amirkhan, (1990) derived a "Coping Strategy Indicator (CSI)" including three main coping scales: problem-solving, seeking

support, and avoidance coping strategies. These two coping measures are situational (state-based) coping strategies (Greenaway et al., 2015).

3.4.10.2 Research about problems and coping strategies in teacher education

Pollard (1982) argued the concept of coping strategy in that the experience of a child (suffering from teacher power) or of a teacher (worried by the crowd) threat might reflect through self and the classroom contexts. That kind of survival threat can become patterns, and cultural knowledge will become institutionalized through coping strategies. Material, biographical, role, and classroom interaction factors posed essential aspects for the problem and coping for teachers and students in their daily lives in school.

A systematic review about coping research in teacher education published between 2016 to May 2021, was conducted as a component of this study. Based on the final 61 studies after data cleaning, it was found that scholars researched coping strategies of various problems regarding to teaching-learning, psychological and environmental issues (Chaw & Kopp, 2021). Coping research is mostly found in European countries and many studies referred Lazarus and Folkman's (1984) coping theory as a foundation. Most studies used the quantitative research method—different indicators and scales [e.g., Brief coping (Carver, 1997), The Indicator for measuring coping strategies (Amirkhan, 1990), Coping strategies for stressful situations (Endler & Parker, 1990), Ways of coping questionnaire, (Folkman & Lazarus, 1988), six prominent instrument used in coping research (Greenaway et al., 2015)] are applied to measure the coping strategies.

Aydin and Kaya (2016) investigated the origin of stress occured teachers and the coping methods they used. Teachers' stress rooted from school management, the profession and infrastructure of the school, insufficient resources, continuous monitoring, boredom, burnout of the profession, competition, ambition, student misbehaviour, high expectations, and insufficient time to allocate for themselves. Teachers used to look at things positively, dedicating time to their loved ones and fostering an environment conducive to spending quality time with them as a means of managing and coping with stress.

Agriculture teachers in the study of Lawver and Smith (2014) had occupational stress related to students' time management, discipline, and motivation. They will most likely use distancing coping mechanisms to minimize their emotional ties to the situation. However, they used confronting actions in facing individuals with aggressive manners.

Thus, the authors suggested that teachers should be encouraged to move away from problematic issues and toward positive problem-solving and seek mentoring and guidance from experienced teachers.

Griffith et al. (1999) suggested that avoidance and restraining or neglecting competing activities may contribute to job stress but are maladaptive coping methods in a teaching environment. In Sekiwu's (2009) study, the researcher investigated teachers' comprehension of the challenges associated with teaching and learning in large class settings and explored the coping strategies employed to enhance effectiveness in teaching and learning. The results revealed that teachers demonstrated a comprehensive understanding of the difficulties inherent in facilitating effective teaching and learning within large classes. The author suggested that using student-centred methods, sharing instructional materials, constructing more classrooms in coping with teaching in large classes,

In the study of Antoniou and others (2013), teacher candidates at primary level experience higher stress than secondary education teachers. Female teachers experience much stress compared to male teachers. Rational coping behaviours help teachers overcome work-related stressors and achieve valued outcomes with students. However, avoidance coping predicted high levels of stress and burnout. Another similar study by Rao and Naidu (2018) presents the perceived occupational stress among private and government teachers in educational institutions. Teachers employed a variety of methods to cope with stress, which encompassed adopting positive thinking patterns, seeking assistance from their social network, tapping into their spiritual and religious beliefs, participating in physical activities, employing problem-solving skills, resorting to detrimental coping habits, utilizing unproductive mechanisms, and engaging in high-risk behaviors.Nwosu and others (2018) studied part-time undergraduate student teachers' coping strategy and their academic engagement. Their findings showed that participants used more problem-focused coping than emotion-focused coping strategies.

3.5 Theoretical Framework

This descriptive analysis of the practicum study uses ideas from complexity theory as a theoretical lens to guide the analysis of the implementation of the practicum system in an initial teacher education program. This study drew on ideas from complexity theory to describe, analyze and interpret what has happened in the implementation of practicum

from the perspectives of student teachers, novice teachers, and teacher educators in the areas of difficulties, coping strategies, mentoring, practicum period, university program, and competency achievement.

Bronfenbrenner's ecosystem theory (1977) suggests that individuals develop within a complex system of relationships and interactions across various contexts and levels. These levels are interconnected and can influence one another, leading to different outcomes for the individual's development. He proposed five system contexts: (a) the microsystem, (b) the mesosystem, (c) the exosystem, (d) the macrosystem, and (e) the chronosystem. The microsystem is the most influential context in shaping an individual's development, as it involves direct interactions and relationships with others. The microsystem (individual), the meso (school policies, school funds/school level), and the macrosystem (cultural and social conditions/program level) are strongly related to this study. From the micro, and mesosystem perspective, this study will analyze individual student teachers' and novice teachers' problems, coping strategies, perceptions of the practicum, mentoring, and university program, and competency achievement related to the teaching-learning situation and school placements. From the view of the macro system, this study will analyze the teacher education policy documents related to the practicum in Myanmar.

Dewey's experience-based learning theory is considered to understand student teachers' learning from their experience in practicum. According to Dewey (1938), prior experience is the first-hand experience of the physical and social environment through direct interaction. The secondary experience involves reflecting on and making sense of the primary experience. This reflective process enables individuals to better understand the world around them. Dewey also believed that gestalt, or patterns of thought, feeling, and behaviour, play a significant role in shaping our experiences and learning. These gestalts are formed through our previous experiences, values, beliefs, and attitudes, and they can influence our perceptions and responses to new situations. In the context of student-teacher learning, by reflecting on their prior experiences and examining their gestalts, student teachers can learn from their experiences and improve their teaching skills.

Social constructionism is the theory that people develop knowledge of the world in a social context. From a social constructionist perspective, many things can be learned

from the construction of knowledge through socialization with people and the environment. It can be assumed that student teachers and novice teachers interpret their meaning related to the environment and others through socialization (Vonk, 1989). In the context of teaching, social constructionism suggests that students and novice teachers construct their understanding of teaching and learning through their interactions with others, such as experienced teachers, colleagues, and students. This process of teacher socialization involves adapting to the attitudes, values, norms, and skills of the teaching profession through socialization with others. Novice teachers may learn about the expectations and practices of the teaching profession through their interactions with experienced teachers, students and parents.

Bandura's Social Cognitive Theory (1986) offers a valuable theoretical framework for comprehending how student teachers and novice teachers interpret their experiences. According to this theory, knowledge is not fixed but rather subject to personal interpretation. To acquire knowledge, individuals must actively process information and construct their own interpretations based on previous experiences, personal perspectives, and cultural backgrounds. In the context of student teachers and novice teachers, it can be understood that they construct their understanding by building upon their prior knowledge and experiences. When confronted with new ideas and encounters in the school environment, they compare them to their existing knowledge and construct new or adapted frameworks to make sense of their surroundings.

This study framed coping theory of Lazarus and Folkman (1984), problem focused and emotion focused coping theories. Based on these theories, microanalytic techniques were developed and include eight coping strategies: confrontation, distancing, self-controlling, seeking social support, taking responsibility, escape avoidance, planned problem-solving, and positive reappraisal. The microanalytic approach is chosen for this current study as it contains specific coping strategies for analyzing individual teachers' efforts to minimize the problems related to the teaching-learning situation.

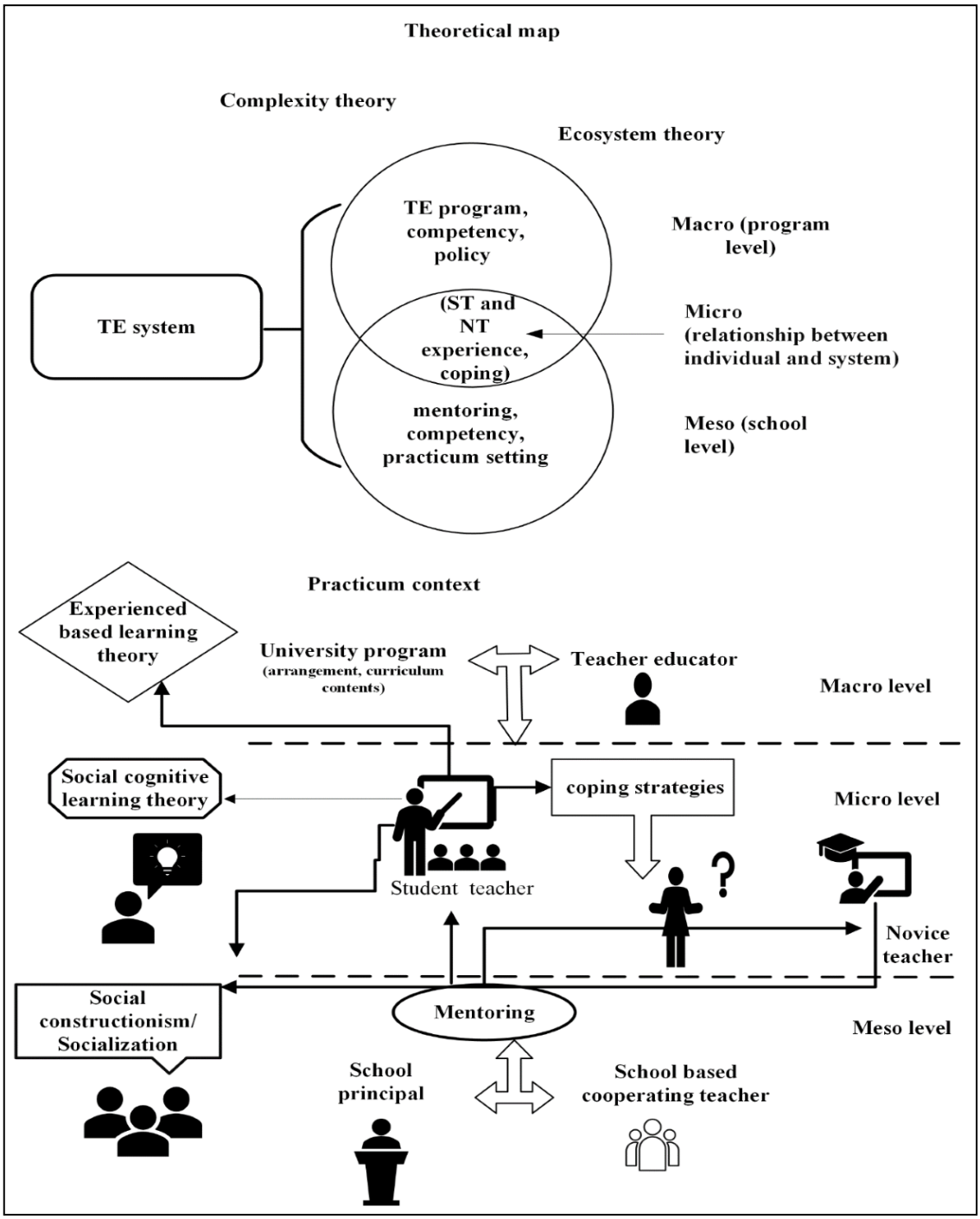


Figure 12 Theoretical Framework of the Study. Source: Author

Summary of the chapter

This chapter provides existing literature related to teacher education. It offers insights into seeing teacher education as a system and program and the strengths and weaknesses of the research on teacher education. Besides, it also highlights the particular focus on the role of the practicum in teacher education. After that, it includes consideration of the study's theoretical, framework. The next chapter will highlight the research methodology part of the study.

Chapter 4 Research design and methodology

Preview of the chapter

This chapter mainly discussed the research methodology part of the study. The discussion about the research framework, research questions, research design, research process, sampling, and participants, developing research tools, data collection method, data analysis method, and ethical considerations are presented in this chapter.

4.1 Research Framework

The research paradigm for this doctoral study is positioned between interpretivism and pragmatism as it explores participants' personal experiences and focuses on renewing practicum and providing considerations for curriculum and program development policy. Interpretivists believe that reality is socially constructed, mind-dependent, and personal (Creswell, 2014). Interpretive epistemology is characterized by subjectivity, as individuals engage in interactions with others and society, attributing significance and assigning labels to various social phenomena. The truth lies within the human experience (Chilisa, 2012). Interpretivists acknowledge that diverse backgrounds and experiences of individuals collectively shape the construction of reality within their social context through meaningful social interactions. The role of the researcher in the interpretive approach is to get a deeper understanding of individual perspectives and explain social reality through multiple perspectives of different participants (Chilisa, 2012; Elshafie, 2013; Eusafzai, 2014).

Interpretivism's point of view for this study can be assumed that it is crucial to focus research efforts on the actual actions and lived experiences of student teachers, teacher educators from universities, and beginning teachers during the practicum, as these hold the key to genuine insights and knowledge to gain a comprehensive understanding about the running process of practicum. The knowledge assumed to be known encompasses the subjective insights and individual experiences of student teachers, teacher educators from universities, and beginning teachers.

Taking a pragmatist approach, this study examines the potential for practicum renewal and policy considerations. Pragmatists prioritize the research problem at hand and employ a wide range of approaches to comprehend it fully. They recognize that research is always embedded within social, historical, political, and other contextual factors (Creswell & Creswell, 2018). Advocates of the pragmatist perspective begin their

research journey by formulating research questions that guide the selection of appropriate frameworks. Pragmatist researchers show a preference for utilizing both quantitative and qualitative data, as it allows for a more comprehensive understanding of social realities (Dina Wahyuni, 2012).

Pragmatism emphasizes the practical theory that emphasizes the construction of theory to understand the context and is likely to work locally (Wyse et al., 2017). Pragmatists presume both objective and subjective nature of the social world (Teddlie & Tashakkori, 2009). According to the pragmatist perspective, there are no universally applicable laws or principles, as they are contingent upon historical and contextual factors, including our subjective values. In the context of this study, the pragmatist viewpoint encompasses a focus on policy development for curriculum and program enhancement, as well as an understanding of how practicum implementation is influenced by various stakeholders.

4.2 Research Questions

The research questions are developed based on the aim and in accordance with the research design.

Table 1 Research Questions

1. What are the main characteristics of practicum in initial teacher education in Myanmar?	
1) How is the practicum framed (in terms of aim, structure, activities, mentoring, and evaluation) in teacher education policy documents in Myanmar?	(doc analysis)
2. How do the different actors perceive the practicum in initial teacher education in Myanmar?	
1) How do student teachers perceive the role of practicum?	(quali)
a) What are student teachers' perceptions of their activities during the practicum?	(quanti)
i. Is there any noticeable variations in student teachers' perceptions of practicum period according to their	(quanti)

demographic factors (gender, affiliation, and academic level in teacher education)?	
ii. Is there any difference in student teachers' perceptions of the practicum period according to school-related factors (school location, duration of practicum period, teaching level)?	(quanti)
b) What are the difficulties that student teachers encounter during their practicum?	(quali+quanti)
i. Is there any difference in the difficulties of student teachers between different school locations?	(quanti)
c) How do student teachers cope with the challenges during their practicum?	
i. What are student teachers' preferred coping strategies for their daily lives?	(quanti)
ii. What are the student teachers' coping strategies related to the difficulties during their practicum?	(quanti)
iii. Which items should be included in developing the instrument to measure student teachers' common coping strategies related to the teaching-learning situation?	(quanti)
d) How do student teachers perceive the role of mentoring during practicum? (What are student teachers' perceptions of their activities during the practicum?)	(quali+quanti)
i. Is there any difference in student teachers' perceptions of the role of mentoring according to their demographic factors (gender and study year)?	(quanti)
ii. Is there any difference in student teachers' perceptions of the role of mentoring according to school-related factors (affiliation, school location, teaching level)?	(quanti)

e) How do student teachers see university-based teacher education's preparation for their practicum? (What are student teachers' perceptions of their activities during the practicum?)	(quali+quanti)
i. Is there any difference in student teachers' perceptions of the role of university programs according to their demographic factors (gender, affiliation, and academic level in teacher education)?	(quanti)
f) What are the student teachers' perceptions of their competency developement?	(quanti)
(2) How do novice teachers reflect on their past practicum?	
a) What are novice teachers' general coping strategies for their daily lives?	(quanti)
b) What difficulties do novice teachers face during their early period of teaching?	(quali+quanti)
c) How do novice teachers utilize the knowledge and skills acquired in past practicum to cope with the difficulties encountered in early period of teaching? (What are novice teachers' coping strategies related to teaching-learning difficulties?)	(quali+quanti)
d) How do novice teachers perceive the role of mentoring? (What are novice teachers' perceptions on the mentoring or support system during their practicum?)	(quali+quanti)
e) How does the past practicum experiences in university-based teacher education program provide support to the first-year teaching of novice teachers? (What are novice teachers' perceptions of the role of university-based teacher education?)	(quali+quanti)
f) What are the novice teachers' perceptions of their competency development?	(quali)
(3) How do university-based teacher educators perceive the changing role of the practicum?	(quali)

a) How do university-based teacher educators perceive the student teachers' practicum?	(quali)
b) How do university-based teacher educators perceive the support and evaluation of student teachers during the practicum?	(quali)
c) What are university-based teacher educators' opinions on better practicum and program?	(quali)

4.3 Research Design

Johnson and colleagues (2007) propose that pragmatism serves as the fundamental philosophy behind mixed research. They position mixed research as a bridge between quantitative and qualitative approaches, aiming to honor the strengths of both perspectives and find practical solutions to research problems. The reasons methodologists for conducting mixed-method research include validating and explicating findings from another approach, producing more comprehensive findings, and offering more meaningful answers to research questions to meet the aims of the research.

A mixed methods design becomes advantageous when neither a purely quantitative nor qualitative approach is sufficient to fully comprehend a research problem, and when the combined strengths of both approaches can offer the most comprehensive understanding (Creswell, 2014). Mixed methods research enables the investigation of complex social phenomena, uncovering patterns and associations, generating findings that support generalizations, developing and testing theories, providing detailed descriptions, and identifying patterns that offer evidence to enhance understanding of educational topics (Wyse et al., 2017).

Researchers are confronted with the task of selecting the most suitable paradigm that aligns with their chosen approach. The decision-making process involves considering multiple paradigms that can be applied to different mixed-method designs (Teddlie & Tashakkori, 2009). However, this study is framed within the qualitative dominant mixed methods research framework, as the research aims are associated with interpretivism and pragmatism. It is a type of mixed research that relies on a qualitative view of the research process and concurrently recognizes the role of quantitative data and approaches for the study (Johnson et al., 2007). At the research design stage, qualitative data can assist the

quantitative component of a study by helping with conceptual and instrument development.

Thus, this study chose an exploratory sequential mixed method design. An exploratory sequential mixed method is a three-phase design beginning with exploring qualitative data and analysis, then developing a feature to be tested and testing this feature in a third quantitative phase. This design aims to explore with a sample first so that a later quantitative phase can be tailored to meet the needs of the individuals being studied. Sometimes this quantitative feature includes developing a contextually sensitive measurement instrument and developing new variables unavailable in the literature (Creswell & Creswell, 2018). The research design and phases can be seen in figure 13.

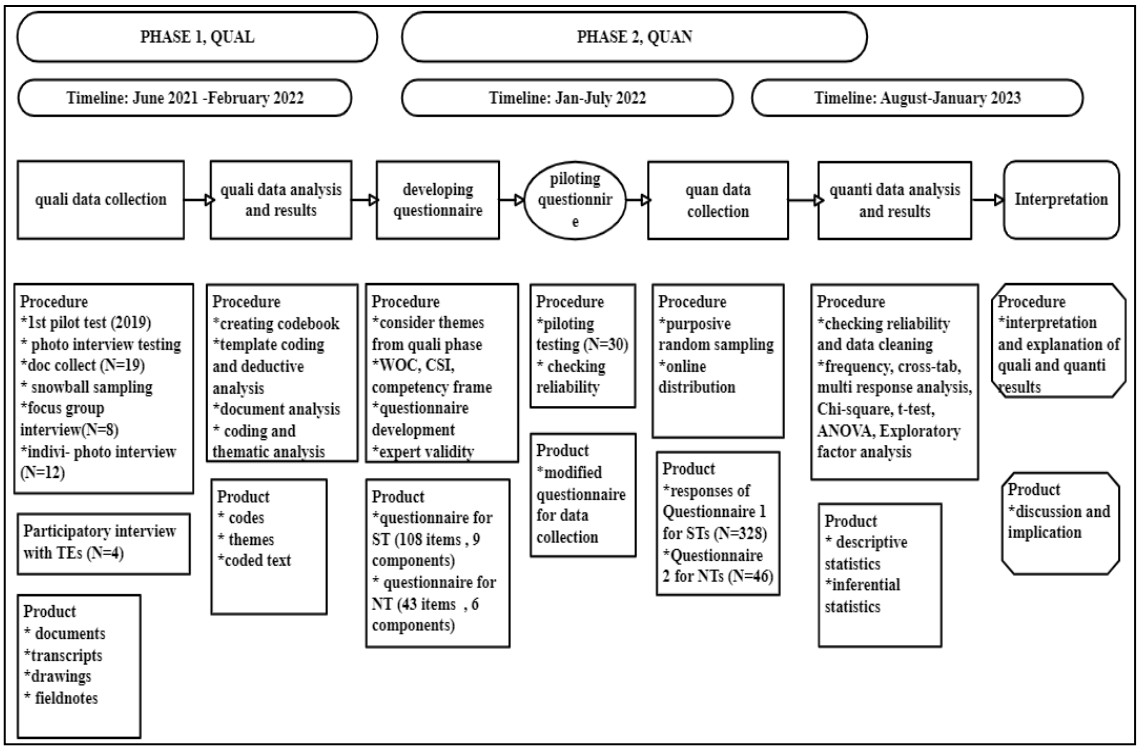


Figure 13 Exploratory Sequential Design of the study. Source: Author, adopted from Berman (2017)

4.4 Analytical Framework

This study used a mixed-method methodology and framed this between interpretivism and pragmatism. As a research design, an exploratory sequential mixed method design is used. For the data collection method, focus group interviews, photo-elicitation interviews, document collection, and questionnaires will be used. As for the data analysis methods, the deductive approach to conduct document analysis and thematic analysis (inductive coding approach) were conducted to analyze photo elicitation

interview data and focus group data for the qualitative part. SPSS software is used to conduct the descriptive and inferential analysis methods, including M, SD, frequency, multiple response analysis, exploratory factor analysis, t-test, Chi-square analysis, and ANOVA tests.

The interview questions and photos were collected and developed based on the pilot tests, research questions, and theoretical framework. After analyzing the interview data, a questionnaire was developed. The items under the practicum variable will be categorized into perceptions of the practicum period and activities during the practicum. Mentoring variable is categorized into expectations of mentoring and perceptions of getting support. The items for developing University/college programs is considered in courses, teaching methods, and perceptions of the program. The competency component is adopted and categorized from Hungary's student teachers' competency framework (Kopp & Kalman, 2023) and the teacher competency standard framework from Myanmar (Ministry of Education, 2019).

For developing the items related to coping strategies, the "Ways of Coping Questionnaire" by Folkman and Lazarus (1988) and "Coping Strategy Indicator" by Amirkhan (1990) is adopted in this study to understand and analyze student teachers' and novice teachers' coping strategies related to the teaching-learning situation in this study. These two coping measures are related to situational coping strategies. It is challenging to adopt the coping scales or indicators related to teacher education from totally different cultural contexts and situations, especially in the case of Myanmar. That motivates the researcher to develop the indicator for coping scales of student teachers' problems related to the teaching-learning situation during the practicum from the current study. These two situational-based coping measures were put as the frame of the questionnaire, combined with the results of interview data, and items for measuring student teachers' coping strategies were developed.

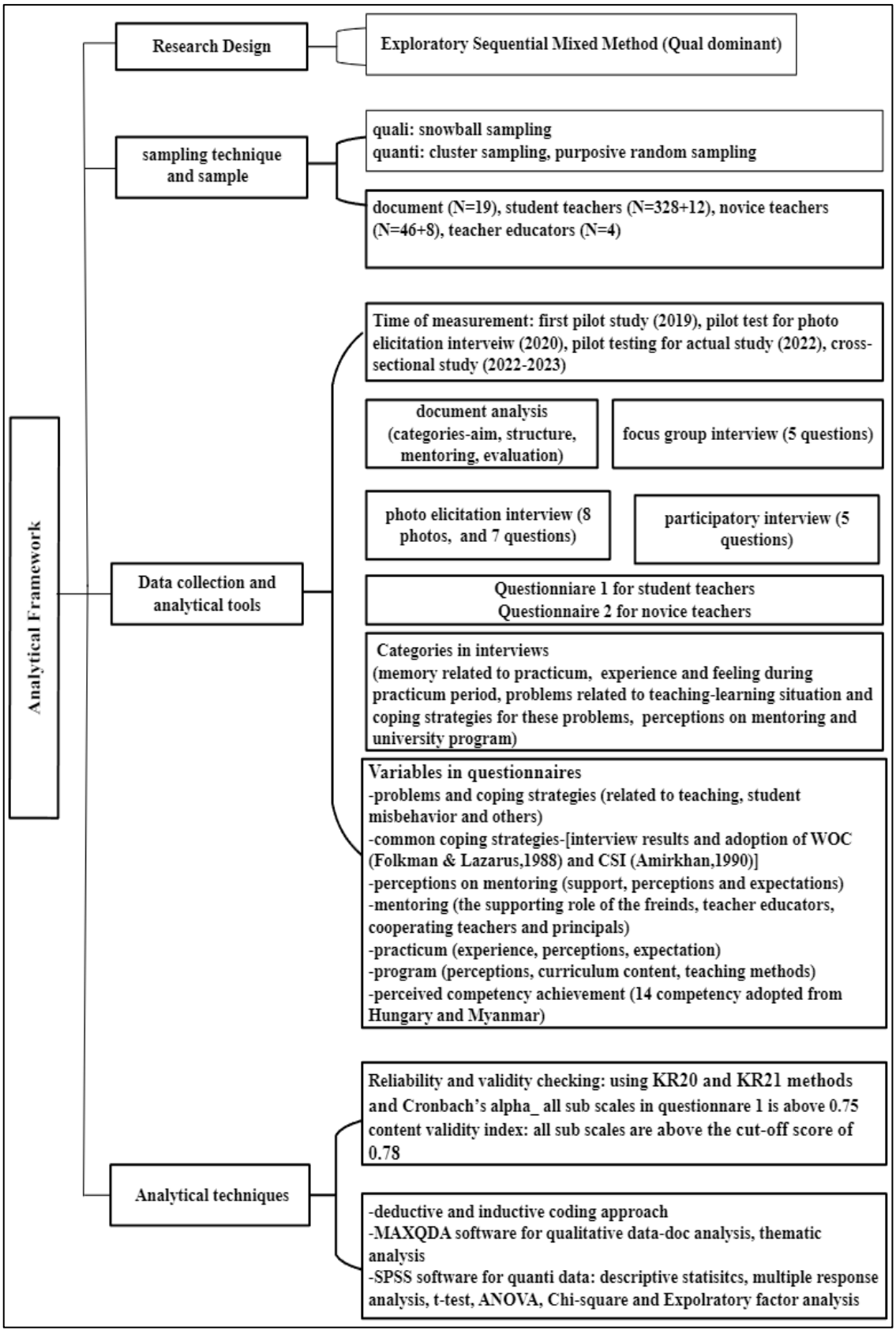


Figure 14 Analytical Framework of the study. Source: Author

4.5 Research Process

This doctoral journey was started in 2018 by collecting literature and preparing for the pilot study. The first pilot study was conducted to check the feasibility of the interview questions and survey in June 2019. At that time, the questionnaire was not validated. The survey items for student-teachers and novice teachers were intended to investigate the general practicum experiences. Based on the first pilot study results, it was found that the survey items were not feasible for achieving the aim of the study.

Darling-Hammond and others (2002) found that teachers' perceptions depend on individual and contextual differences, and teachers' views of their preparation varied across individual programs. Myanmar is still a developing country, and its unique context has influenced the education and teacher education system of Myanmar. The results in the first pilot can be interpreted that the survey for investigating the practicum experiences of student-teachers and teacher education programs were only partially feasible for the local context of Myanmar. Then, decisions were made to include visual methods, documents, and validated questionnaires for the Myanmar context.

The documents and data were collected for the second pilot test in 2020. The pandemic period interrupted and delayed the data collection process. The pandemic in Myanmar started in the third week of March 2020, and the Universities and schools closed for nearly one year. The second pilot tested for photo interviews in late 2020 and modified the necessary part for the actual study. After that, individual photo interviews were conducted in June 2021, and the data was analyzed for the questionnaire's development.

Pilot testing for the questionnaire was completed in March 2022. Next, the online data collection process was started and ended in July 2022. The data analysis and the writing process were continued. The research activities and publication process during the journey were illustrated in figure 15.

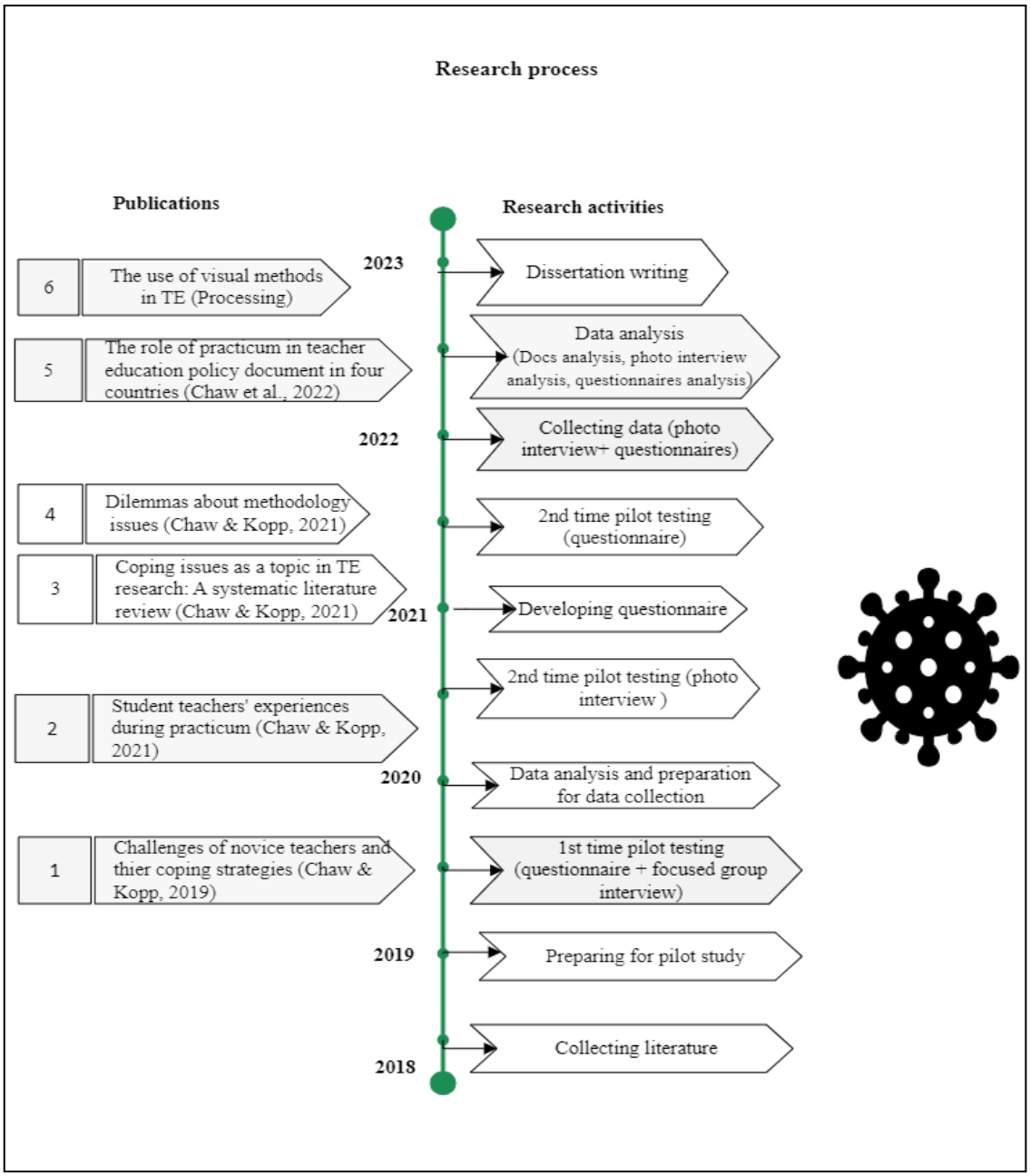


Figure 15 Research Process of the Study. Source. Author.

4.6 Sampling and Participants

Sequential mixed methods sampling involves the selection of units of analysis for the study through the sequential use of purposive and probability sampling strategies (QUAL → QUAN). It means that information from the qualitative sampling procedure is often required to draw the quantitative sampling procedure (Teddlie & Tashakkori, 2009). The participants' group for this study includes student teachers, novice teachers, and teacher educators.

For the qualitative strand of the study, the researcher chose snowball sampling from the purposive sampling method. Purposive sampling addresses specific purposes related to research questions. Snowball sampling is a well-known purposive sampling technique that involves using informants or participants to identify additional cases that may be included in the study (Patton & Patton, 2002). The total sample for the QUAL strand was twelve student teachers, eight novice teachers, and four teacher educators. The criterion for choosing the participants is that those student teachers and novice teachers who had practicum (blog teaching or practice teaching) experience in their teacher education program and those teacher educators who had experiences in the arrangement or supporting role of the practicum.

In the quantitative part, cluster sampling and purposive random sampling were used. In cluster sampling, groups (clusters) occur naturally in the population instead of sampling individual units. Cluster sampling occurs when the researcher wants to generate a more efficient probability sample regarding monetary or time resources (Teddlie & Tashakkori, 2009). Purposive random sampling involves taking a random sample of a small number of units from a much larger target population (Kemper et al., 2003).

Student teachers who completed their practice teaching two times at the practising school are considered the target population group of student teachers for this study. Thus, this study's target group of student teachers includes 4th-year student teachers and 3rd-year student teachers (who transferred from Education Degree College). Those student teachers are currently studying at one University of Education out of two Universities of Education in Myanmar. Besides, student-teachers who recently got diplomas from Education Degree Colleges (the old system) were randomly selected out of 25 Education Degree Colleges. The novice teachers in different Basic Education schools in geographically diverted areas were also requested to participate in the study.

The total population of the cohort 4th year student teachers at the University is 217, but 108 student teachers responded to the questionnaire. There should be a 124-sample size for a total population of 217 (90% confidence level). The 108 samples in this study required only 16 participants (124-108= 16) to reach that level. Besides, the cohort of 3rd year (COE) student-teachers is 222, and 156 student-teachers answered the questionnaire. There should be 147 sample sizes for a total 222 population (95%

confidence level), but 156 student teachers in this study cover more than enough sample size for that population group.

The pandemic and political situation make getting information from the entire population of student teachers and novice teachers difficult. However, the total number of participants in the quantitative portion of this study includes 328 student teachers from the University of Education, Education colleges, and those who finished their degree/diploma recently, and 46 novice teachers from Basic Education schools in different geographical areas.

Table 2 Participant group and samples

Participant groups	Total population (T)	No. of participants in answering questionnaire (N)	No. of participants in interviews (N)	Total number (N)
Student teachers	3rd yr STs=222	N=156	N=12	N=340
	4th yr STs=217	N=108		
	recent degree/diploma holder = not accessible	N=64		
Teacher educators	not accessible	-	N=4	N=4
Novice teachers	not accessible	N=46	N=8	N=54
Total		N=374	N=24	N=398

4.7 Developing Research Tools

4.7.1 Interview

a) Photo elicitation interview (for the student-teacher group)

Former student-teachers who recently graduated from the University of Education were requested to send the photos during their practicum. Before that, the purpose of the study was explained to former student teachers, who were requested to use their photos for data collection and publication. Some photos of the teaching-learning situation were collected from the public domain through Google searches.

Interview questions were based on the research questions, and suitable photos were selected. The sample photo-interview with 5 participants were pretested, including two teacher educators, two experienced teachers, and one novice teacher. Thirteen photos were used during the interview. Each interview took nearly 1 hour. The flaw of the interview was that it took a very long time, and using many photos reduced the participants' motivation and caused them to lose interest during the interview.

Based on the research questions and pretest, seven interview questions were developed, and eight photos were chosen for the interview for the actual study (Please check in the Appendix). The sample line graph was drawn for the second interview question, and the participants were asked to draw their line graph based on their experience during their practicum period.

b) Focus group interview (novice teacher group)

The focused group interview questions were constructed based on Albright & et al. (2017) and Sulistiyo & et al. (2017) study and research questions. Five questions were developed for the focus group discussion with novice teachers.

c) Participatory interview (teacher educators)

Significant and representative features were chosen based on the results of document analysis and interview analysis of student teachers' data, and the questions for participatory interviews were constructed. There were two general questions and five specific questions in the participatory interview protocol (Please see in Appendix 3).

4.7.2 Developing Questionnaires

The results from the qualitative strand influenced the instrument's design for the quantitative portion of the study. The questionnaire was developed based on the qualitative strand of interview results. Two types of questionnaires: (1) student teachers' questionnaire based on the photo-interview results and the literature, and (2) novice teachers' questionnaire based on the focused-group interview results of the pilot study and the literature were constructed for this study (Please see Appendix 4).

The structure of both student teachers' and novice teachers' questionnaires are nearly the same, and the items under each component of the questionnaire set are slightly different according to participants' contexts. Thus, it was assumed that the validation of the student teachers' questionnaire was enough as the other questionnaire had the same structure. However, reliability tests were done for all the items in both questionnaires.

a) Content validation

The questionnaire for student teachers consisted of categorical and numerical variables. In the group of numerical variables, there are four components: seventy items for measuring coping strategies, eight items for measuring the opinions on mentoring, ten items for measuring the opinions on practicum, and nine items for measuring the perceptions on the university/college program.

Validity can be defined as the agreement between a test score or measure and the quality it is believed to measure. Content validity checking includes determining whether a test has been constructed adequately and carefully evaluating the content of the items (Yusoff, 2019). Determination of content validity evidence is often made by expert judgment. In this study, nine experts (teacher educators from the University of Education) evaluated the questionnaire for student teachers to check the relevancy of items under each construct and provided feedback and suggestions.

The content validity evidence can be represented by the content validity index (CVI). The scale-level (S-CVI) and item-level (I-CVI) content validity index was calculated. This study followed the article of Yusoff (2019) and used the formula for S-CVI/Ave (S-CVI/Ave (scale-level content validity index based on the average method) = (sum of I-CVI scores)/ (number of items).

The results of the content validity index for the student teacher questionnaire were 0.8 for the general coping categories, 0.86 for the teaching difficulties categories, 0.89 for

the behaviour difficulties categories, 0.92 for the other difficulties categories, 0.97 for coping strategies scale, 0.92 for mentoring scale, 0.96 for practicum, 0.93 for program scale and 0.97 for competency scale. According to Lynn (1986), the acceptable cut-off score of CVI for nine experts is at least 0.78. The content validity index for each item in the instrument was checked, and the items below the score of 0.78 were eliminated and modified. Thus, all the results of the scale-level content validity index of the items in the questionnaire were above the cut-off score of 0.78 (Please check the results in Appendix 4).

b) Pilot testing and reliability checking

The validated questionnaire was sent to 30 student-teachers from one University of Education to check for the pilot testing. Before checking the internal consistency of the items in each component, missing values were deleted, and negatively worded items were recoded to positively worded values of strongly disagree 1 to strongly agree-5 and disagree-2 to agree 4. Descriptive statistics were computed to check the normality of the item distributions. Based on the descriptive statistics, valid responses were identified. The parametric nature of each item was also inspected. Only items with z-score values between +1.96 and -1.96 are accepted, as these values can be considered generally distributed for statistical analysis for a sample size of 30 participants (Field, 2017).

Some items from measuring coping strategies have greater z-score values and are not normally distributed as their z-score values are above 1.96. Thus, these items were considered again with the theoretical background. Cronbach's alpha coefficient measures were used to check the internal consistency of the survey items. In the pilot questionnaire, the internal consistency value for the measurement for coping strategies scale of 70 items is (α = .89), for the mentoring scale of 8 items (α = .53), for the practicum scale of 10 items (α = .70) and for measuring the opinions on university/college program scale consisted of 11 items (α = .39). According to Griethuijsen and others (2015), the acceptable value for Cronbach's alpha coefficient value is 0.7 or 0.6. Thus, some items below the acceptable alpha value from the measuring mentoring scale and measuring university/college programs scale were removed from the questionnaire.

c) Structure of the questionnaire

The final structure of the questionnaire for student-teachers includes nine components and 108 items: starting with their personal information (gender, age,

academic year, current school, duration of the practicum, school location, and teaching level); (1) four nominal multiple choice options for measuring their general coping strategies (based on Lazarus and Folkman, 1984) (N=1 item); (2) eighteen nominal multiple choice options for measuring their teaching difficulties attached with coping strategies options for each chosen difficulty) (N=1 item) (3) ten nominal multiple choice options for measuring difficulties related to managing students' misbehavior attached with coping strategies options (N=1 item) (4) eight nominal multiple choice options for measuring difficulties related to others cases attached with coping strategies for their chosen options (N=1 item); (5) sixty numerical items for measuring their coping strategies of Likert scale type ranging frequency from Never-1, Often-2, Sometimes used-3, Usually used-4 and Always used-5 (N=60 items) ; (6) seven numerical items for measuring their perceptions on mentoring of Likert scale type ranging agreement from strongly disagree-1, disagree-2, not decided-3, agree-4 and strongly agree-5 (N=7 items); (7) ten numerical items for measuring their opinions on practicum of 5-point Likert scale type ranging agreement from strongly disagree-1 to strongly agree-5 (N=10 items) ; (8) twelve numerical items for measuring their opinions on university/college program of Likert scale type ranging agreement from strongly disagree-1 to strongly agree-5 (N=12 items); and (9) fourteen nominal binary type items for measuring their perceived competency achievement from practicum or program (N=14 items) (See Appendix).

The questionnaire for novice teachers includes 6 components and 43 items: starting with their personal information (gender, age, teaching experience, duration of the practicum, school location, and teaching level); (1) four multiple choice options for measuring their general coping strategies (based on Lazarus and Folkman, 1984) (N=1 item); (2) thirteen nominal multiple choice options for measuring their difficulties attached with coping strategies for their chosen options (N=1 item); (3) seven nominal items for measuring their opinions on mentoring from the past practicum of 5-point Likert scale type ranging agreement from strongly disagree-1 to strongly agree-5 (N=7 items); (4) thirteen numerical items for measuring their opinions on practicum of Likert scale type ranging agreement from strongly disagree-1 to strongly agree-5 (N=13 items); (5) seven numerical items for measuring their perceptions on university/college program of Likert scale type ranging agreement from strongly disagree-1 to strongly agree-5 (N=7 items); and (6) fourteen nominal binary type items for measuring their perceived competency achievement from practicum or program (N=14 items) (See Appendix).

4.8 Data Collection Method

Document analysis, photo-elicitation interviews, focus group interviews, and participatory interview methods are employed to collect the required data for the qualitative part. Detailed information on documents and participants is described in the qualitative findings part of the next chapter.

Both virtual and printed versions of practicum-related documents in teacher education in Myanmar were collected. A document refers to a textual file that encompasses both primary data, which is collected by the researcher, and secondary data, which are sourced from external archives or publications. It can also incorporate visual elements such as photographs and charts. Secondary data documents encompass a wide range of information, including maps, demographic data, measurements of health or educational disparities, and de-identified quantitative databases containing variables relevant to the researcher's interests (Given, 2008).

In this study, the focus of analysis lies on the secondary data derived from teacher education policy documents pertaining to the practicum in teacher education specifically in Myanmar. These policy documents serve as valuable sources of information and insights regarding the practicum component within the context of teacher education in Myanmar. There was a total of 19 documents: 9 documents from Education Degree College and ten documents from the University of Education. Some of the documents could access only the hard copy version and scanned photos of the hard copy document.

Photographs, including other visual representations such as drawings, cartoons, and videos, play various roles in qualitative research because they offer a visual medium and the common verbal medium. The researcher or research participants can produce photographs to act as the data. Photographs work because they are in some ways closer than words to the language of emotions (Given, 2008). Photo elicitation evokes information, feelings, and memories due to the photograph's particular representation (Harper, 2002). Semi-structured photo-elicitation interviews were conducted with 12 student teachers in this current study. The photo interview took 30-40 min for each participant.

A Focus group is a structured interview to gather detailed opinions and knowledge about a particular topic from selected participants (Bader, 2002). The focus group presents a more natural environment because participants influence each other in the way they are

in everyday life. A focus group aims to understand better how people feel or think about an issue, idea, product, or service (Krueger & Casey, 2015). This study conducted focus group interviews with novice teachers from different geographical areas. Focus group discussion was conducted online as novice teachers were in different geographical areas. Eight novice teachers discussed five questions during the focused-group interview. The focused group interview took 1 hour and 30 minutes.

In the participatory interview, participants in a research study have the opportunity to provide their interpretations and voice their opinions in response to the researcher's findings. This process allows participants to contribute their perspectives, giving voice to the community or group being researched. By incorporating participant feedback and insights, researchers can enhance the overall richness and validity of their findings, ensuring that the voices and viewpoints of the researched community are represented and acknowledged (Given, 2008).

In this study, a participatory approach was employed, and a total of four teacher educators were engaged in participatory interviews. This methodology allowed for active involvement and collaboration between the researcher and the participants, fostering a deeper understanding of the experiences, perspectives, and insights of the teacher educators. Through these participatory interviews, the teacher educators were able to actively contribute their knowledge, expertise, and personal viewpoints, thereby enriching the research process and enhancing the overall validity and relevance of the study's findings.

Participants were given a verbal and written description of the interview process before the interview and obtained informed consent. During the online interview, the screen showing the written description of the interview protocol was shared with each participant. The interview results of student teachers and the analysis of practicum-related documents were summarized to the participants. The purpose of sharing this information is to check the validity of the first interview from a different perceptive and to prompt further discussion. However, Forbat and Henderson (2005) suggested that researchers need to consider the ontological and epistemological status of the representation and power of participants' accounts. This participatory interview was intended to understand the context and phenomenon from different perspectives, and views are considered equally valid and exciting. The interview does not aim to challenge the truthfulness of the first interview results.

The questionnaire was employed to get the responses from many participants in the quantitative part. After getting permission from the University, two questionnaires were distributed to the student teachers' and novice teachers' groups online. Qualtrics software was employed to develop, distribute, and collect questionnaire responses. The quantitative data collection started in the first week of June 2022, and the questionnaire closed after three weeks.

4.9 Data Analysis Method

The following data analysis procedures were performed, and specific data results are summarized in the next chapter. As the study is exploratory mixed-method research, the data analysis procedure starts with qualitative analysis and ends with quantitative analysis and interpretation of the data. The process is illustrated in the following figure.

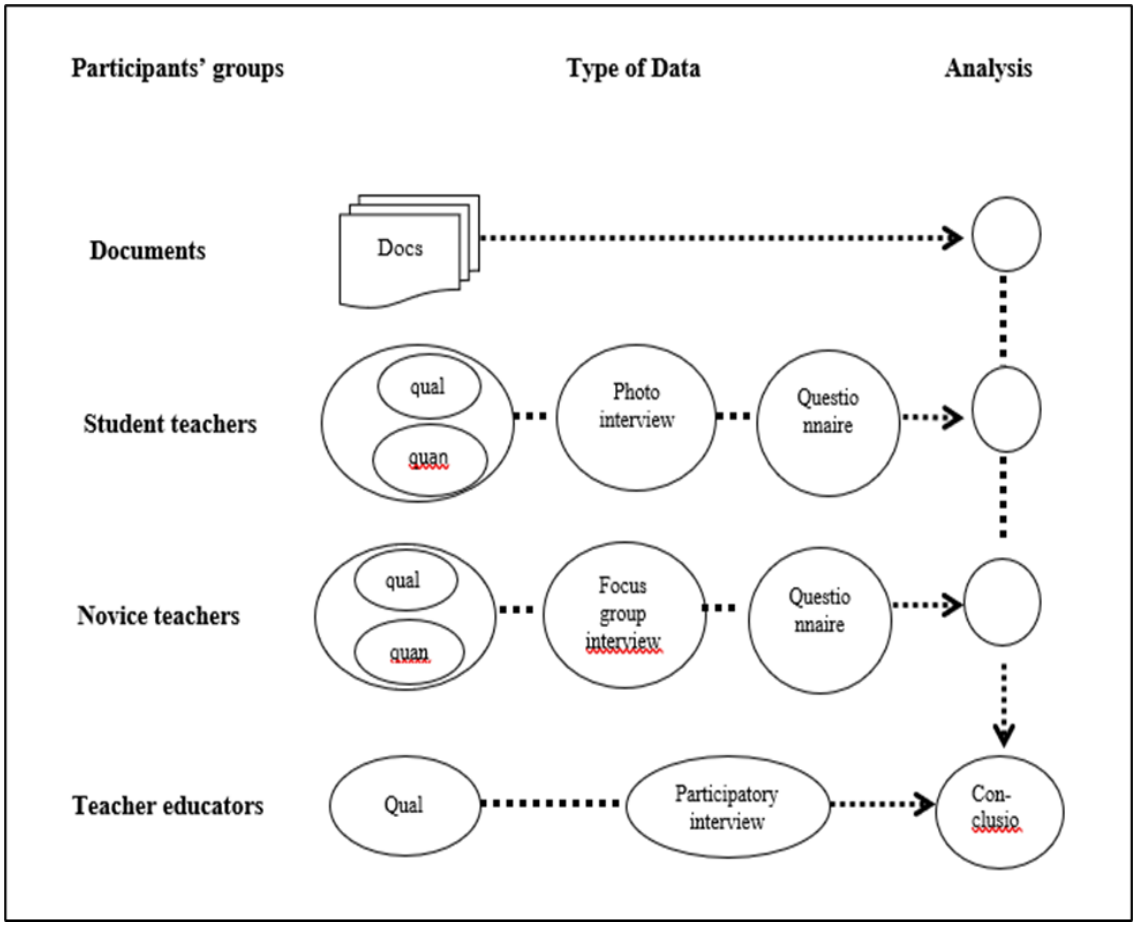


Figure 16 Data Analysis Procedure of the Study. Source: Author.

The document analysis method is conducted using MAXQDA software for the first section of the qualitative part. The qualitative deductive coding method was used to do the analysis. The qualitative deductive coding approach has been labeled "template coding" (King, 1994) and Blair (2015), "deductive coding" (Miles et al., 2014),

"procedural coding," "protocol coding," or "a priori coding" (Saldaña, 2021). In template/deductive coding, the researcher must define the codes drawn from the theory, research questions, and literature (King, 1994). Blair (2015) described that there are three phases in template coding; creating the priori codes starts with (1) the research problems, (2) research questions, and aim (3) literature. That list of codes in deductive coding comes from the conceptual framework, a list of research questions, hypotheses, problem areas, and critical variables the researcher brings to the study. Most computer-assisted qualitative data analysis software programs can retain these provisional codes before the data is imported into their programs (Miles et al., 2014).

This study followed a phenomenological approach, and a thematic analysis was conducted for interview data. Phenomenology is adopted to study the participants' experiences of a phenomenon (Elshafie, 2013). The thematic analysis moves beyond counting exact words or phrases and focuses on identifying and describing implicit and explicit ideas of the theme. Codes are typically developed to represent the identified themes for later analysis (Guest et al., 2012). MAXQDA software was used to code and analyze the interview transcripts. Interview transcripts of student-teachers, novice teachers, and teacher educators are analyzed using the thematic analysis method. First, interview transcripts are translated into English and imported into MAXQDA software. Then, the implicit and explicit themes were identified from the transcripts, and the codes were developed to represent the theme.

Deductive coding for analyzing teacher education policy documents was performed. First, codes are created based on the literature, theoretical framework, and research questions. Codes assign symbolic meaning to the descriptive or inferential information compiled during a study (Miles et al., 2014). Then, the list of codes was imported to the MAXQDA software and conducted deductive analysis for practicum-related teacher education documents in Myanmar.

For the quantitative part, descriptive and inferential analysis methods were employed based on the different components of the questionnaire to investigate the participants' responses to the questionnaire items. Under the descriptive analysis method, mean (to find the average value), standard deviation (to check the amount of variability from the mean), frequency (to count the number), multiple response analysis (to analyze multiple responses per item from each participant) were used in this study. Inferential analysis methods such as independent sample t-test (to compare two means), One-way

independent analysis of variance, ANOVA (to predict an outcome from several group means), Chi-square test (relationship between two categorical variables), and exploratory factor analysis method (to analyze interrelationships among many variables and explain these variables in terms of their common underlying dimensions or factors) were computed to gain a comprehensive understanding of the participants' questionnaire responses.

4.9.1 Screening and Data Cleaning

The online version of two questionnaires was sent to two different participant groups. Questionnaire 1 for student teachers was sent to student teachers from the one University of Education and one Education College, and 417 participants responded. Questionnaire 2 for novice teachers was sent to novice teachers from different geographical areas, and 73 teachers answered. Qualtrics software was used to administer the questionnaires. The researcher used the native Myanmar language in the original questionnaires in Qualtrics.

After closing access to the questionnaire, the researcher screened the responses and deleted incomplete and duplicated responses based on the identification of the software. The researcher downloaded the questionnaire into the Statistical Package of Social Science (SPSS) version and input it into the SPSS software. Data were collected in the period May-July 2022. Before conducting the reliability analysis, the responses to negatively worded sentences were recoded into positive ones, such as a score of 5 into 1 and 4 into 2, as the scores were within the range on the Likert scale type (1 to 5). The data were checked through again, input errors were corrected, and missing responses were deleted. Finally, 328 responses from the original 417 responses from student teachers and 46 responses from the original 73 responses from novice teachers were left for further analysis.

4.9.2 Checking Parametric Properties of Questionnaire Items

Descriptive statistics were computed to check the normality of the item distributions. Based on the descriptive statistics, valid responses were identified. Histograms and box plots were viewed to identify outliers and any other irregularities in the data distribution. Items with skewness values between +2 and -2 and kurtosis values of +7 and -7 are considered normally distributed for statistical analyses (Lin et al., 2015). Those items that are incompatible with these skewness and kurtosis values were deleted.

4.9.3 Reliability Testing

Scholars recommended using the Split-half method (odd-even items), internal consistency (Cronbach's alpha), and KR20 and KR21 methods in eliminating or increasing the items that can affect the scale's reliability for measuring the reliability of behavioural characteristics.

The questionnaire was distributed online to student-teachers from both a University of Education and an Education College. The survey consisted of ten components, including categorical and numerical variables. In the group of numerical variables, there are four components: sixty items for measuring coping strategies, seven items for measuring opinions on mentoring, ten items for measuring opinions on practicum, and twelve items for measuring the university/college program. KR20 and KR21 methods are used to measure the reliability of categorial items (dichotomous items) in student teachers' questionnaires. Cronbach's alpha coefficient measures were used to check the internal consistency or reliability of the set of numerical items. Some items were removed from the questionnaire based on Cronbach's alpha results. The final list of coping strategies scale consisted of 60 items ($\alpha = .89$); mentoring scale consisted of 6 items ($\alpha = .75$). The practicum scale consisted of 10 items ($\alpha = .73$). The opinions on university/college program scale consisted of 11 items ($\alpha = .74$). It has been suggested that reliability estimates in the range of .70 and .80 are good enough for most purposes in basic research. Thus, the reliability value of the sub-scale of the student teachers' questionnaire is acceptable and good enough.

The Cronbach's alpha reliability test was also used to check the items of the novice teachers' questionnaire. As the reliability value was low ($\alpha < 0.5$) in the first round, the Split-half method was employed, and some items were eliminated from the scale. The final version of the questionnaire for novice teachers includes seven items for measuring their opinions on mentoring ($\alpha = .58$), thirteen items for measuring their opinions on practicum ($\alpha = .71$, internal consistency), seven items for measuring their perceptions on university/college program ($\alpha = .576$) and fourteen items for measuring their competency achievement from practicum or program ($\alpha = .75$) respectively. Salvucci and others (1997) described the range of reliability measurement based on an index of inconsistency as the reliability is low (if $\alpha < 0.5$), moderate ($0.5 < \alpha < 0.8$), and high ($\alpha > 0.8$).

4.10 Ethical Considerations

The ethical application form was submitted to the Ethical Committee of Eötvös Loránd University, and the application was approved on 05 May, licensed number: 2022/280. Besides, the permission letter was received from the rector and department head of the University of Education in Myanmar to collect the required data for the study. The ethical consent form was added to the front page of each questionnaire. The interviewees were explained the detailed process in the interview protocol and got their consent before conducting the interview. Some documents and photos in the study were available in the public domain. For the photo-elicitation interview, the photos were received from the owners with permission to use them for research purposes. For one cartoon photo, a licensed version was received from the company for educational and professional purposes.

Summary of the chapter

This chapter highlighted the research methodology part of the study. The theoretical perspectives of the research methodology are discussed in the research paradigm, design, context, and process. Besides, the practical considerations about research methodology, including sampling and participants, developing research tools, data collection method, and data analysis method using figures, are presented. The following chapter will discuss a detailed description of the data analysis method and study results.

Chapter 5 Findings

Preview of the chapter

This chapter mainly presented the results/findings part of the study. It comprises the findings of the qualitative part and the results of the quantitative part. The qualitative part consists of document analysis and interview results. Meanwhile, the quantitative part included student teachers' responses to Questionnaire 1 and novice teachers' answers to Questionnaire 2.

5.1 Qualitative Findings

The qualitative findings of the study are presented based on the results of the document analysis and interview.

5.1.1 Document Analysis

The types of documented data for this study can be seen in table 3.

Table 3 Type of Documents related to Practicum in Teacher Education in Myanmar

Imported Documents related to the practicum in MAXQDA	Origin of the documents	Type of documents		Total
		Scanned Photos	Document file	
D1, D6 -Evaluation forms of the practicum	Education Degree College	2	-	2
D2-Structure of practicum		1	-	1
D3-Practicum aim		1	-	1
D4-Diary, lesson plan		1	-	1
D5-Practicum journal		1	-	1
D16-TE college curriculum framework		-	1	1
D17, D19-teacher educator guide		-	2	2
D18-student teacher textbook		-	1	1
D7-practicum journal		1	-	1

D 8, D9, D10-University arrangement of the practicum	University of Education	3	-	3
D 11, D12, D13-official letter		3	-	3
D14-structure and credits		-	1	1
D15-Practicum components		-	1	1
Total		13	6	19

*D means the initial word for the document.

This study refers to the deductive coding approach of Blair (2015) and Mile et al. (2014) and is based on three phases of the data in the deductive approach. First, “priori codes” were developed based on research problems. Second, the research questions and aim were rechecked, the priori codes were adjusted, and the possible codes were removed. Then, the codebook/template was developed and imported into MAXQDA software. Then, the practicum-related documents were analyzed using codes in the template (See appendix 2).

Table 4 A Template Showing Code, Subcodes, and Definition of The Codes

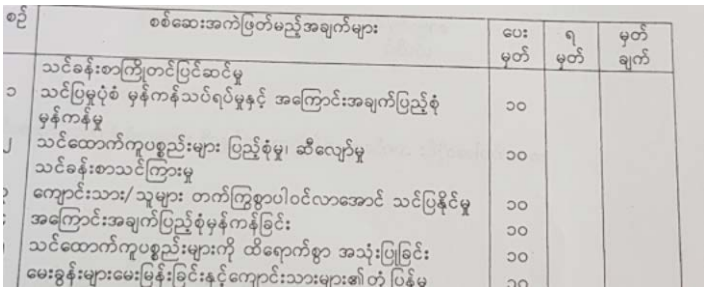
Codes	Subcodes	Definition/Meaning
Aim/definition	Practicum definition	Description/explanation of practicum
	Practicum aim	Objectives of the entire practicum
	Learning outcomes	Skills, knowledge, and competencies that student-teachers sought to acquire them
Structure of the practicum	University arrangement	E g. The formal arrangement encompasses various aspects, such as the specific allocation of student teachers to each school, the distribution of subjects among them, and the provision of an official letter from the university to

		the respective schools, outlining the details and expectations of the practicum placement.
	Practicum component	Component of practicum module as a separate module or integrated with core curriculum
	Credits unit	Credit allocation for the duration of the practicum or credit value assigned to the practicum course or program.
	Duration (Year/Semester)	The period for the practicum/teaching practice in schools
Student teachers' activities related to the practicum	practice activities	The activities undertaken by student teachers during the practicum encompass a range of responsibilities, including teaching, observing classroom dynamics, actively participating in school-related activities, preparing reports, evaluating student learning outcomes, and engaging in various other tasks aimed at enhancing their practical teaching skills and overall professional development.
	lesson study	Lesson preparation by self or together with friends, teaching aids
Mentoring (support system)	mentoring/supporting program	the arrangement of formal mentoring/supporting systems in schools

	mentor training	delivery of good practice, techniques, and strategies for supporting student teachers to improve their professional practice
	the role of the mentor	observing, instructing, guiding, facilitating, and offering professional and collegial support
Evaluation of the practicum	Practicum diary/lesson plan	Notes students make during their everyday practice
	Practicum journal	Final practicum report/ practicum journal
	Observation and assessment of open lessons	(e g., observation and assessment by the school principal or teachers or mentor or teacher educator from the university)
	Evaluation form	(E g., criteria for evaluation of the student-teacher's performance during practicum)
	Portfolio	(eg., Activities during the practicum in document files, presentation, student-teachers' professional development)

The table presented five principal codes and 17 subcodes and their related definitions about the codes in the template. After importing the code template into the MAXQDA software, the texts of the documents were scanned and matched with the subcodes or principal codes of the template. Then, the texts were highlighted, and the subcodes' names were written beside the texts. The same analysis was done on the other documents. Finally, the codes were summarized and arranged according to the order of the code system. Table 5 shows an example of summaries with coded segments from MAXQDA software (Please see the full version of the results in Appendix 2).

Table 5 Example of Summaries with Coded Segments - Document Analysis.mx22

Codes	Coded segments
Evaluation of the practicum\Evaluation form	 D1: 110|1703 - 1933|2430 (0)
Evaluation of the practicum\portfolio	Practicum • Portfolios of teaching practice: lesson plans, materials development, units of work, assessment tools 50 D16: 46: 109|321 - 46: 498|354 (0)
Mentoring (support system) \ mentoring/supporting program	Each partner and placement school has an assigned support teacher to mentor the st D16: 39: 103|339 - 39: 504|351 (0) understand the objectives. The training is offered as one of the modules.[96] The in-school mentors report directly to the TEs in the ECs.[97] D16: 39: 107|287 - 39: 423|314 (0)
mentor training	These mentors are trained in lesson observations, constructive feedback, basic skills and assessment as well as in the expectations of the EC curriculum so they D16: 39: 158|313 - 39: 519|340 (0)

From the analysis of 19 documents, it was found that 72 codes were matched with the template. The documents included codes 7 codes related to the aim/definition of the practicum, 38 codes related to the structure of the practicum, 7 codes matched with student teachers' activities related to the practicum, 5 codes for mentoring/supporting system, and 17 codes in relation with the evaluation of the practicum. A detailed analysis of the table can be seen in Appendix 2.

(a) Aim/definition of the practicum

The subcodes under the aim of the practicum include practicum aim, definition, and learning outcomes. Relating to the aim of the practicum, the university program outlined that teacher trainees must undergo training for their practice teaching and bloc teaching as a practicum in basic education schools to provide them with essential teaching competencies from the third year to the fifth year. In EDC, the practicum is aimed at student teachers to have the opportunity to practice their teaching in a real and controlled environment. Practicum is defined as a chance for student teachers to put their educational theories from educational studies into practice in documents. The learning outcomes for teaching blocs of the practicum are also found in EDC documents. However, any document related to specific learning objectives of student teachers for their practicum from the university program could not be found. Illustrative instances of encoded segment from the document include:

[To equip the teacher-trainees with necessary pedagogic skills' from the third to the fifth year, the students have to undergo training for practice teaching as a practicum in basic education schools].

D14: 1 - 1 (0)

It is evident that both teacher education programs offered by universities and education degree colleges have established comprehensive practicum components aimed at equipping teacher trainees with the necessary skills and experiences and to have the opportunity to practice their teaching in a real and controlled environment. Practicum has been defined as a chance for student teachers to put their educational theories from educational studies into practice. Student teachers are expected to acquire practicum teacher competencies standards in the practicum guidebook of Myanmar teacher education.

(b) Structure/arrangement

The subcodes, such as the arrangement of the practicum, credits, duration, and practicum component, were found in most of the documents. The practicum arrangement included the formal protocol structure from the university/ education degree college through the Ministry of Education to the student teachers' practicing school. Practicum is designed as a separate module in the new curriculum framework of Education Degree College. The credit number was mentioned in the curriculum framework and practicum

handbook for students and teachers. In the university curriculum structure, the practicum is designed as one part of the curriculum and is not included in every year of the undergraduate program. However, the credit unit for that semester is already prescribed in the curriculum.

The EDC practicum handbook (D16, D18, and D19) states, “actual time related to practicum period is relatively short, but the schedule is designed for each year from first to the four-year degree program.” The practicum components in the university program included lesson study, peer group teaching, school visits, bloc teaching, and practice teaching. However, the lesson study, peer group teaching, and school visits activities are already integrated with the curriculum from their first year in D15. In the curriculum from 3rd yr to 5th yr, bloc teaching and practice teaching period were found. In the EDC curriculum, the practicum component included three models of on-campus practice schools, partner schools for school visits, and lesson observation and placement schools for teaching practice. Some examples can be seen in the following coded segments.

[Each year of your four-year Education College degree program has a Practicum component, typically taking place during February and August] D19: 7 - 7 (0)

[Peer group teaching] D15: 24: 186|127 - 24: 302|145 (0)

[Micro teaching, Peer group teaching, bloc teaching] D15: 32: 150|441 - 32: 255|488 (0)

Student teachers need to complete their practice teaching at Basic Education Schools as it is one of the requirements to be fulfilled for their study program. Teacher trainees pursuing a bachelor’s degree at the university program must participate in Practicum I in the 3rd year (6th semester) and Practicum II in the 4th year (8th semester) at the University of Education. Student teachers from Education Colleges (old system) had to conduct their practice teaching in schools at the end of their first-year program (6 weeks at primary schools) and at the end of their second-year college program (6 weeks at lower secondary schools). However, the credit hours for the practicum are not mentioned explicitly. A detailed explanation of the practicum structure is described in the previous chapter (Please see Section 2.5, Chapter 2).

University and EDC arranged the structure of the practicum and got permission from the Ministry of Education. The Ministry of Education contacted district and township education officers and principals to cooperate in conducting student teachers’

practicum in their respective schools. That formal and centralized arrangement can be seen in Kazakhstan as all types of student teachers' practices are oriented by order of the rector and the official letter of the institute's director (Ministry of Education and Science, 2016). The component of the practicum in both university and EDC included lesson study, peer group teaching, school visits, bloc teaching, and practice teaching.

(c) Student teachers' activities related to the practicum

Writing a daily diary, lesson plan, practicum journal, observation, practice teaching, lesson study, and peer group teaching are found as student teachers' activities related to the practicum in documents. Student teachers must write and discuss the lesson plan with the cooperating teachers or principal during the practicum. Lesson observation of student teachers is integrated with the school visit program of the curriculum in the university program. Nevertheless, lesson observation and school visit programs are mentioned separately in the practicum module of EDC. The lesson/classroom observation unit is prescribed that student teachers need to do notetaking what is happening in the classroom, and they will be provided with a classroom observation tool. In the EDC document, it has been noted that student teachers will need to identify and reflect on teacher competencies during their classroom observation.

Some examples of coded segments from EDC documents are

[Entries will include reflections on learning, school visits, and placements, observations from peers and experienced teachers, research project assignments, reflections, and evaluations of post-practice teaching]

D18: 15 - 15 (0)

[Writing in your Practicum Journal (Bloc 3, Days 2-3)]

D18: 20 - 20 (0)

Writing a daily diary, lesson plan, practicum journal, observation, practice teaching, lesson study, and peer group teaching is student teachers' activities related to the practicum. Student teachers must write and discuss the lesson plan with the cooperating teachers or the principal during the practicum. Lesson observation of student teachers is integrated with the school visit program of the curriculum. Similar findings can be seen in the study (Li, 2016; Chaw et al., 2022) that student teachers were required

to write reflective journals and a diary report, attend seminars and share experiences related to practicum.

(d) Mentoring/support

EDC practicum handbook (D 16 and D19) revealed that each partner or placement school would have supporting teachers or mentors, and student teachers can get their support. Those mentors will be trained in lesson observations, constructive feedback, fundamental skills, and assessment methods according to the expectation of the EDC curriculum. Besides, it has been written in the EDC document that mentors are necessary to observe the student teachers' classes and assist them with classroom duties during the student teachers' practicum period. Examples of coded segments are:

[These mentors are trained in lesson observations, constructive feedback, basic skills, and assessment as well as in the expectations of the EC curriculum, so they...] D16: 39: 158|313 - 39: 519|340 (0)

[Mentor teacher Your assigned classroom teacher at the practice or partner school. You will be observing your mentor teacher's classes and assisting him or her with classroom duties] D19: 71 - 71 (0)

Mentor roles also include supervision and assessment (Orland-Barak, 2016); however, mentors are required to prepare for their roles to distinguish between the role of a classroom teacher and a mentor of teachers.

However, the implementation level at EDC is still under development. More interestingly, mentoring/ supporting programs are not prescribed in the accessible documents collected from the university. It can be assumed that the formal mentoring system might still be in the development stage in the practicum component of teacher education in Myanmar.

(e) Evaluation/Assessment related to the practicum

Evaluation of the practicum components included different methods such as writing lesson plans before the practicum during the university/college program, writing a practicum journal after the practicum, creating a portfolio, lesson observation and assessing the open lesson of student teachers. The practicum-related documents from the UOE and EDC prescribed that student teachers must learn how to prepare the lesson during their university/college program and discuss their lesson plans with teacher educators from the university/college program before practicum

period. Writing lesson plans also includes assessing student teachers' work during the practicum. In both documents from UOE and EDC, student teachers must write practicum journals to report their feedback and reflection on their daily activities, practice, and school environment.

The university document does not mention the person responsible for evaluating student teachers' performance during the practicum. However, the student teachers' activities during the practicum period at the school are supposed to evaluate by cooperating teachers and the principal from the school, as the university sent the official letter and sealed envelope that includes the evaluation form to assess the student teachers' performance during the practicum.

The documents from the Education Degree College highlight that teacher educators, schoolteachers/cooperating teachers, or principals are responsible for evaluating open lesson /teaching observation. Evaluation sheets/forms have been sent to the principal or schoolteachers through student teachers with a sealed envelope. The university and degree college programs prescribed ten criteria in the evaluation form.

The documents presented that both teacher educators from the university/college program will evaluate the practicum journal of student teachers after the practicum period. An example coded sentence from the document includes:

[You will submit a final Practicum Journal at the end of Year 4, which will be summatively assessed. The assessment of the Practicum Journal makes up 30% of your overall assessment marks]. D18: 15 - 15 (0)

However, the actual assessment and evaluation of the practicum depend on the knowledge about the practicum, availability, and role clarification of teacher educators from the university, principals, and schoolteachers in school placement.

The results from the document analysis (five categories) were considered to develop the interview questions, such as how different actors perceive the practicum, the arrangement of the practicum, the activities during the practicum, perceptions on the evaluation and assessment of the practicum, the role of mentor, the role of university/college program.

5.1.2 Interviews

5.1.2.1 Photo elicitation interview with student teachers

The researcher conducted photo-elicitation interviews with student teachers from the University of Education and Education Degree College. The demographic information of the participants is listed in the table.

Table 6 Demographic Information for Student Teachers (N = 12)

Pseudonym of participant	Gender	Age	Duration of practicum	Year/ program	Specialization
Uni student teacher 1	Female	22	6	Final/Uni	English, Physics, Biology
Uni student teacher 2	Female	21	6	Final /Uni	English, Physics, Biology
Uni student teacher 3	Male	21	8	Final /Uni	English, Physics, Chemistry
Uni student teacher 4	Female	22	6	Final/Uni	English, Physics, Chemistry
Uni student teacher 5	Female	20	6	Final/Uni	English, Physics, Biology
Uni student teacher 6	Female	21	5	Final/Uni	English, History, Economics

Uni student teacher 7	Female	21	6	Final/Uni	English, Physics, Biology
EC student teacher 1	Male	20	8	Final/EDC	Geography, History
EC student teacher 2	Male	22	8	Final/EDC	Geography, History
EC student teacher 3	Male	20	7	Final/EDC	Chemistry, Physics
EC student teacher 4	Male	22	7	Final/EDC	Geography, Economics
EC student teacher 5	Male	20	10	Final/EDC	Geography, History

The transcripts of the individual data were coded and grouped into categories. After that, the combined categories are developed as themes. The photo-elicitation interview results of the student teachers' group were presented according to seven themes: (i) memory related to the photos, (ii) experiences and feeling during their practicum, (iii) teaching experience, (iv) misbehaviour and coping, (v) teaching difficulties and coping, (vi) mentoring/getting support (vii) university/college program.

(i) Memory related to the photos

The three photos were shown to the participants, and they were asked to describe their memory during their practicum based on the photos. Figure 17 included the teacher giving a speech for the independent day in a school classroom and students listening to the teacher. Figure 18 illustrates student group work learning activities in the classroom with small pieces of paper. Figure 19 captures a group of student teachers in a room, and they are doing lesson preparation.

Participants interpreted differently and described what they could see from the photos. Some participants did not mention their opinions on the photos. In the first photo, student teachers saw the teacher's actions in the photo first and the students' behaviours

later. Participants described the same students' group work activities from the second photo. Participants explained that teachers were preparing the lesson plan in the third photo.

Participating in co-curriculum activity during practicum

Figure 17 Participating in co-curriculum activity during practicum.

Note. The photo was taken by a student teacher during the practicum. Reprinted with permission.

Student teachers elicited their memory based on the activities of the photos. Practicum is a short time for student teachers to practice teaching in a real classroom. Most of the student teachers did not have the opportunity to take part in school activities. One student teacher clearly stated this:

“I attended the school assembly, but I did not give a speech at the assembly.” (Uni student teacher 5)

Student teachers were active during the practicum as it was their first experience teaching in a real school context. They would like to participate in school activities and try to behave like the teachers in the profession. They learned the school activities and attempted to become familiar with the new teaching-learning environment.

Students' Group Work activities during the Lesson

Figure 18 Students' Group Work Activities during the lesson.

Note. The photo was taken by a student teacher during the practicum. Reprinted with permission.

Based on the above photo, student teachers recalled their memory and experiences. Student teachers carried out small group work learning activities with students during their practicum period. They tried to include group work activities during their lesson. However, student teachers mentioned they faced problems making the group, allocating insufficient teaching aids, and managing students' misbehaviour. The following quotes affirmed student teachers' voices:

"We had peer group teaching at Education College. I had this type of teaching, and I learned how to teach student groups." (EC student teacher 1)

"Referring to memory, I have had successful moments such as using the role-playing method while teaching English lessons. I used colored paper for student activities and asked students to stick on the board for their answers. I prepare the lesson alone. Sometimes, I consulted with my friend who teaches the same subject as me to prepare the lessons." (Uni student teacher 1)

“In student group work activities, some students complained that they did not want to be in the same group with some students. Thus, I made the group according to the numerical number. I had another problem with teaching aids. The school does not have enough facilities. There are 4 student groups in the classroom, and I have enough teaching aids for only two groups. Thus, I asked the other groups to do different tasks.” (EC Student teacher 5)

Although group work activities are unfamiliar, student teachers have tried using them during lessons. Because most teachers use the teacher-centred approach in the classroom, and students are used to being familiar with that approach. Student teachers encountered challenges in making the group. It might be because many students are in the classroom (around 60), and it may take a lot of work to manage the student groups. Student teachers also encountered insufficient teaching aids to use during their lessons. Some rural schools where transportation is not easily reachable do not have sufficient school facilities such as teaching aids to apply during the lesson.

Student Teachers’ Lesson Preparation during the Practicum

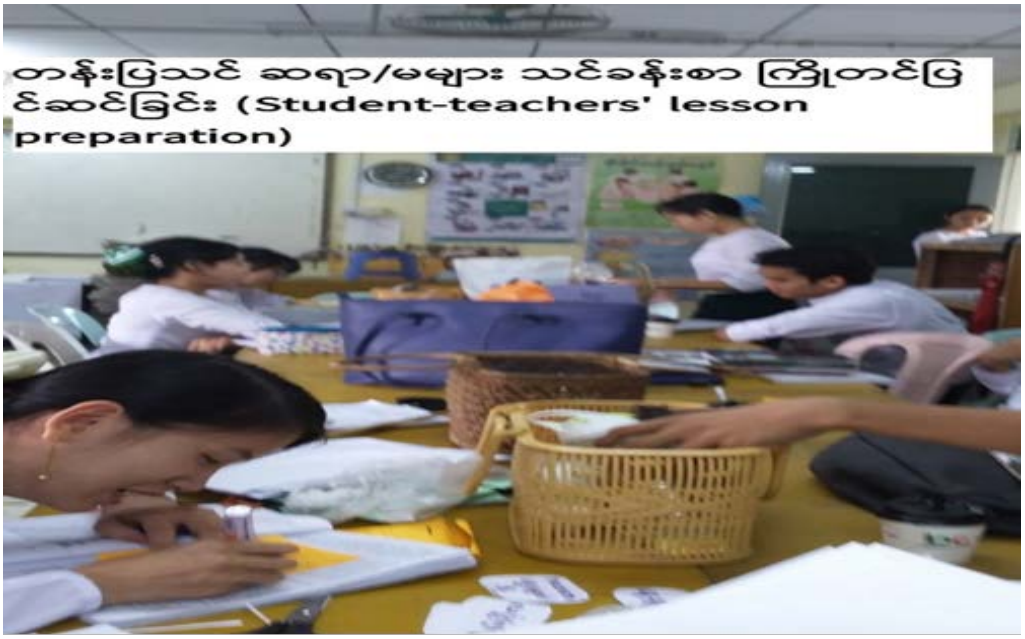


Figure 19 Student Teachers' Lesson Preparation during the Practicum

Note. The photo was taken by a student teacher during the practicum. Reprinted with permission.

Student teachers said they wrote their lesson plans at home and school. Some student teachers created the lesson plan and teaching aids with their colleagues.

“During the practicum, I prepared the lesson both at home and school by myself. For the teaching aids exhibition at Education College, I prepared the teaching aids together with my friends.” (EC student teacher 1)

“I plan my lessons at home. I create teaching aids before I teach the students.” (EC student teacher 5)

Writing the lesson plan for the daily lesson is one of the tasks for student teachers during their practicum period. Student teachers also created teaching aids with their colleagues or themselves that can be used during their lessons.

The sample photos assisted in getting more information about the participants’ memory and experiences related to their participation in school activities, teaching methods and lesson preparation during the practicum.

(ii) Experiences and feelings during their practicum

As the second interview question, student teachers were requested to draw a line map to illustrate their experience during the practicum period. First, the picture of the sample line map was shown to the student teachers and let them know the nature of the up and down lines from the original horizontal line of the map. The curved lines above the horizontal line are drawn to describe the successful things, and the curved lines below the horizontal line are depicted to indicate the unsuccessful things on the map. Student teachers were given a few minutes to draw their line map based on their experiences at each practicum period using their pen and paper. After that, student teachers were asked about their experiences during the practicum based on their up and down lines on the line map. Participants looked at their line maps and elicited their experiences.

Sample Line Map Illustrating the Practicum Period

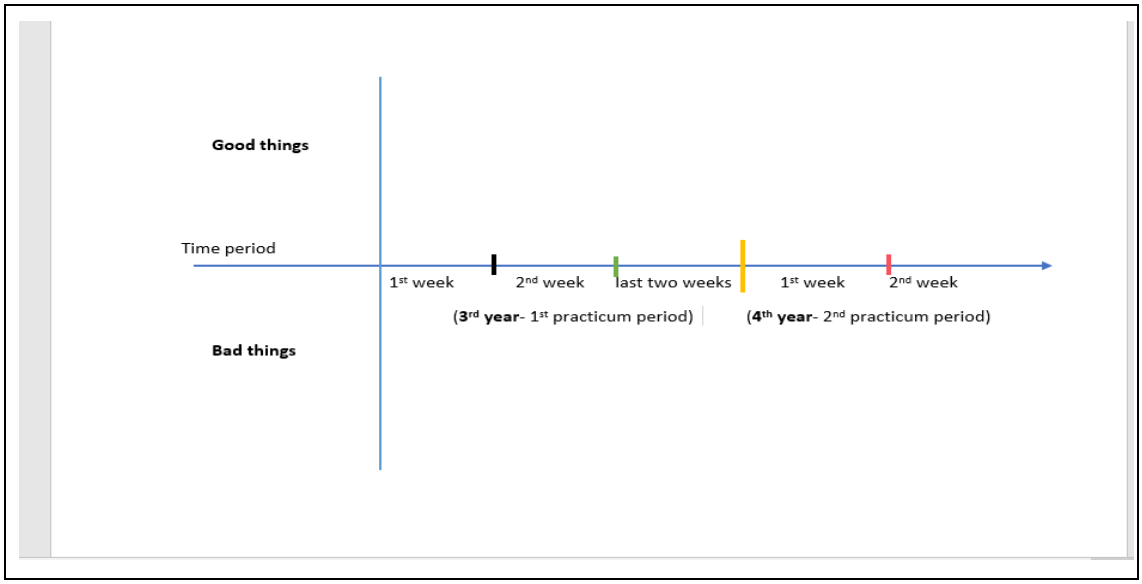


Figure 20 Sample Line Map Illustrating the Practicum Period

Note. The photo of a line map illustrating the practicum period. Own work.

Student teachers in the current study's drawings and expression about their experiences during the practicum can be clearly seen in the following drawings and quotes:

A Student Teacher's Line Map

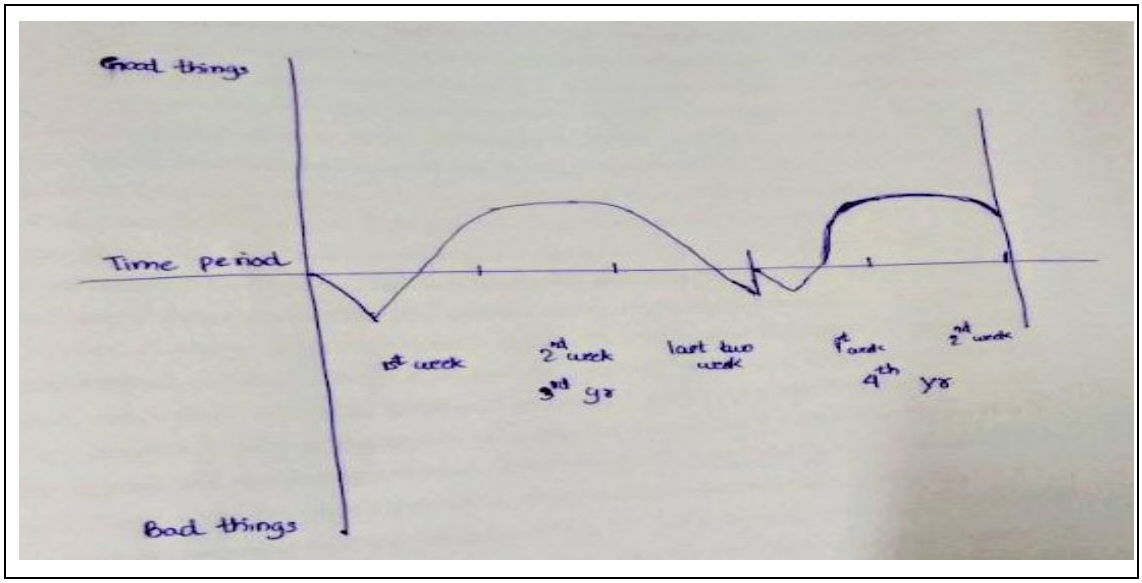


Figure 21 A Student Teacher's Line Map

Note. The photo was illustrated and taken by a student teacher. Reprinted with permission.

"Week 1, the line is at the bottom. I was anxious initially and prayed that it would be all right. Later, I was absorbed in teaching, and I think I will continue teaching. In the first

practicum: the subject teacher is familiar to me, and I have no difficulties. In the second practicum at Yangon school, our room condition was not comfortable for us at the beginning. I had one difficulty: I had to teach the lesson according to the fixed scheduled time." (Uni student teacher 2)

A Student Teacher's Line Map

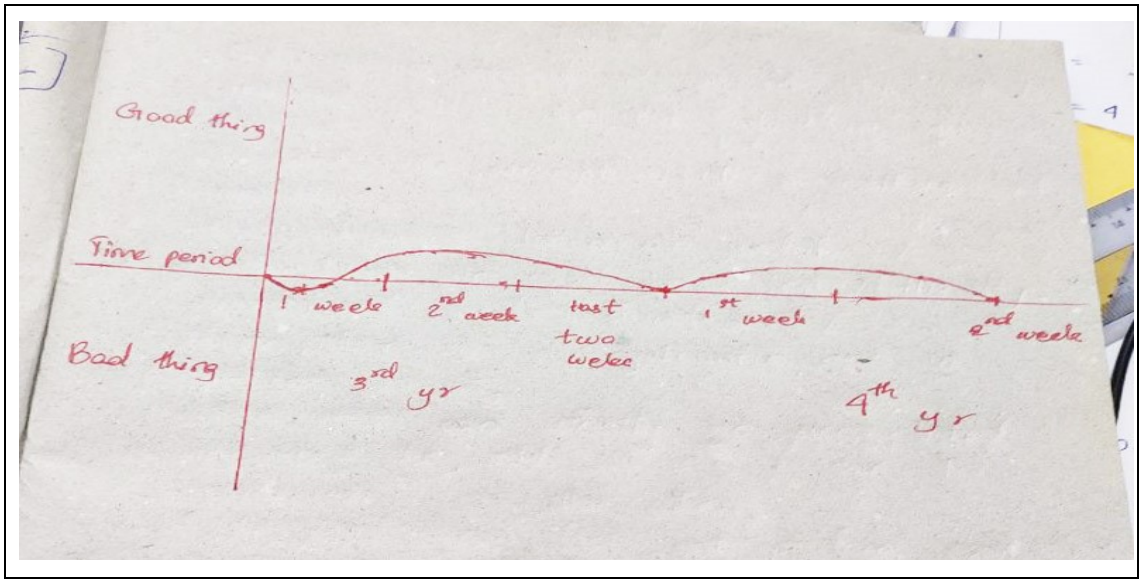


Figure 22 A Student Teacher's Line Map

Note. The photo was illustrated and taken by a student teacher. Reprinted with permission.

"First week, I was unfamiliar with the children because I did not know their background (knowledge level and environment). Later, I got to know them well. At first, I had a problem with managing students because my age was not that much different from the students. In the second week, I was ok with teaching and managing students. I could not teach for the third week because the school had a Kathein (religious donation ceremony). I got feedback from students that they did not understand my early lessons. In the second practicum, the first week, I had one problem with teaching because students did not attend the classes regularly, I needed to adjust the lesson because some students came, and some did not come to school, and I did not want them to miss my lesson. The second week was ok." (Uni student teacher 6)

The first week of the school practicum period was difficult for student teachers as it was their first time practising their teaching in real classrooms. Student teachers were anxious and unfamiliar with the students and the school environment. One student teacher from the university program mentioned that he or she had a problem with absentee students in the classroom in the second practicum. During the second practicum, student

teachers from the university program have to practice their teaching in some practising schools in Yangon Region (Please see Section 2.4). As Yangon is a commercial city, parents and students prefer private sessions at home to going to school every weekday. Students often go to school to fulfil their 75% attendance. Because of that reason, student teachers encountered student absentee problems during their practicum period. It is a common problem for upper secondary teachers. In later weeks, student teachers became calm, enjoyed teaching, and could manage their personal, social, and professional activities. It has been found that the third week of the first practicum period coincided with the school's religious ceremony and happened during national holidays.

When student teachers were asked to describe their feelings during their practicum period, they recounted that they were excited, anxious, stressed, and tired in the early days of practicum. However, they expressed that they became happy after a few days. Student teachers note:

"1st practicum, I was excited during the early period, then I became happy. In second practicum, I had much stress about whether it would be convenient or not to teach students in urban schools." (Uni student teacher 7)

"I was happy. If I felt depressed, I talked with other teachers, and they encouraged me. The principal met with me once a week and supported me. I talked with my college friends and discussed our difficulties. We also discussed about teaching aids." (EC student teacher 4)

(iii) Teaching experience

Observing the Student Group Work by a Student Teachers

Figure 23 Observing the Student Group Work by a Student Teacher

Note. The photo was taken by a student teacher during the practicum. Reprinted with permission.

Student teachers are asked to describe their teaching experience related to the photo. Student teachers had the same experience creating group learning activities with their students during their practicum. They faced some difficulties according to the circumstance of the classroom environment. However, they tried to teach in that way. They needed help making slow and quick learners in a group. Student teachers in rural schools did not have enough teaching aids for all group learning activities. The following excerpts depicted student teachers' teaching experience:

"When forming the group, I tried to balance arranging quick and slow learners in a group. I could use pictures as teaching aids for the physics lesson. I asked the student group a question about the lesson. Although we were practicing our teaching, I wanted students to get everything I taught in class." (Uni student teacher 2)

"In my geography lesson, students studied in groups. It's a little difficult to get along with a slow and quick learner. There was no map or chart to show the geographical location of Myanmar to teach that lesson. I drew a map on the board and explained it to the students. Besides, I had to ask another teacher because I did not know much about geography." (EC student teacher 2)

Related to the photo, student teachers described their similar experiences. It can be seen that student teachers tried to make student group learning and give necessary guidance. Although they have problems, such as making quick and slow learners in the same group and insufficient teaching aids problems, they try their best to apply new teaching activities and use teaching aids in their classroom. If they had limited knowledge about the subject, they asked other teachers and tried to understand the lesson before they taught it in the classroom.

(iv*) Misbehavior and coping*

Students' Misbehavior in the Classroom

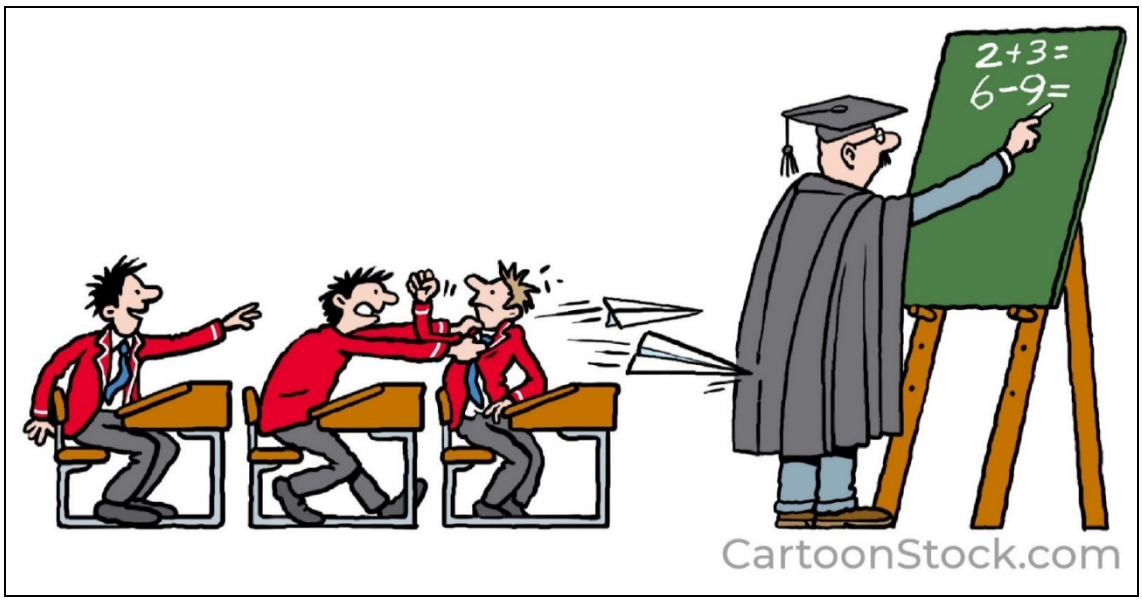


Figure 24 Students' Misbehavior in the Classroom

Note. The author received licensed version from the cartoonstock.com. company.

The researcher showed the cartoon picture to demonstrate the student's misbehaviour problems in the classroom. Students' misbehaviour problems are difficulties that student teachers must manage during their practicum. Student teachers expressed their experiences that students in their classroom were chatting while they were teaching, and they had to do something to stop that misbehaviour. One of them had to manage disrespectful students in the classroom. They coped with students' misbehaviour problems by showing their facial expressions, scolding, threatening, and asking questions to them. They asked other teachers and the principal to cope with misbehaviour problems.

"Coping-Misbehavior? Some students in every class wanted attention. Even though I had not met naughty students, they smiled and seemed shy when they were asked to answer the questions. Solution? I reported it to the class teacher for those students whom I could not have control over. I couldn't neglect those students. I needed to stay beside them and give suggestions and guidelines to them. There were times when the other students were neglected because of those attention seeker students" (Uni student teacher 1)

"I had never experienced that type of situation. I have had some students who chatted a lot while I was teaching. Coping: I let them know that I disliked their behavior

with my facial expressions. I tapped the chair with my palm, and they became quiet. I did not ask for help because I could manage their behavior." (EC student teacher 3)

It is a rare case that student teachers mention that they have faced problems with student misbehaviour because some might think that their poor classroom management skills will be judged when they tell the real problem to others. With the assistance of the cartoon picture, student teachers were brave enough to express their experiences. Student teachers in this study coped with students' misbehaviour problems by showing their facial expressions, scolding, threatening, and asking questions to them. They sometimes asked other teachers and the principal to cope with misbehaviour problems.

(v) *Teaching difficulties and coping*

Teachers' discussion for teaching-related problems

Figure 25 Teachers' Discussion for Teaching-related Problems

Note. The photo was taken by a student teacher during the practicum. Reprinted with permission.

Based on the photo, student teachers were asked to elicit similar experiences during their practicum. Student teachers admitted they had difficulties teaching the subject matter, how to teach better, and teaching aids problems. The schools did not have enough facilities to support them, especially regarding teaching aids. They used different ways to cope with teaching-related difficulties. Student teachers had to create by themselves or use available material to explain the lesson. Although they did not have a formal meeting to share their teaching-related difficulties, they informally helped each

other. They asked the principal and other teachers if they had such difficulties. The following excerpts state some voices of student teachers:

“I discussed with schoolteachers for the subject matter. During the first practicum, an experienced teacher explained how to teach the lessons. I had difficulty. I had to think about how to explain the lessons to slow learners. First, I did not think that I needed to explain everything in detail. How to cope?? In the first practicum, I went to a private tutor and saw how he was teaching. I knew how to teach the details step by step, and I tried to teach by myself. I think a detailed explanation would be boring for quick learners. During the first week, I had to sit and watch experienced teachers teaching constantly. I used the extra time to teach slow learners. However, I thought that way would be possible for a while, and it would not be ok for a long time. In the second practicum, we discussed with each other, searched online, and discussed what works best for students. I did not ask the teacher from the practicing school. The reason might be for fear of being looked down upon me.” (Uni student teacher 3)

“Fig?? I think the teachers discussed other issues. In the first practicum, I consulted with the teachers in the first grade on how to teach the students in a better way. One teacher told me that he became a teacher with this system, and he did not have any other ideas about how to teach in a better way. Difficulty? I had a problem with teaching aids. Coping? I had to teach the lesson with the available material. If I could not show real things related to the lesson, I had to show them the picture of the things.” (EC student teacher 1)

“We did not have the same situation in the photo; we did not meet and discuss formally. However, we discussed it informally. We knew teaching theory better than those teachers who got a teaching diploma after a few months of training. Nevertheless, they had better teaching experience than us. Thus, we exchanged our knowledge. The principal also helped with coping difficulties related to teaching.” (EC student teacher 4)

It seems that some student teachers might have problems with teaching during the first practicum. Interviewee 1 said he or she had problems teaching or explaining the lesson to understand poor-performing students. The reason might be that he or she is at the very beginning state of the teaching profession. Another reason might be that university courses might not include practical tips for teaching poor-performing students. However, he or she tried to cope with those teaching difficulty problems learning from

outside and inside the schools. Besides, another interviewee mentioned that he consulted with other teachers in schools on how to teach the lesson in a better way. However, some teachers in school seem that they do not have the motivation to learn modern teaching methods as they learnt traditional teaching styles when he or she was a student. Another interviewee described that they had informal meetings and they shared their knowledge. It can be seen that they created a professional learning community between prospective teachers who know updated and modern teaching methods and those teachers who had much more teaching experience in the classroom.

(vi) *Mentoring/Getting support from others*

Teacher Mentoring

Figure 26 Teacher Mentoring

Note. The photo was adopted from www.mmtimes.com/special-features/231-educentre/26911-government-providing-strong-leadership-through-the-national-education-strategic-plan.html). In the public domain.

Student teachers were shown a photo of a teacher explaining something to another person and asked for their opinions and experiences related to the photo. Student teachers explained how they got support from schoolteachers regarding subject matter, teaching methods, and classroom management. Schools did not have official mentors or mentoring/supporting systems for student teachers. Thus, they received informal support from schoolteachers. Student teachers mentioned that it would be better for them if someone guides and supports them when they need help.

“We talked to each other and did not know how to solve the misbehavior problem. We consulted, but we could not get the answer. Experienced teachers in that school told us how to teach the subject. Teachers did not mention how to manage disruptive behavior. The teachers showed us their lesson plans. A mentoring system should guide how to teach and manage in what situation. I wished Teacher educators to discuss this with the school.” (Uni student teacher 5)

“I had to ask an experienced teacher about mathematics because I did not understand that part. Mentoring should be done in schools. I was able to teach the lesson after I had listened to an experienced teacher’s explanation. It may be more convenient for us if the mentor could observe our strengths and weaknesses and coordinate with us.” (EC student teacher 5)

“One teacher taught me how to manage student misbehavior because I was using strict rules to manage students. There was no mentoring or support related to teaching. It will be better to have a mentor or mentoring system. We were not familiar with the students. When we are new to the school environment, I think it will be easier and more comfortable to be guided by a teacher.” (EC student teacher 3)

Student teachers wished mentors to guide and give feedback on their performance. Student teachers mentioned their problems and needed support in managing student misbehaviour, teaching mathematics lessons, unfamiliar students, and the school environment. They learned and got help from their peers and experienced teachers if they had difficulties.

(vii) Opinion on University/College program

Teacher Educator and Student Teachers

Figure 27 Teacher Educator and Student Teachers

Note. This photo was adopted from (https://bangkok.unesco.org/sites/default/files/styles/themehighlights/public/assets/article/UNESCO/Myanmar/images/myanmar.html). In the public domain.

A photo of the teaching-learning situation of the university/college program was shown to the participants, and they were asked to describe their opinions on the university program.

"I wanted more effective and practical lessons to use in the classroom. I thought university lessons to be more practical. We had to learn how to organize in a learner-centered classroom at university, but using this method in school was not convenient. I wish the university plans curriculum contents for student teachers to use different teaching methods in the classroom. The teacher educator did not come to see our teaching during the practicum period." (Uni student teacher 5)

"Educational studies from college were useful. We did not have time to use teaching aids in our classroom. We found it helpful that we learned how to prepare and use teaching aids in college. However, it was not convenient to use teaching aids in the classroom. We had teaching aids exhibitions in EDC where we could learn a lot about how to create and use teaching aids related to our lessons in the classroom. Nevertheless, we could not use teaching aids in the real classroom because of lack of equipment and time." (EC student teacher 2)

"During peer group teaching, four teacher educators observed and advised us. I thought 80% of university subjects were supported for the practicum, and we could learn only 9% when we taught in schools. I used TCA in the first practicum. In the second practicum, I could use CCA in the classroom. College program/curricular contents could prepare us for the practicum. However, we found some difficulties when we taught different students in a real classroom. If possible, I would like to practice my teaching in school one day per week. In this way, we became familiar with students and knew how to build a relationship with schoolteachers." (EC student teacher 3)

Student teachers highlighted that the university program prepared them for their practicum. Student teachers said it would be better to connect more between the university's curriculum content and schools. Some university subjects helped them. They needed more effective and practical teaching methods. They noted they could learn from university educators' knowledge and experiences. However, they wanted university

educators to observe and evaluate their teaching during their practicum. They faced problems teaching diverse students and insufficient time and facilities to use teaching aids. However, they are still motivated to get more practice teaching experience.

The photo-elicitation interviews show student teachers' strengths and problems regarding teaching, classroom management and other teaching-learning activities they experienced during practicum in actual school situations. Related to teaching, student teachers tried to apply modernized teaching methods that they learned from the university program during their practicum periods, such as a student-centred approach, small group work learning activities and using teaching aids including charts, pictures and videos in their lessons. The modern teaching methods that student teachers used during the practicum differed from the traditional teacher-centred approaches (e.g., lecture method) mostly used in the classroom.

The line map helped get detailed information on student teachers' experiences during their practicum period. Student teachers encountered emotional problems in their early practicum days, such as excitement, anxiety and stress. Later, they could cope with these emotional problems. Student teachers also faced professional problems such as teaching difficulties with some students, insufficient teaching aids problems, and students' misbehaviour during their teaching. They employed different coping strategies to solve these problems.

Student teachers wished for a more extended practicum period to gain professional experience. Cooperating teachers and principals in some practising schools supported student teachers. Student teachers asked for their suggestions to solve their teaching-learning-related problems. For the assessment/evaluation, student teachers mentioned that they wanted university-based teacher educators or cooperating teachers to evaluate their teaching performance and give feedback.

With the assistance of Figure 27, student teachers' perceptions of their university program can be collected. Related to the university program, student teachers complained about some teaching methods which could not be applied in the classroom and theory-focused curriculum content that could not be matched with the K12 curriculum.

The photo-elicitation interview results were used to develop the questionnaire categories for investigating student teachers' experiences during the practicum, including

teaching-learning problems, coping strategies, mentoring/supporting, and perceptions of the university program and practicum.

5.1.2.2 Focus group interviews with novice teachers

A focus group interview was carried out with eight novice teachers. The demographic information of novice teachers from the focus group interview is presented in table 7.

Table 7 Demographic Information for Novice Teachers (N = 8)

Participant	Age	Gender	Specialization	Teaching experience	Distance from school
Novice teacher 1	24	Male	English, Chemistry, Physics	1 year and 2 months	Far
Novice teacher 2	24	Male	English, Physics, Biology	1 year	Near
Novice teacher 3	21	Male	Chemistry, Physics	2 years	Far
Novice teacher 4	23	Female	English, Chemistry, Biology	1 year	Near
Novice teacher 5	25	Female	English, History, Economics	1 year	Far
Novice teacher 6	23	Female	English, Chemistry, Physics	1 year	Near
Novice teacher 7	23	Female	English, Chemistry, Physics	1 year	Near

Novice teacher 8	22	Female	Chemistry, Physics	2 years	Near

Based on the responses to the focus group interview questions, the novice teachers' experiences during their early teaching period can be summarized according to five themes: professional activities, good and bad experiences, difficulties and coping, mentoring/obtaining support and university preparation.

(i) Professional activities

Novice teachers were burdened with administrative work such as typing, recording meeting notes, and examination duties. Concerning professional activities, novice teachers did overtime teaching after school hours and taking the subject leader role. Generally, there were mainly six subjects in every grade in K12 schools, and experienced teachers in Grade 12 usually took the subject leader roles. For example, the mathematics subject leader collected mathematics teachers from Grade 6 to Grade 11 every month and discussed how and what to teach the lessons. Apart from this work, novice teachers needed to write notes of lessons for every week and a diary for daily lessons and submit it to the school principal. Among the responses given by the novice teachers were:

"I helped in sending official school letters and in examination duties." (Novice teacher 7)

"I was the subject leader of Grade 10 in my school." (Novice teacher 8)

It seems that novice teachers had to deal with more administrative and professional tasks when they entered the profession. They have to perform teaching-learning-related tasks such as exam supervising team, subject leader role, overtime teaching, writing teachers' diaries and daily lesson plan.

(ii) Good and bad experiences

Novice teachers reported teaching difficulties during their first year of teaching: some described how they faced behavioural problems among the students. One reported having language difficulties with teaching students who speak ethnic languages. Most of the participants did not mention their successful experiences during the interview. They

described their needs and difficulties during their first period of teaching. Participants described their experiences during their early period of teaching as follows:

“it is not comfortable to teach 60 students in one classroom”.

“Students do not have basic knowledge, and the class size is very large, the headmaster does not like group work activities. Thus, I use lecture method.”

“When I was teaching Grade 3 students, my lessons were always behind the prescribed monthly curriculum. I did not know how to teach following the monthly lesson plan.” (Novice teacher 5)

Novice teachers have encountered problems with teaching poor-performance students and large classrooms with 60 students in one classroom. Their headmaster/principal did not like modern teaching methods such as group work activities. Thus, novice teachers had to use the lecture method.

As Myanmar still has practised the centralized school system from KG to Grade 12, the responsible person from the Ministry of Education in cooperation with educational officers from each region, outlined the exam dates for each grade. Educational officers from townships, districts, and principals from each primary and secondary school decided to hold the exam on the same date at their schools. Thus, teachers must teach their lessons according to the prescribed monthly lessons.

“The most important is students’ pass rate (percentage of students who passed the state exam) and critical thinking is not important. Students are used to learning with old teaching methods. I want to get more bloc teaching time”. (Novice teacher 6)

“I had difficulties teaching Physics to Grade 10 students because half of the students in the classroom are slow learners, and those students were not interested in the lesson, and they were talking while I was teaching. When I gave punishment to those students, their parents criticized me. Every teacher, including me, who teaches Grade 12 students puts more effort into increasing student pass rate in their subjects as Grade 12 students had to take the state exam. I was stressed during that time.” (Novice teacher 7)

Novice teachers face teaching difficulty problems with slow learners who are not even motivated to learn. Novice teachers had to deal with the problems of student’s parents when they gave punishment to misbehaving students. Myanmar has a culture of giving the same respect to teachers as their parents (Please see Section 2.7). Some parents

used to tell the teachers to teach good manners to their children or give punishment to the students if they are doing inappropriate behaviours. However, some parents do not like giving punishment to their children. Besides, novice teachers who teach Grade 12 students were stressed about their teaching as Grade 12 students have to take the state exam.

(iii) Significant challenges and coping

During focus group interviews, novice teachers are asked to describe significant challenges and how they cope. Novice teachers mentioned that they have to deal with behavioural problems among their students. Some novice teachers had problems with school principals; one described having problems with competition between teachers, and other novice teachers said they had difficulties teaching with the student's diverse needs. If novice teachers had difficulties, they asked other teachers and principals to cope. Novice teachers sometimes solve problems by themselves. One novice teacher mentioned that she could learn from workshops and take suggestions from online teaching and learning groups for teaching difficulties.

"Problems with students are big difficulties for me. They did not give respect to me. I tried to solve it but it did not work." (Novice teacher 2)

"I asked other teachers and the principal, called the parents, discussed it with them, and solved it. I had no difficulties with teaching." (Novice teacher 4)

"Students in my classroom misbehave and do not respect me. I had a problem with classroom management". (Novice teacher 1)

"I am not okay with my colleague. They did not let me teach my specialization subject. I can teach English subjects to Grade 9 students. They want to compete with me. I just want to get teaching experience. She always gives me trouble. I always live alone, I cannot sleep. Then, I tried to pass entrance exam for the master program at the university". (Novice teacher 3)

"In my classroom, six students have visually impaired. They cannot see my writing on the white board, and they can listen to my voice. I did not know how to teach those students". (Novice teacher 2)

It seems that novice teachers had difficulties socializing with the school principals and their colleagues. One novice teacher recounted that she wanted to escape from that

situation. Novice teachers have challenges in managing the classroom as they have to deal with misbehaving students. There is also another problem with teaching inclusive students. It can be seen that the teacher education program did not prepare novice teachers teaching inclusive students. However, novice teachers tried to cope with student misbehaviour problems with the help of principals and other teachers. One tried to cope with teaching difficulty by attending the workshop and learning from online lessons and learning groups.

(iv) Mentoring / Obtaining support from others

Novice teachers are explained the concept of mentoring and asked whether they need to ask for that type of support or help from others when they have difficulties. Regarding mentoring/obtaining support, novice teachers mentioned they asked their friends, the principal and experienced teachers from their schools.

"I asked my friend from another school in writing daily teacher diary." (Novice teacher 8)

"I felt more confident when my colleagues said my teaching skills had improved this year." (Novice teacher 4)

"I could learn from experienced teachers and the principal." (Novice teacher 5)

Even though there is still no formal mentoring and induction program in Myanmar teacher education program, novice teachers could adapt to the situation of the schools and receive help from experienced teachers and friends to solve their personal and professional problems.

(v) University Preparation

Novice teachers were asked to describe their perceptions of their university preparation, such as the curriculum content, teaching methods and practicum. Novice teachers felt that teaching methods and lesson preparation lessons from university programs were practical. When they faced students with poor academic backgrounds, they saw the difference between the university lessons they learned and the actual situation in the classroom. Examples of novice teachers' voices are described as follows:

"It was not as easy as I expected. I used new teaching methods from the university program. However, some students in my classroom could not read the sentences correctly.

Time was limited for each lesson, and group work was not going well with the students' seats. The students' seats were fixed." (Novice teacher 6)

"Teaching methods, problem solving, discussion and lesson planning that we learned in University level is different from the real classroom." (Novice teacher 3)

"Students are not familiar with brainstorming and take time to get their ideas …and we could use what we learned from the university curriculum based on the condition of the students in the classroom." (Novice teacher 2)

"It is not so easy to teach students as the same way that I was taught from university. I can't make group discussion. I do not know about official work". (Novice teacher 5)

"There was a gap between what we learned from the university program and the real situation we faced in schools. I think the lessons from the university program should include more practical lessons." (Novice teacher 3)

Novice teachers could not use a student-centred approach because students needed to become more familiar with this teaching method. Besides, the class sizes were large, group discussions could have been more varied, and the lesson was left behind the prescribed monthly lesson chart. Novice teachers thought two weeks of the bloc teaching period in their university/college program was insufficient. They learned different teaching methods theoretically but wanted to know the practical tips for using them. They wished the university lesson to connect with the lesson from the Basic Education textbook. They expected to learn the solutions to how to manage large class sizes. Besides, students are used to teaching with a teacher-centred approach and were unfamiliar with the brainstorming approach.

From the focus group interview results, novice teachers' experiences during the early teaching period and reflection on the past practicum can be learned. Novice teachers participated in different professional activities such as taking subject leader roles, overtime teaching after school, and exam supervision in their early teaching period. Novice teachers faced good and significant challenges during their early period of teaching. Although students liked their teaching methods, teachers and principals in their schools disagreed with their new teaching methods. It has been known that novice teachers faced time management problems, overcrowded classrooms, and unmotivated students during their early teaching period. However, they obtained professional support such as teaching difficulties and student misbehaviour problems from the cooperating

teachers and their principals. Novice teachers mentioned that the teaching methods they learned from the university program could not be used in the classroom because of the different context between university and school, such as large class sizes of around 60 students, limited time, prescribed monthly curriculum chart and fixed seating arrangement in the classroom.

Focus group interviews with novice teachers came to understand the actual problems of novice teachers during their early period of teaching, their coping strategies to solve these problems, opinions on mentoring/obtaining support during their early teaching period and opinions on university programs such as curriculum content, teaching methods and practicum period. In the second phase of the quantitative part, the questionnaire for novice teachers was developed, including the categories of novice teachers' teaching learning-related problems, coping strategies to solve these problems, general coping strategies, perceptions on past practicum, perceptions on mentoring/obtaining support and perceptions on university program based on the results of the focus group interview.

5.1.2.3. Participatory interviews with teacher educators

Four teacher educators from the University of Education and two from Education Degree College were requested to participate in the participatory interview. As mentioned in the previous chapter (Section 2.4, context chapter), the Department of Curriculum and Methodology arranged the practicum component in their teacher preparation courses and arranged the student teachers' practicum. Thus, in this participatory interview, four teacher educators from the Department of Curriculum and Methodology were invited to express their opinions on the practicum implementation of initial teacher education. The demographic information of teacher educators was described in Table 8.

Table 8 Demographic Information of Teacher Educators

Participants	Affiliation	Time taken	Experience	Interview type
Teacher Educator 1	Methodology dept, EDC	20 min	6yrs	Online (Zoom)
Teacher Educator 2	Methodology dept, EDC	25 min	6yrs	Online (Zoom)

Teacher Educator 3	Methodology dept, UOE	40 min	15yrs	Online (Zoom)
Teacher Educator 4	Methodology dept, UOE	30 min	21yrs	Online (Zoom)

Online interviews were conducted with four teacher educators using the Zoom platform. First, each interviewee has been explained the summary of the student teachers' photo-elicitation interview results and the document analysis results. Then, interviewees were shown written descriptions of the summary of the result. After that, participants were requested to describe their opinions on the first interview results.

An inductive approach was employed in analyzing the interview data. The transcripts were coded first, and the codes were formed into categories and grouped into themes. The thematic analysis method resulted in 44 codes and 7 convergent themes. The exported table of summaries with coded segments, including codes, coded segments, and transcriptions from MAXQDA software, can be seen in Appendix. The interview results are elaborated under each theme.

(i) Perceptions on practicum

The participants, teacher educators, were requested to describe their perceptions of the term practicum. All teacher educators responded that the practicum period is essential for student teachers to integrate their theoretical knowledge and practice, learn from their teaching practice, and apply their knowledge in the classroom. Examples of their responses are:

"The practicum period is a time to integrate theoretical knowledge with practice." (Teacher Educator 1)

"Practicum is an essential period for teacher trainees to learn and practice their teaching to become outstanding teachers." (Teacher Educator 3)

It seems that teacher educators see the practicum as an essential period for student teachers to practice their teaching to be outstanding students.

(ii) Opinion on difficulties

Teacher educators are described student teachers' difficulties, such as large class sizes, teaching aids problems, and using the child-centred approach method. After that, teacher educators expressed their opinions on student teachers' difficulties. The most interesting excerpts from teacher educators are:

"Student teachers needed to make more effort, we added practical lessons in EDC, and class size problems are normal for them. I accept that it is not easy to use new methods, but they are performing activities in schools. EDC can support them with a lot of teaching aids. There are enough teaching aids in every department and student teachers can borrow them if they want to use during their practicum". (Teacher Educator 1)

"It will be more effective if all the students can use the teaching aids; it is difficult to get in rural schools, student teachers know their problems, but they still have their difficulties." (Teacher Educator 2)

"Some principals are narrow-minded and think student teachers' practicum period is interrupting their school program. We can see their difficulties from their diary, and we are trying to reduce their difficulties year after year." (Teacher Educator 3)

Teacher educators agreed that they saw student teachers' challenges in their practicum diaries and are trying to reduce student teachers' difficulties year after year. One teacher educator thought that student teachers need to make more effort to prepare themselves for managing large class sizes and teaching aid problems, as these are the common problems in rural schools. For the teaching aids problem, teacher educators complained that there were many teaching aids samples in the Department and that student teachers could borrow them to use in their practicum. Besides, the teacher educator mentioned that student teachers are at the beginner level and using an alternative method of CCA can be challenging if the students in that school are unfamiliar with that approach. Teacher educators said that student teachers had to think about all these things. One teacher educator reflected that some principals and subject deans might not have a broader mindset and knowledge about the practicum.

In that case, teacher educators assumed they had already prepared student teachers for the practicum during their university program. Teacher educators might think that

student teachers also need to make more effort for the potential problems during their practicum.

(iii) Opinions on mentoring/supporting

The teacher educator has not mentioned about the support system or mentoring program during the practicum. Instead of mentoring, the word 'supporting' is used because teacher educators and student teachers were unfamiliar with the term mentoring. Teacher educators assumed that student teachers needed support during their practicum. One teacher educator perceived that student teachers needed support for teaching aids. Teacher educators gave their contact numbers to student teachers to contact them if they had problems during their practicum. However, teacher educators could not give support or supervise student teachers for the whole practicum period as they had teaching tasks for other students.

"We gave them our contact number if they had problems during their practicum. Some students contacted us, but some solved their problems by themselves. We could not supervise those 4th-year students the whole practicum period because we have lecture classes for other students." (Teacher Educator 3)

"Experienced teacher educator from EDC checked their lesson plan and teaching aids and discussed how to teach the lesson with student teachers before the practicum. Teacher educators cannot help them when they go to their practice school. However, they contacted me via phone and asked for help" (Teacher Educator 1).

Regarding mentoring, teacher educators agreed that student teachers need support during the practicum. However, they had other classes to teach, and they did not have enough time to check student teachers' teaching and give them support. Moreover, teacher educators think they have prepared student teachers to teach and plan the lesson before the practicum. As mentoring or supporting systems in teacher education in Myanmar still need to develop, teacher educators might not think mentoring or supporting student teachers during the practicum is a mandatory task.

(iv) Opinion on evaluation during the practicum

The University of Education and Education degree college sent student teachers with the official request letter to the schools and the evaluation form sealed in a separate letter for the principal. During the practicum, the principal or subject dean was supposed

to evaluate student teachers according to the evaluation criteria of the evaluation form. However, some student teachers got points in the evaluation form without being observed or evaluated by the principal or subject dean. Besides, teacher educators from the university or Education degree college could not visit the practising schools where student teachers were practising their teaching from time to time. One teacher educator said there was still a requirement to evaluate the student teachers during their practicum. Teacher educators' opinions can be seen from the following quotes:

"Currently, there is still a requirement in evaluation for student teachers. They will do better if they have been evaluated" (Teacher Educator 1).

"We checked them. They had two weeks of bloc teaching. We visited them once to help them if they need our help" (Teacher Educator 3).

"In my opinion, it is necessary to supervise the lesson plans of student teachers. Because schoolteachers had experience with that. Thus, if schoolteachers could supervise lesson plans before teaching and give feedback after their teaching, it will be a more effective practice for student teachers" (Teacher Educator 2).

Teacher educators imply that the principal or cooperating teachers are responsible for the evaluation or assessment of the practicum. However, there has been no clarification of the role of the principal and cooperating teachers conducting the practicum. Those principals might think the evaluation form is essential for student teachers to continue to the next academic year. They might put the highest points without actual evaluation in the classroom. It can be interpreted that the evaluation or assessment of student teachers' performance during practicum by the principal or cooperating teacher is superficial.

(v) Opinions on the implementation level

Education Degree College introduced a new teacher education curriculum in December 2019. Practicum is a separate module comprising many themes such as portfolio, lesson study, peer group teaching, school visit, and school placement. However, the teacher educator thought that the implementation level was still at the beginning stage according to the prescribed curriculum. Later, it will reach a higher level of implementation. They complained that some teacher educators did not have enough knowledge and understanding about the activities of the new curriculum, and they

interpreted differently. Teacher educators still need a definite action plan for every curriculum activity.

“Implementation will be all right in a long time. Currently, we are doing in chaos (e.g., teacher educators did not have enough knowledge and understanding about portfolios, and different departments interpret differently). We are putting our effort into implementing the new curriculum, but it is still dull. We still do not have a definite action plan for every activity” (Teacher Educator 1).

“For the curriculum of the university program, student teachers think that they only learn theoretical knowledge in some subjects and want practical lessons. One teacher educator said, “It depends on the time allocation of each subject, student teachers’ background knowledge” (Teacher Educator 3).

The new curriculum was introduced in Education Degree College, but the implementation level is still developing. Besides, the pandemic and the political situation happened around 2021, and the implementation was at the beginning stage when the data for this study was collected. Furthermore, teacher educators still need professional development training or workshop to implement the new curriculum’s updated materials.

(vi) Opinion on better practicum

Teacher educators were asked to mention their opinions on a better practicum system. Teacher educators consider that the practicum period will be more successful if student teachers prepare well to be subject matter and classroom management experts. Besides, the principal and teachers from the respective school and the teacher educators from the university should supervise and support student teachers during their practicum. One teacher educator expressed that it would be better for student teachers if their bloc teaching period is extended to one month (previously, it was allowed for two weeks).

“If student teachers well prepare themselves to have subject mastery and classroom control to teach effectively to students and the respective school or university could support them, practicum period for student teachers will be more successful.” (Teacher Educator 4)

“It will be better and more effective if student teachers have one month for their bloc teaching. They can become outstanding teachers if they overcome challenges using their knowledge and experience during their practicum.” (Teacher Educator 3)

“If the principal and teachers from school supervise and evaluate, in addition, teacher educators give feedback on student teachers’ activities during their practicum; it will be more effective for student teachers.” (Teacher Educator 1)

Teacher educators think that the practicum system will be improved if student teachers have to make more effort for the practicum period and the practising school and the university support them. In that case, teacher educators did not mention the program’s problems at the university/college level. It might be that teacher educators might think the university/college program has already prepared student teachers to be outstanding students, and student teachers and the practising school are responsible for the better practicum period. Teacher educators did not express the weakness of the university/college program, or they might think that the idea of reforming or updating the offering approach of the university/college program is beyond their decision-making level. Thus, they did not describe the side of the university/college program.

(vii) Opinion on a better program

Teacher educators highlighted that the new curriculum/program at the Education Degree College is good. However, they still need human resources, further training, and face-to-face discussion about implementing the new curriculum. The implementation stage still needs to be stronger.

“The new curriculum is good. It will be better if we can implement it effectively than on paper. We should have the training and face-to-face discussion. It is not okay to change immediately. We still need human resources. If then, we can train more qualified student teachers. As for infrastructure, we have a lot of new buildings. We also want to train more student teachers. In that case, we need more trainers. We have over workload because of insufficient teacher educators.” (Teacher Educator 1)

For a better university program, one teacher educator suggested that a new K12 curriculum was introduced in Basic Education schools. Teacher educators need those updated materials related to that. The Ministry of Education or government should support those updated materials because the teacher education curriculum is developed based on the updated materials in Basic Education Schools. Teacher educators need to add how to teach and plan the lesson for student teachers based on the textbooks of Basic Education Schools. Besides, the Ministry of Education should provide student teachers internet access to learn technological tools (e.g., how to use google classroom, Kahoot)

to apply in teaching-learning situations. In the case of teacher educators, they can use the internet to teach student teachers in the classroom.

From the participatory interview with teacher educators, the perspective and voices of teacher educators for implementing the current practicum system in Myanmar can be seen, and the results of student teachers' interviews and the document analysis can be confirmed. From this interview, we can see teacher educators' roles and opinions as the researcher to think about how to suggest better practicum and university programs for initial teacher education.

5.2 Quantitative findings

In this quantitative part, two questionnaires were used to investigate the practicum in Initial teacher education in Myanmar.

5.2.1 Student teachers' responses to questionnaire 1

The first set of questionnaires investigated student teachers' experience during the practicum. Student teachers were asked to describe their demographic information and their practices related to (i) general coping strategies, (ii) difficulties related to teaching and coping strategies related to those teaching difficulties, (iii) difficulties related to student misbehaviour, and coping strategies related to student misbehaviour difficulties (iv) difficulties related to other issues and coping strategies related to those difficulties, (v) common coping strategies, (vi) their perceptions of mentoring (vii) practicum (viii) program, and (ix) competency development.

SPSS software was used to analyze the data. This section describes demographic data for participants, means, and standard deviations for variables. The link to the online survey forms was sent to student teachers, and 328 participants responded to the questionnaire. The demographic data for gender, age group, academic year, current university, previous university, duration of practicum period, duration of second practicum, location of the school, and teaching level are presented in Table 9.

Table 9 Descriptions of Demographic Information of Student Teacher (N=328)

Personal factor variables		Number of participants	Percent
Gender	Male	132	40.2
	Female	196	59.8
Age group	18-20	23	7.0
	21-23	297	90.5
	24-26	8	2.4
Academic level in teacher education	B.Ed. 3rd yr. (Direct Intake)	2	.6
	B.Ed. 3rd yr. (College of Education)	154	47.0
	B.Ed 4th yr (Direct Intake)	57	17.4
	B.Ed 4th yr (College of Education)	51	15.5
	Recent graduate	64	19.5
Affiliation	YUOE	249	75.9
	Education Degree College	55	16.8
	B.Ed./diploma holders	24	7.3
Duration in 1st practicum	0 - 2 weeks	53	16.2
	3- 4 weeks	93	28.4
	5- 6 weeks	100	30.5
	7-8 weeks	70	21.3
	more than 8 weeks	12	3.7
Duration in 2nd practicum	0-2 weeks	73	22.3
	3-4 weeks	82	25.0
	5-6 weeks	105	32.0
	7-8 weeks	57	17.4
	more than 8 weeks	7	2.1
Location of schools in 1st practicum	Rural	212	64.6
	Urban	79	24.1
	Sub-urban	37	11.3
Teaching level in 1st practicum	Primary school level	239	72.9
	Middle school level	6	1.8

	High school level	83	25.3
Location of schools in 2nd practicum	Rural	189	57.6
	Urban	107	32.6
	Sub-urban	29	8.8
Teaching level in 2nd practicum	Primary school level	3	.9
	Middle school level	250	76.2
	High school level	72	22.0

The demographic information showed that 59.8% of the respondents were female. Although there were three age groups, 297 participants were between the ages of 21 and 23. 75.9% of the respondents are studying at the University of Education. 3.7% of participants reported having more than eight weeks of practicum experience, but 16.2% of student teachers had two weeks of practicum. The teaching level for the majority of the participants was high school level. 64.6 % reported that their school was in a rural area during their first practicum 57.6% were teaching in rural schools in their second practicum period.

(i) General coping strategies

Student-teachers were given four general coping strategies related to the daily life problems framed by Lazarus and Folkman (1984). Student-teachers are asked to choose the coping strategies they use in their daily lives when they encounter problems. As the questions were multiple-choice, multiple-response analyses with dichotomy groups were calculated and shown in table 10.

Table 10 Multiple Response Analysis of Student-Teachers' General Coping Strategies *(N=328)*

No	Student teachers' general coping strategies items	N	Percent of Responses
1	problem solving(self)	112	34.3%
2	**seeking social support**	**189**	**57.8%**
3	Avoidance	13	4.0%
4	adaptation/adjustable	55	16.8%
Total		369	112.8%

N=number

The number of responses and percentage of student teachers' general coping strategies can be seen in Table 8. Among the four general coping strategies, most student teachers (N=189) selected seeking social support coping strategy, problem-solving coping strategy (N=112) as the second choice, adaptation/adjustable to the situation (N=55) as the third, and avoidance coping strategy (N=13) the least.

The following chart also visualised the data for comparing student teachers' general coping strategies.

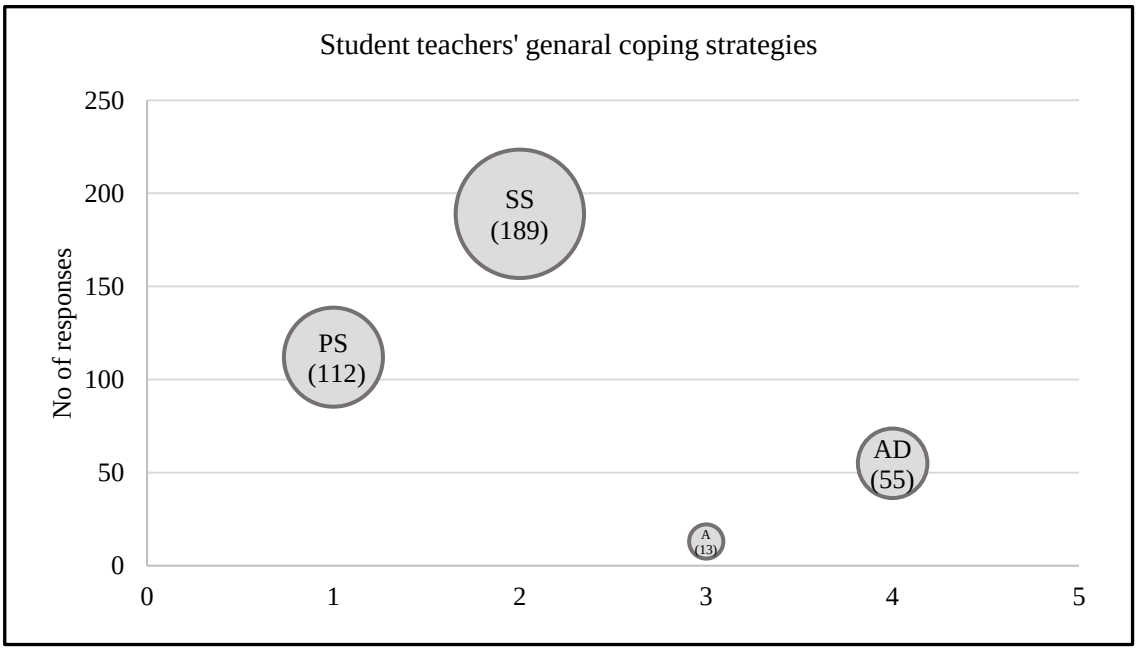


Figure 28 General Coping Strategies of Student Teachers

Note: SS-Seeking social support, PS-problem solving, AD-Avoidance, A-Adaptation to the situation.

(ii) Difficulty related to teaching

Based on the interview results, general difficulties related to teaching (18 items) were composed, and student teachers were asked to choose their difficulties or problems related to teaching during the practicum. Multiple response analyses with dichotomy groups were calculated and shown in Table 11.

Table 11 Multiple Response Analysis of Student-Teachers' Teaching Related Difficulties

(N=328)

No.	Teaching-related difficulty (in short phrases)	N	Percent of responses
1.	**teaching slow learners**	**142**	**43.4%**
2.	time management problems	62	19.0%
3.	**lack of/inadequate teaching aids.**	**163**	**49.8%**
4.	students' absentee	27	8.3%
5.	Discomfort in teaching with a learner-centered approach.	78	23.9%
6.	not being able to use teaching methods effectively in the classroom.	75	22.9%
7.	**observation and criticism from the subject teacher**	**16**	**4.9%**
8.	**students who are not interested in the lesson.**	**96**	**29.4%**
9.	difficulty in teaching some lessons.	85	26.0%
10.	Teaching unprepared lesson	81	24.8%
11.	Unable to manage group learning activities	23	7.0%
12.	Inconvenient classroom for students group learning activities.	64	19.6%
13.	Teaching some special needs students	36	11.0%
14.	Large class size	87	26.6%
15.	Insufficient time to prepare and teach lessons.	56	17.1%
16.	Preparing questions for the exam.	27	8.3%
17.	Difficulty in lesson preparation	19	5.8%
18.	Other difficulties (student's lack of background knowledge, have already learned the lesson in private session)	18	5.5%
a. Dichotomy group tabulated at value 1.			

N=number, DT=difficulty related to teaching

The number of responses and percentage of student teachers' teaching-related difficulties during their practicum period can be seen in the above table. According to the results of the table, the most significant proportion of 49.8% of student teachers (N=163) selected difficulty 3, "lack of inadequate teaching aids," about 43.4% of student teachers (N=142) chose difficulty 1, "teaching difficulty with low intelligent quotient students,"

about 29.4% of student teachers (N=96) chose difficulty 8 “experienced with uninterested students in the lesson.” However, a minor proportion of 1.4 % of participants (N=16) reported they experienced negative observation and criticism from the subject teacher (difficulty 7) during their practicum.

However, student teachers encountered other difficulties related to teaching, such as “students’ lack of background knowledge” and “some students have already learned the lesson in their private session.”

The data on student teachers’ difficulties related to teaching during their practicum are also visualized in the following chart.

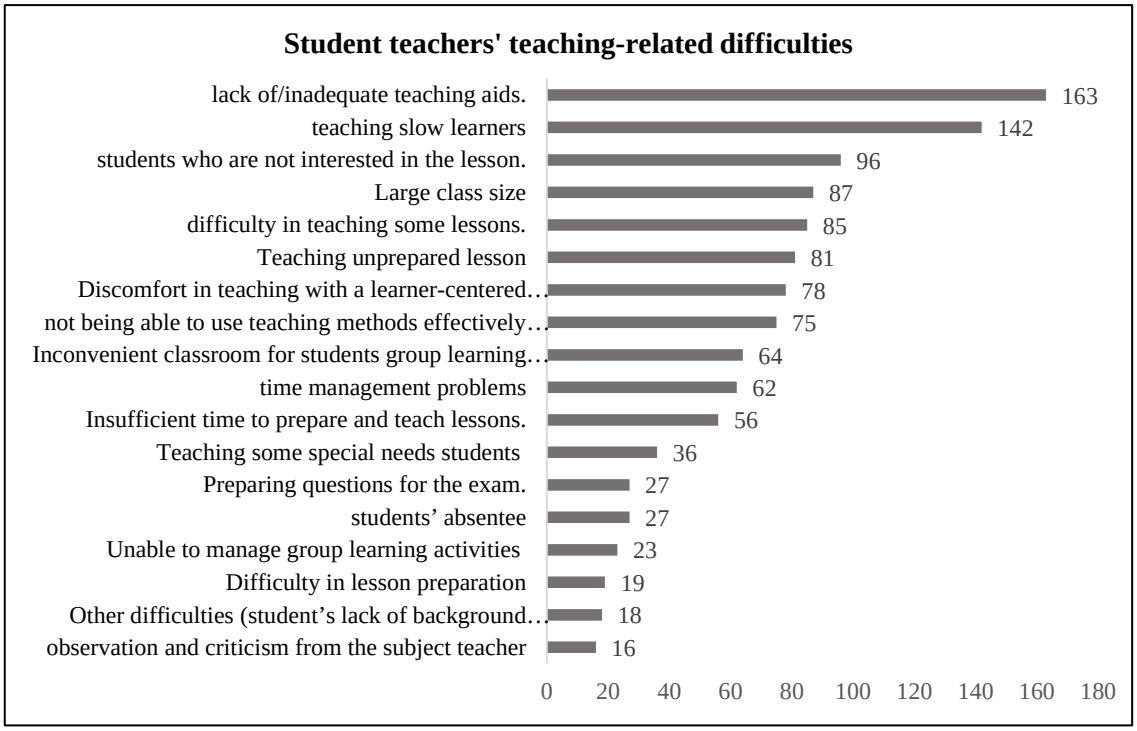


Figure 29 Student Teachers' Teaching Related Difficulties during their Practicum

Next, the crosstabulation method was computed to describe the interaction between difficulty related to teaching (categorical variable) and types of schools (categorical variable) where student teachers took their practice teaching. The results of multiple response analysis showing the number and proportions of the participants’ teaching-related difficulty and their coping strategies are tabulated in table 12.

Table 12 Pearson Chi-Square Analysis of Crosstabulation of Student-Teachers' Difficulties Related to Teaching and School Locations in 1st Practicum

Difficulties related to teaching	Location of school in 1st P			X^2	df	p
	Rural	Urban	Sub-urban			
DT1, Teaching slow learners	96	30	16	1.25	2	.535
DT2, time management problems	**31**	24	7	**9.32**	2	**.009**
DT3, lack of / insufficient teaching aids	113	33	17	3.29	2	.193
DT5, teaching with a learner-centered approach.	**36**	26	16	**16.77**	2	**.000**
DT6, unable to use different teaching methods effectively in the real classroom	41	22	12	4.52	2	.104
DT7 observation and criticism from the subject teacher	6	7	3	5.44	2	.066
DT8, students are not interested in the lesson	**52**	31	13	**6.71**	2	**.035**
DT9, teaching some lessons	**45**	22	18	**12.54**	2	**.002**
DT10, teaching unprepared lessons on behalf of absent teachers	**42**	23	16	**10.39**	2	**.006**
DT11, Inability to manage group activities	7	**11**	5	**12.66**	2	**.002**
DT12, Inconvenient classroom and seating for students' group learning activities	**32**	21	11	**7.60**	2	**.022**
DT13, some special needs students	23	10	3	0.54	2	.762
DT14, large class size	**44**	28	15	**10.57**	2	**.005**
DT15, Insufficient time to prepare lessons and teach	**24**	23	9	**14.41**	2	**.000**
DT16, Preparing exam questions	14	10	3	2.79	2	.247
DT17, difficulty in lesson preparation	7	**9**	3	**7.31**	2	**.026**

A Chi-Square Goodness of Fit Test was performed to determine whether the proportion of student teachers who faced teaching difficulties differed between the three locations of schools in 1st practicum. The proportions of student teachers in three school locations significantly differed by *time management problems*, [X^2(**2**) = 9.32, p = .009];

teaching with a learner-centered approach, [X^2(**2**) = 16.77, p = .000]; *students are not interested in the lesson*, [X^2(**2**) = 6.71, p = .035]; *teaching some lessons*, [X^2(**2**) = 12.54, p = .002]; *teaching unprepared lessons on behalf of absent teachers*, [X^2(**2**) = 10.39, p = .006]; *inability to manage group activities*, [X^2(**2**) = 12.66, p = .002]; *inconvenient classroom and seating for students' group learning activities*, [X^2(**2**) = 7.60, p = .022]; *large class size*, [X^2(**2**) = 10.57, p = .005]; *insufficient time to prepare lessons and teach*, [X^2(**2**) = 14.41, p = .000] and *difficulty in lesson preparation*, [X^2(**2**) = 7.31, p = .026] respectively.

The results of student teachers' teaching difficulties in different school locations during their 1st practicum can be visualized in the following chart.

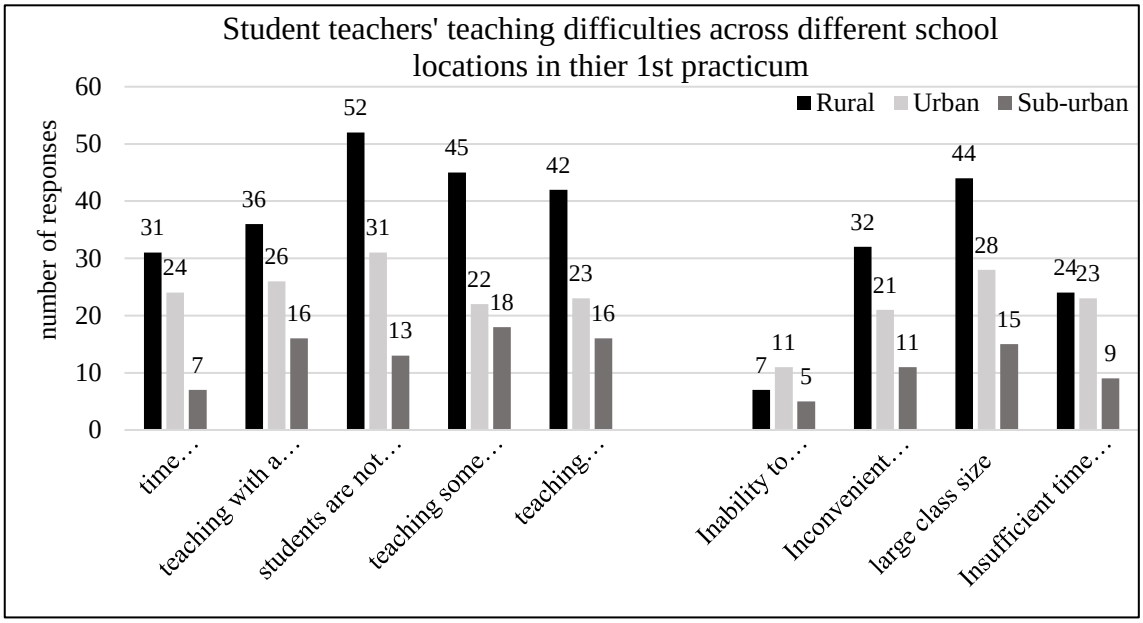


Figure 30 Student Teachers' Difficulties Related to Teaching across Different School Locations in 1st Practicum

Among the three school locations (rural, urban, and suburban), the proportion of student-teachers in rural schools mainly had encountered *"students are not interested in the lesson"* (N=52), *"teaching some lessons"* (N=45), *"large class size"* (N=44), *"teaching unprepared lessons on behalf of absent teachers"*(N=42), *"teaching with a learner-centered approach"* (N=36), *"inconvenient classroom and seating for students' group learning activities"* (N=32), **"***time management problems"* (N=31)**,** and *"insufficient time to prepare lessons"* (N=24) compared to student-teachers in urban schools and suburban schools. Meanwhile, student-teachers in urban schools mostly faced *"inability to manage students' group activities"* (N=11) and *"difficulty in lesson*

preparation" (N=9) compared to student-teachers in rural schools and suburban schools during their 1st practicum.

Table 13 Pearson Chi-Square Analysis of Crosstabulation of Student Teachers' Difficulties Related to Teaching and School Locations in 2nd Practicum

Difficulties related to teaching	Location school in 2nd P			X^2	df	p
	Rural	Urban	Sub-urban			
DT1, Teaching slow learners	80	46	15	0.91	2	.633
DT2, time management problems	27	**30**	3	**9.97**	**2**	**.007**
DT3, lack of / insufficient teaching aids	94	50	17	1.29	2	.523
DT5, teaching with a learner-centered approach.	30	**41**	7	**18.87**	**2**	**.000**
DT6, unable to use different teaching methods effectively in the real classroom	34	34	5	**7.95**	**2**	**.019**
DT8, students are not interested in the lesson	46	40	7	6.004	2	.050
DT9, teaching some lessons	42	31	9	2.21	2	.338
DT10, teaching unprepared lessons on behalf of absent teachers	41	28	11	3.78	2	.151
DT11, Inability to manage group activities	6	**15**	2	**12.21**	**2**	**.002**
DT12, Inconvenient classroom and seating for students group learning activities	30	28	6	4.59	2	.10
DT13, some special needs students	16	16	3	2.99	2	.22
DT14, large class size	35	**41**	9	**14.26**	**2**	**.000**
DT15, Insufficient time to prepare lessons and teach	21	**29**	5	**12.43**	**2**	**.002**
DT16, Preparing exam questions	12	11	4	2.64	2	.267
DT17, difficulty in lesson preparation	4	**12**	2	**10.92**	**2**	**.004**

A Chi-Square Goodness of Fit Test was performed to determine whether the proportion of student teachers who faced teaching difficulties differed between three different school locations in 2nd practicum. The proportions differed by *time management*

problems, [$X^2(2) = 9.97$, $p = .007$]; *teaching with a learner-centered approach*, [$X^2(2) = 18.87$, $p = .000$]; *unable to use different teaching methods effectively in the real classroom*, [$X^2(2) = 7.95$, $p = .019$]; *inability to manage group activities*, [$X^2(2) = 12.21$, $p = .002$]; *large class size*, [$X^2(2) = 14.26$, $p = .000$]; *insufficient time to prepare lessons and teach*, [$X^2(2) = 12.43$, $p = .002$] and *difficulty in lesson preparation*, [$X^2(2) = 10.92$, $p = .004$] respectively.

The results of student teachers' difficulties related to teaching in different school locations during their 2nd practicum can be viewed in the following chart.

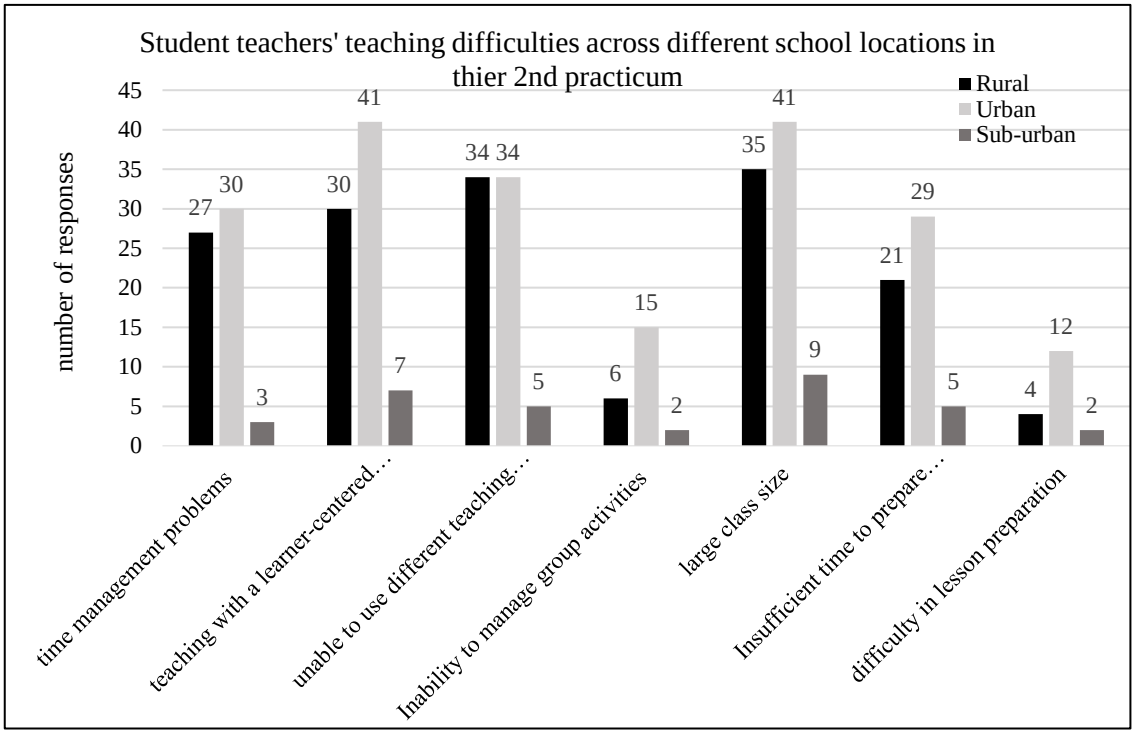


Figure 31 Student Teachers' Difficulties Related to Teaching across Different School Locations in their 2nd Practicum

Among the three school locations (rural, urban, and suburban), the proportion of student-teachers in urban schools had mostly encountered "*teaching with a learner-centered approach"* (N=41) and "*large class size"* (N=41), "*time management problems"* (N=30), "*insufficient time to prepare lessons and teach"* (N=29), "*inability to manage group activities"* (N=15), "*difficulty in lesson preparation"* (N=12) and "*observation and criticism from the subject teacher"* (N=10) compared to student-teachers in rural schools and suburban schools.

(iii) Coping strategies related to teaching difficulties

The two-step multiple choice questions were developed where the first question asks about student teachers' difficulties, and the second question asks them to choose their coping strategies for the first chosen difficulty. Multiple response analysis was computed to analyze these data, and the results were described in table 14.

Table 14 Multiple Response Analysis of Student Teachers' Coping Strategies for Teaching-Related Difficulties During their Practicum

(N=328)

No	Coping strategies and teaching difficulty	N	Percent of responses
	D1 **Teaching slow learners?**		
1	D1C1, teaching from basic level	29	8.8%
2	D1C2, extra teaching	31	9.5%
3	D1C3, reflection	23	7.0%
4	D1C4, private tutor	6	1.8%
5	***D1C5, consult with experienced teacher***	***184***	***56.1%***
6	D1C6, teaching according to student background	53	16.2%
	D3 lack of/inadequate support?		
7	D3C1, rotation method	16	4.9%
8	D3C2, discuss principal	32	9.8%
9	D3C3, external source	9	2.7%
10	D3C4, a more economical way	36	11.0%
11	***D3C5, creating teaching aids***	***69***	***21.0%***
12	D3C6, other (try to get teaching aid)	1	0.3%
	D8 students who are not interested in the lesson?		
13	***D8C1, motivation***	***39***	***11.9%***
14	D8C2, form effective group	27	8.2%
15	D8C3, discuss with others	9	2.7%
16	D8C4, reflection on teaching	16	4.9%
17	D8C5, neglect	2	0.6%
18	D8C6, other (telling jokes and motivating students, creating activities for all student's participation.)	3	0.9%

	D14 large class size?		
19	*D14C1, effective student group*	*34*	*10.4%*
20	D14C3, discussed with an experienced teacher	17	5.2%
21	D14C4, using the lecture method	21	6.4%
22	D14C5, other (speak louder, class control, request their cooperation)	5	1.5%
23	D14C6, getting student representative help	10	3.0%

Table 14 summarizes the number of responses and percentage of the coping strategies related to student teachers' mostly encountered difficulties. According to the results of the table, student teachers (N=184) mostly used *D1C5-"consult with an experienced teacher"* for "teaching slow learners" (Fig. 32), about 69 student teachers used *D3C5 "create teaching aids by themselves"* to cope with "lack of/inadequate support of teaching aids problems" (Fig. 33), and employed *D8C1 "giving motivation to the student," (N=39)* to solve the difficulty of "students are not interested in the lesson." Some examples of the results were visualized in the following charts.

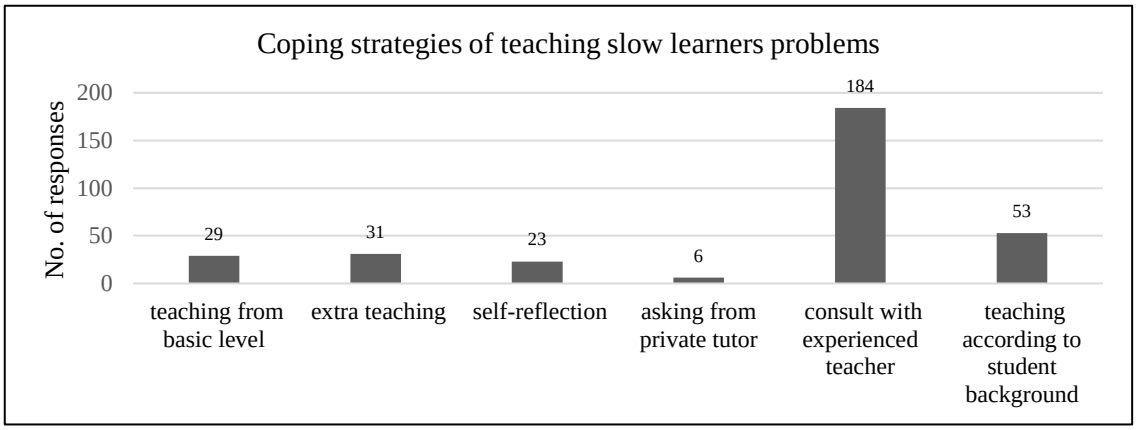


Figure 32 Student Teachers' Coping Strategies for Teaching Slow Learners

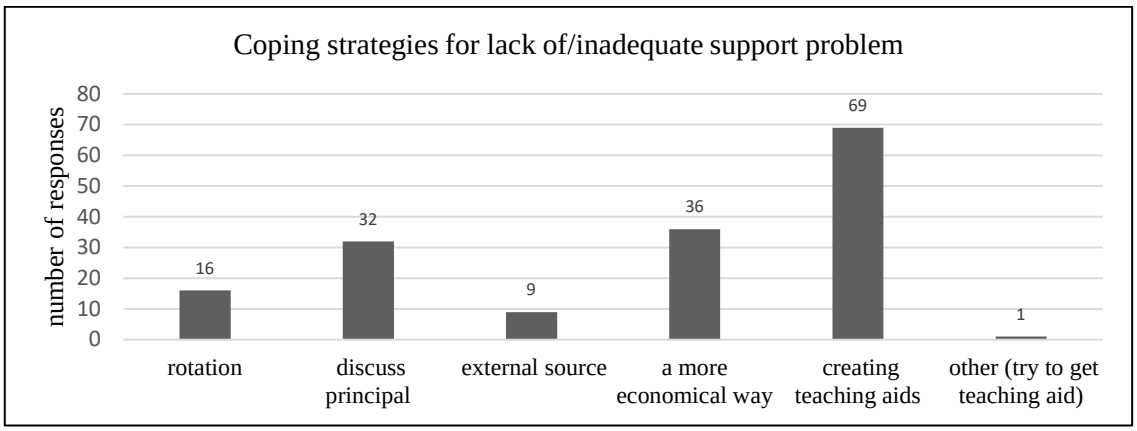


Figure 33 Student Teachers' Coping Strategies of Inadequate Support

(iv) Student teachers' difficulties related to students' misbehavior problems

Student-teachers were asked to choose difficulties related to student misbehavior during their practicum. Based on their interview results, the questionnaire consists of 10 items related to students' misbehavior problems faced by student-teachers during their practicum. Multiple response analyses with dichotomy groups were calculated and shown in table 15.

Table 15 Multiple Response Analysis of Student-Teachers' Difficulties Related to Students' Misbehaviour

(N=328)

No	Student-teachers' difficulties related to students' misbehavior problems	N	Percent of responses
1	DB1, Relationship problem with misbehaving students	67	20.5%
2	DB2, Bullying problems among students	73	22.3%
3	**DB3, Inactive students during group activities**	**147**	45.0%
4	**DB4, Managing disobedient students**	**82**	25.1%
5	**DB5, Chatting with friends during the lesson**	**105**	32.1%
6	DB6, lack of paying respect to teachers	35	10.7%
7	DB7, Making fun of teacher's teaching	21	6.4%
8	DB8, students fighting in the classroom	41	12.5%
9	DB9, students are not close to the teacher	28	8.6%
10	DB10, other difficulties (lack of parents' cooperation, making fun of teachers, students' shyness behavior in group activities, inactive students in their group work)	13	4.0%
Total		612	187.2%

N=number, DB=difficulty related to student misbehavior

The number of responses and percentage of student teachers' difficulties related to students' misbehaviour during their practicum period can be seen in the above table. According to the results of the table, about 45% of student teachers (N=147) mainly chose difficulty 3, "inactive students in group work"; about 32.1% of participants (N=105) selected difficulty 5 "students' chatting while I am teaching", and about 25.1% of student teachers selected (N=82) picked difficulty 4 "managing disobedient students". However,

few student teachers (N=13) responded that they encountered another difficulty besides the difficulties in the table.

Student teachers found other difficulties related to student misbehaviour, such as “lack of parents’ cooperation”, “making fun of student teachers”, “students’ shyness behavior in group activities”, and “inactive students in their group work”.

The results of student teachers’ difficulties managing student misbehaviours can be seen in the following chart.

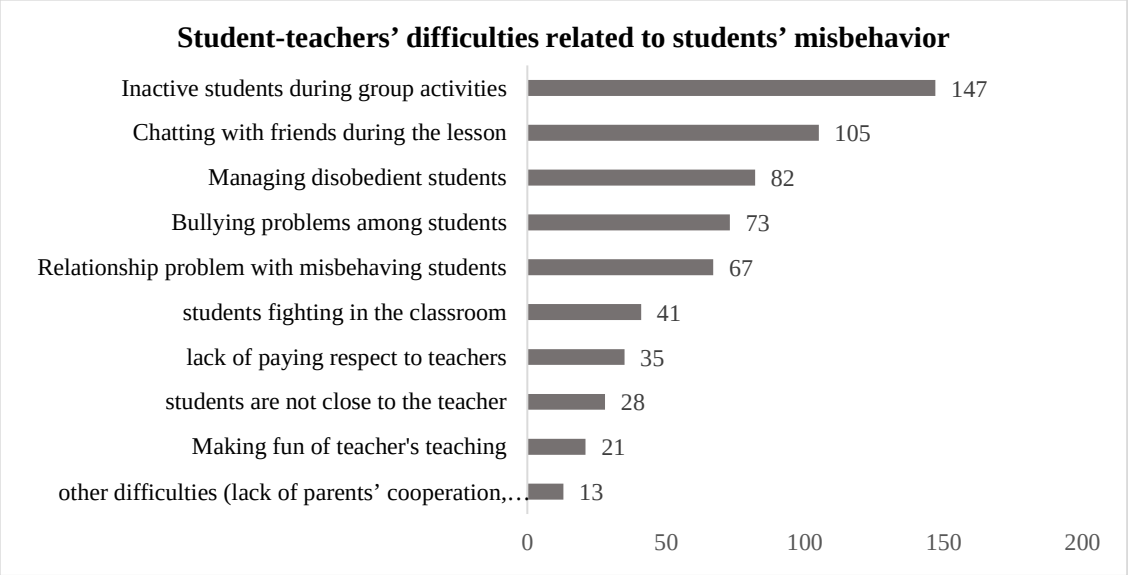


Figure 34 Student Teachers' Difficulties Related to Managing Student Misbehaviors

(v) Coping strategies related to students’ misbehavior problems

The two-step multiple choice questions were composed, where the first step asked student teachers’ difficulties related to students’ misbehavior. The second step asked them to choose coping strategies for the first difficulty. Multiple response analysis was computed, and the results were described in table 16.

Table 16 Multiple Response Analysis of Student-Teachers’ Coping Strategies Related to Students’ Misbehavior Problems During Their Practicum

(N=328)

No	Student-teachers’ coping strategies related to students’ misbehavior problems	N	Percent of responses
	DB3, Inactive student during group activities?		
1	D3CB1, strongly remind students not to be late in group assignments.	4	1.2%
2	D3CB2, Warning with facial expressions.	7	2.2%

3	***D3CB3, going closer to those students and asking questions.***	**82**	**25.5%**
4	D3CB5, Punishment if the group activity is not completed	2	0.6%
5	D3CB6, Explain to them the benefits of teamwork	3	0.9%
6	D3CB7, Other (asking questions, carrot and stick method, no other option)	49	15.3%
	DB4, Managing disobedient students?		
7	D4CB1, Self-reflection and changing my behavior towards them	6	1.9%
8	D4CB2, Getting advice from experienced teacher	13	4.0%
9	D4CB3, punishment	5	1.6%
10	D4CB4, neglecting	4	1.2%
11	D4CB5, addressing individual students who engage in disruptive behavior	9	2.8%
12	***D4CB6, teaching students to be obedient***	**45**	**14.0%**
	DB5, Chatting with their friends during the lesson?		
13	CBD5CB1, Banging the table with a stick to get students' attention.	1	0.3%
14	D5CB2, Warning students who are engaging in disruptive behavior	4	1.2%
15	D5CB3, Neglecting	2	0.6%
16	***D5CB4, asking questions to students who are talking to each other during the lesson***	**56**	**17.4%**
17	D5CB5, make eye contact and warn students who are talking while teaching.	14	4.4%
18	D5CB6, instructing students to focus on the lesson	2	0.6%
19	D5CB7, other (warning, no other option, no description)	26	8.1%

Table 16 describes the number of responses and percentage of the coping strategies related to student teachers' mostly encountered difficulties. According to the results of the table, about 25.5% of student teachers (N=82) used *D3CB3 "going closer to those students and asking questions"* to solve the problem of "Inactive student during group activities," 14% of student teachers (N=45) employed *D4CB6 "teaching students to be obedient*" to cope with "managing disobedient students," and 17.4% of participants (N=56) applied *D5CB4 "asking questions to students who are talking to each other*

during the lesson" to solve the problem of "chatting with their friends during the lesson." The following figure illustrates student teachers' coping strategies for solving inactive students during group activities.

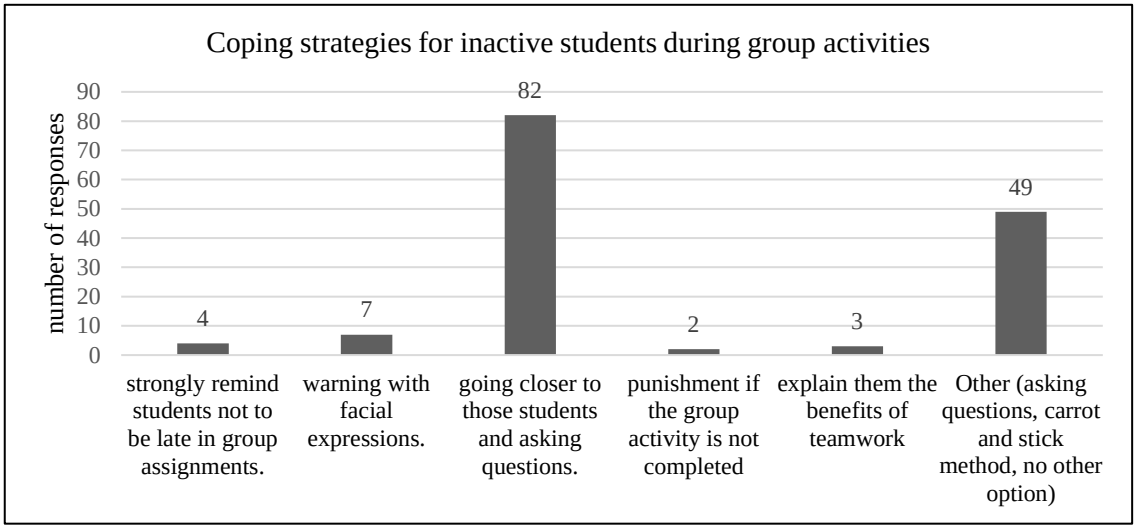


Figure 35 Student Teachers' Coping Strategies Related to Inactive Students during Group Activities

Next, the crosstabulation method was computed to describe the interaction between difficulty related to students' misbehaviour (categorical variable) and types of schools (categorical variable) where student teachers took their practice teaching. The results of multiple response analysis showing the number and proportions of the participants' difficulties related to students' misbehaviour and their coping strategies are tabulated in Table 17.

Table 17 Pearson Chi-Square Analysis of Crosstabulation of Student Teachers' Difficulties Related to Managing Students' Misbehavior and School Locations in 1st Practicum

Difficulties related to student-misbehavior	Location of school in 1st Practicum			X^2	df	p
	Rural	Urban	Sub-urban			
DB1, relationship problem with misbehaving students	36	22	9	4.57	2	.102
DB2, bullying problems among students	46	17	10	.55	2	.760
DB3, inactive student during group activities	99	31	17	1.31	2	.518
DB4, managing disobedient students	**43**	27	12	**7.15**	**2**	**.028**

DB5, chatting with friends during the lesson	59	33	13	5.32	2	.070
DB6, lack of paying respect to teachers	20	9	6	1.57	2	.455
DB7, making fun of teacher's teaching	10	9	2	4.34	2	.114
DB8, students fighting in the classroom	27	11	3	.81	2	.667
DB9, students are not closed to the teacher	17	9	2	1.36	2	.506

A Chi-Square Goodness of Fit test was performed to determine whether the proportion of student teachers who faced difficulties related to student misbehaviour differed between three different school locations in 1st practicum. The proportions differed by managing disobedient students, [X^2(**2**) = 7.15, p =.028].

Among the three school locations (rural, urban, and suburban), the proportion of student-teachers (N=99) in rural schools mostly encountered “inactive student during group activities” compared to those in urban and suburban schools in their first practicum.

Table 18 Pearson Chi-Square Analysis of Crosstabulation of Student Teachers' Difficulties Related to Managing Students' Misbehavior and School Locations in 2nd Practicum

Difficulties related to student-misbehavior	Location of school in 2nd Practicum			X^2	df	p
	Rural	Urban	Sub-urban			
DB1, relationship problem with misbehaving students	29	28	7	5.46	2	.065
DB2, bullying problems among students	43	22	8	.66	2	.716
DB3, inactive students during group activities	87	46	14	.374	2	.829
DB4, managing disobedient students	35	**39**	7	**11.74**	**2**	**.003**
DB5, chatting with friends during the lesson	55	39	8	1.92	2	.382

A Chi-Square Goodness of Fit Test was performed to determine whether the proportion of student teachers who faced difficulties related to student misbehaviour differed between three different school locations in 2nd practicum. The proportions differed by managing disobedient students [X^2(**2**) = 11.74, p = .003].

During their second practicum, student-teachers (N=39) in urban schools encountered “managing disobedient students” compared to those in rural and suburban schools.

(vi) Other difficulties during the practicum

Student teachers were given 11 items related to other difficulties and requested to choose other difficulties they encountered during their practicum period. Multiple response analysis of the results was shown in Table 19.

Table 19 Multiple Response Analysis of Student-Teachers’ Other Problems in Practicum

(N=328)

No	Student-teachers’ other problems	N	Percent of responses
1.	**OM1, Stress**	**141**	43.1%
2.	**OD2, writing practicum report/Journal (difficult to write for all the subjects)**	**87**	26.6%
3.	OD3, School teachers' negative opinions of us	13	4.0%
4.	OD4, Dean of the Grade 9, and another teacher did not like me.	30	9.2%
5.	**OD5, School’s operational problem (not enough teachers, transportation)**	**76**	23.2%
6.	OD6, low voice	51	15.6%
7.	OD7, uncomfortable social relationships with others	29	8.9%
8.	OD8, relationship problems with parents	8	2.4%
9.	OD9, other (teaching many subjects, unfriendly behavior of schoolteachers, bad classroom conditions, no other option)	13	4.0%
Total		448	137.0%

N=number, OD=other difficulty

The number of responses and percentage of student teachers’ difficulties related to students’ misbehaviour problems during their practicum period can be seen in Table 16. According to the results of the table, about 43.1% of student teachers (N=141) selected OD 1“managing stress,” 26.6% of participants (N=87) picked OD 2 “writing practicum journal,” and 23.2% of student teachers (N=76) faced OD 5 “poor working conditions of the school.”

Moreover, student teachers faced other difficulties such as “they have to teach many subjects,” “unfriendly behavior of schoolteachers,” and “bad classroom conditions.”

The results of student teachers’ other problems during the practicum can be visualized in the following chart.

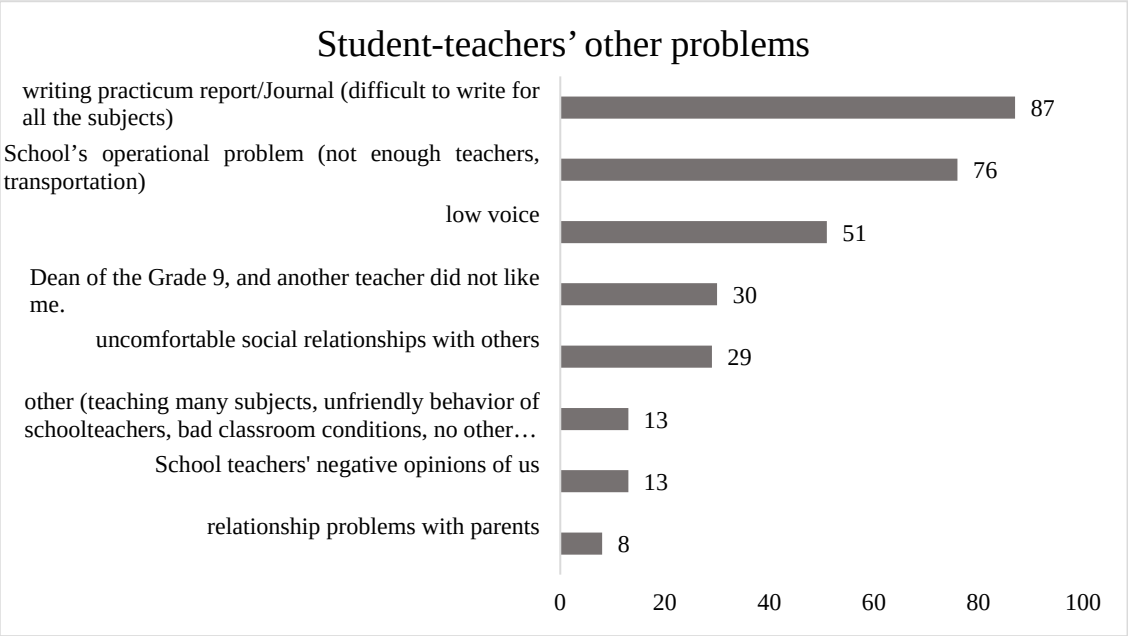


Figure 366 Student Teachers' Other Problems during their Practicum

(vii) Coping strategies related to other difficulties

The two-step multiple choice questions were developed where the first step asked student teachers’ difficulties related to other issues, and the second step asked them to choose their coping strategies for the first chosen difficulty. Multiple response analysis was computed, and the results were described in table 20.

Table 20 Multiple Response Analysis of Student-Teachers’ Other Problems Related to And Their Coping Strategies During Their Practicum

No	Coping strategies and teaching difficulty	N	Percent of Responses
	CO1, Stress?		
1	M1CO1, getting help from a family member or other close friend who has a teaching career.	23	7.1%
2	M1CO2, keeping calm	43	13.3%

3	M1CO3, talking to friends about emotional problems	28	8.7%
4	***M1CO4*, reading motivational books**	**46**	**14.2%**
5	M1CO5, other (change the mood, discuss with teachers and parents)	1	0.3%
	CO2, writing practicum report/Journal?		
6	D2CO1, calling a friend for help.	20	6.2%
7	***D2CO2*, consultation with veteran teachers of the subject**	**44**	**13.6%**
8	D2CO3, getting feedback from university/college teachers	11	3.4%
9	D2CO4, self-study of how to write.	12	3.7%
	CO5, School's operational problem (not enough teachers, transportation)?		
11	D5CO1, unable to find a solution.	9	2.8%
12	***D5CO2, getting help and advice from the principal.***	**46**	**14.2%**
13	D5CO3, getting help from third parties	17	5.3%
14	D5CO4, Other (ask for volunteers, taking more classes, division of classes, asking volunteer teachers)	4	1.2%

Table 20 presented the number of responses and percentage of student teachers' coping strategies related to other problems during their practicum. According to the results of the table, 14.2% of student teachers (N=46) used M1CO4 "*reading motivational books"* to solve the problem of "stress" and D2CO2 "*consultation with veteran teachers of the subject"* to cope with the difficulty of "writing practicum report/Journal." About 13.6% of student teachers (N=44) selected D5CO2 "*getting help and advice from the principal"* to solve the "school's operational problem."

(viii*)* Developing dimensions for student teachers' common coping strategies

The researcher used numerical items (60 variables) to measure student teachers' common coping strategies. As the first step, the descriptive analysis was computed and checked the results of mean, standard deviation, skewness, and kurtosis values of common coping strategies scale items.

Exploratory factor analysis is conducted using SPSS software for measuring coping strategies scale. The rating scale of a 5-point Likert type scale (Never-1, Rarely-

2, Sometimes-3, Often-4, and Always-5) was used to evaluate the responses to the coping strategies scale.

The sample size for factor analysis

The sample size for the study is 328, and the number of variables for computing factor analysis is 60. Hair (2019) suggests the general rule of the ratio of participants to variables/items is to have a minimum of five times to get an interpretable factor structure, as there are 60 items on the coping strategies scale, and about 300 participants were required. An actual sample size of 328 was sufficient for exploratory factor analysis (Comrey & Lee, 1992; Mvududu & Sink, 2013).

Preliminary analysis

Before performing exploratory factor analysis, measurement appropriateness for the 60 items was evaluated with descriptive statistics. Following this step, the normality in distribution was tested by examining skewness and kurtosis before conducting an exploratory factor analysis. A normality problem was found in one item, *"CS 14,"* as the skewness and kurtosis value are more significant than 2.5. That item was transformed into a logarithm and replaced with "*logCS14*- in data running. Then, the reliability analysis was done to check the internal consistency of the items before computing factor analysis. If the alpha value is higher than 0.9, the internal consistency is excellent, and if it is at least higher than 0.7, the internal consistency is acceptable (Blunch, 2008). Cronbach's alpha value for the coping strategies scale is 0.89 for the average reliability value, and all 59 items are around 0. 8. It can prove to continue further analysis.

Correlational analysis

An analysis of the inter-item Pearson Product correlations was conducted. Items with consistently low (approximately <.20) or high (> .80) inter-item correlations were deleted.

Verifying assumptions

Next, the Kaiser- Measure of Sampling Adequacy (KMO) test and Bartlett's test of Sphericity were executed to determine to construct validity and confirm that the data collected for an exploratory factor analysis were appropriate. The KMO test was used to verify the sampling adequacy for the analysis. Bartlett's Test of Sphericity was used to determine if correlations between items were sufficiently large for EFA. A statistically

significant Bartlett's test of Sphericity ($p < 0.05$) indicates that sufficient correlations exist among the variables to proceed. The measure of sampling adequacy (KMO) values must exceed .50 for the overall test and each variable. In this study, the assumptions were met for conducting factor analysis: the KMO value coping scale is 0.901, and Bartlett's test of Sphericity is significant at 0.000.

Table 21 Measure of Sampling Adequacy Table Showing KMO and Bartlett's Value

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.901
Bartlett's Test of Sphericity	Approx. Chi-Square	5914.142
	Df	741
	Sig.	.000

Extraction method

This study used the principal axis factoring (common factor analysis) method for extraction. Common factor analysis is most appropriate when the primary objective is to identify the latent dimensions or constructs represented in the common variance of the original variables, as typified in the scale development process (Hair, 2019).

Factor rotation

Both orthogonal and oblique rotation methods were executed. Oblique factor rotation is computed so that the extracted factors are correlated and identifies the extent to which each factor is correlated. In the case of orthogonal factor rotation, the factors are extracted so that their axes are maintained at 90 degrees, and the correlation between the factors is constrained to zero. Field (2017) recommended that oblique rotation should be used when there is an expected correlation between factors. Since the items were developed based on the interview results of student teachers' coping strategies related to their difficulties during their practicum, it was assumed that some correlations were found between factors.

Next, Kaiser's K1 method and the percentage of total variance were also considered for deciding the rotation of the number of factors. Kaiser's K1 value (Eigenvalue greater than 1) determines the number of factors to be retained. The factors having eigenvalues greater than 1 are considered significant. The reliable value for the

total variance explained is 60%, but some social science and educational research has a total variance value of less than 60% (Hair, 2019). The percentage of total variance explained before eliminating the items according to the communality value is 50.159%. Thus, this study assumed that the percentage of the total explained variance after the oblique extraction, 50.39%, is reliable. There are 7 factors above the value of 1, and the sum of the squared loading value is 4.341 after the extraction method is employed.

Table 22 Total Variance Explained Rotation Sums of Squared Loadings

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	8.398	21.534	21.534	7.907	20.27	20.275	5.891
2	6.856	17.578	39.113	6.371	16.337	36.612	5.155
3	2.480	6.358	45.471	1.996	5.118	41.730	5.248
4	1.691	4.335	49.806	1.214	3.113	44.843	5.204
5	1.427	3.658	53.464	.923	2.368	47.210	5.399
6	1.156	2.965	56.429	.667	1.711	48.921	4.853
7	1.054	2.702	59.131	.574	1.471	**50.392**	4.341
8	.985	2.525	61.656				
9	.210	.539	100.000				
Extraction Method: Principal Axis Factoring.							

Communality and cross-loadings for the final structure of the factors

After rotation, communality and cross-loadings were checked for the final structure of the factors to be retained. Communality is the amount of a variable's variance explained by its loadings on the factors and decides factors to include or exclude a variable in the factor analysis. In the communality table, initial and extraction values were executed. However, this study checked the extraction communalities value. Fabrigar and Wegener (2004) proposed that the communalities value falls into the range of .40 to .70, and the sample size should be at least 200. In this study, the sample size is 328, and items with communalities below .40 were eliminated each time and reran the analysis until all the items reached above the extracted communalities of .40.

Following this, items that have cross-loadings (i.e., items that load substantially on two or more factors) were deleted if the loadings were weak (< .35). If the loading value were greater than 0.35, the researcher decided to retain or eliminate the items based on the division of square loading of the higher value of the first factor by the lower value of the second factor. The item remained under the first factor if the result exceeded 1.5 and above. The researcher reran the analysis without those items to build a simple structure. The loading values above .35 were considered interpretable items under each factor. Finally, the factors were named based on the content of the factor items.

Naming the factors

There were seven factors executed in the pattern matrix. However, Factor 7 is deleted as it has only two items, the number of items under each factor should be four, and the factor loading values are not high (please see table 20). Under factor 1, seven items (CS 33, CS 37, CS 32, CS 6, CS 36, CS 19, CS12) with loading values starting from .85, .67, .67, .61, .58, .57 to .50. Eight items were under factor 2 (CS46, CS 53, CS 52, CS 57, CS 54, CS 56, CS 55, CS 47) with loading values of .78, .76, .61, 60, .58, .48, .41, .36 respectively. Factor 3 had six items (CS 21, CS 31, CS 15, CS 34, CS 24, CS 51), and loading values include .76, .75, .73, .65, .63, .47). Another five items (CS 18, CS 13, CS 44, CS 20 and CS 31) composite in factor 4 and their loading values are (.70, .64, .62, .57, .41). Under factor 5, six items (CS 26, CS30, CS11, CS 4, CS16, CS40) were found with loading values of .76, .56, .56, .56, .39, .37). Factor 6 includes four items (CS 42; CS 43, CS 39, CS 41) with loading values of .76, .60, .54, 40. Six factors, namely problem-solving by self, avoidance, giving punishment, adaptation to the situation, seeking professional support, and getting emotional support, were interpreted as the common coping strategies scale of the student teachers.

Table 23 Results from a Principal Axis Factor Analysis of the student teachers' common coping strategies scale

(N=328)

PCA items	Factor loading						
	1	2	3	4	5	6	7
Factor 1 Problem solving by self							
CS33, Building good relationships with students.	**.857**						
CS37, Thinking about teaching methods for students with learning disabilities.	**.673**						
CS32, Self-reflection and change behavior if it is necessary.	**.673**						
CS6, Motivating students to be interested in the lesson.	**.612**						
CS36, Trying to control emotions and get along with other teachers.	**.586**						
CS19, Self-studying when there are difficulties related to the subject/pedagogy.	**.578**			.271			
CS12, Self-reflecting on teaching methods.	**.501**			.337			
Factor 2 Avoidance							
CS46, Comforting oneself by buying something.		**.780**		.308			
CS53, Buying and eating a favorite food.		**.765**					
CS52, Oversleeping		**.615**					
CS57, Staying away from people.		**.601**					.268

CS54, Trying to forget it all.		**.587**		-.264			
CS56, Realizing that you have no control over the problem.		**.488**					
CS55, Treating others badly when angry/depressed.		**.416**					.325
CS47, Self-blame.		**.364**					.252
Factor 3 Giving punishment							
CS21, Reminding students that they will be punished for not being late on group assignments.			**.765**				-.254
CS31, Warning students with a stick.			**.750**				
CS15, Corporal punishment			**.735**				
CS34, Banging the table with a stick to get students' attention.			**.651**				
CS24, Punishment for unfinished assignment.			**.639**				-.258
CS51, Scolding.			**.473**				
Factor 4 Adaptation to the situation							
CS18, Discussion with principal to provide teaching aids.				**.701**			
CS13, Teaching slow learners over time after school time				**.645**			
CS44, Getting feedback from a teacher at a teacher education university/degree college.	-.260			**.627**			

CS20, Re-teaching students with weak learning skills from the basic level.	.323			**.579**			
CS38, Getting help and advice from the principal.				**.414**			
Factor 5 seeking professional support							
CS26, Talking to other teachers and getting encouragement.					**.763**		
CS30, Asking a colleague or classmate or another experienced teacher for help in dealing with students' disruptive behavior.					**.569**		
CS11, Discussion with experienced teachers about teaching methods.					**.567**		
CS4, Asking an experienced subject matter expert about a lesson.					**.561**		
CS16, Observing the teaching of more experienced teachers.	.341				**.398**		
CS40, Discussing with other teachers and getting advice on how to deal with students' parents.				.310	**.374**		
Factor 6 Getting emotional support							
CS42, Talking to friends about emotional problems.						**.763**	

CS43, Getting help from a family member or other friend who has a teaching career.						**.608**	
CS39, Calling a friend and discuss about the problem.						**.541**	
CS41, Discussing with classmates for teaching aids.				.343		**.402**	
*CS48, Stop trying to solve problems.							.681
*CS45, Neglecting							.570

Note. N = 328. The extraction method was principal axis factoring with an oblique (Promax with Kaiser Normalization) rotation. Factor loadings above .30 are in bold.

A principal axis factor analysis (FA) was conducted on the 60 items with oblique rotation (promax). The Kaiser–Meyer–Olkin measure verified the sampling adequacy for the analysis, KMO = 0.90 (‘marvelous’ according to Kaiser & Rice, 1974), and all KMO values for individual items were greater than 0.87, which is well above the acceptable limit of 0.5 (Kaiser & Rice, 1974). An initial analysis was run to obtain eigenvalues for each factor in the data. Seven factors had eigenvalues over Kaiser’s criterion of 1, explaining 50.39% of the variance in combination. The scree plot was ambiguous and showed inflexions that would justify retaining five and six factors. Six factors were retained because of the large sample size, the convergence of the scree plot, and Kaiser’s criterion on this value.

(ix) Student teachers’ perceptions on mentoring/getting support

Student-teachers are asked to rate their perceptions of informal mentoring or support they got during the practicum period. Participants used 5-a point Likert scale with totally disagree-5, disagree-4, no opinion-3, agree-4, and totally agree-5 to rate the mentoring scale items. There are seven items under mentoring scale, and the items’ names and mean and standard deviation values are indicated in the table..

Table 24 ***Descriptive Statistics Showing the Mean and Standard Deviation of Student-Teachers' Opinions on Mentoring/Getting Support***

(N=328)

No	Mentoring items	M	SD	Remark
1	M1, A more experienced teacher helped in managing students' disruptive behavior.	3.77	.89	Agree
2	M2, I got help in teaching from a more experienced teacher.	3.87	.78	Agree
3	M3, I asked an experienced subject expert teacher about the lesson	3.98	.78	Agree
4	M4, During the training period, less experienced instructors need mentoring from a more experienced instructor.	4.02	.81	Agree
5	M5, Mentoring from a more experienced teacher is needed only when the teacher is facing difficulties.	3.96	.48	Agree
6	*M6, During the class period, the school principal does not visit and provides guidance.	4.18	.59	Disagree
7	*M7, No guidance provided by subject leader.	4.16	.59	Disagree

Scoring Direction for Positive Item:	**Scoring Direction for Negative Item*
1.00-1.50=totally disagree	*1.00-1.50=totally agree*
1.51-2.50=Disagree	*1.51-2.50=agree,*
2.51-3.50=Undecided	*2.51-3.50=Undecided*
3.51-4.50=Agree	*3.51-4.50= Disagree*
4.51-5.00=Strongly agree	*4.51-5.00=Totally Disagree*

A descriptive analysis with SPSS was conducted, and the results of participants' perceptions of mentoring or support they got during their early teaching period can be reported. Participants rated *"the school principal does not visit and provide guidance"* as the highest (M=4.18, SD= .59), followed by "*No guidance provided by subject leader*" (M= 4.16, SD=.59) and *"a more experienced teacher helped in managing students' disruptive behavior"* as the lowest with a mean value of (M=3.77, SD= .89).

(x) Student teachers' perceptions of *practicum period*

Participants were asked to rate their perceptions of the previous practicum in their university/college program. The researcher used 5- point Likert scale items with *totally disagree*-5, *disagree*-4, *no opinion*-3, *agree*-4, and *totally agree*-5 to investigate student teachers' perceptions of their past practicum. The items' names and mean and standard deviation values based on their rating on the Likert scale items were indicated in the table.

Table 25 Descriptive Statistics Showing the Mean and Standard Deviation of Student-Teachers' Opinions on Practicum Period

(*N=328)*

No	Opinions on practicum	Mean	SD	Remark
1.	Prac1, the theories learned in university/degree college cannot be applied in the practical classroom (it has to be taught depending on the conditions of the school).	4.14	.54	Agree
2.	Prac2, there are gaps between the written lesson plan and the actual teaching in the classroom.	4.06	.42	Agree
3.	Prac3, practicum prepares student-teachers to be ready and to know the problems they might face in the classroom in advance.	3.93	.82	Agree
4.	Prac4, the practicum period is important for gaining classroom experience.	4.21	.63	Agree
5.	Prac5, I want to have someone to be observed and evaluated during the practice teaching period.	3.91	.82	Agree
6.	Prac6, it is necessary to increase the period of practicum.	3.44	1.08	Undeci ded
7.	Prac7, although we have learned the use of teaching aids in the university/college, we were not able to teach using the teaching aids in the classroom.	4.00	.45	Agree
8.	Prac8, The teachers in the school do not have any friendly relationship with the student-teachers.	4.15	.60	Agree
9.	Prac9, After the practice teaching, the attitude and feelings towards the teaching career have changed.	3.98	.79	Agree
10	Prac10, During practicum, we had the opportunity to learn how to prepare and teach a lesson that are appropriate to the children.	4.18	.58	Agree

Scoring Direction for Positive Item: *Scoring Direction for Negative Item*

1.00-1.50=totally disagree *1.00-1.50=totally agree*

1.51-2.50=Disagree	*1.51-2.50=agree,*
2.51-3.50=Undecided	*2.51-3.50=Undecided*
3.51-4.50=Agree	*3.51-4.50= Disagree*
4.51-5.00=Strongly agree	*4.51-5.00=Totally Disagree*

The results showed that item 4 -participants had micro and peer group teaching practice at the university/college before the practicum period (M=4.21, SD=.63) among ten items under the practicum scale. Item 9 "it is necessary to increase the period of practicum" (M=3.44, SD=1.08), resulting in the lowest mean value among the items.

(xi) Student teachers' perceptions on the preparation of University/College program

Participants were asked to rate their perceptions of the university/college program where they studied. The researcher used 5-point Likert scale type items with totally disagree-5, disagree-4, no opinion-3, agree-4, and totally agree-5 to investigate the perceptions of novice teachers on their university/ college program. There were 12 items related to the program representing the teaching methods and content. The name of the items and the mean and standard deviation values based on their rating on the Likert scale items were indicated in the table.

Table 26 ***Descriptive Statistics of Means and Standard Deviation of Student Teachers' Opinions on Program***

(N=328)

No	Opinions on program	Mean	SD	Remark
1	Pro1, The teaching methods taught in the institute of education/degree college are at a high level for reuse in basic schools.	2.88	1.16	Undecided
2	Pro2, Teaching methods taught in a university/degree college are different from the teaching methods used in the actual classroom.	3.99	.47	Agree
3	Pro3, I want the teachers in the education university/degree college to teach me practical lesson.	3.95	.84	Agree
4	Pro4, In the university of education/degree college, i learned about learner-centered teaching method, but in the practicum, i had to use only teacher-centered teaching method.	4.03	.50	Agree

5	Pro5, Subjects at university/degree college need to be restructured to connect with basic school lessons.	3.62	1.02	Agree
6	Pro6, I would like the university of education/degree college to prepare in advance about the difficulties that the prospective teachers might face in their practicum.	3.94	.73	Agree
7	Pro7, During the practicum, i would like teachers from the university/degree college to come and evaluate and give comments while student-teachers are teaching in the classroom.	3.59	.95	Agree
8	Pro8, Before the practicum, we have to learn the experiences of the teachers from the university/degree college and prepare for the practicum.	3.98	.70	Agree
9	Pro9, The knowledge learned from the university/degree college can be used to some extent in the practicum.	4.05	.62	Agree
10	Pro10, Prior to the time of practicum, students-teachers are grouped together at the university of education/degree college to develop teaching aids and conduct peer group teaching.	4.26	.69	Agree
11	Pro11, I think the lessons we learnt in a university/degree college are more theoretical than practical.	4.05	.49	Agree
12	Pro12, Lessons learned at the university/degree college are linked to the new primary and secondary curriculum.	3.96	.79	Agree

Scoring Direction for Positive Item:	*Scoring Direction for Negative Item*
1.00-1.50=totally disagree	*1.00-1.50=totally agree*
1.51-2.50=Disagree	*1.51-2.50=agree,*
2.51-3.50=Undecided	*2.51-3.50=Undecided*
3.51-4.50=Agree	*3.51-4.50= Disagree*
4.51-5.00=Strongly agree	*4.51-5.00=Totally Disagree*

Descriptive analysis with SPSS was conducted, and participants' perceptions of their university/ college program were reported. Participants rated Pro10, "*prior to the time of practicum, students-teachers are grouped at the University of Education/Degree College to develop teaching aids and conduct peer group teaching*" (M=4.26, SD=.69) as the highest. Pro 1 "*The teaching methods taught in the Institute of Education/Degree*

College are at a high level for reuse in basic schools" as the lowest with a mean value of (M=2.88, SD=1.16).

Description of mean values and standard deviation of student teachers' perceptions on mentoring, practicum period, and university program

Although mentoring scale, practicum scale, and university programs scale were different components in the questionnaire, these components were analyzed under the same descriptive and inferential analysis as they were the same component type (scale). Moreover, this arrangement could reduce the length of the quantitative result parts.

Table 27 ***Mean Values and Standard Deviations of student teachers' perceptions on mentoring, practicum period, and university program***

(N=328)

No	Categories	N	M	SD	Remark
1	Mentoring/Getting support	326	3.99	.50	Agree
2	Practicum	325	4.00	.38	Agree
3	University program	321	3.70	.43	Agree

Scoring Direction for Positive Item:	*Scoring Direction for Negative Item*
1.00-1.50=totally disagree	*1.00-1.50=totally agree*
1.51-2.50=Disagree	*1.51-2.50=agree,*
2.51-3.50=Undecided	*2.51-3.50=Undecided*
3.51-4.50=Agree	*3.51-4.50= Disagree*
4.51-5.00=Strongly agree	*4.51-5.00=Totally Disagree*

The descriptive statistics indicated student teachers' perceptions of mentoring, practicum, and university programs. In table 27, the mean value of student teachers' perceptions of their mentoring program was 3.99, practicum was 4.00, and university program was 3.70, respectively.

Findings of student teachers' perceptions of mentoring, practicum, and university programs based on their demographic factors (gender, academic level in teacher education, affiliation)

An independent sample t-test was used to analyze the difference between the opinions of male and female student-teacher groups on their mentoring (support) issues during their practicum.

Table 28 Independent Sample T-Test Results of Student-Teachers' Perceptions on Mentoring/ Getting support by their Gender Group

(N=328)

Variables	Gender	N	M	SD	*p*	t	*df*	Cohen's d
Mentoring/ Getting support	Male	132	3.99	.68	.959	-.052	171.6	.50
	Female	194	3.99	.32				
Practicum	Male	132	4.07	.47	.008	2.675	197.246	.37
	Female	193	3.94	.29				
Program	Male	131	3.80	.54	.002	3.157	193.025	.42
	Female	190	3.64	.32				

$^{*}p < .05$. $^{**}p < .01$.

Table 28 presented an independent sample t-test of the mean difference between the male and female student-teacher groups in their perceptions of mentoring, practicum period, and university program.

There is no significant mean difference between female student-teachers (M= 3.99, SD=.32) and male student-teachers' (M=3.99, SD=.68) perceptions of mentoring during their practicum.

On average, there is a significant difference between the opinion of male student-teachers (M= 4.07, SD=.47) and female student-teachers (M=3.94, SD=.29) on their practicum. This mean difference was significant t (197.2) = 2.675, p =0.008, but it did represent a fairly small-sized effect, d = 0.37.

On average, there is a significant difference between the opinion of male student-teachers (*M*= 3.80, *SD*=.54) and female student-teachers (*M*=3.64, *SD*=.32) on their

university program. This mean difference was significant *t* (193) = 3.15, *p* =0.002, but it did represent a fairly small-sized effect, *d* = 0.4.

Table 29 One-Way ANOVA Results of Student-Teachers' Perceptions of Mentoring, Practicum and University program by academic level Group

(N=328)

Variables		Sum of Squares	*df*	Mean Square	F	*p*
Mentoring/ Getting support	Between Groups	7.670	4	1.917	8.274	<.001
	Within Groups	74.383	321	.232		
	Total	82.052	325			
Practicum	Between Groups	5.111	4	1.278	9.684	<.001
	Within Groups	42.219	320	.132		
	Total	47.330	324			
University Program	Between Groups	5.144	4	1.286	7.469	<.001
	Within Groups	54.406	316	.172		
	Total	59.550	320			

One-way ANOVA test was performed to determine to mean differences between student teachers' academic level groups in teacher education **[**B.Ed 3rd yr (Direct Intake), B.Ed 3rd yr (COE), B.Ed 4th yr (Direct Intake), B.Ed 4th yr (COE), B.Ed degree/diploma holders] in their perceptions of mentoring/getting support, practicum and university program.

One-way ANOVA revealed that there was a statistically significant mean difference in their perceptions of mentoring between at least two groups (F (4, 321) = [8.274], p = 0.001)

There was a statistically significant mean difference in their perceptions of the practicum period between at least two groups (F (4, 320) = [9.684], p = 0.001).

There was a statistically significant mean difference in their perceptions of preparation for university/college programs between at least two groups (F (4, 316) = [7.469], p = 0.001).

Post-hoc test was computed to compare the mean difference between specific significant groups. The following table shows the post hoc test results of student teachers' perceptions of mentoring/getting support, practicum, and university program by their academic level in teacher education.

Table 30 Post Hoc Tests Results of Student-Teachers' Perceptions of Mentoring, Practicum and University program by academic level Group

(N=328)

Dependent Variable	(I) Academic level in teacher education	(J) Academic level in teacher education	Mean Difference (I-J)	*p*	95% Confidence Interval	
					Lower Bound	Upper Bound
Mentoring/ Getting support	B.Ed 3rd yr (COE)	B.Ed 4th yr (COE)	.26711*	.010	.0459	.4883
	B.Ed 4th yr (Direct Intake)	B.Ed degree/diploma holders	-.38478*	.003	-.6752	-.0944
	B.Ed 4th yr (COE)	B.Ed degree/diploma holders	-.45598*	<.001	-.7039	-.2081
Practicum	B.Ed 3rd yr (COE)	B.Ed degree/diploma holders	-.24597*	.003	-.4273	-.0646
	B.Ed 4th yr (Direct Intake)	B.Ed degree/diploma holders	-.32567*	<.001	-.5373	-.1140
	B.Ed 4th yr (COE)	B.Ed degree/diploma holders	-.38183*	<.001	-.5900	-.1736
University program	B.Ed 3rd yr (COE)	B.Ed degree/diploma holders	-.28513*	.009	-.5181	-.0522
	B.Ed 4th yr (COE)	B.Ed degree/diploma holders	-.37492*	.001	-.6385	-.1114

*$p < .05$. **$p < .01$. ***$p < .001$.

Games-Howell test (as the sample groups are not equal) for multiple comparisons revealed that the mean value of perceptions on mentoring/getting support was significantly different between B.Ed 3rd yr (COE) and B.Ed 4th yr (COE) ($p = 0.010$,

95% C.I. = [0.04, 0.48]), B.Ed 4th yr (Direct Intake) and B.Ed degree/diploma holders (p = 0.003, 95% C.I. = [-0.67, -0.09]) and B.Ed 4th yr (COE) and B.Ed degree/diploma holders (p = 0.001, 95% C.I. = [-0.70, -0.20]).

Games-Howell test for multiple comparisons exposed that the mean value of perceptions on practicum was significantly different between B.Ed 3rd yr (COE) and B.Ed degree/diploma holders (p = 0.003, 95% C.I. = [-0.42, -0.06]), B.Ed 4th yr (Direct Intake) and B.Ed degree/diploma holders group (p = 0.001, 95% C.I. = [-0.53, -0.11]) and B.Ed 4th yr (College of Education) and B.Ed degree/diploma holders group (p = 0.001, 95% C.I. = [-0.59, -0.17]).

Games-Howell post-hoc test showed that the mean value of perceptions on the program was significantly different between B.Ed 3rd yr (College of Education) and B.Ed degree/diploma holders (p = 0.009, 95% C.I. = [-0.51, -0.05]), and B.Ed 4th yr (College of Education) and B.Ed degree/diploma holders group (p = 0.001, 95% C.I. = [-0.63, -0.11]).

Table 31 One-Way ANOVA Results of Student-Teachers' Perceptions of Mentoring/Getting support, Practicum and University Program by Affiliation Group

(N=328)

Variables		Sum of Squares	*df*	Mean Square	F	*p*
Mentoring/ Getting support	Between Groups	3.419	2	1.709	7.021	.001
	Within Groups	78.634	323	.243		
	Total	82.052	325			
Practicum	Between Groups	3.812	2	1.906	14.104	<.001
	Within Groups	43.518	322	.135		
	Total	47.330	324			
University Program	Between Groups	2.661	2	1.331	7.438	<.001
	Within Groups	56.889	318	.179		
	Total	59.550	320			

One-way ANOVA test was performed to determine mean differences between student teachers' affiliation group (University of Education, Education Degree College, B.Ed degree/diploma holders) on their perceptions of mentoring/getting support, practicum and university program.

One-way ANOVA test revealed that there was a statistically significant difference in their perceptions of mentoring/getting support between at least two groups (F (2, 323) = [7.021], p = 0.001)

A one-way ANOVA revealed that there was a statistically significant difference in their perceptions of practicum between at least two groups (F (2, 322) = [14.104], p = 0.001).

A one-way ANOVA revealed that there was a statistically significant mean difference in their perceptions of preparation of university/college program between at least two groups (F (2, 318) = [7.438], p = 0.001).

Post-hoc test was computed to see the difference between specific significant groups. The following table showed the post hoc test results of student teachers' perceptions of mentoring/ getting support, practicum and university program by their affiliations group.

Table 32 Post Hoc Tests Results of Student-Teachers' Perceptions of Mentoring/ Getting Support, Practicum and University Program by Affiliation Group

(N=328)

Dependent Variable	(I) Affiliation	(J) Affiliation	Mean Difference (I-J)	*p*	95% Confidence Interval	
					Lower Bound	Upper Bound
Mentoring	YUOE	Education Degree College	-.27350*	.028	-.5224	-.0246
Practicum	YUOE	Education Degree College	-.28675*	<.001	-.4552	-.1183
	Education Degree College	Recent graduates	.30667*	.020	.0403	.5731
University program	YUOE	Education Degree College	-.24542*	.038	-.4800	-.0109

*p <.05. **p < .01. ***p < .001.

Games-Howell test (as the sample groups are not equal) for multiple comparisons found that the mean value of perceptions on mentoring was significantly different

between student-teachers who are attending at University of Education and those at Education Degree College (p = 0.028, 95% C.I. = [-0.52, -0.02]).

Games-Howell test for multiple comparisons revealed that the mean value of perceptions on practicum was significantly different between student-teachers who are attending at University of Education and those at Education Degree College (p = 0.001, 95% C.I. = [-0.45, -0.11]), student teachers who are studying at Education Degree College and those who recently graduated from Education Degree College (p=0.020, 95% C.I.= [0.04,0.57]).

Games Howell test exposed that the mean value of perceptions on university program was significantly different between student-teachers attending at University of Education and those at Education Degree College (p = 0.038, 95% C.I. = [-0.48, -0.01]).

Findings of student teachers' perceptions of mentoring/ getting support, practicum, and university program according to school-related factors (duration of practicum, school location, teaching level)

Table 33 One-Way ANOVA Results of Student-Teachers' Perceptions of Mentoring, Practicum, and University Program by Duration in 1st Practicum

(N=328)

Variables		Sum of Squares	*df*	Mean Square	F	*p*
Mentoring / Getting support	Between Groups	4.296	4	1.074	4.433	.002
	Within Groups	77.757	321	.242		
	Total	82.052	325			
Practicum	Between Groups	1.783	4	.446	3.131	.015
	Within Groups	45.547	320	.142		
	Total	47.330	324			
University Program	Between Groups	1.498	4	.374	2.038	.089
	Within Groups	58.053	316	.184		
	Total	59.550	320			

$^{*}p < .05$. $^{**}p < .01$.

A one-way ANOVA was performed to compare the mean difference between student teachers' duration groups in their 1st practicum (0 - 2 weeks, 3- 4 weeks, 5- 6

weeks, 7-8 weeks, more than 8 weeks) in their perceptions of mentoring/ getting support, practicum and university program.

A one-way ANOVA revealed that there was a statistically significant mean difference in their perceptions of mentoring between at least two groups (F (4, 321) = [4.433], p = 0.002).

A one-way ANOVA revealed that there was a statistically significant mean difference in their perceptions of practicum between at least two groups (F (4, 320) = [3.131], p = 0.015)

A one-way ANOVA revealed no significant mean difference between duration groups in their perceptions of the university program (F=2.038, p=0.89).

Post-hoc test was computed to see the difference between specific significant groups. The following table shows the post hoc test results of student teachers' perceptions of mentoring and practicum by the duration of 1st practicum.

Table 34 Post Hoc Tests Results of Student-Teachers' Perceptions of Mentoring/ Getting support, Practicum and University Program by Duration in 1st Practicum

(N=328)

Dependent Variable	(I) Duration_in_ 1st_P	(J) Duration_in_ 1st_P	Mean Difference (I-J)	*p*	95% Confidence Interval	
					Lower Bound	Upper Bound
Mentoring	3- 4 weeks	5- 6 weeks	-.26768*	.009	-.4891	-.0462
		7-8 weeks	-.18357*	.025	-.3518	-.0154
Practicum	0 - 2 weeks	5- 6 weeks	-.19038*	.024	-.3643	-.0165

*$p < .05$. **$p < .01$.

Games Howell test (as the sample sizes are very different) for multiple comparisons found that the mean value of perceptions on mentoring/getting support was significantly different between student teachers who were teaching for 3-4 weeks and 5 to 6 weeks (p = 0.009, 95% C.I. = [-0.48, -0.04]), between teaching for 3-4 weeks and 7 to 8 weeks (p = 0.025, 95% C.I. = [-0.35, -0.01]) during their 1st practicum.

Games Howell test exposed that the mean value of perceptions on practicum significantly differed between student teachers teaching for 0-2 weeks and 5 to 6 weeks (p = 0.024, 95% C.I. = [-0.36, -0.01]) during their 1st practicum.

Table 35 One-Way ANOVA Results of Student-Teachers' Perceptions of Mentoring/Getting Support, Practicum and University Program by Duration in 2nd Practicum

(N=328)

Variables		Sum of Squares	*df*	Mean Square	F	*p*
Mentoring	Between Groups	3.619	4	.905	3.670	.006
	Within Groups	78.158	317	.247		
	Total	81.777	321			
Practicum	Between Groups	1.254	4	.313	2.156	.074
	Within Groups	45.925	316	.145		
	Total	47.179	320			
University Program	Between Groups	1.426	4	.357	1.925	.106
	Within Groups	57.804	312	.185		
	Total	59.230	316			

$^{**}p$ <.01.

One-way ANOVA was performed to compare the effect of student teachers' duration groups in their 2nd practicum (0 - 2 weeks, 3- 4 weeks, 5- 6 weeks, 7-8 weeks, more than 8 weeks) on their perceptions of mentoring/getting support, practicum, and university program.

One-way ANOVA revealed that there was a statistically significant difference in the perceptions of mentoring/ getting support between at least two groups (F (4, 317) = [3.670], p = 0.006).

One-way ANOVA revealed no significant mean difference between duration groups in their perceptions of practicum (F=2.156, p=0.074).

One-way ANOVA revealed no significant mean difference between duration groups in their perceptions of the university program (F= 1.925, p=.106).

Post-hoc test was computed to see the difference between specific significant groups. The following table shows the post hoc test results of student teachers' perceptions of mentoring/ getting support by duration in 2nd practicum.

Table 36 Post Hoc Tests Results of Student-Teachers' Perceptions of Mentoring/ Getting Support by Duration in 2nd Practicum

(N=328)

Dependent Variable	(I) Duration in 2nd_P	(J) Duration in 2nd_P	Mean Difference (I-J)	*p*	95% Confidence Interval	
					Lower Bound	Upper Bound
Mentoring/ Getting support	3-4 weeks	5-6 weeks	-.24751*	.023	-.4720	-.0230
		7-8 weeks	-.23587*	.005	-.4205	-.0512

*$p < .05$. **$p < .01$.

Games Howell test (as the sample sizes are very different) for multiple comparisons revealed that the mean value of perceptions on mentoring was significantly different between student teachers who were teaching for 3-4 weeks and 5 to 6 weeks (p = 0.023, 95% C.I. = [-0.47, -0.02]), between teaching for 3-4 weeks and 7 to 8 weeks (p = 0.005, 95% C.I. = [-0.42, -0.05]) during their 2nd practicum.

Table 37 One-Way ANOVA Results of Student-Teachers' Perceptions of Mentoring/ getting support, Practicum, and University Program by School Locations in 1st Practicum

(N=328)

Variables		Sum of Squares	*df*	Mean Square	F	*p*
Mentoring/ Getting support	Between Groups	.697	2	.348	1.383	.252
	Within Groups	81.356	323	.252		
	Total	82.052	325			
Practicum	Between Groups	.495	2	.248	1.702	.184
	Within Groups	46.835	322	.145		
	Total	47.330	324			
University Program	Between Groups	.562	2	.281	1.516	.221
	Within Groups	58.988	318	.185		
	Total	59.550	320			

A one-way ANOVA was performed to compare the effect of school location groups (rural, urban, suburban) on the perception of mentoring/ getting support, practicum, and university program.

However, one-way ANOVA results revealed no significant difference between rural, urban, and suburban schools on the perception of mentoring/ getting support during 1st practicum (F=1.383, p=.252).

However, one-way ANOVA results revealed no significant difference between rural, urban, and suburban schools on the perception of practicum during 1st practicum (F=1.702, p=.184).

However, one-way ANOVA results revealed no significant difference between rural, urban, and suburban schools on the perception of the university program during 1st practicum (F=1.516, p=.221).

Table 38 One-Way ANOVA Results of Student-Teachers' Perceptions of Mentoring/ Getting Support, Practicum and University Program by School Locations in 2nd Practicum

(N=328)

Variables		Sum of Squares	*df*	Mean Square	F	*p*
Mentoring/ Getting support	Between Groups	1.966	2	.983	3.939	.020
	Within Groups	79.839	320	.249		
	Total	81.805	322			
Practicum	Between Groups	1.045	2	.523	3.614	.028
	Within Groups	46.143	319	.145		
	Total	47.188	321			
University Program	Between Groups	.462	2	.231	1.235	.292
	Within Groups	58.957	315	.187		
	Total	59.419	317			

A one-way ANOVA was performed to compare the effect of school location groups (rural, urban, suburban) on the perception of mentoring/getting support, practicum, and university program during 2nd practicum.

A one-way ANOVA revealed that there was a statistically significant difference in their perceptions of mentoring/ getting support between at least two groups (F (2, 320) = [3.939], p = 0.020).

A one-way ANOVA revealed that there was a statistically significant difference in their perceptions of practicum between at least two groups (F (2, 319) = [3.614], p = 0.028).

However, one-way ANOVA results revealed that there was no significant difference between rural, urban, and suburban schools on the perception of the university program during 2nd practicum (F=1.235, p=.292).

Table 39 Post Hoc Tests Results of Student-Teachers' Perceptions of Mentoring, Practicum and University Program by Location of Schools in 2nd Practicum

(N=328)

Dependent Variable	(I) Type of school in 2nd P	(J) Type of school in 2nd P	Mean Difference (I-J)	*p*	95% Confidence Interval	
					Lower Bound	Upper Bound
Mentoring/ Getting support	Rural	Urban	.16295*	.019	.0220	.3039
Practicum	Rural	Urban	.12381*	.019	.0162	.2314

*p <.05.

Games-Howell test (as the sample groups are not equal) for multiple comparisons found that the mean value of perceptions on mentoring/getting support was significantly different between student-teachers who were teaching at rural schools and those at urban schools (p = 0.019, 95% C.I. = [0.02, 0.30]).

The Games-Howell test exposed that the mean value of perceptions on practicum significantly differed between student-teachers teaching at rural schools and those at urban schools (p = 0.019, 95% C.I. = [0.01, 0.23]).

Table 40 One-Way ANOVA Results of Student-Teachers' Perceptions of Mentoring, Practicum, and University Program by Teaching Level in 1st Practicum

(N=328)

Variables		Sum of Squares	*df*	Mean Square	F	*p*
Mentoring	Between Groups	3.099	2	1.549	6.339	.002
	Within Groups	78.954	323	.244		
	Total	82.052	325			
Practicum	Between Groups	1.251	2	.625	4.370	.013
	Within Groups	46.079	322	.143		
	Total	47.330	324			
University Program	Between Groups	.372	2	.186	.999	.370
	Within Groups	59.179	318	.186		
	Total	59.550	320			

A one-way ANOVA was performed to compare the effect of three teaching level (primary, lower secondary, upper secondary) student teacher groups on perceptions of mentoring/ getting support, practicum, and university program in 1st practicum.

A one-way ANOVA revealed that there was a statistically significant difference in the perceptions of mentoring/ getting support between at least two groups (F (2, 323) = [6.339], p = 0.002).

A one-way ANOVA revealed that there was a statistically significant difference in the perceptions of practicum between at least two groups (F (2, 322) = [4.370], p = 0.013).

However, one-way ANOVA results revealed no significant differences between (primary, lower secondary, and upper secondary) levels on the perception of the university program during 1st practicum (F=.999, p=.370).

Table 41 Post Hoc Tests Results of Student-Teachers' Perceptions of Mentoring/ getting support, Practicum, and University Program by Teaching Level in 1st Practicum

(N=328)

Dependent Variable	(I) Teaching level in 1st P	(J) Teaching level in 1st P	Mean Difference (I-J)	*p*	95% Confidence Interval	
					Lower Bound	Upper Bound
Mentoring/ Getting support	Primary level	Lower secondary	.54762*	.009	.1817	.9135
		Upper secondary	.16144*	.018	.0230	.2999
	Lower secondary level	Upper secondary	-.38618*	.040	-.7511	-.0213
Practicum	Primary level	Upper secondary	.14028*	.009	.0294	.2512

*$p < .05$. **$p < .01$.

Games-Howell test (as the sample groups are not equal) for multiple comparisons found that the mean value of perceptions on mentoring/ getting support was significantly different between student-teachers who were teaching at the primary level and those at the lower secondary level (p = 0.009, 95% C.I. = [0.18, 0.91]), student-teachers who were teaching at primary level and those at the upper secondary level (p = 0.018, 95% C.I. = [0.02, 0.29]), student-teachers who were teaching at lower secondary level and those at the upper secondary level (p = 0.040, 95% C.I. = [-0.75, -0.02]).

The games-Howell test exposed that the mean value of perceptions on practicum significantly differed between student-teachers teaching at the primary level and those at the upper secondary level (p = 0.009, 95% C.I. = [0.02, 0.25]).

Table 42 One-Way ANOVA Results of Student-Teachers' Perceptions of Mentoring/ getting support, Practicum and University Program by Teaching Level in 2nd Practicum

(N=328)

Variables		Sum of Squares	df	Mean Square	F	Sig.
Mentoring /getting support	Between Groups	1.774	2	.887	3.547	.030
	Within Groups	80.031	320	.250		
	Total	81.805	322			
Practicum	Between Groups	.986	2	.493	3.402	.035
	Within Groups	46.203	319	.145		
	Total	47.188	321			
University Program	Between Groups	.034	2	.017	.090	.914
	Within Groups	59.385	315	.189		
	Total	59.419	317			

One-way ANOVA was performed to compare the effect of three teaching level (primary, lower secondary, upper secondary) student-teacher groups on perceptions of mentoring/ getting support, practicum, and university program during 2nd practicum.

One-way ANOVA revealed that there was a statistically significant difference in the perceptions of mentoring/ getting support between at least two groups (F (2, 320) = [3.547], p = 0.030).

One-way ANOVA revealed that there was a statistically significant difference in the perceptions of practicum between at least two groups (F (2, 319) = [3.402], p = 0.035).

However, one-way ANOVA results revealed no significant differences between (primary, lower secondary, and upper secondary) levels on the perception of the university program during 2nd practicum (F=.999, p=.370).

Table 43 Post Hoc Tests Results of Student-Teachers' Perceptions of Mentoring/ Getting Support, Practicum and University Program by Teaching Level in 2nd Practicum

(N=328)

Dependent Variable	(I) Teaching level in 2nd P	(J) Teaching level in 2nd P	Mean Difference (I-J)	*p*	95% Confidence Interval	
					Lower Bound	Upper Bound
Mentoring	Lower secondary	Upper secondary	.17787*	.022	.0213	.3344
Practicum	Lower secondary	Upper secondary	.11334*	.048	.0008	.2259

*p <.05

Games-Howell test (as the sample groups are not equal) for multiple comparisons found that the mean value of perceptions on mentoring/ getting support was significantly different between student teachers' groups who were teaching at the lower secondary level and those at the upper secondary level (p = 0.022, 95% C.I. = [0.02, 0.33]) during their 2nd practicum.

The games-Howell test revealed that the mean value of perceptions on practicum significantly differed between student teachers' groups teaching at lower secondary and upper secondary levels (p = 0.048, 95% C.I. = [0.00, 0.22]) during their 2nd practicum.

(xii) ***Student teachers' competency development***

Student-teachers were asked to choose one or both options related to their competency achievement during their study in the teacher education program. There are 14 items related to the competency standards adopted from the competency standards for student teachers in Hungary and Myanmar.

Table 44 Multiple Response Analysis of Student-Teachers' Decision on perceived competency development

No	Student-teachers' decision on achievement of competency	Options	N	Percent of Responses
1	CoM1 uses various methods to develop students' knowledge, skills, and understanding.	Prog	178	55.6%
		Prac	253	79.1%
2	Com2 select and adapt various teaching methods to the characteristics of learners	Prog	192	60.0%
		Prac	211	65.9%
3	Com3 evaluate the appropriateness of the content to be taught to the students	Prog	166	51.9%
		Prac	230	71.9%
4	**Com4 understand and use different forms of assessment to guide and support learning**	Prog	216	67.5%
		Prac	190	59.4%
5	Com5 understand the factors in the out-of-school environment that can influence students' personality development and learning	Prog	171	53.4%
		Prac	229	71.6%
6	Com6 understand students' social emotional and cognitive development contributes to the learning and development of students' intelligence, skills, and culture.	Prog	195	60.9%
		Prac	213	66.6%
7	Com7 understand the context of traditional and value-based ethics, language, and ethnicity of learners	Prog	166	51.9%
		Prac	230	71.9%
8	Com8 understand and respect the concepts and meanings of different cultures	Prog	174	54.4%
		Prac	235	73.4%
9	Com9, have students engage in learning activities individually or collaboratively with others.	Prog	172	53.8%
		Prac	242	75.6%
10	CoM10, develop personal teaching practice through learning from other teachers and professional development opportunities.	Prog	165	51.6%
		Prac	244	76.3%
11	**CoM11, knowledgeable and understand how to choose and use various classroom management techniques in managing teaching and learning processes.**	Prog	210	65.6%
		Prac	203	63.4%
12		Prog	192	60.0%

	CoM12, conduct teaching and learning processes related to the characteristics of learners.	Prac	216	67.5%
13	CoM13, reflect on own teaching practice.	Prog	117	36.6%
		Prac	279	87.2%
14	CoM14, understand how to learn through formal, non-formal and informal learning methods to continue and develop professional knowledge, skills and attitudes	Prog	214	66.9%
		Prac	217	67.8%
Total			5720	1787.5%

N=number, Com=competency, Pro=university program, Prac=practicum

The number of responses and percentage of student teachers' opinions on the perceived competency they developed from the university program and practicum can be seen in table 84. The results showed that, except for Competency 4 and Competency 11, all student-teachers rated the importance of practicum over the university program in developing their competencies.

It means that they can learn and achieve their competency 4, "understand and use different forms of assessment to guide and support learning," and competency 11 ", knowledgeable and understand how to choose and use various classroom management techniques in managing teaching and learning processes" in their university program more than in their practicum.

The data comparing student teachers' perceived competency development from the university program and practicum are also visualized in the following bar chart.

Bar chart comparing student teachers' perceived competency achievement from program and practicum

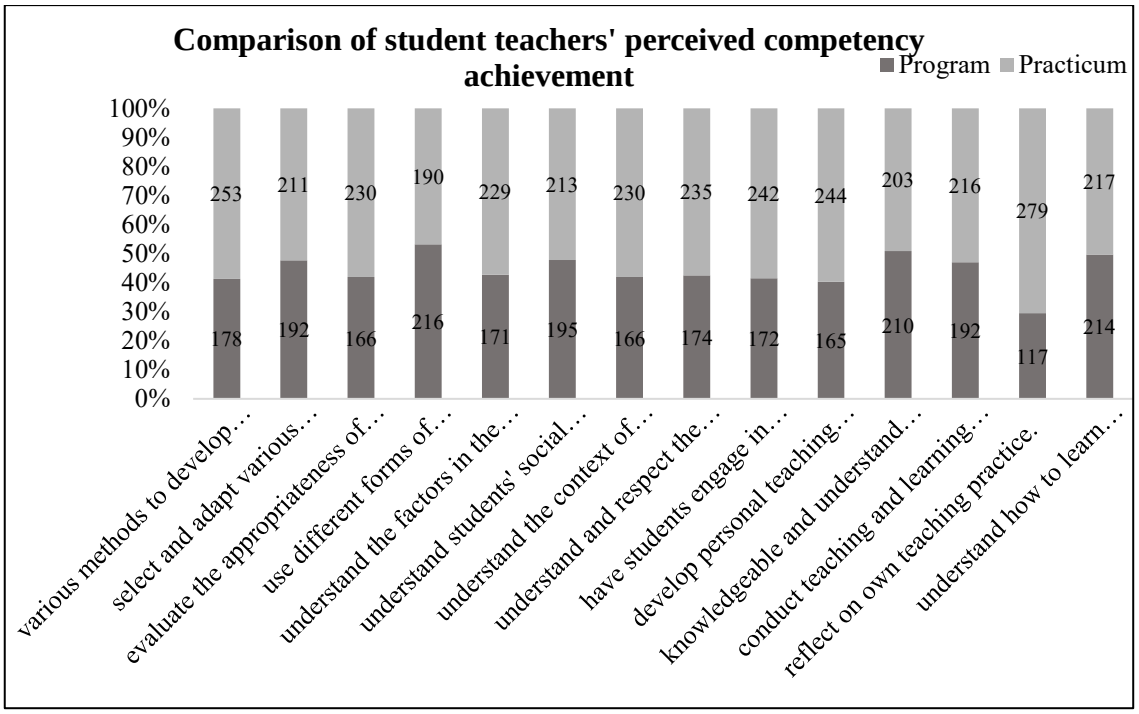


Figure 37 Bar Chart Comparing Student Teachers' Perceived Competency Development from University Program and Practicum

5.2.2 Results of novice teachers' responses to questionnaire 2

This questionnaire for novice teachers was intended to examine the novice teachers' perceptions of the past practicum and university program. The questionnaire was composed of demographic information, (i) general coping strategies, (ii) difficulties related to the teaching-learning situation and coping strategies, (iii) perceptions on mentoring/ getting support, (iv) practicum, (v) program, and (vi) perceived competency development. As this study aimed to get information from novice teachers' general coping strategies, difficulties related to the teaching-learning situation and coping strategies, and perceptions on past practicum, mentoring university program, and perceived competency development, only the descriptive statistics method was used to analyze the data.

This section describes demographic data for participants and means and standard deviations for variables. The link to the online survey forms for novice teachers was sent to novice teachers in different geographical areas, and the total number (N = 46) of participants responded to the questionnaire. The demographic data for gender, age, teaching experience, certification, duration in the practicum, teaching level in the current practicum, and school location are presented in the following table. The demographic information showed that 76.1% of the respondents were female. Although there were two age groups, the total number (N=37) of participants was between the ages of 26 and 28.

65.2% of the respondents got their degrees from the University of Education. 84.8% had 0-2 years of experience, and 15.2% had 2-3 years of teaching experience. Participants (N=18) reported having 0-2 weeks of practicum experience, but 21.7% of novice teachers had more than 8 weeks of practicum period. The teaching level for the majority of the participants was high school level. 76.1% reported that their school was in the urban area, 15.2% were teaching in rural schools, and 8.7% were in suburban schools.

Table 45 Frequency Table Showing Personal Factor Variables of The Novice Teachers

(N=46)

Personal factor variables		Frequency	Percent
Gender	Male	11	23.9
	Female	35	76.1
Age group	23-25	9	19.6
	26-28	37	80.4
Teaching experience	0-2yrs	39	84.8
	2-3yrs	7	15.2
Certification	YUOE	30	65.2
	Education Degree College	2	4.3
	Other	2	4.3
	Bridging from EDC	12	26.1
Duration in the practicum	0-2 weeks	18	39.1
	2-4 weeks	7	15.2
	4-6 weeks	4	8.7
	6-8 weeks	7	15.2
	8 weeks and above	10	21.7
Teaching level in current practicum	Middle school level	1	2.2
	High school level	45	97.8
School Location	Rural	7	15.2
	Urban	35	76.1
	Sub-urban	4	8.7

(i) Perceptions on Past Practicum

Participants were asked to rate their perceptions of the previous practicum in their university/college program on the practicum scale. The researcher used 5-point Likert

scale type items with *totally disagree*-5, *disagree*-4, *no opinion*-3, *agree*-4, and *totally agree*-5 to investigate the perceptions of novice teachers on their past practicum. The items' names and the mean and standard deviation values based on their rating on the Likert scale items were indicated in table 50.

Table 46 Descriptive Analysis with Mean and Standard Deviations of Novice Teachers' Perceptions of Practicum

(N=46)

No	Practicum items	Mean	SD	Remark
1	P1, I was not disturbed by students' misbehavior during the short practicum period.	3.37	1.06	Undecided
2	P2, get good teaching practice experience	4.22	.41	Agree
3	P3, the amount of practicum period should be increased.	3.85	.81	Agree
4	P4, we had micro and peer group teaching practice at the university/college before the practicum period.	4.41	.49	Agree
5	P5, it will be better if the curriculum content of the university/college is integrated into the practical lesson.	4.41	.54	Agree
6	P6, practicum experience is very useful for the profession.	4.07	.80	Agree
7	P7, feel more confident after the practicum period.	4.17	.67	Agree
8	P8, used teaching aids during the lesson in the practicum period.	4.22	.66	Agree
9	P9, as practicum is a short time period, we could not fully reach the level to understand the professional experience.	2.33	.84	Undecided
10	P10, we learnt theory at uni and practical things at practicum period.	4.00	.55	Agree
11	P11, we felt familiar with school environment when we entered the profession because of practicum experience	3.78	.78	Agree
12	P12, we did not have much difficulties as novice teachers because of teaching experience from practicum period.	3.93	.80	Agree
13	P13, we had no difficulties in profession as we reflected our weak points from practicum.	3.72	.93	Agree

Scoring Direction for Positive Item: **Scoring Direction for Negative Item*

1.00-1.50=totally disagree	*1.00-1.50=totally agree*
1.51-2.50=Disagree	*1.51-2.50=Agree,*
2.51-3.50=Undecided	*2.51-3.50=Undecided*
3.51-4.50=Agree	*3.51-4.50=Disagree*
4.51-5.00=Strongly agree	*3.51-4.50=totally disagree*

The results showed that item 4, "participants had micro and peer group teaching practice at the university/college before the practicum period" (M=4.41, SD=.49). Item 5, "it will be better if the curriculum content of the university/college is integrated into the practical lesson" (M=4.41, SD=.54) had the highest mean values among 13 items under practicum scale. Item 9 "as the practicum is a short period, we could not fully reach the level to understand the professional experience" (M=2.33, SD=.84), resulting in the lowest mean value among the items.

Novice teachers agreed they had micro-teaching and peer group teaching activities before the practicum period. Novice teachers perceived that the university/college program's curriculum content should be integrated into practical lessons. Besides, novice teachers agreed that they could not reach the level to understand the professional experience because of the shorter period of the practicum. In general, novice teachers had positive attitudes about their past practicum experience as they received good teaching practice experience and felt more confident about their teaching after the practicum.

However, participants put less mean values on item 11 about familiarity with the school environment and item 13, no difficulties when they became teachers in the profession as they reflected and learned from the past practicum. Related to the practicum period, novice teachers marked less value on item 3, which strongly suggests that increasing the time allocated to practicum will not be helpful from the perspective of novice teachers. Participants put the lowest value on item 9, perceptions of the shorter period of practicum and their understanding of the professional experience and less on item 1, their experience of student misbehaviour problems during the short period of the practicum. According to scoring directions of the items, these values indicates novice teachers did not make strong decision on that items.

(ii) General coping strategies

After getting demographic data, novice teachers were given four options for general coping strategies based on Lazarus and Folkman (1984). The participants (N=46)

were asked to choose their general coping strategies if they faced problems in their daily lives in school.

The multiple response analysis of general coping strategies variables was run, and the results are shown in table 47.

Table 47 Multiple Response Analysis of General Coping Strategies

(N=46)

No.	General coping strategies variable[a] (in short phrases)	N	Percent of responses
1	problem solving	21	45.7%
2	**seeking social support**	**24**	**52.2%**
3	avoidance	8	17.4%
Total		53	115.2%

The results of multiple response analysis for general coping strategies indicated that 45.3% of novice teachers (N=24) chose seeking social support as their general coping strategy. However, 21 out of 46 novice teachers chose problem-solving coping strategies as their coping strategies. Only 8% of participants used avoidance coping strategies when they encountered problems. The following chart illustrates the novice teachers' general coping strategies when facing problems in their daily lives.

Bubble chart showing novice teachers' general coping strategies

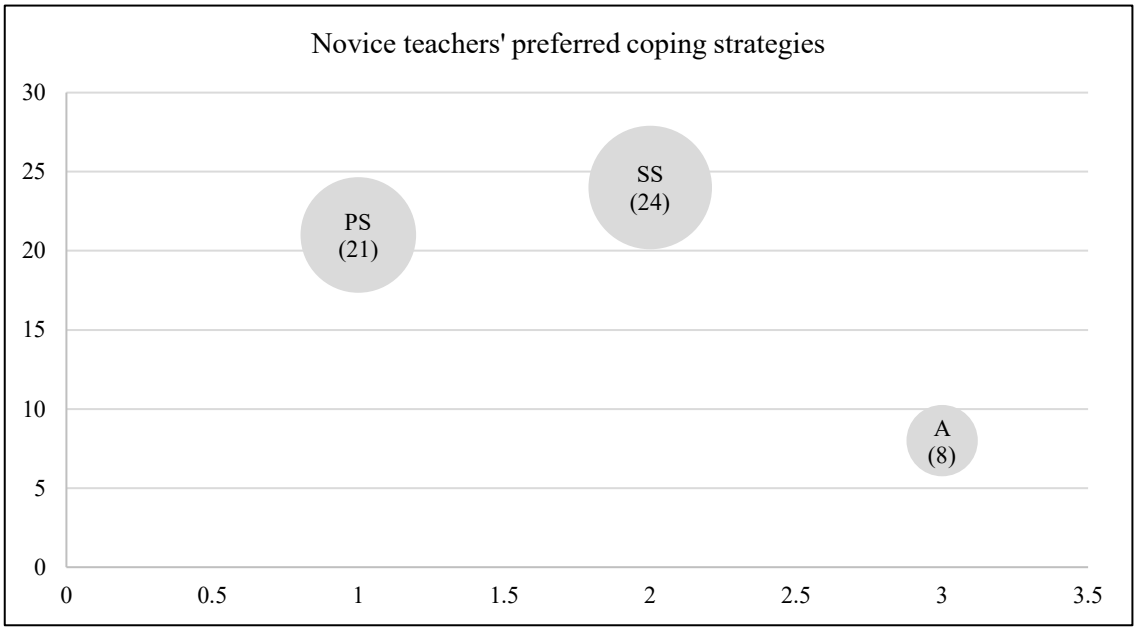


Figure 38 Bubble Chart Showing Novice Teachers' General Coping Strategies

Note: SS-Seeking social support, PS-problem solving, A-Avoidance

(iii) Difficulty related to teaching-learning situation and coping strategies

Based on the interview results, difficulties related to the teaching-learning situation (13 items) are given, and novice teachers are asked to choose their difficulties or problems in their early teaching period. Multiple response analyses with dichotomy groups are calculated and shown in table 48.

Table 48 Multiple Response Analysis of Novice Teachers' Difficulties Related to Teaching-Learning Situation

No	Novice teachers' difficulties related to teaching-learning situation (in short phrases)	N	Percent of Responses
1	Assigning subject teachers according to their specialization	11	23.9%
2	time management problems	12	26.1%
3	relationship problems with principal	4	8.7%
4	student absentee problems	4	8.7%
5	**inconvenient with teaching student-centered approach**	**16**	**34.8%**
6	experiencing relationship problems with parents	4	8.7%
7	teaching special needs students	4	8.7%
8	large class size	15	32.6%
9	**difficulty in teaching slow learners**	**22**	**47.8%**
10	**managing disobedient students**	**17**	**37.0%**
11	disrespectful students	9	19.6%
12	difficulties with some lessons	9	19.6%
13	other difficulties	3	6.5%
Total		130	282.6%

N=number

The number of responses and percentage of novice teachers' difficulties related to the teaching-learning situation during their early teaching period can be seen in the above table. According to the results of the table, the largest proportion of 47.8% of novice teachers (N=22) selected difficulty 9, *"difficulties in teaching slow learners." About* 37% of novice teachers (N=17) chose difficulty 10, *"managing disobedient students,"* and

about 34.8% of novice teachers (N=16) chose difficulty 5, *"inconvenient with teaching student-centered approach* ."

In general, novice teachers mostly encountered difficulties in teaching slow learners, managing disobedient students, and using student-centered approach. Novice teachers also encountered large class size problems (32.6%), time management (26.1%) and assigning subject teachers according to their specialization (23.9%).

The results of novice teachers' problems related to the teaching-learning situation were shown in the following chart.

Bar chart showing novice teachers' problems related to teaching-learning situation

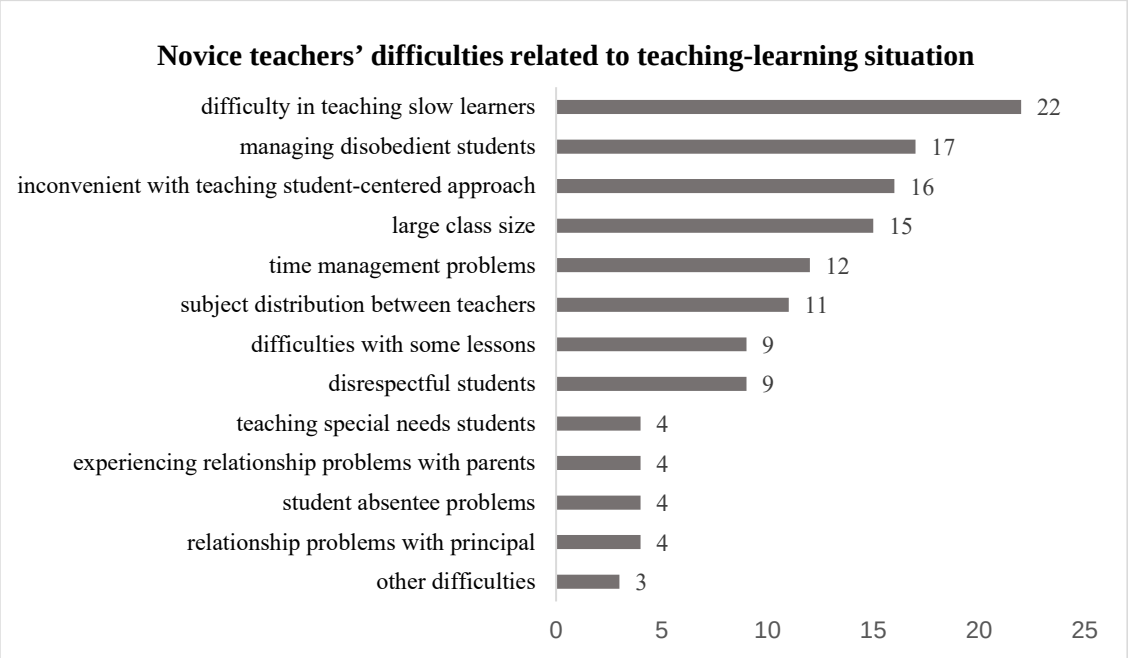


Figure 39 Bar Chart Showing Novice Teachers' Problems Related to Teaching-Learning Situation

The two-step multiple choice questions where the first question asks about novice teachers' difficulties, and the second question asks them to choose their coping strategies for the first chosen difficulty. Multiple response analysis was computed, and the results were described in table 49.

Table 49 Multiple Response Analysis of Novice Teachers' Coping Strategies Related to Teaching-Learning Difficulties

No	Novice teachers' coping strategies related to teaching-learning difficulties	N	Percent of Responses
	How to solve the problem of being unable to use student-centered approach?		
1	lecture method	4	9.3%
2	self-reflection on teaching	3	7.0%
3	discuss with other experienced teachers	3	7.0%
4	**learn from the internet**	**5**	**11.6%**
5	Other	1	2.3%
	How to solve slow learner problem?		
6	teaching from basic level	7	16.3%
7	teaching extra time	1	2.3%
8	**discussed with experienced teacher**	**9**	**20.9%**
9	teaching students with appropriate method	2	4.7%
10	Other	3	7.0%
	How to solve misbehaving students' problem?		
11	**meeting and discussing with parents**	**7**	**16.3%**
12	principal solved the problem	3	7.0%
13	corporal punishment	4	9.3%
14	teach them to have respects to others	6	14.0%
15	Others	6	14.0%
Total		122	283.7%

Table 49 explains the number of responses, and percentage of the coping strategies related to novice teachers' mostly encountered difficulties mentioned in Table 49. According to the results of table 49, novice teachers (N=9) chose "*discuss with an experienced teacher"* to solve the difficulty of teaching slow learners (Fig 40). Other novice teachers (N=7) used "*meeting and discussing with parents"* to cope with managing disobedient student problems (Fig 41), and about five novice teachers picked up "*learning from the internet"* to cope with the problem of inconvenience by using a student-centered approach (Fig 42).

The results were also illustrated in the following charts.

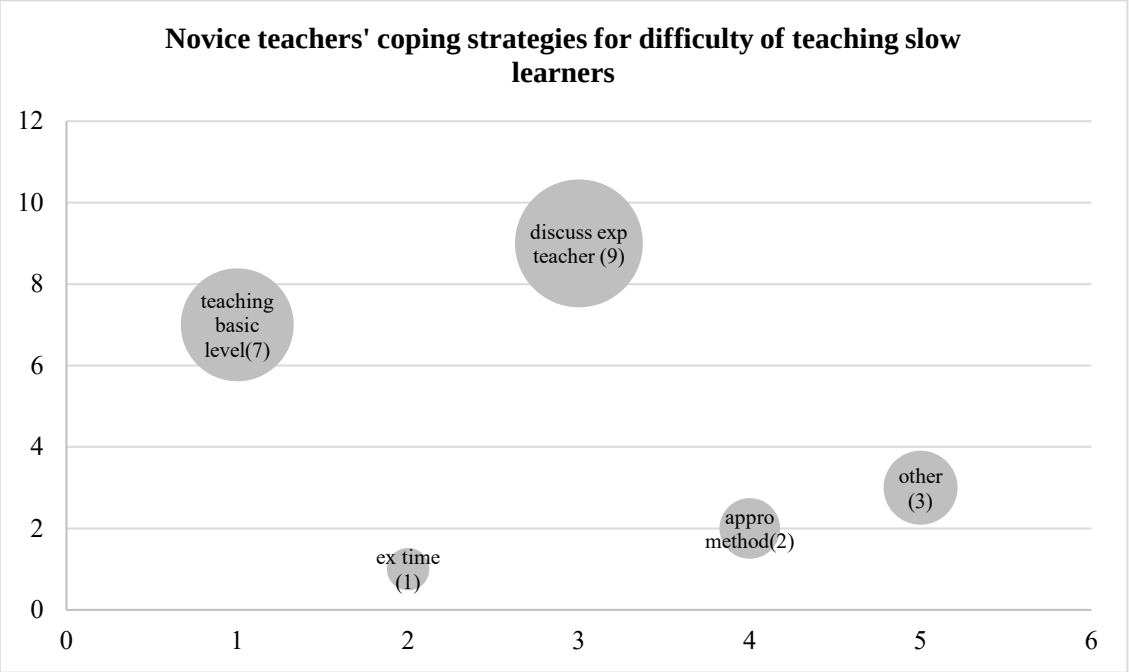


Figure 40 Bubble Chart Showing Novice Teachers' Coping Strategies Related to Teaching Slow Learners during their Practicum

Figure 40 illustrates novice teachers' mostly used coping strategy to solve the problems of teaching slow learners during their practicum. Among five coping strategies, novice teachers (N=9) mostly chose discussed with experienced teachers to solve that problem.

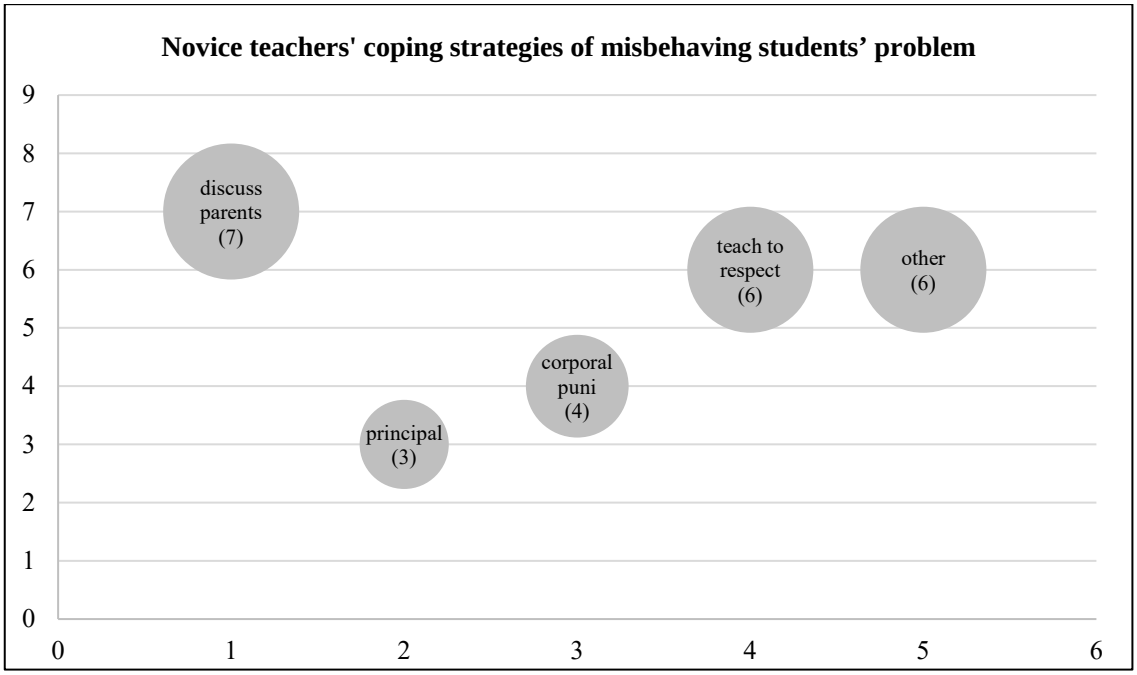


Figure 41 Bubble Chart Showing Novice Teachers' Coping Strategies Related to Managing Misbehaving Students during their teaching

Figure 41 illustrates novice teachers' mostly used coping strategy to solve the problems of managing misbehaving students during their early period of teaching. Among five coping strategies, novice teachers (N=7) met and discussed with students' parents to solve that problem.

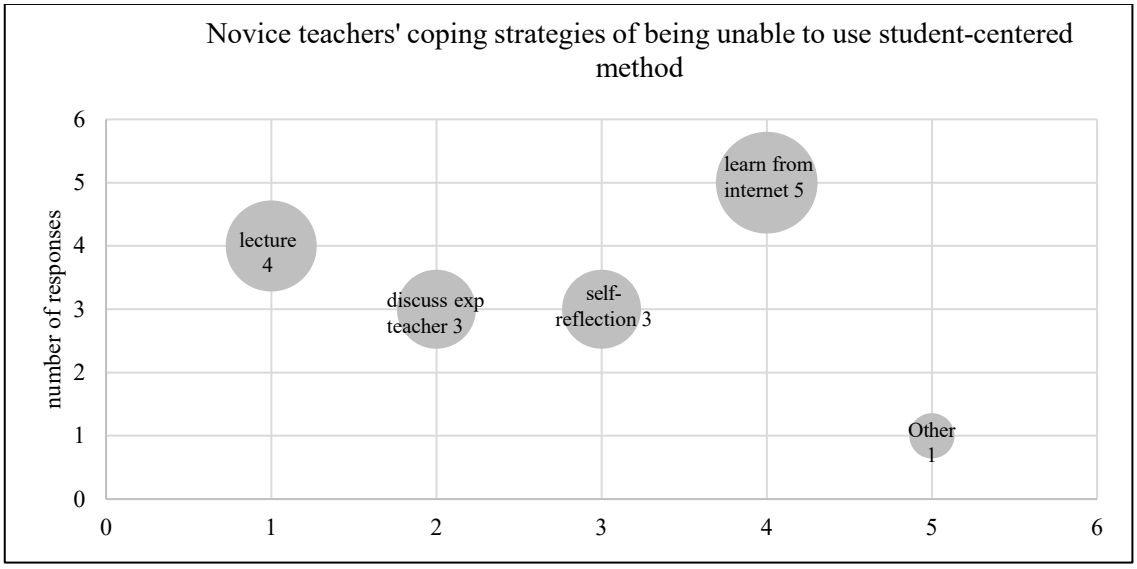


Figure 42 Bubble Chart showing Novice Teachers' Coping Strategies Related to Being Unable to use Student-Centered Method during their Early Teaching Period

Figure 42 illustrates novice teachers' mostly used coping strategy to solve the problems of being unable to use student-centered method during their early period of teaching. Among five coping strategies, novice teachers (N=5) learned from the internet to solve that problem.

(iv) Mentoring/supporting

Although the formal mentoring system is not developed in teacher education in Myanmar, the participants' perceptions of informal mentoring they obtained during their early teaching period were investigated. The participants were asked to describe their perceptions of mentoring they got during their early teaching period. Participants used 5-a point Likert scale with *totally disagree*-5, *disagree*-4, *no opinion*-3, *agree*-4, and totally *agree*-5 to rate their perceptions of mentoring they got during their early teaching period. There were seven items under mentoring scale, and the name of the items and the mean and standard deviation values of the items are indicated in the table.

Table 50 Descriptive Statistics Showing Mean and Standard Deviation of Novice Teachers' Perceptions on Mentoring/ getting support

(N=46)

No	Mentoring items	Mean	SD	Remark
1	M1, experienced teacher helped me how to write lesson plan	3.54	1.02	Agree
2	M2, get help from experienced teacher for managing student misbehavior	3.74	.88	Agree
3	M3, get support from colleagues than the principal	3.63	.90	Agree
4	M4, ask experienced teacher about the subject matter	3.57	.88	Agree
5	*M5, the principal did not help and guide me.	3.91	.59	Disagree
6	M6, get suggestions from friend	4.00	.73	Agree
7	M7, get support from family members	3.50	1.18	Agree

Scoring Direction for Positive Item:
1.00-1.50=totally disagree
1.51-2.50=Disagree
2.51-3.50=Undecided
3.51-4.50=Agree
4.51-5.00=Strongly agree

Scoring Direction for Negative Item
1.00-1.50=totally agree,
1.51-2.50=Agree,
2.51-3.50=Undecided
3.51-4.50=Disagree
4.51-5.00=Strongly disagree

Descriptive analysis was computed, and the participants' perceptions of mentoring/ getting the support they received during their early teaching period can be reported. Participants rated getting suggestions from a friend (M6) as the highest (M=4.00, SD= .73), followed by lack of guidance from the principal (M=3.91, SD=.59). Although item 5 has the second highest mean value, according to the nature of the negative item, participants disagreed the fact that they did not receive any help or guidance from the principal. Novice teachers are less rated on getting help from experienced teachers for managing student misbehaviour. However, participants had the lowest rating on getting support from family members (M7) with a mean value of (M=3.50, SD=1.18).

In general, novice teachers get help or support mostly from their friends, experienced teachers and the principal. However, a few novice teachers got support from

family members. The table shows that novice teachers mainly obtained suggestions from their friends. They received professional support such as writing lesson plans, teaching difficulties with specific subjects, and managing classrooms from experienced teachers and the principal. A few novice teachers get emotional support from their family members.

(iii) Perceptions of Past Practicum

Participants were asked to rate their perceptions of the previous practicum in their university/college program on the practicum scale. The researcher used 5-point Likert scale type items with *totally disagree*-5, *disagree*-4, *no opinion*-3, *agree*-4, and *totally agree*-5 to investigate the perceptions of novice teachers on their past practicum. The items' names and the mean and standard deviation values based on their rating on the Likert scale items were indicated in table 51.

Table 51 Descriptive Analysis with Mean and Standard Deviations of Novice Teachers' Perceptions of Practicum

(N=46)

No	Practicum items	Mean	SD	Remark
1	P1, I was not disturbed by students' misbehavior during the short practicum period.	3.37	1.06	Undecided
2	P2, get good teaching practice experience	4.22	.41	Agree
3	P3, the amount of practicum period should be increased.	3.85	.81	Agree
4	P4, we had micro and peer group teaching practice at the university/college before the practicum period.	4.41	.49	Agree
5	P5, it will be better if the curriculum content of the university/college is integrated into the practical lesson.	4.41	.54	Agree
6	P6, practicum experience is very useful for the profession.	4.07	.80	Agree
7	P7, feel more confident after the practicum period.	4.17	.67	Agree
8	P8, used teaching aids during the lesson in the practicum period.	4.22	.66	Agree
9	P9, as practicum is a short time period, we could not fully reach the level to understand the professional experience.	2.33	.84	Disagree

10	P10, we learnt theory at uni and practical things at practicum period.	4.00	.55	Agree
11	P11, we felt familiar with school environment when we entered the profession because of practicum experience	3.78	.78	Agree
12	P12, we did not have much difficulties as novice teachers because of teaching experience from practicum period.	3.93	.80	Agree
13	P13, we had no difficulties in profession as we reflected our weak points from practicum.	3.72	.93	Agree

Scoring Direction for Positive Item:	*Scoring Direction for Negative Item*
1.00-1.50=totally disagree	*1.00-1.50=totally agree*
1.51-2.50=Disagree	*1.51-2.50=Agree,*
2.51-3.50=Undecided	*2.51-3.50=Undecided*
3.51-4.50=Agree	*3.51-4.50=Disagree*
4.51-5.00=Strongly agree	*3.51-4.50=totally disagree*

The results showed that item 4, *"participants had micro and peer group teaching practice at the university/college before the practicum period"* (M=4.41, SD=.49), and item 5, *"it will be better if the curriculum content of the university/college is integrated into the practical lesson"* (M=4.41, SD=.54) had the highest mean values among 13 items under practicum scale. Item 9 "*as the practicum is a short period, we could not fully reach the level to understand the professional experience*" (M=2.33, SD=.84), resulting in the lowest mean value among the items.

It can be interpreted that novice teachers agreed they had micro-teaching and peer group teaching activities before the practicum period. Novice teachers perceived that the university/college program's curriculum content should be integrated into practical lessons. However, novice teachers do not think that *they could not reach the level to understand the professional experience because of* the shorter period of the practicum. It means that they get professional experience during the shorter period of the practicum. Besides, items 3 and 9 strongly suggest that increasing the time allocated to practicum will not be helpful from the perspective of novice teachers. It might be that the school context and the university context are different, and the pedagogical culture in the school is not as developed as the pedagogical theories in the university context. They know the realities of the school context as they become novice teachers.

(iv) University/ college Program

Participants were asked to rate their perceptions of the university/college program where they studied. The researcher used 5-point Likert scale type items with *totally disagree*-1, *disagree*-2, *no opinion*-3, *agree*-4, and *totally agree*-5 to investigate the perceptions of novice teachers on their university/ college program. Seven items related to the program represented the teaching methods and content. The items' names and the mean and standard deviation values based on their rating on the Likert scale items were indicated in the table.

Table 52 Descriptive Analysis with Mean and Standard Deviations of Novice Teachers' Perceptions of Program

(N=46)

No	Program itmes	Mean	SD	Remark
1	Pro1, the contents at the uni should be more focused on practical method for the actual classroom.	4.15	.55	Agree
2	Pro2, university programs should prepare teachers with the material in which they might face problems (e.g., large class size).	4.22	.41	Agree
3	Pro3, it would be better if teacher educators from uni teach the teaching method integrated with actual lesson.	4.26	.64	Agree
4	Pro4, cannot use student-centered approach because of time and space limitation and large class size.	3.48	1.04	Undecided
5	Pro5, there is a gap between uni lesson and actual lesson in the school classroom.	3.74	.74	Agree
6	Pro6, university lessons are useful for preparing the lesson and teaching methods for novice teachers.	4.02	.68	Agree
7	Pro7, I think the lessons from university/college are more focused on theory than practice.	3.89	.90	Agree

Scoring Direction for Positive Item:
1.00-1.50=totally disagree
1.51-2.50=Disagree
2.51-3.50=Undecided
3.51-4.50=Agree

Scoring Direction for Negative Item
1.00-1.50=totally agree
1.51-2.50=Agree
2.51-3.50=Undecided
3.51-4.50=Disagree

4.51-5.00=Strongly agree *4.51-5.00=Totally disagree*

Descriptive analysis with SPSS was conducted, and participants' perceptions of their university/ college program were reported. Participants rated Pro 3, "it would be better if teacher educators from university integrate the teaching method with actual lessons" (M=4.26, SD=.64) as the highest, and Pro 4, "cannot use student-centered approach because of time and space limitations and large class size" as the lowest with a mean value of (M=3.48, SD=1.04).

Novice teachers suggest that learning practical lessons from teacher educators would be better. They might think that they have learned theoretical lessons of how to use teaching methods, and they still need to learn more about the practical lessons. Although they tried to use modern teaching methods from the university/college program (student-centred approach), it is incompatible with school classrooms because of large class sizes, limited time and space. The university/college program seems to offer modern teaching methods that cannot be compatible to use in school classrooms. Novice teachers cannot overcome the difficulties such as large class sizes and time and space requirements if they use a student-centered approach. They might have to adapt to the traditional teaching methods that are embodied in school culture.

(v) Perceived Competency Development

Multiple response analyses with dichotomy groups are calculated and shown in the table. Novice teachers are asked to read 14 teacher competency items and decide whether they learned these competencies from the university program and practicum.

Table 53 Comparison of Multiple Response Analysis of Novice Teacher's Perceived Competency Development from University/College Program and Practicum

No	Competency items	Options	N	Percent of responses
1	coM1 uses various methods to develop students' knowledge, skills, and understanding	Prog	38	88.4%
		Prac	29	65.9%
2	**com 2 select and adapt various teaching methods to the characteristics of learners**	**Prog**	**25**	**58.1%**
		Prac	**26**	**59.1%**
3	com 3 evaluate the appropriateness of the content	Prog	29	67.4%
		Prac	25	56.8%

4	com 4 understand and use different forms of assessment	Prog	33	76.7%
		Prac	24	54.5%
5	com 5 understand the factors in the out-of-school environment that can influence students' personality development and learning	Prog	31	72.1%
		Prac	22	50.0%
6	com 6 understand students' social emotional and cognitive development contributes to the learning and development of students' intelligence, skills and culture.	Prog	31	72.1%
		Prac	23	52.3%
7	com 7 understand the context of traditional and value-based ethics, language, and ethnicity of learners	Prog	31	72.1%
		Prac	26	59.1%
8	com 8 understand and respect different cultures	Prog	29	67.4%
		Prac	28	63.6%
9	**com 9 have students engage in learning activities individually or collaboratively with others**	**Prog**	**23**	**53.5%**
		Prac	**33**	**75.0%**
10	**com 10 develop personal teaching practice through learning from other teachers and professional development opportunities**	**Prog**	**26**	**60.5%**
		Prac	**28**	**63.6%**
11	com 11 be knowledgeable and understand how to choose and use various classroom management techniques	Prog	27	62.8%
		Prac	24	54.5%
12	com 12 conduct teaching and learning processes related to the characteristics of learners	Prog	35	81.4%
		Prac	22	50.0%
13	**com 13 reflect on own teaching practice**	**Prog**	**18**	**41.9%**
		Prac	**38**	**86.4%**
14	com 14 understand how to learn through formal, non-formal and informal learning methods	Prog	36	83.7%
		Prac	20	45.5%
Total		Prog	412	958.1%
		Prac	29	65.9%

The number of responses and percentage of novice teachers' evaluation of perceived competency achievement from university programs can be seen in table 53. According to the table results, novice teachers decided on the university program as the source of their perceived competencies achievement for achieving the competencies except on competencies 2, 9, 10, and 13. About 59.1% of participants (N=26) selected practicum as their source to achieve com 2 *"select and adapt various teaching methods*

to the characteristics of learners." About 75% of novice teachers (N=33) picked out practicum as their source to achieve com 9 **"***have students engage in learning activities individually or collaboratively with others,"* whereas 53.5% of student teachers (N=23) chose university program as their source to achieve the same competency. About 63.6% of novice teachers (N=28) decided on practicum as their source for achieving com 10 "*develop personal teaching practice through learning from other teachers and professional development opportunities."* However, about 86.4% of novice teachers (N=38) rated that they learned com 13 "*reflect on own teaching practice"* from their practicum.

The comparative results of novice teachers' perceived competency development from university/college programs and practicum can be seen in the following chart.

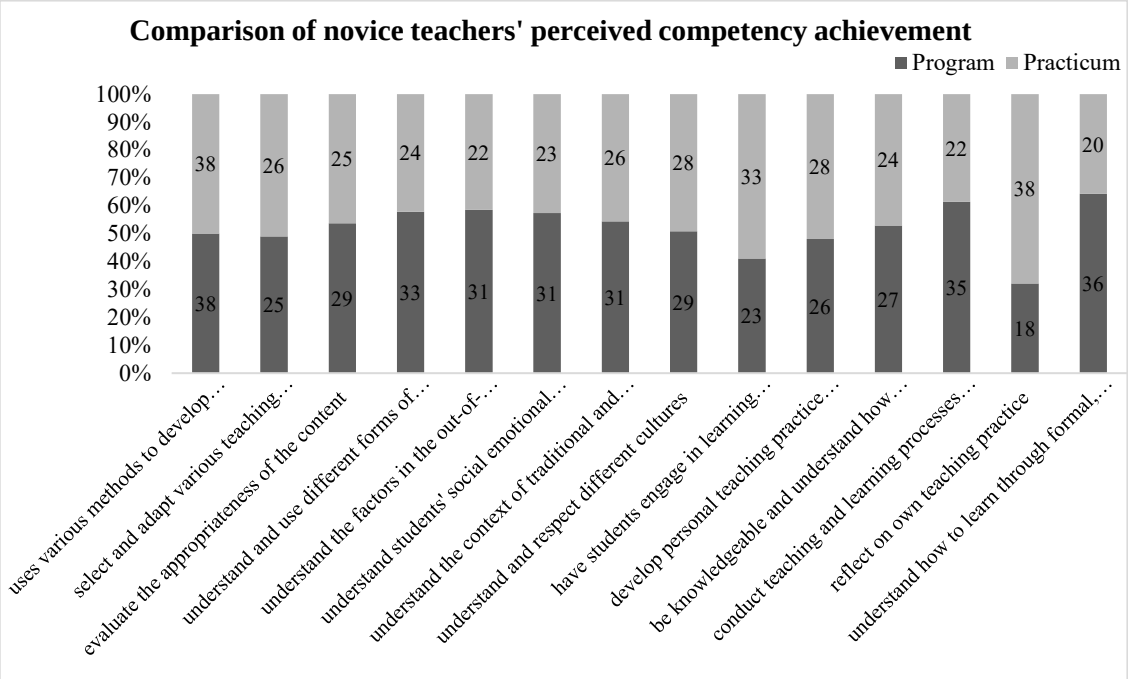


Figure 43 Bar Chart Comparing Novice Teachers' Perceived Competency Development from University/College Program and Practicum

Summary of the chapter

This chapter summarized the findings part of the qualitative study and the results of quantitative data. The qualitative part includes detailed document analysis results, photo-elicitation, focus groups, and participatory interviews. The quantitative part included the analysis of student teachers' responses to Questionnaire 1 and novice teachers' answers to Questionnaire 2. The following chapter will present the summary of the outcomes of the analysis and discussion part.

Chapter 6 Discussion

Preview of the chapter

This chapter analyses the findings according to two main research questions and sub-questions. The discussion about the practicum and teacher education program according to its component, structure, the different perspectives of actors, comparison of different findings, and unique case of this study are presented. The limitation of the study is described after the discussion part.

6.1 Answering Research Questions

This study aims to gather information on implementing teaching practicum to improve the quality of the practicum and initial teacher education program in Myanmar. Two main research questions and sub-questions were developed. This section will discuss the answers to the research questions.

RQ1 What are the main characteristics of practicum in initial teacher education in Myanmar?

RQ 1.1 How is the practicum framed (in terms of aim, structure, activities, mentoring, and evaluation) in teacher education policy documents in Myanmar?

The practicum-related documents from the University of Education and Education Degree College were analyzed to explore the main characteristics of practicum in initial teacher education in Myanmar. The University of Education and Education Degree College offers a teacher education program in Myanmar. Practicum in initial teacher education is aimed at student teachers: to equip them with pedagogical skills, to have the opportunity to practice their teaching in a real and controlled environment, and to acquire practicum teacher competencies standards. The practicum structure is administered from the host university/college with the approval of the Ministry of Education and the cooperation of school principals and township education officers.

The practicum component comprises lesson planning, lesson study, peer group teaching, portfolio, school visits, and placement. However, those practicum components are embodied in the teacher education courses. The practicum component is not divided into separate modules in the University of Education and Education Degree College (old system). The practicum period for student teachers under the university arrangement took 4 weeks for the first time in their third year and 2 weeks for the second time in their fourth year of the study program. For student teachers in Education Degree College (old system),

the practicum period took 6 weeks at the end of their first year and another 6 weeks at the end of the second year of their diploma program. Compared to EDC, the practicum period in UOE is shorter. Compared to international practicum, the teaching practice period is still shorter than it should be. However, it depends on the different contexts, policies, and programs.

During the practicum, student teachers must prepare lesson plans, teaching aids, daily diaries, and lesson observation and practice their teaching in the classroom. Evaluation criteria were handed to the practising school and principals, and subject teachers are supposed to evaluate the student teachers according to the criteria. Student teachers have to report practicum journals to the university/college, and teacher educators evaluate and reflect on the contents of the practicum journal. Supporting or mentoring the system of student teachers during their practicum has not been found in the documents.

According to the document analysis results, it can be summarized that the practicum is well arranged and structured, aimed for student teachers to acquire professional skills and competency standards and to have an opportunity to practice their teaching. The practicum components such as lesson study, writing lesson plans, peer group teaching, school visit, and writing practicum journals are embodied in the curriculum contents of the program. The practicum period at schools is arranged by the host university/college with the permission of the Ministry of Education. The school principals and township education officers cooperate in the arrangement process. The principal and cooperating teachers from schools are supposed to evaluate the student teachers' performance during the practicum. However, mentoring or providing a support system has not been found in the practicum-related documents.

R.Q 2. How do the different actors perceive the practicum in teacher education in Myanmar?

(1) What are student teachers' experiences and perceptions during the practicum?

(a) What are student teachers' perceptions of their activities during the practicum?

The first week of the school practicum period was challenging for student teachers as it was their first practice teaching time in real classrooms. They were excited, anxious, stressed, and tired in the early days of practicum. In later weeks, student teachers could manage inconvenient things and became happy and enjoyed their teaching. Student teachers tried to include group work activities during their lessons. As practicum is a short

time for student teachers to practice teaching in a real classroom, most of the student teachers could not have the opportunity to take part in school activities. Student teachers carried out small group work learning activities with students during their practicum period. Writing the lesson plan for the daily lesson is one of the tasks for student teachers during their practicum period. Some student teachers created teaching aids with their colleagues at school (Quali results).

Student teachers perceived that the practicum period was essential for gaining classroom experience, and it prepared them to learn how to be ready and know the problems they might face in the classroom in advance. During the practicum, they had the opportunity to learn how to prepare and teach the lesson that was appropriate to the student. Student teachers agreed that their attitude and feelings towards the teaching career changed after the practice teaching period. However, student teachers perceived that the teachers in the school do not have any friendly relationship with them (quanti results).

Student teachers did not describe their perceptions on increasing the practicum period (M=3.44, SD=1.08) (Quanti result). Although the university/college arranged 4 weeks/6 weeks for the first practicum, some of them mentioned that they have to participate for more weeks according to the requirement of the schools (Quali results). It means they did not think increasing the practicum period helped them gain more practical experiences. Another reason might be that they have different practicum periods during their first practicum.

Overall, the practicum period is essential for student teachers to gain valuable classroom experience and develop teaching skills. Despite the challenges of initial stress and socializing problems with teachers in practicing school, student teachers can adapt and improve over time and value their practical experience during the practicum.

(i) Is there any noticable variations in student teachers' perceptions of the practicum period according to their demographic factors (gender, affiliation, and academic level in teacher education)?

There is a significant difference between student teachers' perceptions of the practicum period according to personal factors such as gender, affiliation, and academic level in teacher education.

An independent sample t-test results indicate a statistically significant mean difference between male and female student teachers in terms of their perceptions of the practicum. This suggests that gender may impact student teachers' experiences and perceptions of their practicum. This difference might be whether male or female student teachers had a more positive or negative perception of their practicum. It is important to note that gender difference is also essential when examining student teachers' perceptions and experiences during their practicum.

One-way ANOVA test results indicate statistically significant mean differences between the student teachers' affiliation groups (University of Education, Education Degree College and Recent degree holders) regarding their perceptions of the practicum. This suggests that the affiliation of student teachers may impact their experiences and perceptions of their practicum, with different affiliations resulting in different experiences and expectations. Student teachers attending the University of Education, Education Degree College and Recent degree holders have different perceptions of the practicum. In general, the sentence highlights the importance of considering the affiliations of student teachers when examining their perceptions and experiences during their practicum. The results could be used to inform policies and programs that aim to improve the quality of student teaching experiences for different affiliation groups.

One-way ANOVA tests revealed statistically significant mean differences among student teachers' academic level groups (B.Ed. 3rd yr. (College of Education), B.Ed 4th yr (Direct Intake), B.Ed 4th yr (College of Education) and Recent degree holders) in terms of their perceptions of the practicum. This suggests that the academic level of the student teachers may impact their experiences and perceptions of their practicum, with different academic levels possibly resulting in different experiences and expectations. Overall, this result highlights the importance of considering the academic level of student teachers when examining their perceptions and experiences during their practicum. The results could inform policies and programs that aim to improve the quality of student teaching experiences for different academic level groups.

(ii) Is there any difference in student teachers' perceptions of the practicum period regarding school-related factors (school location, duration of practicum period, teaching level)?

There is a significant difference between student teachers' perceptions of the practicum period according to school-related factors such as school location, duration, and teaching level.

One-way ANOVA results indicate statistically significant mean differences between student teachers' groups at rural and urban schools in their perceptions of practicum. This suggests that student teachers in rural schools may have had different experiences and expectations than those in urban schools, possibly due to differences in the school environment, resources, or other factors. It can be assumed that the practicum context is essential as differences may exist between different types of schools. The results could inform policies and programs to improve the quality of student teaching experiences in rural and urban settings.

One-way ANOVA results indicate statistically significant mean differences between student teachers who had a practicum duration of 2 weeks and those who had a practicum duration of 5-6 weeks in terms of their perceptions of the practicum. This suggests that the duration of the practicum may impact student teachers' experiences and perceptions, with those with a longer practicum duration possibly having different experiences and expectations compared to those with a shorter duration. Overall, the results highlight the importance of considering the duration of the practicum when examining student teachers' perceptions and experiences. The results could be used to inform policies and programs that aim to improve the quality of student teaching experiences, including decisions regarding the length of the practicum.

One-way ANOVA results revealed statistically significant mean differences between student teachers teaching at the primary level and upper secondary level, lower secondary level and upper secondary level in their perceptions of the practicum period. It means that the teaching level of student teachers during their practicum may affect their perceptions of practicum. This suggests that student teachers who teach at different levels of schooling may have had different experiences and expectations during their practicum, possibly due to differences in the nature and demands of the teaching position at different levels.

(b) What are the difficulties that student teachers face during their practicum?

Student teachers faced some difficulties according to the circumstance of the classroom environment. They had problems making slow and quick learners in a group, inadequate teaching aids for all group learning activities in rural schools, and difficulty teaching specific subjects (Quali result). 49.8% of student teachers encountered a lack of inadequate teaching aids problems, 43.4% faced teaching difficulty with low-performing students, and 29.4% had problems with uninterested students in the lesson. Among them, only a minor proportion of 1.4 % of participants reported they experienced negative observation and criticism from the subject teacher (Quanti results).

In general, student teachers faced inadequate teaching aids problems, making group learning activities with low-performing students and teaching difficulty with the specific subject matter. It is most common in rural schools that do not have adequate teaching aids because of many reasons, such as poor transportation or insufficient facilities support from the Ministry of Education. In rural schools, student's parents are not interested in their child education, or they might not have enough time and money to invest in their children's education. Besides, student teachers faced subject matter difficulty. This may be because student teachers are still needed to be familiar with the lessons of the K12 school curriculum as they are beginners in the profession. Another reason could be the university program's requirement to ensure subject matter knowledge and pedagogical knowledge of student teachers' specialized subjects. Moreover, a few student teachers encountered with subject teachers who gave negative criticism to them related to their teaching.

Related to student misbehaviour, student teachers expressed those students were chatting while they were teaching and had problems managing disrespectful students in the classroom (Quali results). About 45% of student teachers met "inactive students in group work", 32.1% of student teachers faced "students are chatting while I am teaching", about 25.1% of student teachers had difficulty with ″managing disobedient students" and 13% of student teachers encountered other difficulties such as lack of parents' cooperation, making fun of teachers, students' shyness behaviour in group activities, inactive students in their group work (Quanti results).

Related to other difficulties, student teachers had problems with stress and anxiety about the practicum period and writing practicum journals (Quanti results).

This study got similar results to the study of Kyriacou and Stephens (1999). It identified student teachers' concerns during their teaching practice: not being regarded as a real teacher, dealing with students' disruptive behaviour, and heavy workload.

These student teachers' problems could be used to inform teacher education programs and policymakers to prepare them better to overcome these challenges during their practicum.

(i) Is there any difference in the difficulties of student teachers between different school locations?

According to Chi-square results, rural school student teachers had significantly more difficulties than in urban and suburban schools during their first practicum. Student teachers in rural schools faced these difficulties, such as insufficient teaching aids and inactive students during group activities. In contrast, urban school student teachers faced challenges in managing group activities and dealing with large class sizes (Quanti result). The significant difference was found in time management problems, [X^2(**2**) = 9.97, p = .007]; Student absenteeism, [X^2(**2**) = 6.61, p = .037]; teaching with a learner-centred approach, [X^2(**2**) = 18.87, p = .000]; unable to use different teaching methods effectively in the actual classroom, [X^2(**2**) = 7.95, p = .019]; observation and criticism from the subject teacher, [X^2(**2**) = 6.70, p = .035]; inability to manage group activities, [X^2(**2**) = 12.21, p = .002]; large class size, [X^2(**2**) = 14.26, p = .000]; insufficient time to prepare lessons and teach, [X^2(**2**) = 12.43, p = .002] and difficulty in lesson preparation, [X^2(**2**) = 10.92, p = .004] respectively.

This suggests that the challenges faced by student teachers vary depending on the school location and context. Student teachers in rural schools may struggle with limited resources, while those in urban schools may face issues related to managing large groups of students. The information could be used to inform teacher education programs and policies that could better support student teachers in different types of schools.

(c) How do student teachers cope with the challenges during their practicum?

(i) What are student teachers' preferred coping strategies for their daily lives?

Most student teachers preferred seeking social support coping strategies among the four general coping strategies (Quanti results).

(ii) What are the student teachers' coping strategies related to the difficulties during their practicum?

Student teachers created teaching aids by themselves and used available material to explain the lesson. Student teachers used their facial expressions, scolding, threatening, and asking questions to students to cope with student misbehaviour problems. Student teachers sometimes asked the principal and other teachers if they had difficulties (Quali results). Student teachers applied "create teaching aids by themselves, "giving motivation to students," "forming effective student groups," "reaching out to those students and asking questions," "teaching students to be obedient," "asking questions to students who are talking to each other during the lesson," "reading motivational books," "consultation with veteran teachers of the subject" and "getting help and advice from the principal" to solve the difficulties during their practicum (Quanti results). These strategies suggest that the student teachers used various approaches to address their challenges.

(iii) Which items should be included in developing the instrument to measure student teachers' common coping strategies related to the teaching-learning situation?

The results of exploratory factor analysis revealed six factors related to student teachers' common coping strategies scale. The common coping strategies scale consists of problem-solving by self, avoidance, giving punishment, adaptation to the situation, seeking professional support, and getting emotional support. The researcher proposed that these six common coping strategies scale and items under each factor will help develop the instrument or indicators for measuring student teachers' common coping strategies related to teaching-learning situations during their practicum, especially in Myanmar (Quanti result).

(d) How do student teachers perceive the mentoring process during practicum? (What are student teachers' perceptions of the mentoring process during the practicum?)

Student teachers expected it would be better for them if someone would guide and support them when they needed help. However, student teachers got informal support from schoolteachers regarding subject matter, teaching methods, and classroom management (Quali result). Student teachers agreed they needed guidance from the school principal and subject leader. Student teachers think less experienced teachers need mentoring from a more experienced instructor (Quanti result).

Overall, these results suggest that student teachers valued guidance and support and felt they needed more of it to be effective teachers. They felt that informal support from their colleagues in the school was helpful but that more formal support from school leadership and experienced instructors would benefit their professional development.

While student teachers may have received informal support from their schoolteachers during their practicum, the quality and effectiveness of that support may have varied. It is possible that some student teachers may have received more helpful guidance and support than others, depending on the individual schoolteachers they worked with and the nature of the support they received. Additionally, informal support may not address all of the challenges and issues that student teachers face during their practicum, particularly if they are complex or require more specialized knowledge or skills. Therefore, while informal support may be helpful to some extent, it may not be enough to ensure that student teachers receive the guidance and support they need to become effective teachers.

(i) Is there any difference in student teachers' perceptions of the role of mentoring according to their factors (gender and study year)? (quanti)

An independent sample t-test shows a statistically significant difference between the perceptions of female and male student-teachers regarding mentoring in terms of getting support and their expectation for the mentoring program during their practicum. This means that female and male student-teachers differ in how they perceive the support they receive from their mentors and what they expect from a mentoring program. However, gender-related factors may influence how student-teachers perceive mentoring in terms of support and expectations during their practicum. For example, female student-teachers might be more likely to value emotional support or might have different expectations for what constitutes an effective mentoring program compared to male student-teachers.

The results of the One-way ANOVA tests indicate that there are significant mean differences between the groups in the perceptions of student-teachers at different academic levels (B.Ed 3rd yr (COE), B.Ed 4th yr (COE), recent graduates, and B.Ed 4th yr (Direct Intake)) regarding mentoring in terms of getting support and expectations during their practicum. The nature of differences could be due to factors such as differences in the quality of mentoring, the types of mentoring required for each group,

or different professional knowledge and experiences of student teachers. Further investigation would be needed to determine the underlying reasons for the differences in perceptions regarding mentoring regarding getting support and expectations during their practicum between different academic-level groups of student-teachers.

(ii) Is there any difference in student teachers' perceptions of the role of mentoring according to school-related factors (school location and teaching level)?

The results of the One-way ANOVA tests suggest that there are statistically significant differences in the perceptions of student teachers from different groups teaching at rural and urban schools during their 2nd practicum regarding mentoring. This means that the rural and urban student teachers have different opinions and experiences about mentoring during their 2nd practicum. On the other hand, there were no statistically significant differences in the perceptions of student teachers from different school locations (rural or urban) regarding the role of mentoring during their 1st practicum. This means that the rural and urban student teachers have similar opinions and experiences about mentoring during their 1st practicum. The differences could be due to factors such as differences in the quality of mentoring, differences in the types of mentoring provided, or differences in the support, resources available to rural and urban schools and the different culture of the rural and urban schools.

There were significant differences in the perceptions of mentoring between student teachers at different levels of schooling during their first practicum. Specifically, those teaching at primary and lower secondary levels had different perceptions than those teaching at upper secondary levels. During the second practicum, there was a significant difference in perceptions of mentoring between student teachers teaching at lower secondary and upper secondary levels. Student teachers were assigned to teach only at lower secondary and upper secondary levels during their second practicum. It means that the teaching level of student teachers during their practicum may affect their perceptions of mentoring. Differences might be the fact that student teachers who were teaching at the primary level during their first practicum might need more support to teach the younger students or student teachers who taught at the lower secondary or upper secondary level required more support to manage adulthood lives of students. It is important to note that the specific reasons for the differences in perceptions between the different groups of student teachers would require further investigation and cannot be

determined solely based on the statistical results. It is possible that there were differences in the types of challenges faced by student teachers at different levels, as well as differences in the types of support they required from their mentors during their practicum (Quanti).

(e) How do student teachers see university-based teacher education's preparation for their practicum? (What are student teachers' perceptions on their university program?)

Student teachers highlighted that the theoretical part of the university curriculum helped with the practicum. However, there needed to be more curriculum content in universities and practice in schools. Some university subjects helped them. They needed more effective and practical teaching methods. Nevertheless, they wanted university educators to observe and evaluate their teaching during their practicum (Quali result). Before practicum, student teachers learned to create teaching aids and conducted peer group teaching at their university/college program. Student teachers think the knowledge they learned from the university/college can be used during the practicum. Student teachers agreed that the courses they learned in a university/ college program are more theoretical than practical (Quanti result).

These results imply that student teachers felt that the university program was insufficient in preparing them for the realities of teaching in a school setting. They wanted more practical training that would help them with their day-to-day work in the classroom. Student teachers felt that feedback and support from university educators would be valuable in helping them improve their teaching practice. They gained some practical experience during their studies, but they wanted more practical training to better prepare them for their future teaching careers. Overall, these statements suggest that student teachers felt that their university/college program was helpful in preparing them for their practicum, but that there were areas where they felt that their teacher education program was lacking. They wanted more practical training and support from their educators to better prepare them for the realities of teaching in a school setting.

(i) Is there any difference in student teachers' perceptions of the role of university program preparation according to their demographic factors (gender, affiliation, and academic level in teacher education)?

The independent sample t-test was used to compare the mean perceptions of male and female student teachers towards university programs. The result shows a significant

mean difference between male and female student teachers' perceptions of university programs. This means that, on average, male student-teachers perceived the university program differently from female student-teachers, which could be an essential factor to consider when designing and implementing teacher education programs.

The one-way ANOVA results show a statistically significant difference between the two student-teacher groups in their perceptions of the university/college program. Specifically, the two groups were student teachers affiliated with the University of Education and those with Education College. Overall, this result suggests that the context in which student-teachers are prepared can impact their perceptions of the program. This could have implications for program design and implementation, and it may be necessary to consider these differences when designing teacher education programs.

The one-way ANOVA test result shows that there was a statistically significant mean difference between the three groups (B.Ed 3rd yr (COE) student teachers, B.Ed 4th yr (COE) student teachers, and recent graduates) in their perceptions of the program. This means that, on average, the three groups had different perceptions of the program regarding its content, methods, and evaluation. The nature of the difference could be the fact that they are at different stages in their education and have different levels of experience could influence their perceptions of the program in terms of its content, methods, and evaluation. For example, B.Ed. 3rd-year students may have different background knowledge and experience than B.Ed. 4th-year students and recent graduates. This could lead to differing perceptions of the program's effectiveness, relevance, and overall quality. Overall, this result suggests that there may be differences in how different groups of student-teachers perceive the program's content, methods, and evaluation. These differences could have implications for program design and implementation, and it may be necessary to consider these differences when designing teacher education programs.

(f) What are the student teachers' perceptions of their competency development?

The results from the quantitative study indicate that student-teachers perceived that they learned and developed their competencies from both the university program and the practicum experience, but there were exceptions to this trend.

Overall, the participants believed they learned how to develop their competencies through theoretical knowledge from the university program and practical experience from

the practicum. However, for specific competencies, for competency 4, which involves understanding and using different assessment forms to guide and support learning, the student-teachers perceived that they primarily learned this skill from the university program. This suggests that the theoretical knowledge gained from the university program was more beneficial for this particular competency.

On the other hand, for competency 11, which involves choosing and using various classroom management techniques in managing teaching and learning processes, the student-teachers believed they primarily learned this skill from their university program. This implies that the theoretical knowledge gained from the university program was more beneficial for this particular competency. Overall, the results suggest that the university program and the practicum experience were valuable sources of learning and developing student-teacher competencies. Still, the relative importance of each source depended on the specific competency being developed.

(2) How do novice teachers reflect on their past practicum? (What are the perceptions of novice teachers on their past practicum?)

Novice teachers are burdened with administrative work such as typing, recording meeting notes, and examination duties. Concerning professional activities, novice teachers taught overtime after school hours and took subject leader roles. Related to the practicum, novice teachers said the practicum period is short (Quali). Novice teachers had micro-teaching and peer group teaching practice at the university/college and during the practicum period. Novice teachers wished it would be better if the curriculum content of the university/college could integrate with the practical lesson in preparing student teachers for the practicum. Novice teachers got good teaching practice experience. Novice teachers agreed that they could use teaching aids when they teach the lesson during their practicum period. Novice teachers felt more confident about teaching after the practicum period (Quanti result).

(a) What are novice teachers' general coping strategies for their daily lives?

The multiple-response analysis of general coping strategies results in seeking social support as novice teachers' general coping strategies.

(b) What difficulties did novice teachers face during their first year of teaching?

Novice teachers reported teaching difficulties during their first year of teaching. During the focus group interview, novice teachers mentioned challenges such as teaching

difficulties with slow learners, students' diverse needs and the monthly prescribed curriculum and exam system. Novice teachers faced behavioural problems among the students, language difficulties with teaching students who spoke one ethnic language, problems with competition between teachers, and teaching with diverse needs of students. Novice teachers reported that their school principals and other teachers do not like their new teaching methods, such as group work and activities. They had problems with students' parents and teacher competition because of assigning subject teachers (Quali result). The most significant proportion, 47.8% of novice teachers, had difficulties in teaching slow learners, 37% of novice teachers faced challenges in managing disobedient students, and about 34.8% of novice teachers encountered inconvenient with teaching student-centred approach, 32.6% of novice teachers encountered significant class size problems, 26.1% had time management problems, 23.9% had difficulties in assigning subject teachers according to their specialization. Few novice teachers (8.7%) mentioned relationship problems with the school principals, students' parents, student absentee problems and teaching inclusive students.

It seems that novice teachers had difficulties in teaching related problems such as teaching slow learners, using student-centred approach, large class size, time management for prescribed monthly curriculum and managing disobedient students. Besides, some novice teachers had socialising problems with the school principals, their colleagues and students' parents.

These responses are similar to the findings of Chaaban and Du (2017); common difficulties among novice teachers were "not being able to get through the lesson," "teaching students who did not want to learn," and "difficulties with the contact with parents" (Gaikhorst et al., 2017); "difficult to adapt curricular and instructional practices under individual differences among students" (Veenman, 1984).

In the study of Çakmak and others (2019), novice teachers had challenges with instructional and classroom management, and they reported they asked for help from their colleagues, administration, and parents. They got the required support mostly from experienced teachers.

(c) What are novice teachers' coping strategies related to teaching-learning difficulties?

Novice teachers learned from the guided book and the internet and attended workshops and refresher courses for teaching difficult subjects. They learned from social

media to create teaching aids. They approached their parents, other teachers, and friends to discuss their problems and got their suggestions (Quali result). Novice teachers (20.9%) used discussing with an experienced teacher to solve the difficulty of teaching slow learners. Other novice teachers (16.3%) met with students' parents to cope with managing disobedient student problems, and others (11.6%) picked up learning from the internet to cope with the problem of inconvenience by using a student-centered approach (Quanti result).

In general, novice teachers experienced difficulties such as teaching slow learners, and they asked experienced teachers to cope with that problem. They learned from the internet and other social media when they had difficulty using student-centred approaches and teaching aids. They received suggestions from other teachers, friends and their parents to cope with student misbehaviour problems. It has been found that they responded to similar difficulties and coping strategies to solve those difficulties according to the qualitative and quantitative results.

(d)How do novice teachers perceive the role of mentoring? (What are novice teachers' perceptions of the role of mentoring during their early period of teaching?)

Some novice teachers asked for help from their friends and the school principal. Novice teachers get support from their colleagues and senior teachers in preparing the lesson and writing lesson plans. Even though there is no formal mentoring and induction program in Myanmar teacher education program, novice teachers can adapt to the situation of the schools and receive help from experienced teachers and friends to solve their personal and professional problems (Quali result). Participants mostly got help from a friend and rarely got support from family members. Novice teachers get more support from colleagues than the principal, and they ask experienced teachers about the subject matter (Quanti result).

It seems that novice teachers obtained support from their friends, principal and experienced teachers related to teaching-learning activities. Mentoring and supporting during the practicum and mentoring in the induction period is still not yet developed in teacher education in Myanmar. However, novice teachers received informal support from their colleagues, principal, and experienced teachers. Besides, novice teachers tried to survive and adapt their behaviour to the school culture.

(e) How is the past practicum in university-based teacher education supported to the first-year teaching of novice teachers?(What are novice teachers' perceptions of the role of university-based teacher education?)

Novice teachers felt that teaching methods, problem-solving, discussion, and lesson planning in their undergraduate university program are ineffective in the actual classroom situation. Although novice teachers want to apply the knowledge they learned from their University, they need to adapt it to the conditions of their students and schools. Novice teachers suggested that the curriculum at the university program should integrate real situations in the school, adding more practical lessons and practicum time to the program (Quali result). Novice teachers expected teacher educators from the University to integrate theories related to teaching methods with practical lessons from the K12/Basic Education schools. They tried to use a student-centred approach within limited time and space. They also think university programs should prepare student teachers with the material that can be helpful for their practicum. Half of the novice teachers agreed they could not use a student-centred approach because of time and space limitations and large class sizes (Quanti result).

It seems that modern teaching methods in university programs do not match with the school context. Novice teachers had to adapt to the school context and use old methods. They wished the university curriculum to include more practical lessons that could be matched with the K12 curriculum. They suggest a university curriculum to add potential problems and valuable material for the K12 classroom. They desired university teacher educators to integrate more practical lessons in their teaching.

However, they suggested a more practical period during the interview. This finding aligns with Bezzina and others' (2004) result that beginning teachers felt that the course could have been more professional and recommended extending that period of teaching practice from university programs.

(f) What are the novice teachers' perceptions of their competency developement?

The quantitative results suggest that novice teachers tend to consider university programs as the primary source for developing their competencies, except for competencies 2, 9, 10, and 13. Participants believed that the practicum experience was more valuable for these particular competencies. More specifically, for competency 2, participants believed that the practicum allowed them to learn how to select and adapt

different teaching methods based on the characteristics of the learners they were working with. For competency 9, participants perceived that the practicum allowed them to engage in learning activities individually or collaboratively with other teachers. For competency 10, participants felt they could develop their personal teaching practice by learning from other experienced teachers and engaging in professional development opportunities during their practicum. Finally, for competency 13, participants believed that the practicum allowed them to reflect on their teaching practice, which is crucial for improving their teaching skills.

(3) How do teacher educators perceive changing role of the practicum?

(a) How do teacher educators perceive the student teachers' practicum?

Teacher educators assumed that the practicum period was necessary for student teachers to learn from their teaching practice and apply their knowledge in the classroom. Teacher educators believe that student teachers need to make more effort to prepare themselves for future challenges. Teacher educators see student teachers' difficulties in their practicum diaries, and they are trying to reduce student teachers' difficulties year after year from the university site (Quali result).

Teacher educators seem to know student teachers' difficulties from their practicum journals and try their best to reduce them. However, teacher educators had limited time. Besides, teacher educators think that student teachers are also responsible for preparing for the challenges that might be faced in the classroom. Nevertheless, teacher educators did not comment on other factors, such as the weak point of the teacher education curriculum for student teachers' difficulties in the actual classroom.

(b) How do teacher educators perceive the support and evaluation of student teachers during the practicum?

Teacher educators assumed that student teachers needed support during their practicum. Teacher educators could only support or supervise student teachers for part of the practicum period as they had teaching tasks for other students. They gave their contact numbers to student teachers to contact them if they needed help with their practicum. During the practicum, the principal or subject dean is supposed to evaluate student teachers according to the evaluation criteria of the evaluation form. Teacher educators from the university or Education degree college could not visit student teachers in the practising schools occasionally because of other teaching tasks (Quali result).

Teacher educators accept that student teachers need support or help to deal with their difficulties during the practicum. However, they could only support student teachers in preparing them for the practicum. Because teacher educators have other duties, they think student teachers can manage their problems as it is common in their eyes. Teacher educators did not describe official mentoring or support systems. It may be that they did not think about mentoring or support systems in teacher education programs. Besides, mentoring or support systems are not found in teacher education documents.

Regarding the evaluation of the practicum, the university sent the sealed envelope that include evlauation criteria to schools and the principal and cooperating teachers in that schools are supposed to evaluate student teachers' performance. In addition, the roles of evaluating student teachers' performance during the practicum are not clarified in the form. That creates a role conflict for the principals and cooperating teachers in practising schools to accept their roles as evaluators or supporters or their original teachers and principal roles. Teacher educators mentioned that they evaluated/assessed student teachers' practicum journals. They did not describe their roles in evaluating student teachers' performance during the practicum.

(c) What are teacher educators' opinions on better practicum and programs?

Teacher educators consider that the practicum period will be more successful if there is an extended time for the bloc teaching period, student teachers prepare themselves well, the principal and teachers from the respective school and the teacher educators from the University supervise and support student teachers during their practicum. Teacher educators highlighted that the new curriculum/program at the Education Degree College is good. However, they still need human resources, further training, and face-to-face discussion about implementing the new curriculum. For a better university program, the university program needs infrastructure support from the Ministry of Education or the government to update new things in the teacher education curriculum and program (Quali result).

Research question 1 intends to answer the overview of the practicum's definition, structure, and components and evaluate the practicum prescribed in teacher education. Research question 2 and sub-questions tried to explain the practicum from the perspectives of different actors, including their personal experiences and professional

experiences. Thus, two main research questions and sub-questions are expected to answer and explain how the practicum is implemented in Myanmar's teacher education.

Referring to ecosystem theory and complexity theory, practicum in a teacher education program plays a vital role in understanding the complex nature of teaching and learning. The actors such as students, teachers, and principals stand at the school level, student teachers, university teacher educators, practicum component and teacher education curriculum exist at the university level, and the informed policy for practicum component and structure at the teacher education curriculum position at the program level. However, all actors, functions and components are interrelated in a complex environment. Complex relationships and interactions between actors and components of the program implement a dynamic teacher education system.

Thus, the structure and component of the practicum at the university and program level (Meso and Macro), practicum as a learning opportunity (Meso level), practicum as an opportunity for theory and practice integration at teacher education program (meso and macro level), individual actors' experiences and coping strategies (micro level) can be explicitly discussed in the following sections.

6.2 Practicum as a component and structure in teacher education program (Meso and Macro level)

According to the document analysis results of the practicum-related documents from the university and teacher education college, the practicum component in teacher education in Myanmar is aimed at teacher trainees to practice teaching in a real and controlled environment to equip them with the necessary pedagogical skills. The practicum period is planned to offer a chance for student teachers to put their educational theories from educational studies into practice. Student teachers are expected to acquire practicum teacher competencies standards in the practicum guidebook of Myanmar teacher education. This finding is echoed by the review of Cohen and others (2013); most of the practicums' goals were related to the preservice teachers' professional growth and better acquaintance with the teacher's actual role, the school's environment, and its students' cultural diversity.

The teacher education curriculum at the university embedded the practicum component into the core curriculum. It means that practicum components such as lesson observation, lesson study, peer group teaching, school visits and practicum (school

placement) are not divided into separate module in Ethiopia, Kazakhstan and Iran (Chaw et al, 2022). Student teachers have to write lesson plans during the university/college program and practicum journals after the practicum, create portfolios, conduct lesson observation, and peer group teaching. Student teachers have to write the lesson plan for the daily lesson, discuss it with the cooperating teachers or principal during the practicum and plan the lessons. Lesson observation of student teachers is integrated with the school visit part embedded in the curriculum of the university program. Student teachers in the undergraduate teacher education program (5-yrs) are required to complete practicum I in 3rd year (at the end of the 6th semester) for four weeks. The first practicum period begins in October when there are preparations for Kahtein (Myanmar traditional Buddhist festival) days, and that period is coincided with national holidays. Thus, the planned weeks for the first practicum period are not the right time for practicum purposes. Student teachers must participate in Practicum II of the university program in the 4th year (the middle of the 8th semester) for two weeks.

Meanwhile, student teachers from the Education College diploma program (2 yrs, old system) have to undertake Practicum I at the end of 1st year (6 weeks) and Practicum II at the end of 2nd year (6 weeks) for their practice teaching. Similarly, student teachers from Education Degree College's first practicum period fall during the schools' October exam period, and they have fewer opportunities to practice their teaching (Kyaw, 2020). It can be said that the practicum period from both the university and education degree college is still short. Similar results are found in the study of Manzar-Abbas and Lu (2013), the time allocated to practicum experiences in China needed to be longer, and the authors suggested extending the time for practicum experiences.

From the qualitative interview results, it has been known that student teachers also mentioned their desire to have more extended practicum periods to get more practice teaching time. Novice teachers also suggested lengthening the practicum period as they thought it could give a good opportunity for teaching practice during focus group interviews. However, the questionnaire responses from student teachers and novice teachers about perceptions of an extended period of the practicum [c1] were not strong enough to decide for the extended period of the practicum. This might be the reason that student teachers or novice teachers valued their professional experiences during the practicum. However, only some believed that lengthening the practicum period could solve their problems related to teaching-learning situations. Teacher educators also

pointed out that extending the practicum period would be better. It has been highlighted in the work of Cohen (2013) that student teachers reported needing more time to understand the context. Preservice teachers in the study (Arslana & Ilinb, 2018) indicated that the teaching practice experience benefits them, and they feel more confident after the practicum. As Darling-Hammond (2014) suggested, the high-powered program needs student teachers to invest ample time in their university program and a full academic year of student teaching period under the supervision of experts to grow roots from their practice.

From the meso-level perspective (university/college level), extending the practicum period is reasonable. However, it is necessary to consider the school site as the practicum involves cooperation between the schools and the university/college program. Besides, the practicum structure in Myanmar is a formal and centralized arrangement with the approval of the Ministry of Education in cooperation with district and township education officers and school principals. From a macro level perspective, the practicum component in the teacher education program is required to be more emphasized to achieve the objective of the practicum component of the teacher education program.

From the perspective of the meso level (at teacher education university/college) and macro level (initial teacher education program), practicum structure (practicum period) in initial teacher education in Myanmar is arranged within a short period compared to China, Iran, Ethiopia and Kazakhstan. The practicum components (lesson study, lesson observation, peer group teaching, school visit and school placement) are embedded into the teacher education curriculum.

6.3 Evaluating practicum period in teacher education: Meso and Macro perspective

Teacher educators perceived that the practicum is crucial for student teachers to integrate their theoretical knowledge and practice and apply their knowledge in the classroom. Student teachers and novice teachers in this study believed that they developed their competency standards such as engaging students in learning activities, reflecting on their teaching practice, selecting and adapting various teaching methods to the characteristics of learners, developing personal teaching practice through learning from other teachers, and professional development opportunities from the practicum.

Student teachers agreed that the practicum period is essential for gaining classroom experience. Practicum prepared them to be ready and to know the problems

they might face in the actual classroom in advance. After the practice teaching, some student teachers changed their attitude and feelings toward the teaching career. They had the opportunity to learn how to prepare and teach appropriate lessons to the students. Similar results can be found in the work of (Koşar & Bedir, 2019); the preservice teachers stated that practicum allowed them to put their theoretical knowledge into practice. Student teachers from different academic levels (3rd and 4th yr) and those who participated in different practicum periods (2-4 weeks and 5-6weeks) have different perceptions of the practicum. It seems to be that student teachers who learned more theoretical knowledge (4th yr) had different perspectives on practicum as they can relate more theoretical and practical knowledge. Moreover, student teachers with more practicum periods might have more professional experiences than those who participated in fewer practicum periods. Darling-Hammond and others (2002) discovered that well-prepared teachers could better use teaching strategies that respond to student's needs and learning styles.

Relating to John Dewey's experiential learning theory, student teachers in this study learned a lot from their experiences during their practicum. Student teachers can apply the theories they learned in their university curriculum in the classroom. They see the importance of practice in a real classroom during their practicum. By reflecting on their experiences, student teachers found a better way to improve their teaching practice in the future scenario. They encountered problems, tried to cope with their problems, and developed their professional knowledge and skills. Based on their experience, student teachers highlighted some vulnerable points related to the practicum. Some of the theories learned in university/degree college in the practical classroom did not work in the actual classroom. They could not use the teaching aids in the classroom because of time and accessibility. The teachers in the school do not have any friendly relationship with the student-teachers.

Dealing with Vygotsky's social cognitive theory, practicum experiences improve student teachers' social interaction with others as they collaborate with peers, schoolteachers, and principals in the school context. Student teachers improve their social and cognitive development by planning lessons with students' diverse backgrounds. Organizing students' group learning activities can also improve social interactions and relationships with students in the classroom.

Novice teachers' learning is influenced by their experience (doing practice teaching), mentor teacher who gives them practical support and guidance, and university educator with research-based knowledge and perspectives (Ellis, 2010). Novice teachers in this study reflected that they got good teaching practice experience during the practicum period, which is very useful for the profession. They felt more confident in their teaching skills after the practicum period. They learned the theory at the university program and practical things during practicum. They felt familiar with the school environment when they entered the profession because of their practicum experience. They only had a few difficulties as novice teachers because they reflected on their weak points from practicum and improved themselves.

Concerning Vonk's teacher socialization theory, novice teachers made a socialization process during their early teaching period to get the knowledge, skills, and values to become effective teachers. As novice teachers, they must learn the norms, regulations, and culture of the school community and teaching profession by collaborating with others. They learn from social interaction with students, experienced teachers, and school culture to develop their professional identity.

Thus, it cannot be denied that practicum periods at practising schools make teacher candidates enrich in professional and practical experiences. The practicum period serves as a valuable learning opportunity for student teachers and novice teachers, enabling them to gain practical experience, develop essential teaching skills, and cultivate a deep understanding of theoretical content through hands-on practice.

6.4 Meso level perspectives on the Mentoring/support system in the practicum context

Agudo (2016) said mentoring is vital to all teacher education programs. Nevertheless, mentoring or supporting system has not been found in the program of universities/colleges of Education. In the new curriculum of EDC, it was prescribed that each placement school will have supporting teachers or mentors, and student teachers can get support from them. Those mentors will be trained in lesson observations, constructive feedback, fundamental skills, and assessment methods according to the expectation of the EDC curriculum (doc analysis). However, teacher educators during the interview mentioned that the implementation following the new curriculum is at the beginning level.

Student teachers mentioned it would be better for them if someone guided and supported them when they needed help during the practicum. Schools did not have official mentors or mentoring/supporting systems for student teachers. However, student teachers in this study tried to receive informal support from schoolteachers and principals. When novice teachers faced problems with teaching, they obtained support from experienced teachers, their friends, and the school principal. They learned from guided books and the internet. They attended workshops and refresher courses for different subjects. They approached their parents, other teachers, and friends to talk about their problems and get their suggestions.

Shamatov (2006) noted that the local cultures and traditions played essential roles in shaping the new teachers' relations with other people. McCollum (2014) also recommended effective mentoring programs for supporting beginning teachers to interact with others who understand their situation and can support them in difficult situations. The mentoring experience helped novice teachers develop self-awareness, implement effective instructional strategies, design a successful classroom management plan, and build strong student-teacher relationships (Gholam, 2018). Even though there is no formal mentoring program and induction period for beginning teachers in teacher education programs in Myanmar, novice teachers can adapt to the situation of the schools and receive help from experienced teachers and friends to solve their personal and professional problems. The study of Hudson (2012) results that beginning teachers required more support in school culture and developing teaching practices and behaviour management.

Teacher educators assumed that student teachers needed support during their practicum. However, teacher educators had teaching tasks for other students. Besides, they did not think supporting or supervising student teachers during their practicum was their responsibility. They assumed that they had already prepared student teachers before the practicum time at the university/college program. The changing nature of the practicum requires effective mentoring of student teachers. If teachers could not prioritize attending the workshop on mentoring, Sanders (2005) suggested creating an opportunity to associate teaching with the teaching profession so that teachers can allocate their time to invest in professional development sessions and mentoring roles.

There has yet to be an official support system for student teachers and novice teachers in Myanmar. Informal support from a friend, family, and other teachers still works during the small group inside or outside the school environment. Student teachers got informal support from schoolteachers regarding subject matter, teaching methods, and classroom management. Even though there is no induction program, novice teachers get informal help from experienced teachers and friends to solve their personal and professional problems. However, the feasibility and quality of that informal support from the school context cannot be assured. The quality assurance of the informal support depends on knowledge, experience and mentoring training received by principals, cooperating teachers and peers. Besides, it cannot be assumed that all student teachers and novice teachers can handle all the challenges with that informal support. However, some developing countries have no formal mentoring program, but informal mentoring works well, like in Myanmar.

Thus, the supporting or mentoring system in Myanmar's teacher education is still developing. [ch1] Myanmar National Education Strategic Plan (2016-2021) report also highlighted that supporting systems and supervision in teacher education still need to be stronger. According to the report and current research findings, mentoring/supporting system is necessary for the initial and continuous professional learning journey of teacher education. From the meso-level perspective, mentor training for teacher educators from the university/college site and preparation for mentoring at the schools where student teachers are doing their practicum would be needed, and preparation of mentoring programs at the schools where student teachers are doing their practicum would be needed.

6.5 Macro-level Perspectives on the University Program: Actor Feedback and Insights

Student teachers agreed that they developed their required competency standards such as using various methods to develop student's knowledge, skills, and understanding, evaluating the appropriateness of the content, understanding the factors for students' personality development and the context of traditional and different cultures, using various classroom management techniques and different forms of assessment, conducting teaching and learning processes related to the characteristics of learners, learning through formal, non-formal and informal learning methods from studying their teacher education courses of the university program (quanti results). Student teachers also mentioned that

they had to learn to use teaching aids and conduct peer group teaching at the university courses before the practicum period. However, they wished the curriculum content of the university/college to be integrated with more practical lessons. Darling-Hammond (2010) highlighted that the feature of adequate university program preparation includes the same amount of coursework in reading the content and methods of teaching for that content.

Novice teachers compared their recent experiences with their knowledge from their undergraduate university program. They found that teaching methods and lesson planning in their undergraduate university program could have been more effective in the actual situation in the classroom. Glasswell and Ryan (2017) noted that by reflecting on their experiences, new teachers could identify what is essential for them in the learning and teaching process. Novice teachers could not use the student-centred approach they learned from the university program because of time and space limitations and large class sizes of around 60 students in schools. Effective programs focus on courses to help student teachers learn to apply specific practices and tools in their clinical experiences (Darling-Hammond, 2010).

Teacher educators acknowledged the challenges faced by student teachers, as evident in their practicum journal, and expressed their commitment to progressively minimize these difficulties over time (quali result). Besides, teacher educators expressed that student teachers need to make more effort to prepare themselves for future challenges. It seems to be that teacher educators think that student teachers should do more efforts in preparing for the practicum because they are assumed to know the school context and potential problems. Teacher educators did not mention about the limitations of the curriculum structure of the university/college program in preparing student teachers. The result is contradicted by the findings of Cohen (2013), teacher educators consider implementing more curriculum structure around communication and how student teachers can be assertive during practicum.

From the different perspectives of the actor, it can be seen that the university/college curriculum prepares teacher candidates to become professional teachers through the teacher education curriculum, teaching methods and practicum components. However, the program has some weak points and cases that need to be addressed in preparing student teachers. The actors realized that the university/college program's curriculum contents are more theoretical and can not be applied in the real

classroom. In this case, university/college contents are not matched with the textbooks of the K12 curriculum.

Although the university/college program offered modernized pedagogical contents such as using a student-centred approach and group work activities, student teachers could not be fully applied those in the classroom. It might be the reason that the pedagogical culture of the K12 schools is outdated, and the university offered updated teaching methods. Moreover, the curriculum contents and teaching methods of the university/college program did not fully prepare for real classroom situations, such as how to teach poor performing students, unmotivated students, and inclusive students and how to manage student misbehaviour, large class size and available resources to create a learning environment. Furthermore, the teaching methods of the teacher educators from the university/college are mostly traditional, except in some lessons. In addition, the arrangement of the practicum component and practicum period are required to update and modify.

6.6 Understanding Practicum as Learning Opportunity for teacher candidates: a Micro Level perspective

Teacher educators perceived that the practicum is crucial for student teachers to integrate their theoretical knowledge and practice and apply their knowledge in the classroom. Student teachers and novice teachers in this study believed that they developed their competency standards such as engaging students in learning activities, reflecting on their teaching practice, selecting and adapting various teaching methods to the characteristics of learners, developing personal teaching practice through learning from other teachers, and professional development opportunities from the practicum.

Student teachers agreed that the practicum period is essential for gaining classroom experience. Practicum prepared them to be ready and to know the problems they might face in the actual classroom in advance. After the practice teaching, some student teachers changed their attitude and feelings toward the teaching career. They had the opportunity to learn how to prepare and teach appropriate lessons to the students. Similar results can be found in the work of (Koşar & Bedir, 2019); the preservice teachers stated that practicum allowed them to put their theoretical knowledge into practice. Student teachers from different academic levels (3rd and 4th yr) and those who participated in different practicum periods (2-4 weeks and 5-6weeks) have different perceptions of the practicum. It seems to be that student teachers who learned more

theoretical knowledge (4th yr) had different perspectives on practicum as they can relate more theoretical and practical knowledge. Moreover, student teachers with more practicum periods might have more professional experiences than those who participated in fewer practicum periods. Darling-Hammond and others (2002) discovered that well-prepared teachers could better use teaching strategies that respond to student's needs and learning styles.

Relating to John Dewey's experiential learning theory, student teachers in this study learned a lot from their experiences during their practicum. Student teachers can apply the theories they learned in their university curriculum in the classroom. They see the importance of practice in a real classroom during their practicum. By reflecting on their experiences, student teachers found a better way to improve their teaching practice in the future scenario. They encountered problems, tried to cope with their problems, and developed their professional knowledge and skills. Based on their experience, student teachers highlighted some vulnerable points related to the practicum. Some of the theories learned in university/degree college in the practical classroom did not work in the actual classroom. They could not use the teaching aids in the classroom because of time and accessibility. The teachers in the school do not have any friendly relationship with the student-teachers.

Dealing with Vygotsky's social cognitive theory, practicum experiences improve student teachers' social interaction with others as they collaborate with peers, schoolteachers, and principals in the school context. Student teachers improve their social and cognitive development by planning lessons with students' diverse backgrounds. Organizing students' group learning activities can also improve social interactions and relationships with students in the classroom.

Novice teachers' learning is influenced by their experience (doing practice teaching), mentor teacher who gives them practical support and guidance, and university educator with research-based knowledge and perspectives (Ellis, 2010). Novice teachers in this study reflected that they got good teaching practice experience during the practicum period, which is very useful for the profession. They felt more confident in their teaching skills after the practicum period. They learned the theory at the university program and practical things during practicum. They felt familiar with the school environment when they entered the profession because of their practicum experience.

They only had a few difficulties as novice teachers because they reflected on their weak points from practicum and improved themselves.

Concerning Vonk's teacher socialization theory, novice teachers made a socialization process during their early teaching period to get the knowledge, skills, and values to become effective teachers. As novice teachers, they must learn the norms, regulations, and culture of the school community and teaching profession by collaborating with others. They learn from social interaction with students, experienced teachers, and school culture to develop their professional identity.

Thus, it cannot be denied that practicum periods at practising schools make teacher candidates enrich in professional and practical experiences. The practicum period serves as a valuable learning opportunity for student teachers and novice teachers, enabling them to gain practical experience, develop essential teaching skills, and cultivate a deep understanding of theoretical content through hands-on practice.

6.7 Individual Growth Challenges (Micro level)

Individual growth challenges here refer to student and novice teachers' obstacles and difficulties in personal development and growth.

Student teachers learned modern teaching methods such as incorporating appropriate teaching aids in their lessons, cooperative learning tasks (group learning activities) and child-centered approach (CCA) in their university/college program. Student teachers mentioned letting their students carry out small group work learning activities (using the student-centred approach) during their practicum. Student teachers often encounter various challenges in their teaching practice, including insufficient teaching aids, addressing the needs of slow learners, motivating unmotivated students, managing large class sizes, organizing effective group activities, and implementing student-centred approach. The current finding parallels the review by Cohen (2013); preservice teachers who were prepared to use constructivist approaches faced difficulty using that approach in their practicum.

Similar findings of Lall (2021) noted that the teachers in Myanmar struggled to apply the student-centred approach. However, they have logistical problems such as high teacher-to-student ratios, lack of space, lack of teaching aids, and lack of time. In addition, student teachers often face challenges in managing students' misbehaviour, including issues such as students chatting during the lesson, displaying disinterest, and

demonstrating disrespectful behaviour. The findings of Keser Ozmantar (2019) revealed similar results: most preservice teachers mentioned concerns about classroom management, unmotivated students who had no interest in the lesson, and inclusive students.

Moreover, student teachers in rural schools encountered insufficient teaching aids problems. It appears that these rural schools lack the necessary resources and materials to support effective teaching and learning. Student teachers in urban schools often require assistance managing the challenges associated with large class sizes and organizing effective group activities. The high student population in urban schools can make it more challenging to provide individual attention and ensure active engagement from all students. It is the typical case in Myanmar classrooms that have many students (around 60 students in one classroom) and difficulties in managing group activities. Different results can be found in the studies (Jordan et al., 2018; Gaikhorst et al., 2020); preservice teachers in urban school practicum had challenges of language differences and cultural diversity, insufficient classroom resources, student misbehaviour, insufficient school leadership, and peer mentoring and student with learning needs.

In this study, it was found that most student teachers in rural schools encountered inactive students during group activities compared to their counterparts in urban and suburban schools during their practicum. The same result was found in the study of He and Cooper (2011), that preservice teachers revealed that they had challenges in classroom management, student motivation, and parent involvement. Cohen and others (2013) recommended that student teachers be prepared and aware of encountering unfamiliar teaching-learning situations in practicum and how to overcome them accordingly.

Novice teachers articulated the challenges they face during their first year of teaching, which include behavioural problems among the students, implementing a student-centered approach, language difficulties when teaching students who speak the ethnic language, problems with the school principals, and experiencing competition between teachers and teaching diverse needs of students. These findings are consistent with Rees (2015); novice teachers reported challenges with classroom management problems. Similar findings in Dias-Lacy and Guirguis's (2017) study, novice teachers had

stress, lacked support, and felt unprepared to handle students' behavioural and academic problems.

In addition to regular teaching responsibilities such as writing notes of lessons and teaching diaries during school hours, many novice teachers are required to dedicate extra time after school hours for overtime teaching. Additionally, based on the specific needs of their schools, some novice teachers are assigned subject leader roles, which come with additional responsibilities and expectations. There are mainly six subjects in every grade, and experienced teachers usually take the subject leader role in schools because subject leaders are required to lead other teachers who taught the same subject area from the Grade 6 to 12 and lead the discussion about how to teach and what to teach that subject. This finding was echoed by (Grudnoff & Tuck, 2003; Taharim et al., 2017); novice teachers reported feeling overwhelmed, highly stressed, and overburdened by the administrative tasks of facilitator, motivator, planner, subject leaders, managing student discipline, and many more.

Student teachers might have less professional knowledge and practical experience than novice teachers. However, the same problems happened to novice teachers after entering the profession. It is evident from the above results that novice teachers encounter similar teaching and learning challenges as student teachers, despite having more professional knowledge and practical experience. This suggests that student teachers' problems during the practicum cannot be solely attributed to their lack of experience. Moreover, these issues have been observed in other studies as well. Literature on student teachers from different contexts reveals that they have faced similar challenges to their counterparts in Myanmar (teaching in overcrowded classrooms with approximately 60 students). Even though they had around 20 students in their class, they still encountered similar difficulties. Additionally, student teachers in rural schools often encountered more obstacles than urban and suburban school teachers.

In this study, novice teachers expressed that their school principals and other teachers were not receptive to their innovative teaching methods, specifically those involving group work and activities. In this case, the principal and teachers in schools might need more knowledge about the nature of the activity or its usefulness of that activity. Additionally, they might consider factors such as time constraints, availability of suitable space, and students' preparedness to participate in such activities actively. The

K12 education system in Myanmar follows a centralized curriculum and examination system. The curriculum syllabus specifies that the monthly lesson plan should be completed by the end of the school year. Consequently, decisions regarding the fixed examination dates are made by local school principals, township education officers, district education officers, and Ministry of Basic Education officials. As a result, teachers often rely heavily on lecture-based teaching methods to align with the monthly curriculum chart and meet exam deadlines.

In the context of teacher education and professional development, student teachers and novice teachers faced challenges in acquiring new knowledge and skills, adapting to new learning environments, and managing time and resources effectively. These challenges can occur at different stages of the professional journey, from student teachers' initial teacher preparation program to early career experiences as novice teachers. However, they are expected to overcome these challenges with their dedication, perseverance, and commitment to ongoing professional development, support from experienced teachers and their continuous learning to promote growth in the teaching profession.

6.8 Coping strategies of student teachers and novice teachers related to teaching learning situation (micro level)

Most student teachers selected seeking social support as their preferred coping strategy. This finding aligns with the result of (Murray-Harvey et al., 2000) that teacher education students reported that their primary coping strategy was seeking support from the teacher in the practicum. It can be assumed that student teachers in this study used to find someone to describe the problems and get others' suggestions or help when they faced the problems.

Student teachers employ various coping strategies to tackle teaching-related challenges. When faced with insufficient teaching aids, they use available materials to explain the lesson effectively. To handle large class sizes, student teachers form effective student groups. The findings of Sekiwu (2009) indicated that schools should provide instructional materials and enough learning aids to cope with teaching in large class sizes. Student teachers taught misbehaving students to be obedient. Student teachers used questioning methods for addressing students chatting during the lesson. Student teachers asked the principal and other teachers if they had such difficulties. Preservice teachers in the study of Han and Tulgar (2019) used activating students, ignoring disruptive

behaviours, making eye contact with students, using body language, dealing with problematic students individually, and keeping calm to solve classroom management anxiety during the practicum.

Student teachers face additional challenges, such as managing stress, writing practicum journals, and dealing with poor school working conditions. Student teachers turn to motivational books as a coping mechanism to address stress. When encountering difficulties writing practicum reports or journals, they seek guidance from experienced teachers who can provide valuable insights. Seeking support from the principal is another avenue for assistance. The study conducted by Griffith et al. (1999) revealed that teachers experiencing high job stress often utilized coping strategies such as disengagement and suppression of competing activities to manage their stress levels.

Novice teachers sought social support as their primary coping strategy to address their teaching-learning problems. The same result can be found in the research of Uugwanga (2017); accessing support was the most common strategy of many novice teachers. Novice teachers in this study actively sought guidance and advice from experienced teachers to navigate challenges such as teaching slow learners. Additionally, novice teachers engaged in discussions with their parents to effectively manage intractable student problems. Recognizing the need for diverse teaching approaches, they turned to the internet to explore and learn new methods, particularly for implementing student-centred approaches in their teaching practices. In this study, novice teachers had to invest their money in acquiring resources to teach their learners effectively. They also resorted to utilizing older books available in schools to provide learning materials for their students. Moreover, novice teachers contacted parents who could purchase additional resources for their learners. Another coping strategy used by novice teachers was distancing.

Coping is an individual thing. In general, student teachers and novice teachers employ various coping strategies to navigate the challenges encountered in teaching and learning situations. These strategies include seeking social support from experienced teachers, engaging in discussions with parents and colleagues, utilizing available resources creatively, exploring alternative teaching approaches through online resources, and investing personal funds to enhance the learning experience for their students. These coping strategies demonstrate student and novice teachers' resilience and dedication to

overcome obstacles and create effective learning environments. They strive to enhance their teaching practices and support their students by employing these strategies.

6.9 Building an Assessment Tool for Coping Strategies in Student Teachers' Practicum Context

This study looks at the student teachers' problems related to teaching-learning situations during their practicum and investigates the coping strategies of teachers for solving those problems. Many indicators, scales, and questionnaires for coping strategies were developed based on Lazarus and Folkman (1984). However, finding and interpreting appropriate tools that fit different cultural contexts takes much work for early-stage researchers. It becomes apparent that developing a self-report questionnaire appropriately tailored and framed within the local cultural contexts greatly facilitates data collection. It helps the participants understand the context and decide to answer the data correctly. This study developed the coping strategies items by drawing from the qualitative results obtained through photo-elicitation interviews. These items were matched with the original coping indicators proposed by Lazarus and Folkman and contextualized within the local cultural contexts. Content validity was assessed, followed by a pilot study and reliability testing, which involved modifying or removing certain items. Once the responses from the participants were collected, exploratory factor analysis was conducted to identify common scales of coping strategies employed by student teachers in the context of their practicum experiences related to teaching and learning situations.

Based on the data analysis, six coping strategy scales emerged to capture the common coping strategies employed by student teachers during their practicum in Myanmar in response to teaching and learning situations. These scales include problem-solving by oneself, avoidance, giving punishment, adaptation to the situation, seeking professional support, and seeking emotional support. These coping strategies reflect the various approaches taken by student teachers to address challenges and navigate the complexities of their teaching and learning experiences in the practicum setting.

The study of Nwosu and others (2018) showed that part-time undergraduate student teachers adopted more problem-focused coping strategies in the studies than emotion-focused strategies. However, student teachers also used negative coping strategies such as denial, disengagement, and venting. The authors noted that these maladaptive coping strategies could jeopardize the student's success. Admiraal (2020) suggests that teacher education supports student teachers with more approach-coping

strategies instead of avoidance coping strategies. The six coping scales identified in this study provide valuable insights into coping strategies employed by student teachers in Myanmar and offer a foundation for future research in teacher education. These scales can serve as a starting point for other researchers interested in studying coping strategies in teaching and learning situations in Myanmar and other developing countries with similar contexts. By utilizing and expanding these coping scales, researchers can contribute to a deeper understanding of how student teachers handle challenges, develop effective coping mechanisms, and enhance their professional growth in wide-ranging educational settings.

6.10 Perspectives and Research: A Comparison of Student Teachers and Novice Teachers' perspectives, Research Findings, and International Studies

Practicum period is essential for all prospective teachers as it can offer real classroom experiences to teacher candidates. In this study, both student teachers and novice teachers valued practicum experience within their teacher initial education program as student teachers perceived that the practicum period was essential for gaining classroom experience and they believed that their attitudes on teaching profession changed after the practice teaching period. Novice teachers also got good teaching practice experience from the practicum and gained more confidence because of practicum experience within initial teacher education program. Due to the inadequate infrastructure, time constraints, and examination-oriented system in K12 schools, educators in Myanmar face limited opportunities to incorporate teaching aids into their lessons. Nevertheless, during the practicum period, both student teachers and novice educators make earnest efforts to integrate teaching aids into their instructional practices. While the utilization of teaching aids during lessons may be commonplace in other countries, it represents a distinctive and novel approach within the educational context of Myanmar, where traditional teacher-centered approaches and lecture-based methods are the norm.

During the interviews conducted, student teachers and novice teachers expressed their suggestion to extend the duration of the practicum period. However, the questionnaire results revealed that the idea of extending the practicum period did not receive unanimous support from all teacher candidates and novice teachers. This indicates that not everyone believed that a longer practicum period would necessarily enhance their practical knowledge and experience. One possible explanation for this divergence of opinion is that the length of the practicum period varies among individual teachers based

on the requirements of the schools where they undertake their practice teaching. The interviews revealed that some student teachers and novice teachers had a practice teaching period ranging from 2 to 6 weeks, with a few exceptional cases reporting an extended period of 8 weeks. Those who had longer practice teaching periods might not perceive the need for further extension. This suggests that they did not perceive an incremental benefit in terms of gaining practical experience from a longer practicum period. Another contributing factor could be that both student teachers and novice teachers recognized the importance of adapting to the school's teaching practices, lesson planning, and professional activities, as they required additional time to familiarize themselves with the school's context. To effectively align with the school culture, student teachers and novice teachers need to leverage their pedagogical knowledge and apply the practices they learned from the university, taking into account the specific demands of their students, colleagues, and principals in the classroom.

Regarding the problems, student teachers encountered general problems such as slow learners in making group activities, inadequate teaching aids in rural schools, and difficulty teaching specific subjects, problems with uninterested students in the lesson, relationship problems with teachers in schools, managing disrespectful students in the classroom. Novice teachers had the same difficulties with student teachers in teaching slow learners, managing disobedient students and large class size. However, novice teachers had specific problems of using student-centred approach and time management for prescribed monthly curriculum. Besides, some novice teachers had socialising problems with the school principals, their colleagues and students' parents. Compared to international research, these findings are similar with the difficulties faced by novice teachers of other studies (Veenman, 1984; Chaaban & Du, 2017; Gaikhorst et al., 2017; Çakmak et al., 2019). However, large class sizes, using student-centered approach and teaching according to the monthly curriculum because of exam system in schools are significant problems found in this study.

Regarding coping strategies to problems, it was found that both student teachers and novice teachers preferred seeking social support coping strategies among the four general coping strategies as they got assistance from their colleagues, experienced teachers and principals. Based on the problems encountered by individual student teachers and novice teachers, it can be interpreted that they used different coping strategies. Most of the studies related to coping issues referred Lazarus and Folkman

(1984) coping theories and indicators or questionnaire. This study first reviewed those coping theories and indicators and found that some of the coping strategies were not matched with the context of Myanmar. Thus, the items for problems and coping strategies were developed from the interview results as the local context is needed to be addressed. From this study, student teachers' six common coping strategies scale related to teaching-learning problems in practicum were developed and consisted of problem-solving by self, avoidance, giving punishment, adaptation to the situation, seeking professional support, and getting emotional support.

Both student teachers and novice teachers complained about the more theoretically focused contents of the university curriculum. They felt that modern teaching methods such as problem-solving, discussion, and student-centered approaches from the university program are ineffective in the actual classroom situation. However, teacher education research in international research has also highlighted theory-practice gap in their teacher education curriculum (Zeincher, 2010; Korthagen, 2016; Livingston & Flores, 2017; OECD, 2019b). Thus, this current finding about more theoretically based curriculum is a common problem of teacher education program. Besides, this study discovered that the teaching methods offered at the university/college curriculum such as using student-centered approach, teaching aids during the lesson and group work activities were not compatible with the real classroom situations in schools. These results are the prominent elements that should be considered from the curriculum developer and policy makers of the teacher education curriculum at university/college level.

6.11 Limitations

The findings of the study should be considered in light of some limitations such as the role of participants, recruiting the participants, data collection method, data analysis part, and language issues. This study investigated the role and implementation of the practicum from the perspectives of the main actors on the university site, including the practicum-related documents, perceptions, and experiences of student teachers, novice teachers, and teacher educators from the teacher education university/college program. This study does not include the perspectives of the principal and teachers from the K12 schools.

The pandemic and political situation impacted the data collection process and recruiting of participants. The schools and universities closed, and recruiting the

participants took a long time. Student teachers with at least two practicum experiences in their teacher education program are recruited from the University/College. Thus, the researcher recruited 328 volunteer student teachers from UOE and EDC. This comprised 3rd-year, 4th-year, and 5th yr undergraduate programs from one UOE and 2nd-year student teachers who finished their 2-year diploma program from one COE with the help of colleagues. Although UOEs and EDCs offered different teacher education programs, they have the same aim in the curriculum content and practicum structure for student teachers' outcomes.

Due to the limited time and accessibility, pilot testing of the questionnaire for novice teachers could not be done. Because of that, this study described the descriptive statistics and did not perform inferential analysis for novice teacher data. In a reliability test, some items were found with very low-reliability values, and the problematic items were removed. Besides, novice teachers from K12 schools are in different geographical areas, and only 46 novice teachers could be recruited online.

Because of the limited time, accessibility and effort to manage the rich data, the researcher conducted participatory interviews with only four teacher educators. The participatory interview was conducted to confirm the data from the teacher education policy documents, student teachers' perspectives in the interview and questionnaire responses. The recruitment of teacher educators from the methodology department was already explained in Chapter 2.

Moreover, the interview were conducted in the mother language (Myanmar), and the questionnaire were written in the Myanmar language. The data were translated into English for the data analysis and reporting purposes. The google translate application is used to translate the language into English to reduce personal bias and modify inappropriate sentences that can direct to different meanings.

The research is not a longitudinal study, although the data collection process took a long time. According to the limited time, detailed analysis for some of the collected data could not be conducted and reported. Those data will be used for future studies.

Summary of the chapter

This chapter summarizes answering research questions according to the qualitative and quantitative findings and an interpretation and discussion about the findings and limitations of the study. The conclusion and suggestions of the study will be presented in the next chapter.

Chapter 7 Conclusion and Suggestions

Preview of the chapter

This chapter comprises the summary and conclusion of the study and suggestions of the study for improvement of the study area, recommendations for further research, and future directions.

7.1 Conclusion

This study aims to explore the implementation of practicum in Initial teacher education to improve the practicum and program of teacher education in Myanmar. Two main research questions are developed based on the aim of the study, and an exploratory sequential mixed method design is used to answer the questions. The data collection method includes document analysis, photo-elicitation interviews, focus group interviews, participatory interviews, and questionnaires. The sample in this study includes documents (n=19), student teachers (N=340), novice teachers (N=54), and teacher educators (N=4). The data analysis method includes thematic and deductive analysis using MAXQDA and descriptive and inferential analysis using SPSS software.

The characteristics of the practicum can be overviewed with the structure, aim, and evaluation of the practicum. Related to the practicum structure, there seem to be no modifications from the teacher education program at the university. The new curriculum in EDC described that the period is short, but its component will be included in every semester. All the actors remarked that the practicum period needs to be longer. The practicum in teacher education in Myanmar is aimed at student teachers to equip them with pedagogical skills, to have the opportunity to practice their teaching in a real and controlled environment and to acquire practicum teacher competencies standards. Based on the study results, the practicum's aim is partly accomplished in giving the opportunity to have pedagogical experiences and acquiring competency standards for student teachers in the real environment. However, the supervision and supporting role of the practicum in the school environment still needed to be developed further.

The practicum-related document highlighted that teacher educators, principals, and schoolteachers are expected to supervise the student teachers. Teacher educators thought they had already helped student teachers prepare for the practicum, and they had no idea about supporting them during the practicum period. During the practicum, the principal or subject dean is supposed to evaluate student teachers according to the

evaluation criteria of the evaluation form. Some student teachers recounted that most principals and subject teachers needed more time to check and give feedback on student teachers' teaching. In that case, teacher educators noted that some principals need clarification about their supervision roles and the evaluation form. It seems that the role and duties of supervision and evaluation of the practicum are not clarified and identified between the actors for the practicum.

However, student teachers faced problems such as using the student-centred approach, insufficient teaching aids, talkative students, uninterested students, large class sizes, and teaching slow learners. Novice teachers encountered problems teaching slow learners, managing disobedient students, and using a student-centred approach. Teacher educators assumed that student teachers must make more effort to prepare themselves for tentative challenges before the practicum. Student teachers and novice teachers used to seek social support coping strategies for their daily life problems. Related to teaching-learning problems, they used individual coping strategies based on the situation. They mostly asked their friends, principals, and other experienced teachers.

In general, all the actors have positive perspectives on the practicum period. Student teachers recognized that the practicum period is essential for getting classroom experience and the opportunity to learn how to teach the students. Novice teachers agreed they got good teaching practice experience and felt more confident after the practicum period. Teacher educators perceived that the practicum period is essential for student teachers to integrate their theoretical knowledge and practice.

Student teachers thought that the university program prepared them for the practicum to some extent. They see gaps between curriculum contents in universities and actual practice in schools. They admitted that they needed more effective and practical teaching methods. Novice teachers also see the weak points in their undergraduate university program, such as ineffective teaching methods and the curriculum contents. The different teaching approaches learned in university programs did not work with school situations. From teacher educators' points of view, they did not mention the requirement or modification of curriculum contents and methods. Following the new context of the Basic Education curriculum, they tried to teach the best methods for preparing student teachers. Teacher educators from EDC highlighted that the new curriculum at the EDC program is good. However, they still need human resources and professional development activities to implement the new curriculum.

Based on the study, implementing the practicum in teacher education programs in Myanmar has challenging issues in their structure, mentoring/supporting, supervising, and evaluation/assessment.

It cannot be denied that student teachers and novice teachers got valuable professional knowledge, skills, and experiences during their practicum period. Student teachers and novice teachers had achieved most of the necessary competency standards to become qualified teachers from the practicum. Student teachers and novice teachers can learn more about the student, school environment, curriculum, teaching methods, and the relationship between the stakeholders if they have a more extended practicum period. Because of the short practicum period, student teachers have limited time to practice teaching; they need help building relationships with students, parents, and other teachers.

Regarding evaluation and supervision, the university sent an official letter with the approval of the Ministry of Education to the school principals to cooperate with them for student teachers' practicum. However, the implementation level has some kinds of problems. Though school principals and teachers are supposed to evaluate or supervise student teachers, they are busy with other school administrative tasks. They needed to learn their roles and duties and clarification of evaluating and supervising student teachers during their practicum. They still need to receive training about evaluating the student teachers' performance during their practicum period. Teacher educators could visit one or two times to student teachers' practicum and meet with the principal. Teacher educators needed more time to observe student teachers' teaching because of other teaching and administrative tasks.

In the area of mentoring or support, some challenging points are found. Student teachers needed adequate guidance on planning the lessons, using teaching methods accordingly, and managing student misbehaviour problems during their practicum. Student teachers need actionable feedback on their teaching. Teacher educators needed precise tasks and duties for mentoring or supporting student teachers during the practicum period. They needed the training to mentor, supervise or evaluate student teachers during their practicum. Principals and teachers in practising schools require adequate knowledge and training about mentoring or supporting student teachers during their practicum period. However, student teachers got informal support from the principals, schoolteachers, their friends, and their families. In that case, the quality of the mentoring or support must be maintained.

Although student teachers developed their required competency standards from their university program, teacher education program in Myanmar has limitations in the areas of teaching methods and curriculum contents. The curriculum at the university program helps prepare lessons and teaching methods. Teaching methods such as the student-centred approach, discussion method, group learning activities, problem-based learning, and classroom management strategies in the university program cannot be fully applied in the actual classroom of K12 schools. Student teachers needed help in using these approaches in their practicum. The curriculum of the university/education degree college program needs to include the contents of the possible difficulties that student teachers might face in their practicum. The lessons in a university/degree college program are more theoretical than practical. Teacher educators mostly used lecture methods and rarely included practical lessons—the curriculum contents of the university program needed to match the K12 school's curriculum fully.

The relationship between individual problems and coping strategies (Micro level) encountered at their practicum or schools (Meso level) arranged by teacher education programs (Macro level) are complex and interconnected. At a micro level, individual actors' problems and coping strategies are essential for personal, professional development and achievement in their practicum and teaching profession. Student teachers faced problems related to teaching-learning situations during practicum. The problems include teaching difficulties such as insufficient teaching aids, large class size, teaching methods, and subject difficulties; difficulties in managing student misbehaviour such as talkative students, unrespectful behaviour, and uninterested students in the lesson; and other difficulties such as being stressed, transportation problems, working conditions, building a relationship with students, parents, and other teachers. Novice teachers faced the same difficulties, such as students' behavioural problems, diverse backgrounds, late lessons behind monthly lesson plans, and communication problems with the principal, other teachers, and student's parents.

Coping strategies are individualized, but student teachers can get support and learn from their friends, experienced teachers, principals, and teacher educators. Their common coping strategies include successful coping strategies (problem-solving by self, adaptation to the situation, seeking professional support, and getting emotional support) and unsuccessful coping strategies (avoidance and corporal punishment). Successful coping strategies can manage their problems and improve their performance during

practicum. This can lead to achieving learning goals and building professional skills that will be useful in their future professional life. Unsuccessful coping strategies can lead to distress, dysfunction in teaching, diminishing students' learning opportunities, and retention from the profession. Unsuccessful coping strategies of individual actors can influence the practicum and university programs in teacher education.

Given the complexity of teacher education, it is crucial to consider various aspects such as its features, functions, infrastructure, contextual factors, and the roles of different actors at multiple levels. The structure, function, and interaction between different actors of all its components should be balanced to have a better system. This study found that the practicum and teacher education programs in Myanmar function well in the Myanmar context; however, some areas of improvement are found in implementing the practicum and teacher education program. The findings of this study expect to contribute to improving better practicum and program in teacher education in Myanmar.

7.2 Suggestion

This section provides recommendations and practical insights based on the research findings. These suggestions contribute to the existing knowledge and offer potential avenues for future research and practice. This section highlights critical areas where further attention and action are needed, offering valuable guidance for educators, policymakers, and researchers seeking to enhance the teaching and learning environment.

7.2.1 Practical implications

For a better practicum system

- The practicum structure of the undergraduate teacher educator education program should be designed from the first year to the final year, including its different components and activities such as lesson study, peer group teaching, school visit and lesson observation, assistant teaching, portfolios, and practice teaching according to the local contexts and international context. It is essential to sequence these activities based on their difficulty level, allowing student teachers to progressively develop their skills and competencies throughout their program.
- Engagement time in school visits and practicum periods should be extended.
- The evaluation system of student teachers' performance in the university/college program and practicum in K12 schools should be improved. At the university/college level, the assessment system relying solely on the final exam

(encouraging students to memorize, then deep understanding and critical thinking) should be modified and incorporated with continued assessment methods throughout the year.

- The evaluation process should be transparent to student teachers, teacher educators, principals, and schoolteachers so that student teachers can reflect and learn for further professional development.
- The evaluation criteria should be clearly stated and transparent to all actors related to the practicum before the practicum period. The teacher educators, principals, and schoolteachers should be informed about their roles and tasks to evaluate the performance of student teachers related to teaching activities. Teacher educators, principals, and schoolteachers should be offered training or workshops about the evaluation process.
- Mentoring or support systems for student teachers should be practiced at the university level. If teacher educators are supposed to supervise student teachers during their practicum, they should have precise tasks and duties for their roles. If necessary, they should have training or workshop about that.
- The quality of informal support and mentoring during practicum should be assured in providing mentoring training and workshops to schools where student teachers are conducting the practicum.
- It would be better to have an official mentor for student teachers to support them during their practicum period if it is feasible to develop the mentoring system in the teacher education context. The principals and schoolteachers/cooperating teachers should have training about mentoring/supporting and updated pedagogical and methodological preparedness.
- Financial support for mentoring/supporting system for the practicum should be negotiated with the Ministry of Education.
- For a better university/college program
- The curriculum contents of the teacher education program should be reformed in line with the local context (new Basic Education Curriculum in K12 schools) and adapted to the international context. The current curriculum components should be balanced in the theoretical and practical parts. The curriculum should include specific contents and suggestions that can be useful for problematic areas for student

teachers teaching-learning situations in practicum. The curriculum should consider research-based and research-informed content.

- The teacher education program should consider inclusive ethnic languages and diverse cultural contexts in preparing student teachers.
- The teaching method of the university program should be updated according to the changes in the teacher education and education system. The teaching methods should combine the subject matter's theoretical trend and practice-based activities. For example- practical tips for how to manage group work activities and large class sizes, teaching aids, and alternative ways of teaching methods according to students' background and school contexts (rural and urban schools).

For a better teacher education system

- Teacher educators, curriculum developers, and policymakers should be aware of researched-informed practices from both pre-service and in-service teachers in preparing teachers according to local school contexts.
- School transportation, safety, and working conditions should be considered before allocating tasks and duties for both pre-service and in-service teachers.
- During the early teaching period of novice teachers, support or induction program should be considered to attain teacher attrition rates and professional development.
- Infrastructure and resources such as wifi, library, databases, and technology that can help the teaching-learning situations and scientific work of student teachers and teacher educators should be granted. If it is necessary, the training should be provided by the experts.
- Policymakers and curriculum developers should check the implementation level and the outcomes of the new or reformed policy and curriculum.
- Networking and learning opportunities for pre-service teachers, in-service teachers, and teacher educators should be provided, such as workshops or seminars to discuss the functions, difficulties, and actions to be considered related to teaching-learning situations to fill the gap between the two contexts of school and university.
- The cooperation and collaboration between different practitioners, curriculum developers, and policymakers should be suggested to improve the role of the teacher education system and education system in Myanmar.

- Network and collaboration opportunities should be strengthened between the international scientific and local professional communities for further development of the teacher education and education system.

To the Ministry of Education

- The Ministry of Education could consider the following ideas to improve the teacher education system:
- Increasing practicum placement for student teachers to have more opportunities for teaching in the actual classroom.
- Emphasizing developing strong pedagogical and scientific organizations for teacher education.
- Providing continuous professional development opportunities for teachers throughout the continuum of teacher education.
- National standardized testing should conduct once a year for each grade of K12 schools, as monthly tests and national exams make it quite tricky for teachers to create innovative things.
- Encouraging innovation and creativity in teacher education by providing adequate funding and necessary resources.

7.2.2 Recommendations for further research

This study can be recommended for early-stage researchers and researchers interested in teacher education in the following areas. This study can be replicated in settings such as Asian countries and developing countries with similar contexts. Related to research methods, visual and innovative methods are encouraged to explore culturally sensitive issues in the teacher education context. The research tools from this study especially coping strategies scales related to the teaching-learning situation, could further be developed and employed in measuring coping strategies of specific areas in teacher education. In addition, coping strategies scales can further be developed from specific participant groups, such as teachers at different career levels in similar and different contexts.

Relating to the practicum field, implementation of practicum can be explored from the perspectives of the practitioners from the school site (students, schoolteachers, and principals), from the administrative site (the educational officers at the township level, district, and the Ministry), and the perspective of policymakers. There are many practicum

models in teacher education, and future research could investigate the effectiveness of the practicum model in teacher preparation. Besides, the impact of the practicum system on teachers' learning outcomes and the effect of technological innovation on student teachers' practicum could be explored.

7.3 Future directions

This study will continue exploring the practicum system and teacher education program in the international context. The interested areas include the comparative study of the implementation practicum system in a similar context and different context, the effect of mentoring and supervising roles on the practicum and teacher education program, the effectiveness of the teacher education program (curriculum, methods, and practicum components) on students' learning outcomes, the impact of practicum on teacher identity, wellbeing and effectiveness, resilience, and coping strategies in teacher education.

Concluding remark

The findings of this study suggest that there is a need for continued research in the field of practicum and teacher education programs. However, this study's suggestions and practical implications are expected to inform the practice and policy of practicum and teacher education programs, including curriculum contents and teaching methods in Myanmar and other developing countries with similar contexts.

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https//:www.Myanmar | Education Statistics | CEIC (ceicdata.com)

Appendix 1

Ethical permission

Ethical Permission Application Form

1.	**Name of the Principal Investigator (PI)**[1]	Dr Erika Kopp
2.	Academic degree of the PI	Ph.D
3.	Place of work of the PI (Faculty/Institute/Department)	Faculty of Education and Psychology, Institute of Education, Eotvos Lorand University
4.	Job title of the PI: Is the PI employed by ELTE ? yes/no[2]	Associate Professor Yes
5.	E-mail address of the PI	kopp.erika@ppk.elte.hu
6.	Title of the research:	Practicum in preservice teacher education in Myanmar
7.	Research fields related to the topic of the present research (e.g. cognitive psychology, etc)	Teacher Education and Higher Education Studies
8.	Other researchers involved (e.g. students, etc.)	Ei Phyu Chaw (student)
9.	Expected dates of the beginning and the end of the research	1.04.2022 (Beginning date) 31.08.2022(End of the research)
10.	The research is funded by (grant, etc)	Self-funding
11.	Date of the submission of the application	2022.02.16

Specifications of the data storage and processing of data

[1] The PI must have a scientific degree (DSc, PhD, CSc).

[2] If not an employee of ELTE, by submitting this application the PI consents to the handling of his/her personal data.

In order to continue my data collection and further processes, I would like to inform you that

(1) the consent form and description of the research which contains personal data will be placed safely with a third party who will not have direct contact with the participants.

(2) I will assign codes for personal information to the rest of the documents.

(3) The digital format of the data storage: filled-out online questionnaire in Qualtrics will be exported to my personal computer and analyzed by statistical analytical software. Interview recordings will be kept safely on my personal computer.

(4) The data will be kept for 3 years. The consent forms of the participants will be kept in safe folders on my personal computer.

I will take responsibility for all the personal data of the participants and consent forms related to my doctoral research.

Ei Phyu Chaw

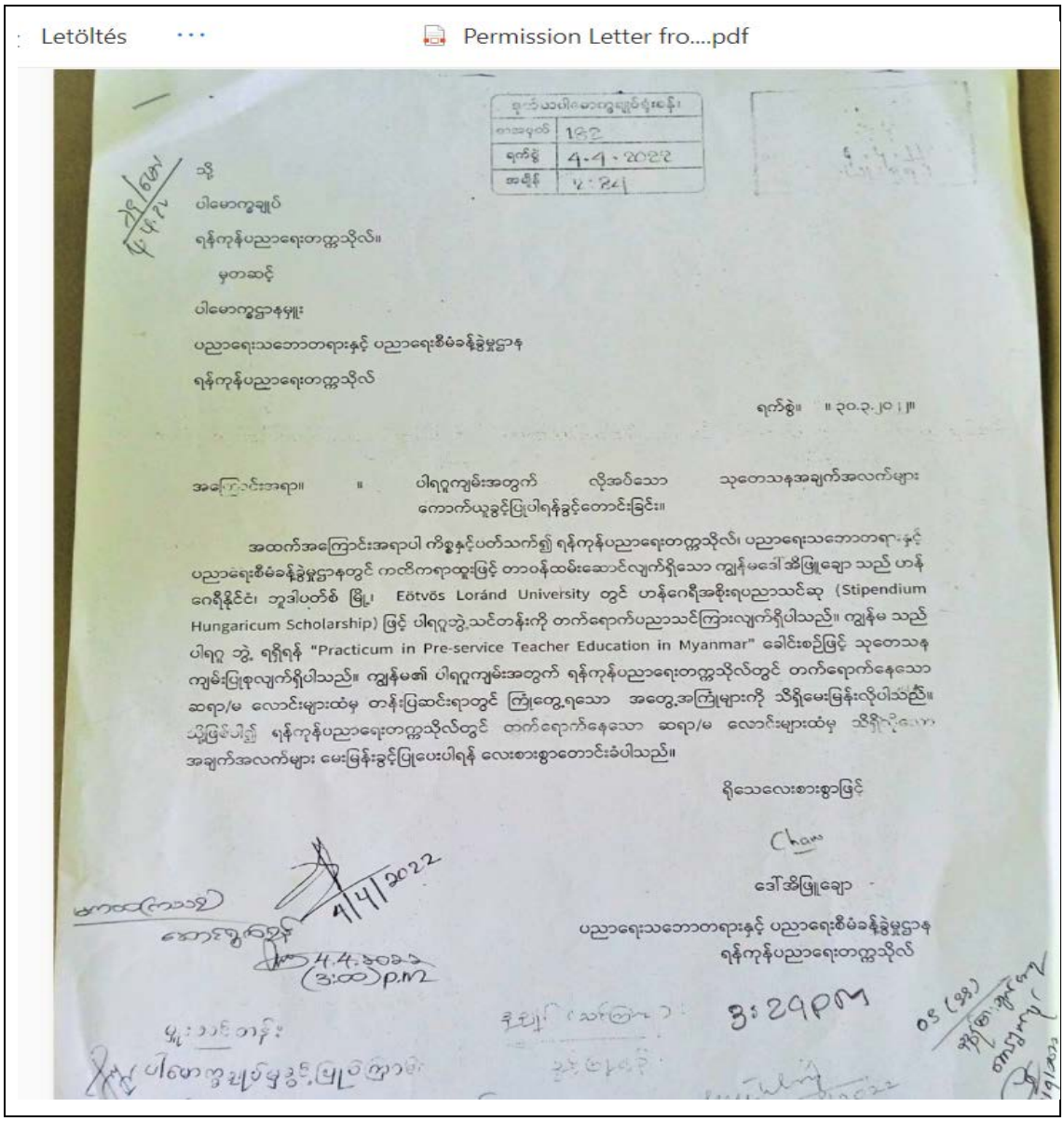
4th year doctoral student (W8ZEDB-Neptun code)

EDiTE program

Doctoral School of Education

Faculty of Education and Psychology

Request letter to University of Education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သို့
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ရက်စွဲ။ ။ ၃၀.၃.၂၀၂၂

အကြောင်းအရာ။ ။ ပါရဂူကျမ်းအတွက် လိုအပ်သော သုတေသနအချက်အလက်များ ကောက်ယူခွင့်ပြုပါရန်ခွင့်တောင်းခြင်း။

အထက်အကြောင်းအရာပါ ကိစ္စနှင့်ပတ်သက်၍ ရန်ကုန်ပညာရေးတက္ကသိုလ်၊ ပညာရေးသဘောတရားနှင့် ပညာရေးစီမံခန့်ခွဲမှုဌာနတွင် ကထိကရာထူးဖြင့် တာဝန်ထမ်းဆောင်လျက်ရှိသော ကျွန်မဒေါ်အိဖြူချော သည် ဟန်ဂေရီနိုင်ငံ၊ ဘူဒါပတ်စ် မြို့၊ Eötvös Loránd University တွင် ဟန်ဂေရီအစိုးရပညာသင်ဆု (Stipendium Hungaricum Scholarship) ဖြင့် ပါရဂူဘွဲ့သင်တန်းကို တက်ရောက်ပညာသင်ကြားလျက်ရှိပါသည်။ ကျွန်မ သည် ပါရဂူ ဘွဲ့ ရရှိရန် "Practicum in Pre-service Teacher Education in Myanmar" ခေါင်းစဉ်ဖြင့် သုတေသနကျမ်းပြုစုလျက်ရှိပါသည်။ ကျွန်မ၏ ပါရဂူကျမ်းအတွက် ရန်ကုန်ပညာရေးတက္ကသိုလ်တွင် တက်ရောက်နေသော ဆရာ/မ လောင်းများထံမှ တန်းပြဆင်းရာတွင် ကြုံတွေ့ရသော အတွေ့အကြုံများကို သိရှိမေးမြန်းလိုပါသည်။ ယင်းဖြစ်ပါ၍ ရန်ကုန်ပညာရေးတက္ကသိုလ်တွင် တက်ရောက်နေသော ဆရာ/မ လောင်းများထံမှ သိရှိလိုသော အချက်အလက်များ မေးမြန်းခွင့်ပြုပေးပါရန် လေးစားစွာတောင်းခံပါသည်။

ရိုသေလေးစားစွာဖြင့်

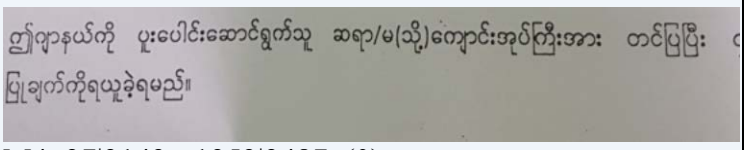
Chaw

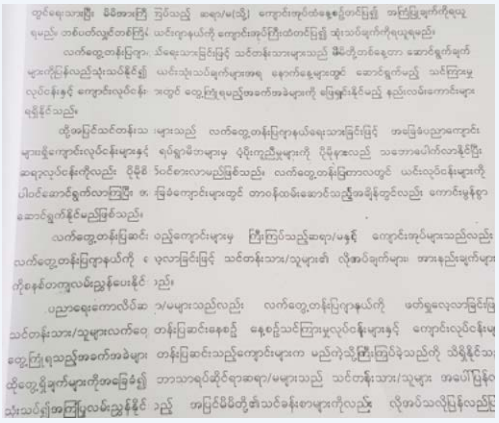
ဒေါ်အိဖြူချော
ပညာရေးသဘောတရားနှင့် ပညာရေးစီမံခန့်ခွဲမှုဌာန
ရန်ကုန်ပညာရေးတက္ကသိုလ်

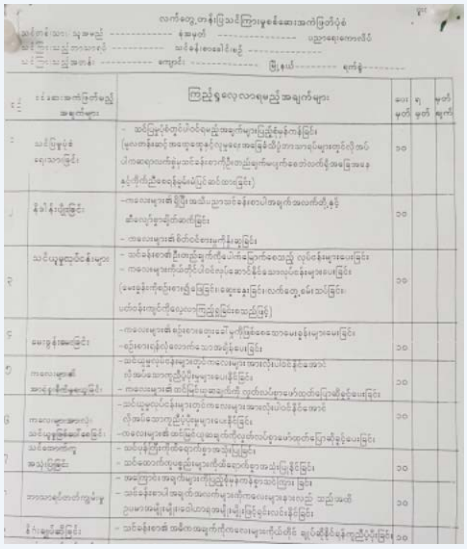
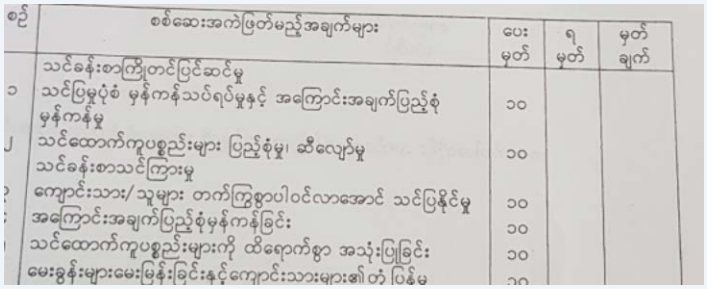
4/4/2022
4.4.2022 (3:00) p.m
3:29PM

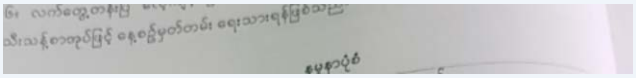
Appendix 2 Document analysis results

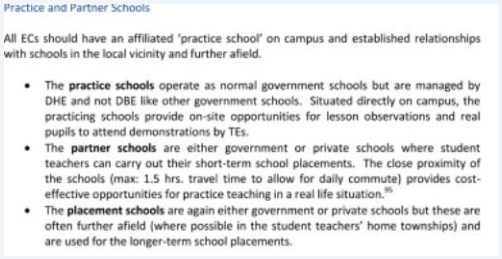
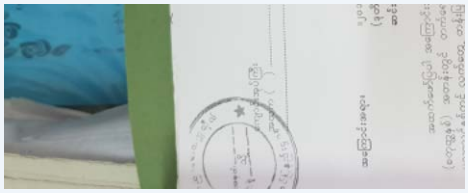
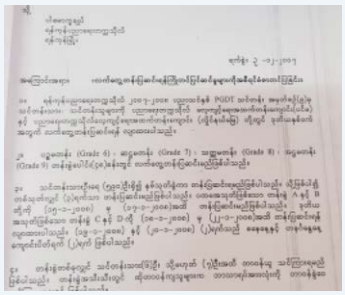
Summaries with Coded Segments - Document analysis.mx22

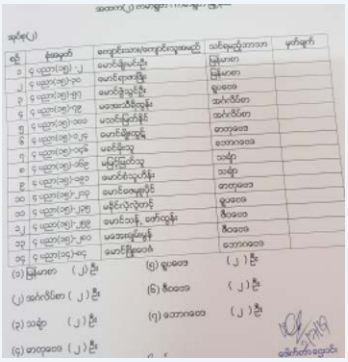
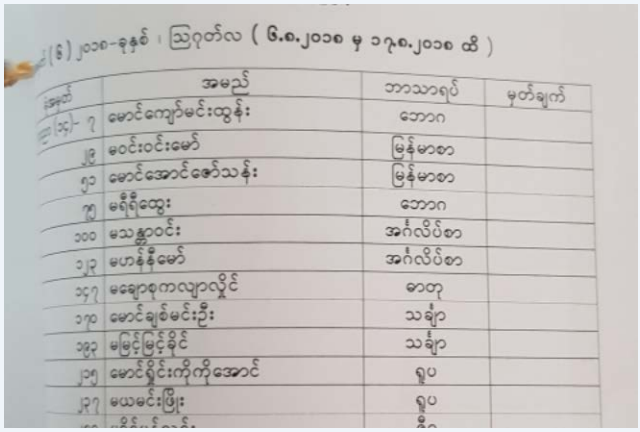
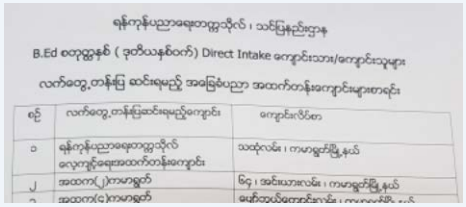
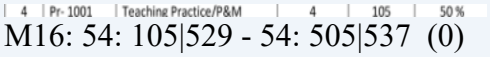
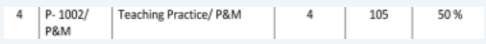
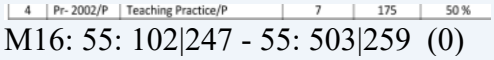
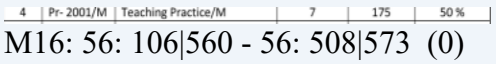
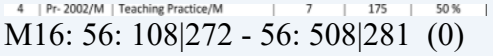
Code	Coded segments
Evaluation of the practicum\Practicum diary/lesson plan	 M4: 37|3143 - 1953|3487 (0)
	Developing a lesson plan for PE (90 minutes): Assign one learning activity or game to each team. In their teams, student teachers should collaboratively make a lesson plan that includes this activity, following the key steps of a PE lesson. They should think about how to make sure all students are able to actively participate in the lesson. M17: 63 - 63 (0)
Evaluation of the practicum\Practicum journal	 M16: 46: 204|284 - 46: 408|293 (0)
	 M7: 121|376 - 1957|3287 (0)

	 M5: 34|1058 - 1958|2672 (0)
	Learning activity 4: Writing in your Practicum Journal (Bloc 1, Day 1) Expected learning outcomes: Each day of the Practicum, student teachers will write in their Practicum Journals. In Year 1, specific writing prompts have been given to help guide their reflection. Student teachers should understand that reflection is a process of thinking about what they have learned, and how it will affect their behaviour and attitudes going forward. M17: 45 - 45 (0)
	submit your completed Practicum Journal M18: 15 - 15 (0)
	Writing in your Practicum Journal (Bloc 3, Day 1) M19: 41 - 41 (0)
Evaluation of the practicum\Observation and assessment of open lessons	The assessment of practicum makes up 50% of the M16: 32: 279|571 - 32: 527|595 (0) teachers will be expected to demonstrate relevant pedagogic and subject expertise. They will be assessed on the range of strategies they are able to call upon for improving pupil performance, as well as their commitment and capacity to accurately evaluate and develop their own practise in the classroom. M16: 45: 106|408 - 45: 516|458 (0) Observed lesson demonstrations M16: 46: 195|271 - 46: 345|280 (0)
	For the first three years of your Education College degree, only formative assessment will be used to evaluate your progress and achievements in the Practicum. M18: 15 - 15 (0) You will submit a final Practicum Journal at the end of Year 4, which will be summatively assessed. The assessment of the Practicum Journal makes up 30% of your overall assessment marks. M18: 15 - 15 (0)

Evaluation of the practicum\Evaluation form	 M6: 130|755 - 1925|2860 (0)
	 M1: 110|1703 - 1933|2430 (0)
Evaluation of the practicum\portfolio	includes assessed lesson observations and practicum. To assess the practicum, student teachers will complete and submit a portfolio of work documenting their progress. Focusing on the practical components of the degree course provides an integrated method to assess student teachers' competency level (a competency being the combination of knowledge, skills, values and their successful application in teaching-learning situations).[111] Student M16: 45: 108|462 - 45: 503|523 (0) Practicum • Portfolios of teaching practice: lesson plans, materials development, units of work, assessment tools 50% M16: 46: 109|321 - 46: 498|354 (0)
Mentoring (support system)\mentoring/supporting program	Each partner and placement school has an assigned support teacher to mentor the student M16: 39: 103|339 - 39: 504|351 (0) understand the objectives. The training is offered as one of the modules.[96] The in-school mentors report directly to the TEs in the ECs.[97] M16: 39: 107|287 - 39: 423|314 (0)
Mentoring (support system)\mentor training	These mentors are trained in lesson observations, constructive feedback, basic skills and assessment as well as in the expectations of the EC curriculum so they M16: 39: 158|313 - 39: 519|340 (0)
Mentoring (support system)\the role of the mentor	Your mentor teacher leaves the classroom for the entire class period with the unspoken expectation that you will teach the entire class. M19: 47 - 47 (0)

	Mentor teacher Your assigned classroom teacher at the practice or partner school. You will be observing your mentor teacher's classes and assisting him or her with classroom duties. M19: 71 - 71 (0)
Student teachers' activities related to the practicum\practice activities	 M4: 287|557 - 1927|733 (0)
	Entries will include reflections on learning, school visits and placements, observations from peers and experienced teachers, research project assignments, reflections, and evaluations of post-practice teaching. M18: 15 - 15 (0) Writing in your Practicum Journal (Bloc 3, Days 2-3) M18: 20 - 20 (0) Classroom observation (Unit 8): During the classroom observation, you will take notes on what happens in the classroom using the provided classroom observation tool. You will then identify and reflect on the teacher competencies you observed by completing an entry in your Practicum Journal. M18: 25 - 25 (0) Observing a classroom in a practice or partner school is a chance for you to see real-life teachers in real-life teaching situations. The classroom observations you will conduct as part of the Practicum are an important part of learning how to teach. They are the starting point for your involvement in the practice or partner school as you progress from observing, to assisting, to planning, to teaching over the four years of your Education College degree programme M18: 34 - 34 (0)
Student teachers' activities related to the practicum\lesson study	This activity will help you think about how the educational theories and strategies you have learnt in your Educational Studies class apply to real-life classroom situations. It will help you to visualise how you might use different teaching and learning strategies in your lessons. M18: 17 - 17 (0)
	Lesson study for your choice of subjects (M19: 42 - 42 (0)

Structure of practicum\University arrangement	 Practice and Partner Schools All ECs should have an affiliated 'practice school' on campus and established relationships with schools in the local vicinity and further afield. • The **practice schools** operate as normal government schools but are managed by DHE and not DBE like other government schools. Situated directly on campus, the practicing schools provide on-site opportunities for lesson observations and real pupils to attend demonstrations by TEs. • The **partner schools** are either government or private schools where student teachers can carry out their short-term school placements. The close proximity of the schools (max: 1.5 hrs. travel time to allow for daily commute) provides cost-effective opportunities for practice teaching in a real life situation.[95] • The **placement schools** are again either government or private schools but these are often further afield (where possible in the student teachers' home townships) and are used for the longer-term school placements. M16: 39: 111|360 - 39: 518|566 (0)
	 M13: 1|370 - 1945|2875 (0)
	 M12: 100|1241 - 1900|2305 (0)
	 M11: 1|1115 - 1874|2697 (0)

	 M10: 50|987 - 1957|3301 (0)
	 M9: 140|1167 - 1790|2270 (0)
	 M8: 155|835 - 1945|1610 (0)
Structure of practicum\Credits number	 M16: 54: 105|529 - 54: 505|537 (0)  M16: 54: 109|224 - 54: 504|248 (0)  M16: 55: 102|247 - 55: 503|259 (0)  M16: 56: 106|560 - 56: 508|573 (0)  M16: 56: 108|272 - 56: 508|281 (0)

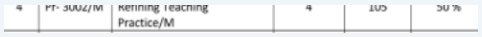
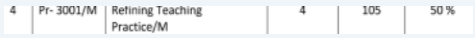
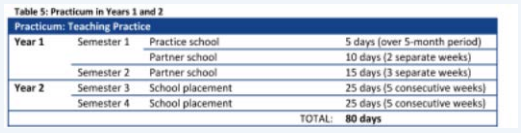
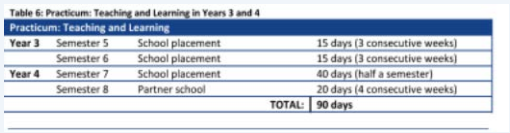
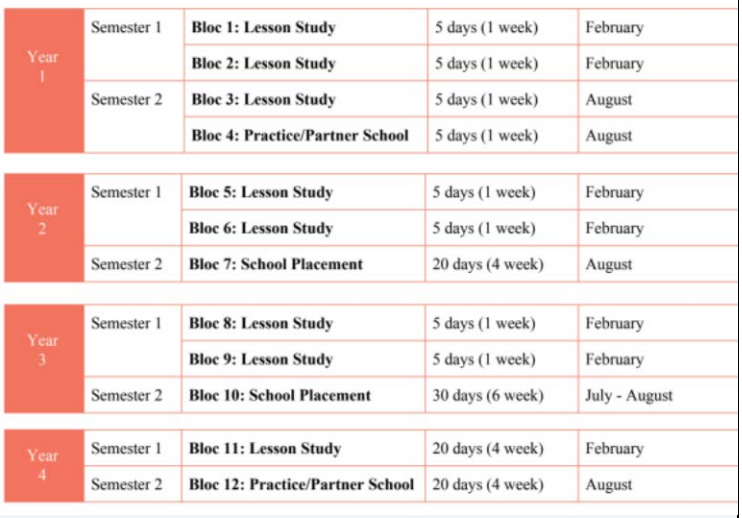
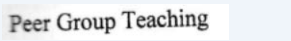
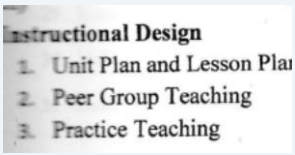
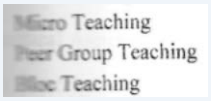
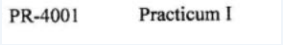
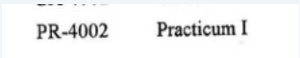
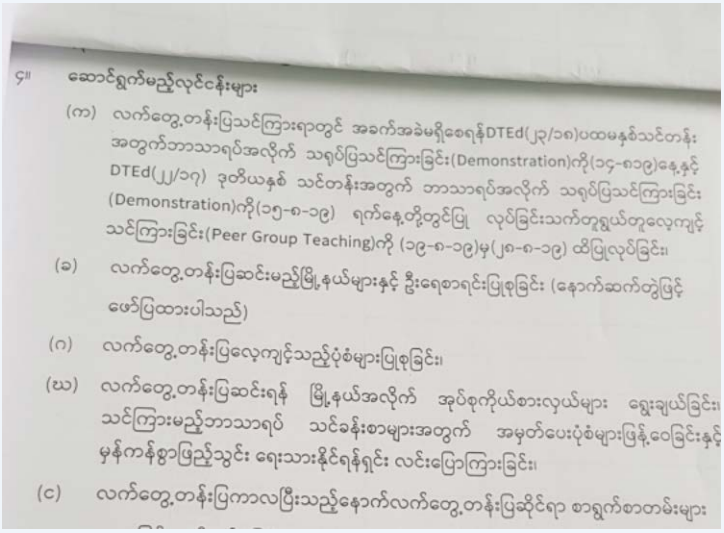
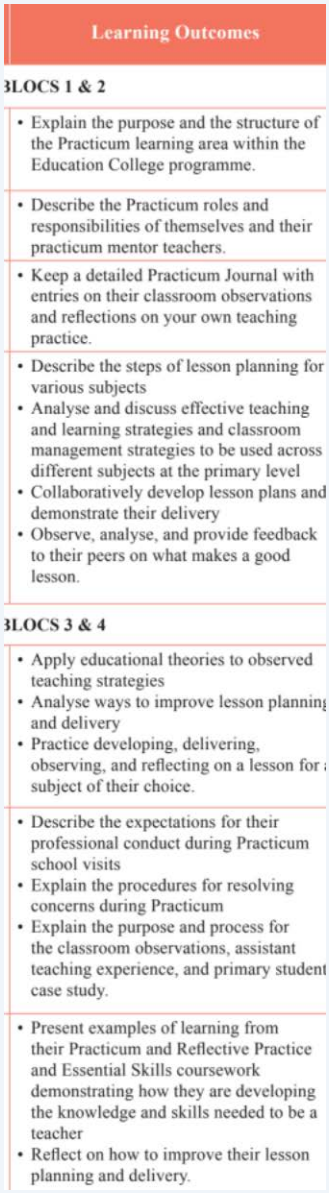
	 M16: 57: 105|251 - 57: 501|256 (0) M16: 57: 106|538 - 57: 506|550 (0)  M16: 58: 109|244 - 58: 500|266 (0)  M16: 58: 114|551 - 58: 501|572 (0) M16: 59: 104|540 - 59: 505|549 (0)  M16: 59: 107|246 - 59: 505|261 (0)  M16: 60: 106|246 - 60: 503|269 (0)  M16: 60: 107|548 - 60: 510|576 (0)
Structure of practicum\Duration (Year/Semester)	 M16: 33: 102|625 - 33: 525|725 (0)  M16: 35: 106|446 - 35: 521|549 (0)
	This means that, while the actual time allotted to the Practicum is relatively short M18: 8 - 8 (0)

	Table A. Education College Practicum schedule by year  M19: 7: 83|63 - 7: 531|372 (0)
Structure of practicum\practicum component	School Visit M15: 13 - 13 (0) preparation and creating instructional Resources (MiddleSchoolLevel) demonstrative Teaching M15: 23 - 23 (0)  M15: 24: 186|127 - 24: 302|145 (0)  M15: 26: 156|33 - 26: 304|108 (0)  M15: 32: 150|441 - 32: 255|488 (0)
	 M14: 6: 314|83 - 6: 444|108 (0)  M14: 8: 326|86 - 8: 469|108 (0)  M14: 9: 294|87 - 9: 446|119 (0)

	PR-5001 Practicum I M14: 10: 292|84 - 10: 458|105 (0) PR-5002 Practicum I M14: 11: 297|86 - 11: 471|111 (0)
	In Cycle 1, the practicum is delivered through three separate models; ▪ Practice schools (day visits) ▪ Partner schools (short-term placements) ▪ School placements (longer-term placements) M16: 32: 108|439 - 32: 405|497 (0)
	 ၄။ ဆောင်ရွက်မည့်လှုပ်ငန်းများ (က) လက်တွေ့တန်းပြသင်ကြားရာတွင် အခက်အခဲမရှိစေရန် DTEd(၂၃/၁၈)ပထမနှစ်သင်တန်း အတွက်ဘာသာရပ်အလိုက် သရုပ်ပြသင်ကြားခြင်း(Demonstration)ကို(၁၄-ခ၁၉)နေ့နှင့် DTEd(၂၂/၁၇) ဒုတိယနှစ် သင်တန်းအတွက် ဘာသာရပ်အလိုက် သရုပ်ပြသင်ကြားခြင်း (Demonstration)ကို(၁၅-ခ-၁၉) ရက်နေ့တို့တွင်ပြု လုပ်ခြင်းသက်တူရွယ်တူလေ့ကျင့် သင်ကြားခြင်း(Peer Group Teaching)ကို (၁၉-ခ-၁၉)မှ(၂၈-ခ-၁၉) ထိပြုလုပ်ခြင်း။ (ခ) လက်တွေ့တန်းပြဆင်းမည့်မြို့နယ်များနှင့် ဦးရေစာရင်းပြုစုခြင်း (နောက်ဆက်တွဲဖြင့် ဖော်ပြထားပါသည်) (ဂ) လက်တွေ့တန်းပြလေ့ကျင့်သည့်ပုံစံများပြုစုခြင်း၊ (ဃ) လက်တွေ့တန်းပြဆင်းရန် မြို့နယ်အလိုက် အုပ်စုကိုယ်စားလှယ်များ ရွေးချယ်ခြင်း၊ သင်ကြားမည့်ဘာသာရပ် သင်ခန်းစာများအတွက် အမှတ်ပေးပုံစံများဖြန့်ဝေခြင်းနှင့် မှန်ကန်စွာဖြည့်သွင်း ရေးသားနိုင်ရန်ရှင်း လင်းပြောကြားခြင်း၊ (င) လက်တွေ့တန်းပြကာလပြီးသည့်နောက်လက်တွေ့တန်းပြဆိုင်ရာ စာရွက်စာတမ်းများ M2: 87|923 - 1957|2287 (0)
	This Practicum module provides the student teachers with the opportunity to practise teaching in an authentic environment. M17: 16 - 16 (0)
	Each year of your four-year Education College degree programme has a Practicum component, typically taking place during the months of February and August. M19: 7 - 7 (0)
Aim\Practicum definition	the Practicum is a chance for student teachers to put into practice the many educational theories and strategies they are learning about in Educational Studies and other subject classes. The more you are able to support them to see these key linkages between their Education College coursework, the Practicum activities, and real-life teaching in primary schools, the more ready they will be to step into their future roles as teachers in Myanmar. M17: 14 - 14 (0) . Practicum is essential in bringing learning in different areas of the Education College programme to an

	integrated whole, with connecting theoretical and practical knowledge studied in Educational Studies, the individual subjects, and reflective skills. M17: 16 - 16 (0)
Aim\Practicum aim	To equip the teacher-trainees with necessary peclagogic skills' from the third to the fifth year, the students have to undergo training for practice teaching and :.-,"; :eaching as practicum in basic edusatio, schools M14: 1 - 1 (0)
	The objective of the practicum is for the student teachers to have the opportunity to practice teaching in a controlled but real environment. It is therefore important that the M16: 32: 109|307 - 32: 509|324 (0)
	ရည်ရွယ်ချက် (က) ဆရာအတတ်ပညာအရည်အသွေးပိုမိုမြင့်မားတိုးတက်စေရန် (ခ) ပညာရေးကောလိပ်မှလေ့ကျင့်သင်ကြားပေးခဲ့သောဆရာအတတ်ပညာများကို လက်တွေ့ ပေါင်းစပ်အသုံးချနိုင်ရန် (ဂ) မူလတန်းနှင့်အလယ်တန်းသင်ရိုးသစ်များ၏သင်ကြားနည်းစနစ်များကိုလက် တတ်စေရန် (ဃ) ကလေးဗဟိုပြုချဉ်းကပ်နည်းကိုလက်တွေ့အသုံးပြုနိုင်စေရန် (င) အခြေခံပညာကျောင်းများတွင် လက်တွေ့တန်းပြဆင်း ရာမှတွေ့ရှိရသည့် အားနည်းချက်များကိုသုံးသပ်၍ လုပ်ငန်းခွင်သို့ရောက်ရှိသောအခါ ပြ နိုင်ရန်ဖြစ်ပါသည်။ M3: 115|1851 - 1958|3205 (0)
Aim\Learning outcomes	Student teachers are expected to demonstrate y applying it effectively in real-life classrooms.' M16: 32: 152|596 - 32: 353|618 (0)



M17: 11: 159|67 - 11: 324|675 (0)

Appendix 3 Interview protocols and coding tables

Appendix/Enclosure #2

Informed Consent and Description of Research (online study-photo interview)

IN CASE PERSONAL DATA ARE COLLECTED

You are to participate in research coordinated by Dr. Erika Kopp, Associate Professor, Eotvos Lorand University, Hungary. The research is carried out by highly qualified psychologists/pedagogues and their assistants. The aim of this study is to explore the implementation of teaching practicum to improve the quality of the practicum and program development in Initial teacher education in Myanmar. Practicum is run by the cooperation between teacher education universities, colleges, practicing schools, and township administration offices. In this research, the practicum structure and implementation of the practicum will be viewed from the university side. From the university side, the key actor of the practicum includes student-teachers and teacher educators. Novice teachers will be included in the study in order to reflect on the practicum for their preparation to be teachers.

Participation is utterly voluntary. It is also possible to terminate participation at any time and to decline from answering questions without having to give reasons for this.

During the study, photo interviews will conduct with volunteer participants which will last about 40 minutes. All the photos used in this study got permission from the owners. The researcher asked permission from student-teachers to allow their photos to be used in the study and they were willing to accept it and sent their photos during the practicum.

The results of this study will later be used in publications and will also be presented at scientific conferences. If requested, written or verbal information will be provided on these events.

All information (including video and/or audio recording) collected during this process will be handled strictly confidentially. Data obtained during the research is stored as coded information in a secured computer. Data of the research are analyzed statistically during which no personal identification is possible. The document with the rules

regulating personal data processing (General Data Protection Regulation, GDPR) is attached with its enclosures.

I agree with the conditions and to participate in the study. I also give my consent to use the anonymized data collected during this process so that these may be accessible to other researchers.

I declare that I am over 18 years of age. I have received full detailed information concerning the conditions of my participation of the study. I agree with these conditions and I am willing to participate.

O yes O no

Interview protocol and selected analysis with student teachers

Interview protocol

Introduction

My name is Ei Phyu Chaw and I am doing my Ph.D. in Hungary. My research will focus on Practicum in Initial teacher education in Myanmar. The aim of the study is to get information on the implementation of the practicum to improve the quality of the practicum. My participants will include student teachers, novice teachers, and teacher educators. I would like to ask you a few questions because I would like to know your experience during the practicum for my research. I will not judge your experiences or responses to my questions. I would like to record our voice during the interview because I need to translate it into another language and describe it in my research. I promise I will use our interview conversation only for my research. I will not include your name and personal information in my study. Thank you very much for your participation!

General questions

1. Please indicate your academic year and specialization in your university program.

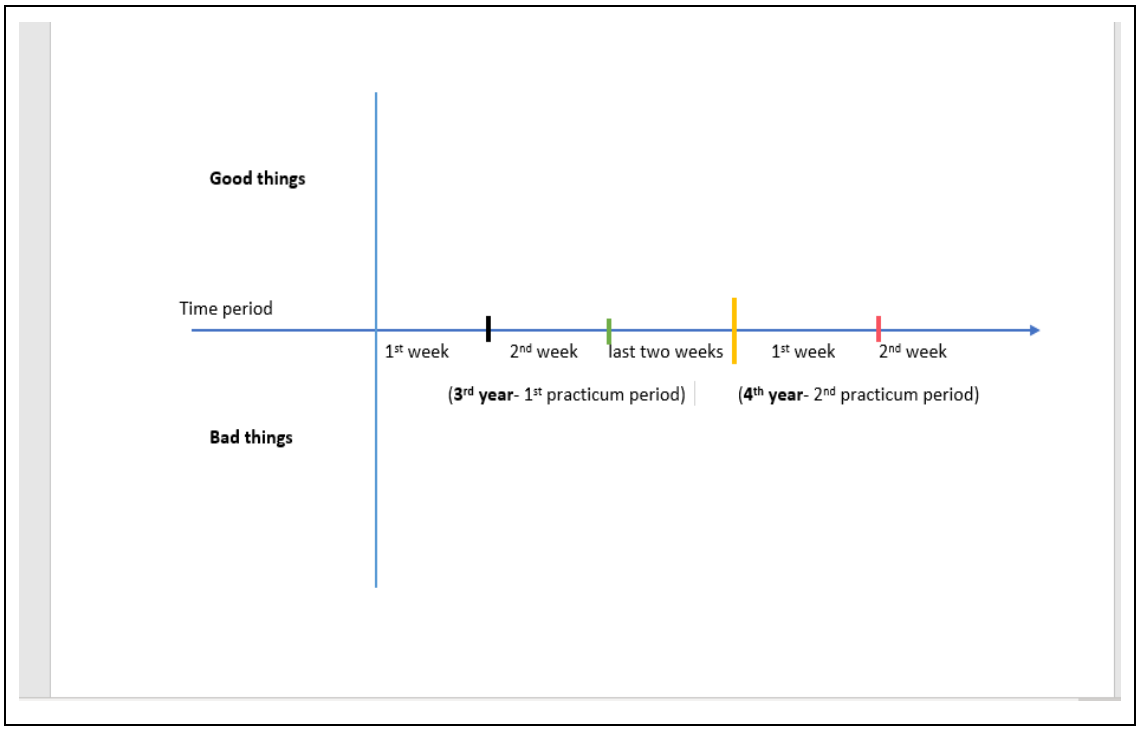
2. How many different teaching practicums have you participated in your university program?

3. Please describe the subject matter, grade levels, school location and the length of the student teaching practicums?

Interview questions

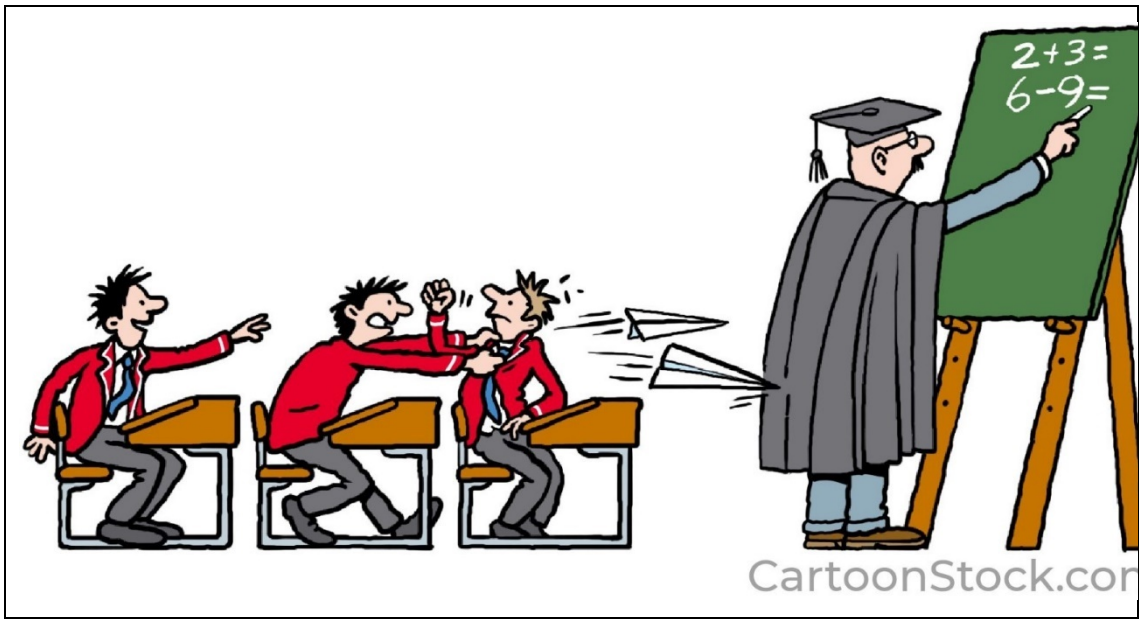
What do you think about the photos? Do you have similar experience in your practicum? Please consider all the things that you had to do during the practicum.

(2) Could you please draw the line according to your experience and explain about your story during the practicum? Could you please tell me one of your successful stories during your practicum? How do you cope with that for bad things?



3. Do you remember your experience when you see the photos? How did you feel during your practicum? Describe your emotion: happy or anxious?

4. I realize too many children in the classroom are this kind of manner. What do you think? How do you cope with that?

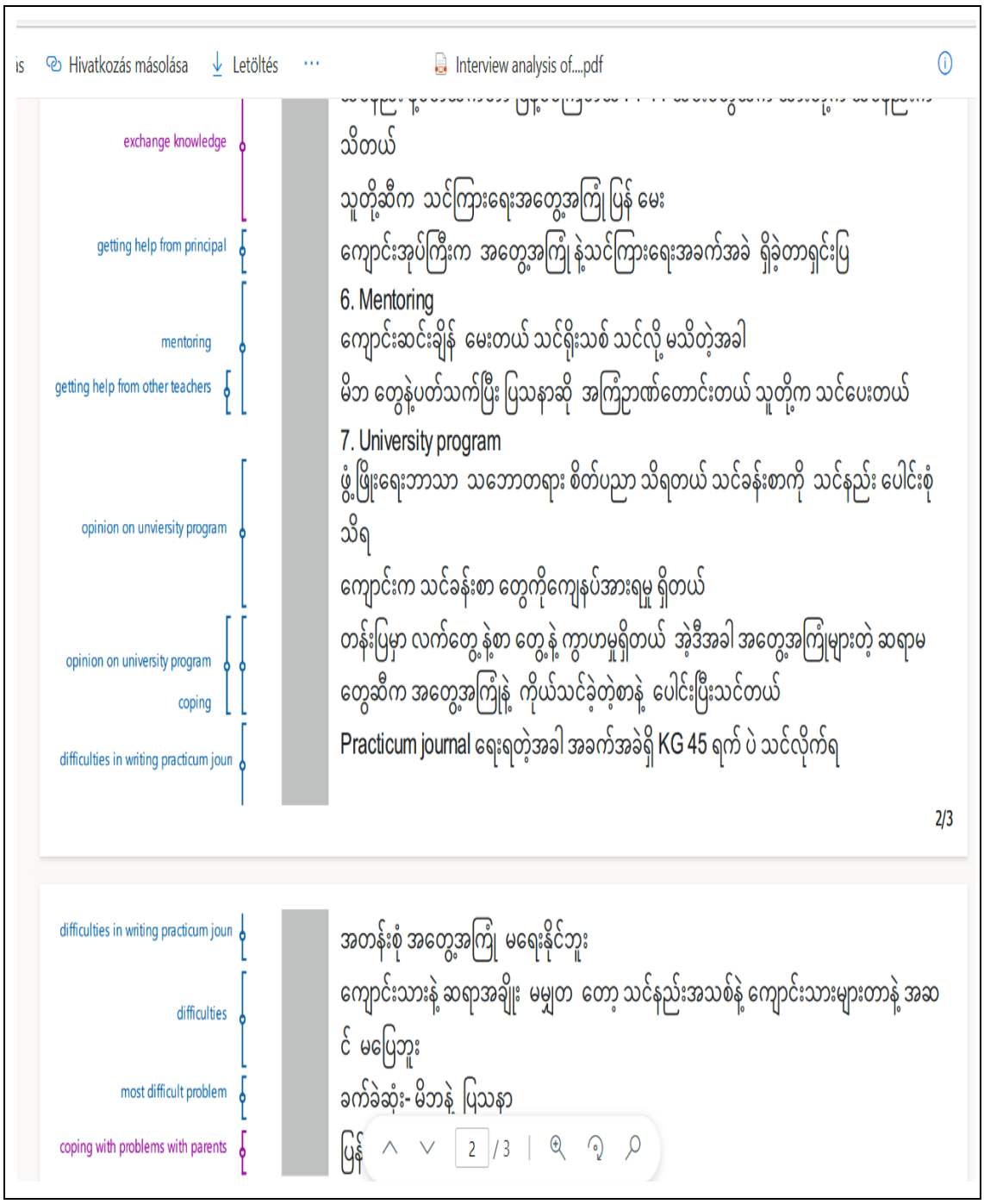


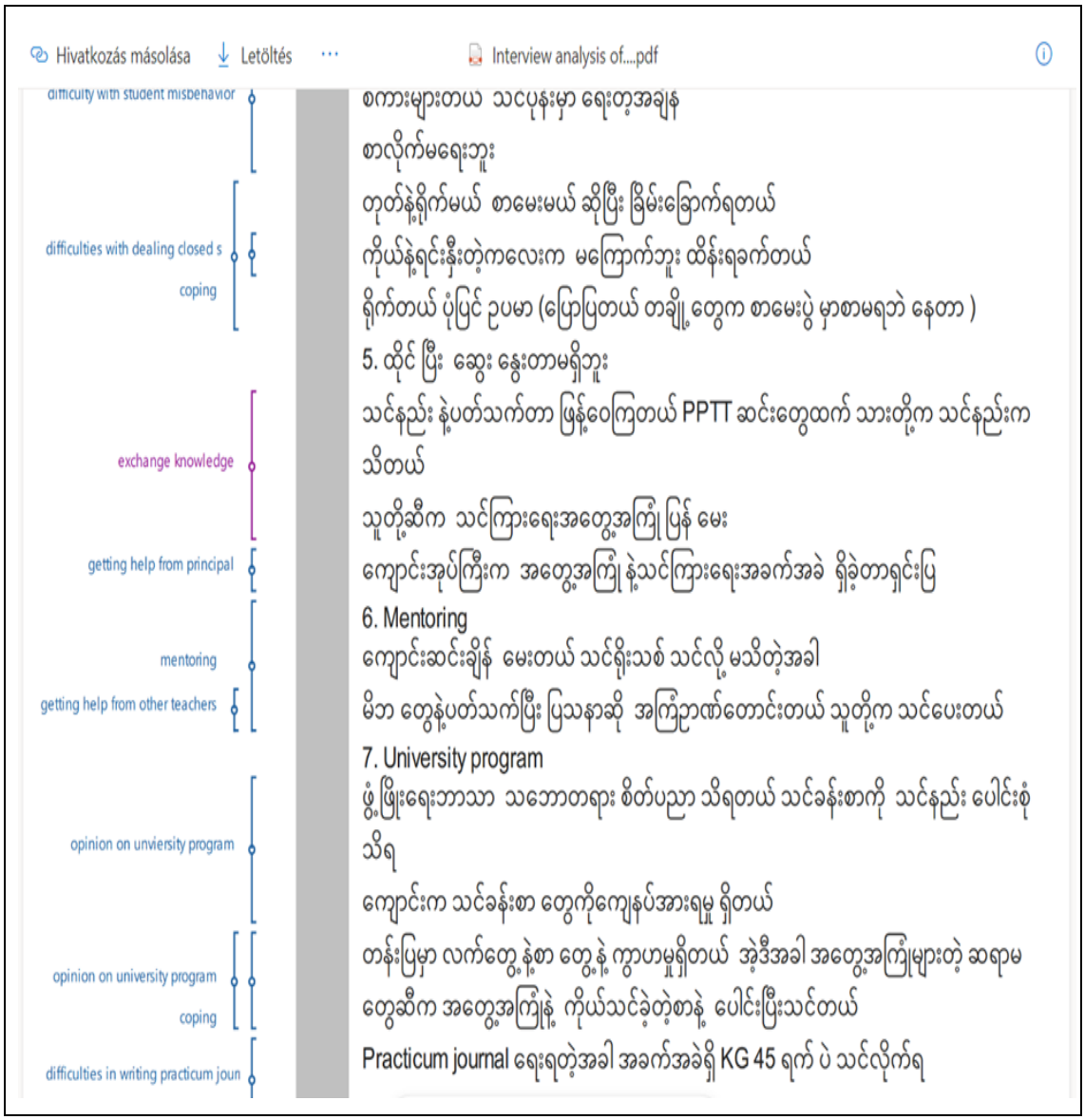
5. What is the most difficult teaching/learning problems (challenges) which you confront in your practicum? How did you cope with that?

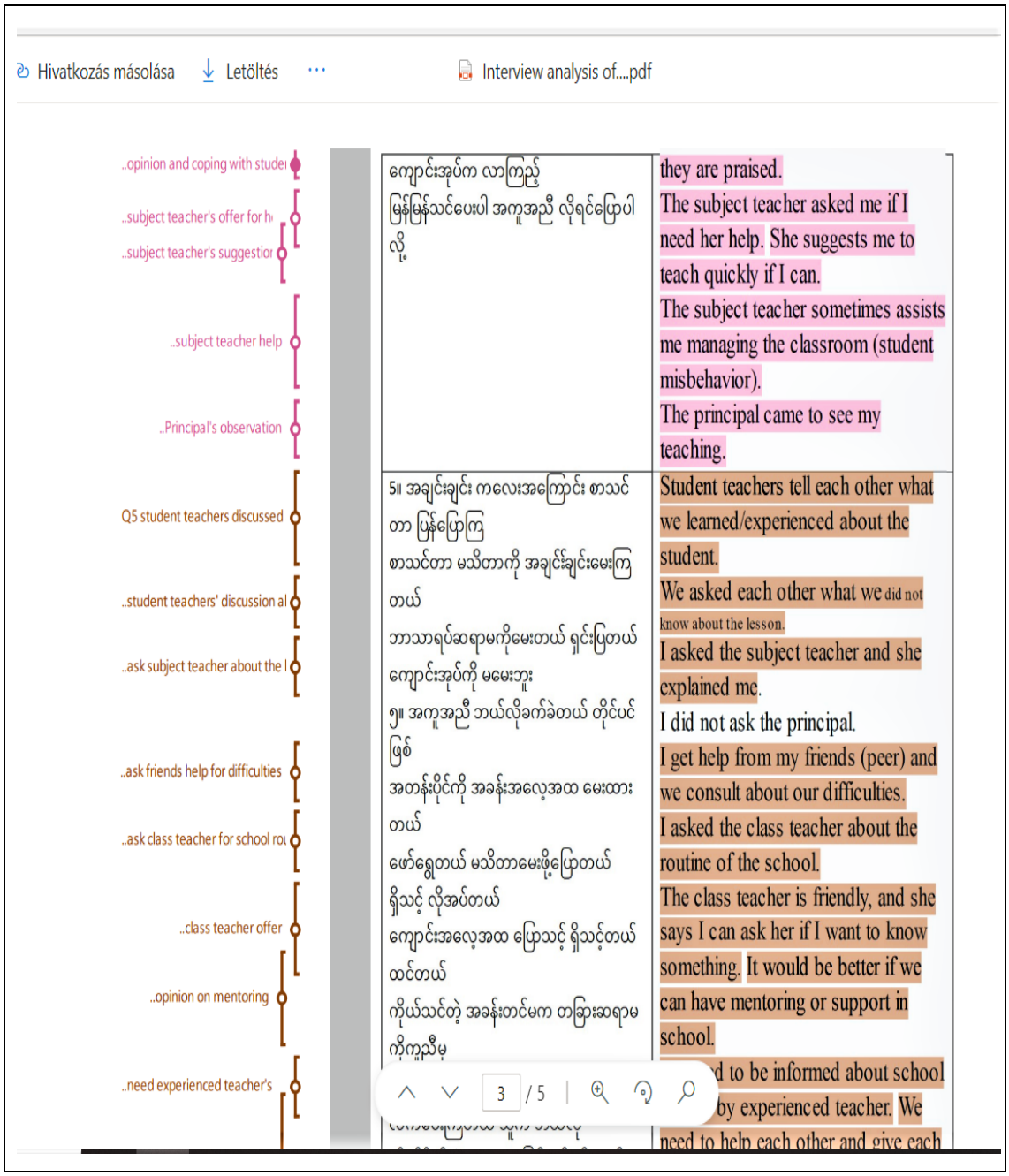
6. Did you remember this kind of experience in your practicum? How would you describe the mentoring and support that you were provided during the practicum? Who was the biggest support during the process?

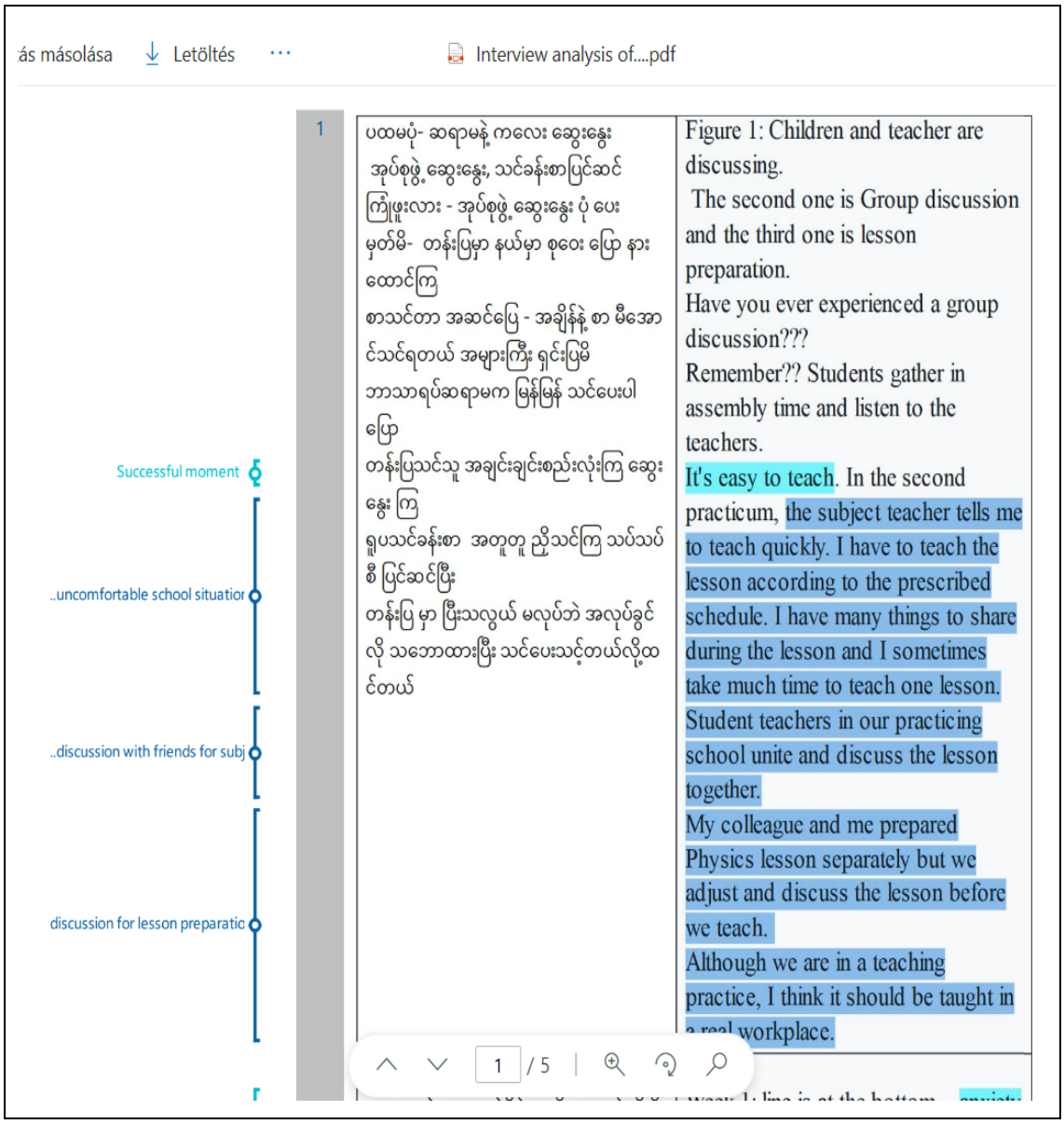
7. Did the theory learned in your university program contribute to the improvement of teaching skills in your practicum? How do you think about your university program? Did they prepare you well?

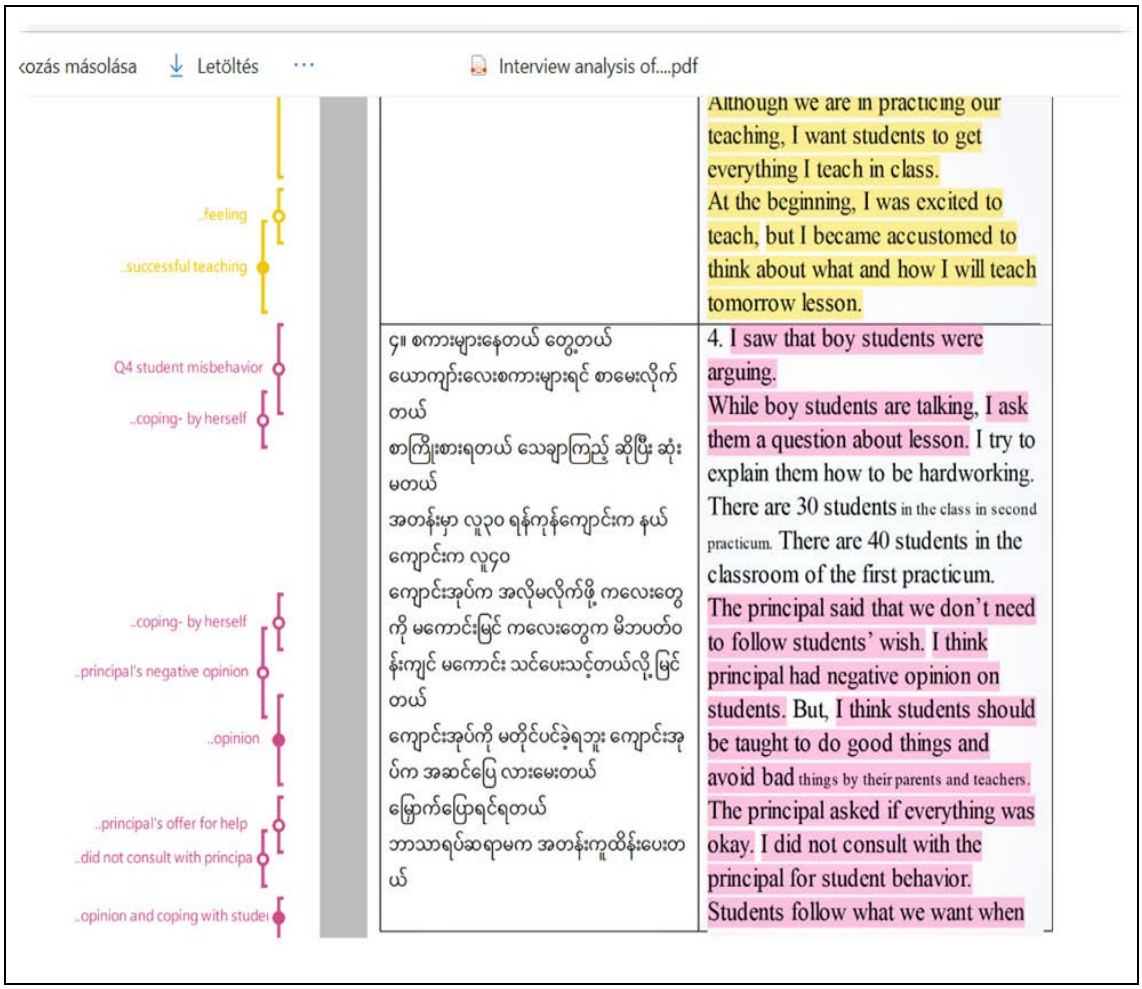
Photo-elicitation interview analysis sheets (exported from MAXQDA)




Hivatkozás másolása
Letöltés
Interview analysis of....pdf
difficulty with student misbehavior
difficulties with dealing closed s
coping
exchange knowledge
getting help from principal
mentoring
getting help from other teachers
opinion on unviersity program
opinion on university program
coping
difficulties in writing practicum joun
စကားများတယ် သင၁ုန်းမှာ ရေးတဲ့အချိန်
စာလိုက်မရေးဘူး
တုတ်နဲ့ရိုက်မယ် စာမေးမယ် ဆိုပြီး ခြိမ်းခြောက်ရတယ်
ကိုယ်နဲ့ရင်းနှီးတဲ့ကလေးက မကြောက်ဘူး ထိန်းရခက်တယ်
ရိုက်တယ် ပုံပြင် ဥပမာ (ပြောပြတယ် တချို့ တွေက စာမေးပွဲ မှာစာမရဘဲ နေတာ)
5. ထိုင် ပြီး ဆွေး နွေးတာမရှိဘူး
သင်နည်း နဲ့ပတ်သက်တာ ဖြန့်ဝေကြတယ် PPTT ဆင်းတွေထက် သားတို့က သင်နည်းက
သိတယ်
သူတို့ဆီက သင်ကြားရေးအတွေ့အကြုံ ပြန် မေး
ကျောင်းအုပ်ကြီးက အတွေ့အကြုံ နဲ့သင်ကြားရေးအခက်အခဲ ရှိခဲ့တာရှင်းပြ
6. Mentoring
ကျောင်းဆင်းချိန် မေးတယ် သင်ရိုးသစ် သင်လို့ မသိတဲ့အခါ
မိဘ တွေနဲ့ပတ်သက်ပြီး ပြဿနာဆို အကြံဉာဏ်တောင်းတယ် သူတို့က သင်ပေးတယ်
7. University program
ဖွံ့ဖြိုးရေးဘာသာ သဘောတရား စိတ်ပညာ သိရတယ် သင်ခန်းစာကို သင်နည်း ပေါင်းစုံ
သိရ
ကျောင်းက သင်ခန်းစာ တွေကိုကျေနပ်အားရမှု ရှိတယ်
တန်းပြမှာ လက်တွေ့ နဲ့စာ တွေ့ နဲ့ ကွာဟမှုရှိတယ် အဲဒီအခါ အတွေ့အကြုံများတဲ့ ဆရာမ
တွေဆီက အတွေ့အကြုံနဲ့ ကိုယ်သင်ခဲ့တဲ့စာနဲ့ ပေါင်းပြီးသင်တယ်
Practicum journal ရေးရတဲ့အခါ အခက်အခဲရှိ KG 45 ရက် ပဲ သင်လိုက်ရ


Hivatkozás másolása
Letöltés
Interview analysis of....pdf
..opinion and coping with stude
..subject teacher's offer for h
..subject teacher's suggestio
..subject teacher help
..Principal's observation
Q5 student teachers discussed
..student teachers' discussion al
..ask subject teacher about the
..ask friends help for difficulties
..ask class teacher for school ro
..class teacher offer
..opinion on mentoring
..need experienced teacher's
ကျောင်းအုပ်က လာကြည့်
မြန်မြန်သင်ပေးပါ အကူအညီ လိုရင်ပြောပါ
လို့
they are praised.
The subject teacher asked me if I need her help. She suggests me to teach quickly if I can.
The subject teacher sometimes assists me managing the classroom (student misbehavior).
The principal came to see my teaching.
5။ အချင်းချင်း ကလေးအကြောင်း စာသင်တာ ပြန်ပြောကြ
စာသင်တာ မသိတာကို အချင်းချင်းမေးကြတယ်
ဘာသာရပ်ဆရာမကိုမေးတယ် ရှင်းပြတယ်
ကျောင်းအုပ်ကို မမေးဘူး
၅။ အကူအညီ ဘယ်လိုခက်ခဲတယ် တိုင်ပင်ဖြစ်
အတန်းပိုင်ကို အခန်းအလေ့အထ မေးထားတယ်
ဖော်ရွေတယ် မသိတာမေးဖို့ပြောတယ်
ရှိသင့် လိုအပ်တယ်
ကျောင်းအလေ့အထ ပြောသင့် ရှိသင့်တယ်
ထင်တယ်
ကိုယ်သင်တဲ့ အခန်းတင်မက တခြားဆရာမ
ကိုကူညီမှ
Student teachers tell each other what we learned/experienced about the student.
We asked each other what we did not know about the lesson.
I asked the subject teacher and she explained me.
I did not ask the principal.
I get help from my friends (peer) and we consult about our difficulties.
I asked the class teacher about the routine of the school.
The class teacher is friendly, and she says I can ask her if I want to know something. It would be better if we can have mentoring or support in school.
d to be informed about school
by experienced teacher. We need to help each other and give each
3 / 5


ás másolása
Letöltés
Interview analysis of....pdf
Successful moment
..uncomfortable school situatior
..discussion with friends for subj
discussion for lesson preparatic
1
ပထမပုံ- ဆရာမနဲ့ ကလေး ဆွေးနွေး အုပ်စုဖွဲ့ ဆွေးနွေး, သင်ခန်းစာပြင်ဆင်ကြုံဖူးလား - အုပ်စုဖွဲ့ ဆွေးနွေး ပုံ ပေးမှတ်မိ- တန်းပြမှာ နယ်မှာ စုဝေး ပြော နားထောင်ကြ
စာသင်တာ အဆင်ပြေ - အခြိန်နဲ့ စာ မီအောင်သင်ရတယ် အများကြီး ရှင်းပြမိ
ဘာသာရပ်ဆရာမက မြန်မြန် သင်ပေးပါ ပြော
တန်းပြသင်သူ အချင်းချင်းစည်းလုံးကြ ဆွေးနွေး ကြ
ရှုပသင်ခန်းစာ အတူတူ ညှိသင်ကြ သပ်သပ်စီ ပြင်ဆင်ပြီး
တန်းပြ မှာ ပြီးသလွယ် မလုပ်ဘဲ အလုပ်ခွင်လို သဘောထားပြီး သင်ပေးသင့်တယ်လို့ထင်တယ်
Figure 1: Children and teacher are discussing.
The second one is Group discussion and the third one is lesson preparation.
Have you ever experienced a group discussion???
Remember?? Students gather in assembly time and listen to the teachers.
It's easy to teach. In the second practicum, the subject teacher tells me to teach quickly. I have to teach the lesson according to the prescribed schedule. I have many things to share during the lesson and I sometimes take much time to teach one lesson.
Student teachers in our practicing school unite and discuss the lesson together.
My colleague and me prepared Physics lesson separately but we adjust and discuss the lesson before we teach.
Although we are in a teaching practice, I think it should be taught in a real workplace.
1 / 5



	Although we are in practicing our teaching, I want students to get everything I teach in class. At the beginning, I was excited to teach, but I became accustomed to think about what and how I will teach tomorrow lesson.
၄။ စကားများနေတယ် တွေ့တယ် ယောကျ်ားလေးစကားများရင် စာမေးလိုက်တယ် စာကြိုးစားရတယ် သေချာကြည့် ဆိုပြီး ဆုံးမတယ် အတန်းမှာ လူ၃၀ ရန်ကုန်ကျောင်းက နယ်ကျောင်းက လူ၄၀ ကျောင်းအုပ်က အလိုမလိုက်ဖို့ ကလေးတွေကို မကောင်းမြင် ကလေးတွေက မိဘပတ်ဝန်းကျင် မကောင်း သင်ပေးသင့်တယ်လို့ မြင်တယ် ကျောင်းအုပ်ကို မတိုင်ပင်ခဲ့ရဘူး ကျောင်းအုပ်က အဆင်ပြေ လားမေးတယ် မြှောက်ပြောရင်ရတယ် ဘာသာရပ်ဆရာမက အတန်းကူထိန်းပေးတယ်	4. I saw that boy students were arguing. While boy students are talking, I ask them a question about lesson. I try to explain them how to be hardworking. There are 30 students in the class in second practicum. There are 40 students in the classroom of the first practicum. The principal said that we don't need to follow students' wish. I think principal had negative opinion on students. But, I think students should be taught to do good things and avoid bad things by their parents and teachers. The principal asked if everything was okay. I did not consult with the principal for student behavior. Students follow what we want when

Focus group interview questions and the coding table

Interview questions for novice teachers

1. Where is your school situated? Is it far from your home?
2. What is your role in school?
3. What are the good things and bad things that you experienced in your first year teaching?
4. What is your greatest challenges? How do you deal with that?
5. How do you think about the preparation of univeristy program and practicum?
6. How do you think about the supporting role of school principals and teachers?

Table: Novice teachers' focused group interviews coding

Topic from interview question/Theme	**Literature notes**	**Coding**	**Described notes of interviewee**
Role/activities	Administrative duties	Office work	office work, help administrative work for headmaster, paper work
	Subject Team leader	Subject leader	subject leader
	School related duties	School related duties	Gardening, gate duty, cleaning duty
Good things and bad things	Student teacher relationship	-difficulties in communicating students	-KG students do not understand instruction, language difficulties
	Problems with teaching	-teaching related problems	-can't control the class, can't teach in accompany with the monthly lesson -forgot how to explain while I am teaching, English language teaching, low achievement school
	Parent teacher relationship	Get stressed in communicating parents	get stressed because parents do not like being scolded their children
	Misbehaved students	Student misbehavior	-bad behaving students, time spent by saying them not to do this and that,

			repeater students are misbehaving
Greatest challenge	Problems with headmaster	Problems with headmaster	headmaster doesn't like teaching co-curriculum subjects, headmaster does not like me.
	Problems with students	Problems with students	disrespect to me, change some misbehaved students, six eye-sight impair student
	Problems with colleague	Problems with colleague	don't want to go to school, competition between teachers, subject leader and assistant headmaster ask me many things to do.
	Problems with parents	Problems with parents	parents have arguments when teachers scold students
University preparation	Teaching method	CCA training	CCA training is useful with new curriculum implementation
	Co-curriculum subjects	Co-curriculum subjects	co-curriculum subjects are useful for getting student interest
	Needs	Need practical lessons	practical lessons, more activities, teachers to teach with problem solving step
	Gap	Difference between university lesson and real classroom	Some lessons are different from the real classroom, used based on the condition of the students, it is not so easy to teach same way in university, old lessons
Get support	Experienced teachers	Experienced teachers	Encouragement from teachers, Cooperating teachers, Senior teachers
	Administrator	Headmaster	Headmaster and other teachers
	Friends	friends	Friends in another school
	Media	Media	Online lesson, workshop, books, online group for lesson and teaching aids

Interview protocol and analysis sheet of teacher educators

Introduction

Thank you very much for your participation!

My name is Ei Phyu Chaw and I am doing my Ph.D. in Hungary. My research will focus on Practicum in Initial teacher education in Myanmar. The aim of the study is to get information on the implementation of the practicum to improve the quality of the practicum. My participants will include student teachers, novice teachers, and teacher educators. I would like to discuss with you a few things related to the student-teachers' practicum. I don't have the right to judge your experiences or responses to my questions. I would like to record our voice during the interview because I need to translate it into another language and describe it in my research. I promise I will use our interview conversation only for my research. I will not include your name and personal information in my study.

General questions

1. Please indicate your teaching experience and specialization in your university or education degree college.
2. How many different teaching practicums have you participated in/ arranged/ supervised in your program?

Explanation about participatory interview.

….....

Interview Question 1

1. How do you think about student-teachers' practicum?

Summary of student teachers' interview results! ……..

Interview Questions

2. What is your opinions on student teachers' challenges during the practicum? (teaching, behavioral problems)
3. How do you think about mentoring and supporting issues?
4. What is your opinions on evaluation of student teachers' performance?
5. What is your opinion on university program? (teaching methods, courses)
6. How do you think about the possible way of developing the practicum and program?

Summaries with Coded Segments - New project for teacher educator.mx22

Code	Coded segments	Summary
Opinion on implementation level	: implementation လုပ်နေ ရေရှည်တော့ အဆင်ပြေနိုင်မယ်ထင်တယ် လောလောဆယ်တော့ ကမောက်ကမ ဖြစ်တယ်ဆိုတာက (ဥပမာ- portfolio နဲ့ပတ်သက်ပြီး ဆရာမတွေမှာ knowledge တွေ အများကြီး အကုန်လုံးမှာမရှိဘူး အဲ့ဒီအခါဟို ဌာနက တစ်မျိုး ဒီဌာနက တစ်မျိုး , ကလေးအချင်းချင်းမှာရော ဘယ်လိုပေးမှာလဲ ကမောက်ကမ ဖြစ်နေတုန်းပဲ , lesson study လဲ လုပ်နေကြတယ် implementation level အနေနဲ့ ဆိုရင် စမ်းတဝါးဝါးအဆင့်လို့ ပဲပြောလို့ရနေတယ် အားလုံးက တော့ အားထုတ်ကြိုးပမ်းနေတယ် တစ်ချို့ဆိုရင် on paper ပဲ လုပ်တာတွေ့ရတယ် ညီမတို့ဌာနက တော့ လုပ်တယ် portfolio စမ်းတစ်ဝါးဝါးပဲ ဖြစ်နေတယ် တိကျတဲ့ plan တော့ မရှိသေးဘူး it will be ok in the longer time. Now, it is still dull. We still don't have enough knowledge and understanding about some of the contents of the curriculum. Thus, we have a chaotic implementation level. we still don't have definite action plan. TE 1: 21 - 21 (0)	Implementation will be all right in a long time. Currently, we are doing in chaotic (e g., teacher educators did not have enough knowledge and understanding about portfolios and different departments interpret differently). We are putting our effort to implement the new curriculum but it is still dull. We still don't have a definite action plan for every activities.
Opinion on implementation	တန်းပြဆင်းတဲ့အချိန်မှာ အကူအညီပေးသင့်တယ် ပေးလဲပေးတယ် experience teacher	Student teachers should be supported during the

level\opinions on mentoring	တွေဆိုရင် lesson plan စစ်ပေးတယ် teaching aids ဘယ်ခေါင်းစဉ်ကို ဘယ်လိုသင်မှာလဲ အစစအရာရာ ထောက်ပံ့ပေးတယ် ကျောင်းအသီးသီး ရောက်တဲ့အခါ သအဲ့လောက်လုပ်မပေးနိုင်ဘူး ဒီမှာရှိနေတုန်း က အကူအညီပေးတယ် ဖုန်းဆက်မေးကြ တယ် it should have in schools. Experienced teachers from EDC gave support to student teachers with teaching aids, teaching method and subject matter TE1: 23 - 23 (0)	practicum and got supported. Experienced teacher educator from EDC checked their lesson plan, teaching aids and discussed how to teach the lesson with student teachers before the practicum. Teacher educator cannot help them when they go to thier practice shcool. But they contacted via phone and asked for help.
Opinion on implementation level\opinions on mentoring\Opinion on better program	လုပ်နေတဲ့လမ်းကြောင်းကတော့ ကောင်္ဂတယ် on paper ထက် ထိထိရောက်ရောက်လုပ်တာကောင်းတယ် သင်တန်းပေး face to face ဆွေးနွေးခိုင်းမယ် ချက်ချင်း ပြောင်းလဲဖို့က အသင့်မဖြစ်သေးဘူး HR တွေ လဲ လုံလောက်အောင် မွေးထုတ်ပေးဖို့လိုတယ် ဒါမှ ကိုယ်က ပြန်သင်ပေးတဲ့အခါ အရည်အသွေးပြည့်ဝတဲ့သူတွေ ထွက်လာ မှာ Infrastructure အနေနဲ့ကတော့ ကျောင်း အဆောင်အများကြီး ဖြည့်ဆည်းပေးတယ် လူတွေအများကြီး မွေးထုတ်ပေးချင်တယ် သင်ပေးဖို့ဆရာမဦးရေ အများကြီးလိုနေတယ် ဆရာမမလုံလောက်တဲ့အခါ ကျန်ခဲ့တဲ့ဆရာမ တွေမှာ workload တွေ ပိုများလာတယ် ကျောင်းဆက်တက်ရတဲ့အခါ အားနာရတယ် quality Teacher educator ရှိမှ မွေးထုတ်ပေးနိုင်မှာဖြစ်တယ် it will be better if we reach actual implementation level than on paper work. We need HR training TE 1: 30 - 31 (0)	The trend is good. It will be better if we can implement effectively than on paper. It should have training, face to face discussion. It is not okay to change immediately. We still need human resources. If then, we can train more qualified student teachers. As infrastructure, we have a lot of new buildings. We also want to train more student teachers. In that case, we need more trainers. We have over workload because of insufficient teacher educators. We feel bad to contiune our further study.
Opinion on implementation level\Opinion on better practicum	သင်ရိုးသစ်ကို ကြိုက်တယ် level မြှင့်ပေးထားတယ် ကလေးတွေ thinking ပို ကောင်းလာတယ် Lesson study, peer group, school visit ကြိုက်တယ် ပိုကောင်းအောင်- evaluation, ဆရာမ ကိုယ်တိုင် ထိထိရောက်ရောက် ကြီးကြပ်ပေးနိုင်ရင် ပို ကောင်းမယ် ကိုယ်တိုင်မြင်တဲ့ အခါ အားသာချက်	

	အားနည်းချက်သိရ ထိထိရောက်ရောက် ပြောနိုင်မယ် ခုကတော့ သူတို့ အတွေ့အကြုံရှင်းတာကို ပြန်နားထောင်ရတဲ့ အခါကျတော့ သူတို့စကားပေါ်မူတည်ပြီး ပြောရသလို ဖြစ်သွားတယ် i like new curriculum, but it will be better if student teachers have been and observed supervised by teacher educators to see their strengths and weakness and give feedback on them. TE 1: 25 - 28 (0)	
opinions on student teachers' perceptions on program	လက်မခံဘူး သင်ရိုးဟောင်းမှာလည်း ပညာရေးကောလိပ်သင်ခန်းစာနဲ့ ချိတ်ထားတဲ့ သင်ခန်းစာတွေက ပုံနှိပ်က သင်ခန်းစာတစ်ပိုင်းချင်းစီအတွက် လေ့ကျင့်သင်ကြားပေးပြီးသား ဖြစ်တဲ့အတွက် (ဥပမာ-သန်္ဂြသင်ပြန်ည်းမှာ) ထပ်ပြီးတော့ စာတွေ့လက်တွေ့မချိတ်တာကို လက်မခံဘူး Class size ကတော့ သူတို့စာသင်ခန်းတွေတောင် ကြီးနေတာဆိုတော့ လေ ဒီအခြေနေမှာရအောင် ဖြစ်မြောက်သင်ရတယ် ဆိုတာကိုတော့လက်ခံပေးတယ် ကျောင်းသားရဲ့ စိတ်ပါ ဝင်စားမှုအတွက်ကတော့ ကျောင်းသားဘက် က စိတ် အားထက်သန်မှု ရှိဖို့တော့ လိုတာပေါ့ background က တော့ အမျိုးမျိုးရှိတာဆိုတော့လေ ဆရာမ ငယ်ငယ်လေးတွေ လာတော့ချစ်ကြတယ် စိတ်ဝင်စားကြတယ် ကိုယ့်ဘက်က ကြိုးစားအားထုတ်ဖို့တော့လို တာပေါ့ သင်ရိုးသစ်နဲ့ပတ်သက်ပြီး မသိတာ လက်မခံဘူး ပညာရေးကောလိပ်က သင်တန်းပေးရတာဆိုတော့ မြို့နယ် အဆင့် ခရိုင်အဆင့် ရှိတယ် အကုန်လုံးမဟုတ်တောင် ချိတ်ဆက် ပြီး ယေဘုယျအဆင့်တော့ ပေးထားတယ် ထပ်ပြီး သူတို့ လေ့လာရမှာပေါ့ နော် 22-23 ဆင်းတဲ့ ကလေးတွေကိုတော့ အဟောင်းမှာ ပါတဲ့ သင်ခန်းစာတွေကိုဖယ်ပြီး သင်ရိုးသစ်နဲ့ ချိတ်ဆက်သင်ကြားပေး တယ် PPTT ရော	

	they need to make more effort, we added practical lessons in EDC, class size problems are normal for them TE 1: 14 - 19 (0)	
Opinions on evaluation on practicum	တန်းပြ journal တင်တဲ့အခါမှာ အကဲဖြတ်ပုံစံမှာ သေချာ စီစစ် မပေးလိုက်ဘူး အမှတ်ကိုလိုချင်သလောက်ပေးလိုက်တယ် ဒါပေမယ့်အခု နောက်ပိုင်းသင်ရိုးသစ်မှာ မိတ် ဖက်ကျောင်းဆင်းတဲ့အခါ ကြီးကြပ် တဲ့ဆရာကိုယ်တိုင် ကလေးနဲ့အတူကြည့်ပြီး အကဲဖြတ်တယ် နောက်ပိုင်းမှာ ဘယ်နှစ်ယေကျော်သွားမယ် ဘယ်သူလိုက်ရမယ်ဆိုတာ plan ချထားတာ ရှိတယ် ခုလောလောဆယ်ကတော့ အကဲဖြတ်နေရာမှာ လိုအပ်ချက်တွေ ရှိနေ တယ် အကဲဖြတ်မှ သူတို့က သေချာလုပ်ဆောင်မှာ there is still necessary but in new curriculum, they have plan to supervise and evaluate, TE 1: 11 - 12 (0)	In practicum Journal, we see that the principal and school teachers get the points without being carefully supervised. In new curriculum, supervisor or mentor teacher will evaluate when student teachers visit partner schools. We also planned how many and who will go with student teachers for that. Currently, there is still requirement in evaluation fo student teachers. They will do better if they have been evaluated.
opinions on student teachers' difficulties	ပထမအချက်ကို လက်ခံတယ် တန်းပြက အရေးပါတယ် peer group teaching က လေ့ကျင့်နိုင်တယ် လုပ်ဆောင်နိုင်တယ် တန်းပြကာလကို ပိုပြီးကြာရှည်သင့်တယ် ဆိုတာကတော့ အခုသင်ရိုးသစ်မှာ မိတ်ဖက်ကျောင်းတွေ ဆင်းတယ် နှစ်တိုင်းမှာ တန်းပြတွေအတွက် ရေးဆွဲထားတာရှိတယ် No. 3 အချက် တော်တော်များများ ကျောင်းက တန်းပြ ဆရာမတွေ လာတာက အခြေခံကျောင်းတွေအတွက်အကူအညီ ဖြစ်မယ်လို့ ထင်တယ် သူတို့ခိုင်းတဲ့ အတိုင်းသင်ပေးတဲ့ အတွက် ကြိုက်နှစ်သက်မယ်လို့ထင်တယ် theory နဲ့ practice မှာ ခြားနားချက်တွေ ရှိပေမယ့် ကလေးတွေက ကြိုးစားကြတယ် ဒီဆရာမတွေက ဒီလိုအကောင်ထည်မဖော်နိုင်ဘူး မသိတဲ့ကြားမှာ သူတို့က တက်တက် ကြွကြွ လုပ်ဆောင်တာကို အတွေ့အကြုံရှင်းလင်းတဲ့အခါမ သိရတယ် teaching aids အတွက် အချိန်မရဘူးဆိုတာကိုတော့ လက်မခံဘူး တန်းပြမဆင်းခင်မှာ လေ့ကျင့်	They have peer group teaching during thier program. In new curriculum, they planned more activities for each year practicum peirod. Although there might be a gap between theory and practice, student teachers are working hard. It is not easy to use new methods but they are performing activities in schools. EDC support them a lot related teaching aids. But they learned for how to prepare for teaching aids. There is enough teaching aids in every department. They got suggestions from teacher educators before thier practicum.

	ပေးပြီးသား ဌာနတွေမှာလည်း သူတို့ဆင်းတဲ့ အခါ လိုအပ်မယ့်အရာတွေ ပိုပြီး ပြည့် ပြည့်စုံစုံရှိတယ် ဆရာမတွေ စီကလည်း အကြံ ဉာဏ်တွေ တောင်းသွား တဲ့အတွက် teaching aids preparation ကို ကျောင်းက အများကြီး အထောက်အပံ့ ပေးပါ တယ် in new curriculum, practicum period will be long, teaching aids support at EDC, diffferent in theory and practice but they are trying thier best TE 1: 5 - 9 (0)	
Perception on practicum	တန်းပြ- ဆရာအတတ်သင်မှာ တန်းပြက အ ရေးကြီးတယ် သိထားစာတွေကို လက်တွေ့နဲ့ ချိတ်ဆက်ဖို့က တန်းပြရှိနေမှပိုအဆင်ပြေ မယ်လို့ ထင်တယ် TE 1: 3 - 3 (0)	
experience related to practicum	တန်းပြဆင်းတာနဲ့ပတ်သက်ပြီး ပါဝင်ဖူးတာ- အ တွေ့အကြုံ ရှင်းလင်းတာ ပါခဲ့တယ် participate in practicum experience explanation workshop TE 1: 2 - 2 (0)	
different implementation level in each EDC	ချထားတဲ့အတိုင်း အကောင်အထည် ဖော်မှု မှာ တစ်ကျောင်းနဲ့ တစ်ကျောင်းမတူဘူး အဆင် ပြေသလိုဖြစ်နေတယ် တပြေးညီလုပ်နိုင်ရင် ပို ကောင်းမယ် တစ်ကျောင်းတစ်မျိုးနဲ့ဆိုတော့ အဆင်မပြေဘူး it will be better if we can do the same at the implementation level TE 2: 35 - 38 (0)	
Opinion on better program	TE တကယ်သင်ရိုး ရေးဆွဲတဲ့ နေရာမှာ လက် တွေ့ အကောင်အထည်ဖော်နိုင်မှုမှာ သင်ရိုး ရေးတဲ့သူက ကျောင်းတွေက အနေအထားကို လေ့လာပြီးမှ ကျောင်းမှာ လုပ်ဆောင်ဖို့ ဖြစ်နိုင်ရဲ့ လား/ အတိုင်းအတာ ဘယ်လောက် ရှိလဲ သုံးသပ်ပြီးမှ ထိရောက်အောင် လုပ်နိုင် တဲ့ အချက်ကိုထည့်သွင်းရေးဆွဲ မယ် ဆိုရင် New နဲ့ အသုံးချမှု နဲ့ အချိုးကျပြီး ထိရောက်တဲ့ သင်ကြားသင်ယူမှု ပိုကောင်းမယ် it will be better if the curriculum developer observe the situation and	Curriculum developers should observe the situation and feasibility of the situation of the schools. They should reflect on those factors and include the contents in the new curriculum. If they can develop balanced proportion of new contents and thier applicable level in the curriculum, we will get better and effective TE program.

	feasibility of the schools and include them in the curriculum TE 2: 32 - 34 (0)	
opinon on better practicum	ချမှတ်ထားတဲ့ new curr အတိုင်း အကောင်အထည်ဖော်နိုင်ရင်တော့ ထိရောက်မယ်လို့ ထင်တယ် ဝန်ထမ်းအင်အားဖြည့်မယ် ဆရာမတွေက လိုက်ပါကြီးကြပ်ပေးမယ် သုံးသပ် ချက်ပေးမယ်ဆိုရင် လက်တွေ့တန်းပြကို ပိုတိုး တက်မယ်လို့ထင်တယ် it will be better if we can implement according to the new curriculum , enough teacher educators, school teachers supervise in practicum TE 2: 28 - 30 (0)	Practicum will be more effective if we can implement according to the prescription of the new curriculum. We need more teacher educators. I think if teacher educators can supervise and give feedback to student teacher during thier practicum, it can improve practiucm system.
opinion on mentoring	တကယ်တော့ တန်းပြမှာ ကြီးကြပ်သူက ကြည့်ပေးမယ် တန်းပြဆင်းခဲ့ချိန်က သင်ခန်း စာကို ပြန်သုံးသပ်ချက် ပေးမယ်ဆိုရင်တော့ ပိုထိရောက်ပြီးကောင်းမယ်လို့ထင်တယ် ခုသင်ရိုးသစ်မှာ ဆရာမတွေကိုယ်တိုင် ပါဝင်ကြီးကြပ်တယ်ဆိုတာ ပါတယ်လို့ သိထား တယ် ကျောင်းကလဲကြီးကြပ်ပေးမယ် အကဲ ဖြတ်မယ် ဒီက ဆရာမတွေကလဲ ပြန်ပြီး သုံးသပ်ချက်ပေးမယ်ဆိုရင်တော့ ကလေးတွေအတွက် ပိုပြီး အကျိုးရှိမယ်လို့ ထင်တယ် if there is a mentor to reflect during their practicum, it will be more effective. In new curriculum, it is prescribed. It will be more effective if the school supervise and teacher educator give reflection to student teachers. TE 2: 25 - 26 (0)	Actually, it will be more effective if there has a supervisor during student teacher practicum. In new curriculum, I know that teacher will supervise student teachers. If the principal and teachers from school supervise and evaluate, in addition, teacher educators give feedback on student teachers‘ activities during thier practicum, it will be more effective for student teachers.
opinion on implementation of program	သင်ရိုးသစ်မှာ practicum, reflecttive practice ဆိုတာရှိလာတယ် ထိရောက်တယ် ပြင်ဆင်ထားတာ သင်ရိုးမှာ ရေးထားတာကောင်းတယ် တကယ် လုပ်နိုင်မယ်ဆိုရင် ကလေးအတွက် အကျိုးရှိမယ်လို့ ထင်တယ် လက်တွေ့ အပိုင်းမှာ စစချင်းမှာ အားနည်းနေတယ် သင်ရိုးကောင်းတယ် လက်တွေ့လုပ်ဆောင်မှုမှာအားနည်းနေသေးတယ်လို့ မြင်တယ် ဆရာအင်အားနည်းနေပြီးတော့ သိပ်မှာစာ	

	ပေ သင် နည်းမခွဲဘဲ ကူပြီးသင်နေရတယ် ပညာရေးကောလိပ်မှာ တန်းပြဆင်းချင်တဲ့ ကျောင်းကို ကလေးကို မေးပြီး စီစဉ်ပေးတယ် မြို့နယ်ရုံးက ဆောင်ရွက်ပေးတယ် new curriculum is good but not enough teacher educators and weak at implementation level TE 2: 20 - 23 (0)	
opinion on new curriculum implementation	New curticulum မှာ practicum မှာအများကြီးပြင်ဆင်ထားတာ တွေ့ရတယ် တကယ့်တကယ် အကောင်အထည် ဖော်တဲ့အခါမှာတော့ ကျောင်းသားတွေ first year- second semsterမှာ school visit လုပ်ရတယ် မြို့ထဲကျောင်းကို မသွားနိုင်ဘဲ ကျောင်းသားအကုန် လေ့ကျင့်ရေးကျောင်းကိုပဲ သွားလိုက်ရတယ် အကူအနေနဲ့ သင်တဲ့အဆင့် မရောက်ခဲ့ဘူး လေ့လာတဲ့အဆင့်ပဲ ရောက်တယ် ဆိုတော့ ချမှတ်ထားတဲ့အတိုင်းအကောင်အထည် ဖော်တဲ့အဆင့်ထိ ရောက်တယ်လို့ မတွေ့ရဘူး အဆင်ပြေသလိုလေးပဲ ဒါကလဲ အခြားအဖက်ဖက်က အကြောင်းအရာတွေကြောင့်လို့ပဲ ထင်ပါတယ် ကျောင်းတိုင်းသွားဖို့ မလွယ်ကူတာရယ် အဆင်ပြေအောင် ဆောင်ရွက်လိုက်ရတာရယ် နိုင်ငံရေးကိစ္စတွေ ကြောင့်လို့ထင်ပါတယ် just observation level, there are still some circumstances that can not reach to an implementation level TE 2: 15 - 18 (0)	Many modifications to the practicum are included in the new curriculum. At the implementation level, student teachers have to go school visits and observed other teachers‘ teaching. They did not assist them as prescribed in the new curriculum. I did not think it reached the implementation level. I think it is because of some circumstances.
Opinion on teaching aids problems	Teaching aid အပိုင်းမှာဆိုရင် ရွာဘက်မှာကျတဲ့ ကလေးတွေက teaching aids ကို မပြင်ဆင်နိုင် တာမျိုးလည်းရှိတယ် ကျောင်းသားဦးရေများနေတဲ့အခါမှာ ကလေးကို အုပ်စုဖွဲ့ပြီး တော့သင်ထောက်ကူ ပေးပြီးတော့ လက်တွေ့လုပ်နိုင်အောင် ပြင်ဆင်ပေး မယ်ဆိုရင် သင်ထောက်ကူဟာ ဒီသင်ခန်းစာတစ်ခု ထဲမှာ သင်ထောက်ကူ တစ်မျိုးထဲပေမယ့် ကလေးတွေ အုပ်စုလိုက်ကို လက်တွေ့အသုံးပြုနိုင်အောင် ပြင်ဆင်ပေးမယ်ဆိုရင် ပစ္စည်းအရေအတွက်	

	များတာမျိုးလည်း ရှိတယ် (အများလိုတယ်?) တစ်မျိုးတည်းပဲ ပြင်နိုင် မယ်ဆိုရင် demonstration method ကိုပဲ အသုံးပြုနိုင်မယ် တန်းပြဆင်းတဲ့အခါမှာ ဆရာက demonstration method ကို သုံးတာထက် ကလေးအားလုံးပါဝင်နိုင်အောင် teaching aid ပြင်ဆင်ပေးနိုင်ရင် ပိုပြီးထိရောက်မယ်လို့ မြင်ပါတယ် သူတို့မှာ အခက်အခဲရှိနေတာကို လက်ခံပါတယ် ဘယ်လို ပြင်ဆင်ပေးရမယ်ဆိုတာကိုသိတယ် ဒါပေမယ့် သူတို့ မှာ အခက်အခဲတွေရှိနေတုန်းပဲ လို့ မြင်ပါတယ် it will be more effective if all the students can use the teaching aids, it is difficult to get in rural schools, student teachers know their problems, but they still have their difficulties TE 2: 10 - 12 (0)	
opinion on evaluation of lesson plan in practicum	lesson plan ပိုင်းပါဆိုရင် ကလေးတွေ lesson plan ရေးထားတဲ့ အပေါ်မှာ ကြီးကြပ်မှုက လိုအပ်တယ် ဘာလို့လဲဆိုတော့ ကျောင်းမှာရှိတဲ့ ဆရာ/မတွေက လုပ်ငန်းခွင်ရောက်တာ ကြာပြီဖြစ်တာမိုလို့ အတွေ့အကြုံက ရှိပြီးသား lesson plan တခုကို ကလေးတွေက အကောင်အထည်ဖော်တဲ့နေရာမှာ ဒီသင်ကြား သင်ယူမှုဝန်းကျင်ကိုထိရောက်စေမှာ ဖြစ်တဲ့အတွက်ကြောင့် အဲ့မှာရှိတဲ့ ဆရာ/မတွေ အနေနဲ့ lesson plan ကိုလည်း ကြည့်ပေးမယ် တကယ်သင်တဲ့အခါမှာလည်း lesson plan အတိုင်း အကောင်အထည်ဖော်နိုင် လားဆိုတာ သုံးသပ်ပေးနိုင်မယ်ဆိုရင်တော့ ကလေးတွေရဲ့ လက်တွေ့တန်းပြ သင်ကြားမှုဟာ ပိုပြီးထိရောက် သွားမယ်လို့ ထင်ပါတယ် it will be more effective if the school teacher evaluate the lesson plan TE 2: 8 - 9 (0)	In my opinion, it is necessary to supervise lesson plans of student teachers. Because school teachers had experience about that. The implementation of lesson plan by student teahcer can benefit to teaching learning environment. Thus, school teachers supervise lesson plan before teaching and give feedback after thier teaching based on the lesson plan, it will be more effective pracitum for student teachers.
Perception on practicum	တန်းပြဆိုတာ - သူတို့တကယ်ကိုလက်တွေ့သင်ကြားသင်ယူမှု ပတ်ဝန်းကျင်မှာ အသုံးချဖို့အတွက် လက်တွေ့လေ့ကျင့်မှုတစ်ခုလို့ ယူဆပါတယ် တကယ်ပြန်ပြီး တော့ကျောင်းတွေမှာ လုပ်ငန်းခွင်ဝင်ရောက်တဲ့အခါမှာ ပြန်ပြီးတော့	

	အများကြီးသူတို့အတွက်အကျိုးရှိစေတယ် လို့ ယူဆပါတယ် practical practice for applying in real teaching and learning environments and benefit for student teachers TE 2: 5 - 6 (0)	
experience related to practicum	ဆင်းပြီး ပြန်လာတဲ့အခါမှာလည်း lesson plan မှာ ရေးထားတဲ့ အကြောင်းအရာကို ကြီးကြပ်ပေးတယ် သူတို့ကိုအမှတ်ပေးထားတဲ့ပုံစံတွေကို ပြန်ပြီးစစ်ဆေး ပေးတယ် TE 2: 4 - 4 (0)	
Experience related to practicum	တန်းပြ နဲ့ပတ်သက်တာကတော့ တန်းပြဆင်းဖို့ အတွက် lesson plan ပြင်ဆင်တဲ့အခါ ကြီးကြပ်ပေးတယ် in evaluation of lesson plan before the practicum and evaluation form after the practicum TE 2: 3 - 3 (0)	
Experience related to practicum\Experience related to practicum	တန်းပြ ကိစ္စ ပါဝင်ဖူးတာ- အလုပ်ဝင်တည်းက တန်းပြ အတွက်လေ့ကျင့်သင်ကြားမှု - ခေါင်းဆောင်ပြီး ပညာရေးဝန်ကြီးဌာနကို တင်ပြပေးတာ 16 နှစ်လောက်ရှိပြီ TE 3: 2 - 3 (0)	
Experience related to practicum\Perception on practicum	လက်တွေ့တန်းပြဆိုတာ ဆရာ/မအလောင်းအလျာတွေအတွက် မရှိမဖြစ်လိုအပ်တဲ့ ရက်ဖြစ်တယ် ။ ဆရာ/မအလောင်းအလျာတွေ လက်တွေ့သင်ကြားတဲ့နေရာ၊ အောင်မြင်တဲ့ ဆရာ/မ ဖြစ်ဖို့ တကယ့်ကျောင်းမှာ လေ့ကျင့်သင်ကြားတဲ့နေရာ TE 3: 5 - 6 (0)	
Experience related to practicum\Structure of practicum at Uni	ကျောင်းက လေ့ကျင့်သင်ကြားပေးတာက တတိယနှစ်မှ စတာမဟုတ်ဘူး ပထမနှစ်တည်းက presentation လုပ်ခိုင်းတယ် First yr မှာ micro teaching - lesson plan ဘယ်လို ရေးမလဲ , test construction, Second year - မူလတန်းသင်ရိုးကို အခြေခံပြီး တော့ ဘွဲ့ရရင် အထက်တန်းပြ လုပ်ရပေမယ့် မူလတန်း - Dean လုပ်တဲ့အခါ သိအောင် မူလတန်းနဲ့ အလယ်တန်း ဆရာမတွေ ဘယ်လို လုပ်ရတယ်ဆိုတာသိ	

	အောင် Practice teaching -3.1 မှာသွားရတယ်- ဘာသာရပ် 3 ခု ရွေးရတယ် 3.1 ကို နေတဲ့နေရာနဲ့ နီးတဲ့ ကျောင်းကို ပေးတယ် စီစဉ်ပေးလိုက်တယ် သူတို့ဆန္ဒကိုမေးတယ် အဆင့်မြင့်က အခြေခံကို ပေးတယ် 1 လ လေ့ကျင့်ရတယ် 3.1 မှာ Lesson plan ဘယ်လိုရေးလဲ teaching aid ဘယ်လိုလုပ်လဲ သင်ထားပေးတယ် ၃ ဘာသာလုံး from 1st yr, they had presentation, micro teaching, how to write lesson plan, test construction, second yr-based on primary curriculum, it aims to be subject dean as a high school teacher, 3rd yr-practice teaching, 1 month, lesson plan, teaching aids, 4. TE 3: 7 - 16 (0)	
Experience related to practicum\Evaluation form in practicum	လက်တွေ့ ဆင်းတဲ့အခါ လေ့ကျင့်သင်ကြားမှုအကဲ ဖြတ်ပုံစံကို ကျောင်းအုပ်ကိုထည့်ပေးလိုက်တယ် ဖွင့်မ ကြည့်ရအောင်လို့ ၁ လ အတွင်း အကဲဖြတ်ပုံစံမှာ ရက်စွဲ အချိန် ဘာသာရပ် 10 ချက် 1. သင်ခန်းစာပြင်ဆင်မှု- သင်နည်း , 10 marks 2. ဘာသာရပ် ကျွမ်းကျင်မှု -10 3. သင်ခန်းစာရှင်းလင်းသင်ပြနိုင်မှု - ကောက်ချက်ချ နိုင်လား 4. ထိရောက်တဲ့ မေးခွန်း မေးနိုင်လား 5. သင်ပုန်းသုံးမှု - စနစ်တကျ -10 6. သင်ထောက်ကူ - ထိရောက်မှု သက်ဆိုင်မှု 7. သင်ယူသူများပါဝင်မှု - ပူးပေါင်း/ 8. အတန်းထိန်းသိမ်းမှု - နှိုးကြား, ကျောင်းသားစိတ်ဝင်စားမှု 9. အသံ - ကြည်လင် ပြတ်သား/ ဝေါဟာရ 10. ဝတ်စားဆင်ယင်မှု - သပ်ရပ်သန့်ရှင်းမှု 100 marks ကျောင်းအုပ် လက်မှတ်နဲ့ ပြန်ပေးတယ် complete ဖြစ်တယ် Practice teaching မဆင်းခဲ့ရင် incomplete ဖြစ် အောင် စာရင်းမထုတ်ပေးပါ ပြန် ဆင်းရတယ် 10 points for each 10 points, incomplete, from 1st yr, they had	

	presentation, micro teaching, how to write lesson plan, test construction, second yr- based on primary curriculum, it aims to be subject dean as a high school teacher, 3rd yr- practice teaching, 1 month, lesson plan, teaching aids, 4. TE 3: 7 - 16 (0) TE 3: 17 - 34 (0)	
Experience related to practicum\Evaluation in practicum	.1 peer group teaching (ကလေးနားလည်အောင် သင်ကြားနည်း) 4.2 bloc teachingတန်းပြဆင်းရတယ် ရန်ကုန်တိုင်းတွင်းကျောင်း - နှစ်ဘာသာ သင်ရတယ် 10 ယောက် ပို့ပေးတယ် လိုက်ကြည့်တယ် နှစ်ပတ်ပဲ ဆင်းခိုင်းတယ် သွားတာကို 1 ခါ round လှည့်တယ် လိုအပ်ချက်ကူညီလို့ရအောင် 3.1, 3.2, 4.1, 4.2 မှာ အထက်တန်းပြ ဖြစ်ဖို့သင်ပေးတယ် 1 round to help them if they need help TE 3: 36 - 43 (0)	We checked them. They had two week bloc teaching. We visited them one time to help them if they need our help.
Experience related to practicum\Opinion on student teachers' difficulty	တန်းပြက bloc က ၁ လ ကြာတယ် ပညာရေးဝန်ကြီးဌာနက အချိန်မပေးနိုင်တာ ကျောင်းအုပ်တွေက အမြင်မကြည်ဘူး ၂ ပတ်ပဲ ဖြစ် ၁ လ လောက် ဖြစ်သင့်တယ် challenge အများကြီးတွေ့ပြီး apply လုပ်နိုင်မယ် သက်ဆိုင်ရာ အထက်တန်း ကျောင်းအုပ်ရဲ့ သဘောထားပေါ်မူတည်တယ် တချို့က အမြင်ကျယ် အတန်းတွေ အကုန်သင်ခိုင်းတယ် bloc , practice teaching က အရေးကြီးတယ် B.Ed က ဆင်းသွားတဲ့ ဆရာကြီး/ဆရာမကြီးတွေက နားလည်တယ် တချို့တွေ က အမြင်ကျဉ်းတော့ bloc teaching က သူတို့သတ်မှတ်ထားတဲ့ ယန္တရားကို အနှောင့်အယှက်ဖြစ်တယ်လို့ ယူဆတယ် စာမေးပွဲအတွက် အထောက် အကူပြုတယ်လို့ ထင်ရတယ် စာမေးပွဲကအမှတ် မှာ မပါဘူး Incomplete ပဲ ဖြစ်တာ ပြန်ဖြေလို့ရတယ် တက္ကသိုလ်က စာမေးပွဲ နဲ့ Assignment ပေါ်မူတည်တယ် ဘွဲ့ရဖို့အတွက်ထောက်ပံ့ပေးတဲ့ လုပ်ငန်းတခု ဖြစ်တယ် အမှတ်များရင် ဘယ်လို ပညာရေးလောကမှာ အမြင်မကျယ်တဲ့	

	သူတွေကြောင့်ဖြစ်တယ် လက်ရှိစာကို ဆက်သင်ခိုင်းလဲရတယ် လက်တွေ့ သင်ကြားဖို့ လွှတ်ထားတယ် အတွေ့အကြုံ ယူခိုင်းတာကို တစ်ချို့က gate duty စောင့်ခိုင်းထားတယ် ဝင်ပြောခဲ့တယ် သက်ဆိုင်ရာ ကျောင်းကဆရာ/မကြီးတွေကို အမြင်ကျယ်အောင် ပညာရေးနဲ့ဆိုင်တဲ့ အကြောင်းအရာတွေ အမြင်ကျယ်လာအောင် ပေးသင့်တယ်လို့ ထင်တယ် တစ်ခါတစ်ရံ ကလေးတွေ challenge တွေ အခက်အခဲ တွေ့တာ ဟာ ကျောင်းအုပ်နဲ့ ဘာသာရပ် ခေါင်းဆောင်ရဲ့ အမြင်မ ကျယ်မှုကြောင့်ဖြစ်တယ် ကလေးတွေပြန်လာရင် diary ရေးခိုင်းတယ် ဘယ်လိုခံစားရတယ် ကြုံတွေ့ရ တယ်ဆိုတာကို တင်ခိုင်းတယ် ဖတ်ကြည့်တဲ့အခါ တွေ့ရတယ် ဘယ်လိုအဆင်ပြေအောင် လုပ်မလဲ ဆိုတာကတော့ တစ်နှစ်နဲ့တစ်နှစ်တော့ လုပ်ဆောင်နေရတယ် MOE allow Bloc teaching for 2 week, if they have many challenges, they know how to overcome and they can apply later. Some principals have narrow minded and they think student teachers' practicum period is interrupting their school program. Evaluation form based on the opinion of the principal, we can see their difficulties from their diary, and we are trying to reduce their difficulties year after after. TE 3: 46 - 57 (0)	
Experience related to practicum\Opinion on student teacher opinion on program	ဘာသာရပ်ဆိုင်ရာ ပြောပြရင် အချိန်ခွဲဝေမှု အရတစ်ချို့ဘာသာရပ်သမားတွေကသင်တယ် သင်ရိုး အတိုင်းသင်တယ် ကလေးရဲ့လက်ခံနိုင်တဲ့ အရည်အသွေးပေါ်မူတည်တယ် သိပ္ပံကလေးကပိုတော်တယ် သိပ္ပံ သင်ကြားနည်းမှာ လက်တွေ့ဘယ်လိုသင်မလဲ အချိန်ပိုခေါ်သင်ပေးတယ် ပေးထားတဲ့ သင်ကြားချိန် နည်းနေတဲ့မခါတချို့ထိထိရောက်ရောက် မလုပ်ပေးနိုင်တာ ဖြစ်ကောင်း ဖြစ်မယ် သင်ပြနည်းကတော့	

	တတ်နိုင်သမျှ ဖိဖိစီးစီးသင်ကြားတယ် သူတို့ပြောတာကို မူတည်ပြီး ကောက်ချက်ဆွဲတယ် ဘယ်လိုသင်မလဲ ထိရောက်အောင်ပေးလိုက်တယ် အချိန်ရယ်နဲ့ ကလေးရဲ့လက်ခံနိုင်မှုပေါ်မူတည်ပြီး တချို့ကမရတာလည်း ဖြစ်ကောင်းဖြစ်မယ် ဉာဏ်ရည် နိမ့်ကလေးကတော်တဲ့ကလေးနဲ့ တွဲသင်လို့ အဆင်မပြေဘူး သပ်သပ်ခွဲသင်မှရတယ် ခုက inclusive education ဆိုပြီး လက်ရှိ ကျောင်းမှာထည့်သင်တဲ့အခါ သူတို့မှာအခက်အခဲရှိ-လက်ခံတဲ့ကလေးရဲ့ ဉာဏ်ရည်ပေါ်မူတည်ပြီး အခက်အခဲရှိနိုင်တယ် ကျောင်းအနေအထား မတူဘူး TTC ကျောင်း က မိဘတွေက သင်ထားပေးတော့ အများကြီးသင်စရာမလိုဘူး မြို့စွန်ကကလေးကျတော့ ဆရာမပဲ အားကိုးရတာ မိဘစီးပွားရေးမကောင်းတော့ အစအဆုံးအသေးစိတ်ရှင်းပြမှရတယ် လက်ခံအနေအထားပေါ်မူတည်တယ် ဖွံ့ဖြိုးဆဲဆိုတော့ ကျောင်းရဲ့အခြေခံ အနေအထားတွေကလဲ မတူဘူး video, projector ရှိတယ် သင်ရတဲ့သူက အဲ့တာတွေထည့် စဉ်းစားရမယ် It depends on the time allocation of each subject, student-teacher background knowledge, and school situation. Teachers must think about all of these things. it is not ok for inclusive students. TE 3: 59 - 67 (0)	
Experience related to practicum\Opinion on mentorin	ဖုန်းနံပါတ်ပေးလိုက်တယ် သက်ဆိုင်ရာ ဘာသာရပ်က အခက်အခဲရှိရင် ဖုန်းဆက်မေးဖို့ တချို့ကမေးတယ် တချို့က ကြိတ်ဖြေရှင်းကြတယ် အခြားအတန်းတွေ ရှိတော့ အဆင်မပြေဘူး 4.2 မှာ တန်းပြ ဆင်းတာ give ph number to contact if they have problems, some student teachers contacted us. TE 3: 69 - 70 (0)	We give them our contact number if they have any problems during thier practicum. Some students contacted us but some solved their problems by themselves. We could not supervise those 4th year students the whole practicum period because we have lectures classes for other students.

Experience related to practicum\Opinion on better practicum	bloc က ၁ လ ဆိုရင် ပိုကောင်းမယ် ပိုထိရောက်မယ် တွေ့လာတဲ့ challenge အမျိုးမျိုးကို ဘယ်လို overcome လုပ်မလဲဆိုတဲ့ လက်တွေ့ apply အသုံးချနိုင်ရင် တော်ပြီး ထူးချွန်တဲ့ ဆရာ/မ ဖြစ်လာ မယ်ထင်တယ် it will be better and more effective if we allow one month for bloc teaching. they can become outstanding teacher if they overcome different challenges using thier knowledge and experience during thier practicum. TE 3: 72 - 73 (0)	
Experience related to practicum\Opinion on better program	သင်ရိုးသစ် ရေးရင် Grade 1 က စ နေပြီ Grade11 ထိရှိတယ် G 12 ပြီးရင် ပြီးတဲ့သင်ပြနည်း စာအုပ်တွေ ထောက်ပံ့ ပေးသင့်တယ် အဲ့တာမှ သက်ဆိုင်ရာ ဘာသာရပ် ဆရာမက သင်တဲ့အခါ စာအုပ်တွေ ကြည့်ပြီး ဘယ်လိုသင်ရမယ်ဆိုတာ လက်တွေ့ apply လုပ်နိုင်အောင် သင်ရမလဲဆိုတာ သိမှာ နိုင်ငံတော်ဘက်က ဖြည့်ဆည်းရမှာ သင်ပြနည်းမျိုးစုံ သင် လိုက်ပေမယ့် tech က တိုးတက်လာတဲ့အခါမှာ သင်နည်းကို ပိုချဲ့ google classroom တို့ kahoot တို့ စာသင်ခန်း ထဲမှာလက်တွေ့အသုံးချနိုင်ရင် ပိုကောင်းတယ် စာသင်ခန်း internet access ရဖို့လိုတယ် က လေးတွေလဲ ရဖို့လိုတယ် ဆရာပဲရလို့ မရဘူး ဆရာက ကိုယ့်ပိုက်ဆံနဲ့ကိုယ် သုံးနိုင်ပေမယ့် က လေး တွေကလိုတယ် နည်းပညာတိုးတက်တာနဲ့အမျှ ဆရာမတွေလဲ ကြိုးစားဖို့ လိုတယ် သက်ဆိုင်ရာ ဝန်ကြီးဌာန က ထောက်ပံ့ ပေးရင်တော့ ပိုကောင်းတယ် new curriculum in basic education schools- MOE or government should provide those textbooks to subject teachers to know how to teach student teachers to be mastered in those subjects. It will be better MOE provide it. Student teachers need internet access to catch up with updated tech and updated teaching methods.	

	TE 3: 75 - 78 (0)	
Experience related to practicum	တန်းပြဆင်းတဲ့အခါပါဝင်ဖူးတာ- 21 နှစ်, teaching of physics participated as a teaching of physics teacher TE 4: 2 - 2 (0)	
opinion on better practicum	ဘာသာရပ်ကို ထိထိရောက်ရောက်သင်ကြားလို့ရအောင် အတန်းကို လည်း ကျွမ်းကျင်ပိုင်နိုင်စွာထိန်းနိုင်အောင် ကြိုးစားမယ် ကိုယ်တိုင်ကပြင်ဆင်မယ် ကြိုတင်ပြင်ဆင်မှု အားကောင်းတယ်ဆိုရင် ပိုလို့ အောင်မြင်မယ်လို့ယူဆပါတယ် သက်ဆိုင်ရာကလည်း ပေးနိုင်တဲ့ supporting ကိုလဲ ပေးမယ်ဆိုရင် bloc teaching ကို သွားမယ့် ကျောင်းသားအပေါ်မှာ အများကြီး တည်မီ မယ်လို့ ယူဆပါတယ် subject mastery and preparation by student teachers and supporting by others TE 4: 33 - 33 (0)	If student teachers well prepare themselves to have subject mastery, classroom control to teach effectively to students and the respective school or university could support them, practicum period for student teachers will be more successful. I assume that the success of the pracitucm depends largely on the student teachers who will do thier practice teaching.
opinion on better program	ယခုလက်ရှိထက်ပိုကောင်းအောင် - theory အရ ပညာရေးဘာသာရပ်တွေကပို့ချထားတာ ကို တကယ့် လက်တွေ့ဆင်းမယ့် ဆရာ/မ လောင်း တစ်ယောက်က တကယ်အသုံးပြုနိုင် အောင် အတန်းတိုင်းမှာ သိထားတဲ့ knowledge ကို အသုံးပြုနိုင်အောင် ပြင်ဆင်သင့်တယ် တန်းပြဆင်းနေစဉ် တွေ့ကြုံရမယ့်အရာတွေကို ကိုယ်ကကျော်လွှားနိုင် အောင်လုပ်ရမှာ ဖြစ်တယ် လူမှုဆက် ဆံရေးပဲ ဖြစ်ဖြစ် how to prepare by student teachers for difficulties related to teaching and communication TE 4: 32 - 32 (0)	Student teachers should prepare to use their theoretical knowledge about teaching to overcome thier difficulties in pracitucm. For example, communication,
opinion on supporting	Program အရ ပြည့်စုံတယ် Non human Resources ရှိရင်တော့ beginner အတွက် ဘာမှ မထိခိုက်ဘူး တိုတက်စေမယ်ထင်တယ် theory အရ ပို့ချပေးပြီ program is perfect and require non-human resources TE 4: 27 - 28 (0)	Accoring to them, program/curriculum content is perfect. But they need support for non-human resources.
teaching aid supporting	Teaching-learning မှာလား Teaching aids - အတွက် supporting လား library မှာ	In teaching-learning situation, they might need teaching aids from library

	ဌားရမှာလား lab လုပ်မယ်ဆို့ရင် Chemical ဝယ်ရမယ် ကျန်တာဌားရမယ် supporting လိုတယ် TE 4: 25 - 26 (0)	or laboratory. They need support for that.
supporting-financial	supporting က financial လား reality က - အရင်က စားစရိတ် မရခဲ့ဘူး ခုနောက်ပိုင်း စားစရိတ်ထောက်ပံ့တယ် စစ်ကိုင်းမှာ ကားခ ကို ထောက်ပံ့ ပေးတယ် 14 ရက်ကို ပညာရေး ဒီဂရီ တက္ကသိုလ် လေ့ကျင့်ရေး ကျောင်းဆိုတာ သင်ဖို့ Supporting - စားစရိတ် ထောက်ပံ့ ကြေးအတွက် ပေါ်လာတာလား TE 4: 19 - 23 (0)	They did not have financial support in earlier time. In these days, they get small amount of financial support. Dose supporting mean for financial?
opinion on new curriculum	New curriculum က ကောင်းတယ် သင်နည်းရော သင်ခန်းစာရော TE 4: 17 - 17 (0)	
opinion on new curriculum and teaching method	အရေးကြီးတာက သင်ရိုးသစ်ရဲ့ subject matter က အရင်ကထက် advanced ဖြစ်အောင် လုပ်ပေးထားတာမို့လို့ subject matter ကျွမ်းကျင်အောင်ကြိုးစားပြီးတော့မှ classroom management ဘယ်လိုသင်ရမလဲ , class size ကြီးနေရင် group size အနေနဲ့ လည်းကောင်း တန်းပြ အချိန်လေးမှာ class ကြီးတယ် ပြောတာထက် ဘယ်လိုနည်းနဲ့ သွားမယ်ဆိုတာ တင်ပြင်ဆင်ထားရင်တော့ တဖြေးဖြေး အဆင်ပြေသွားမယ်လို့ထင်တယ် beginner ဆိုတာကတော့ သူ့ theory အတိုင်းလုပ်ရမယ်ဆိုပေမယ့် reality မှာက ပြုပြင်ပြောင်းလဲဖို့က မလွယ်ဘူး subject matter ကျွမ်းကျင်မှုနဲ့ teaching method ကို သုံးတတ်ရမှာပေါ့ group ခွဲရမယ် TE 4: 15 - 15 (0)	
opinion on student teacher difficulty	beginner က student teacher အတွေးပဲ ရှိမယ်, class size က reality မှာ ကျောင်းရဲ့ teacher -student ratio နဲ့ subject matter အရ ရှိနေမှာ class size ကို group pattern ခွဲလိုက်ရင် သင်နည်းအသစ် သင်ခန်းစာအသစ်နဲ့	It is the opinon of beginner. Class size is the ratio of teacher student in that school and subject specialization. If they make group pattern, new teaching method and lessons will be ok. New curriculum in basic

	ကိုက်ညီတယ် လို့ယူဆတယ် ဘယ်လိုပဲ ဖြစ်ဖြစ် curriculum သည် သင်လို့ ကောင်းတယ် beginner level thought TE 4: 14 - 14 (0)	education shools are ok for them.
opinion on evaluation	သင်နေတဲ့အခါ လာပြီးကြီးကြပ်တာ အမြဲတမ်း ကြီးကြပ်ဖို့မလိုဘူး ကလေးတွေ ဆောင်ရွက်နေတယ်ဆိုရင် အတိုင်းအတာတစ်ခုထိ အောင်မြင် နေတာပဲ to some extent TE4: 12 - 12 (0)	It is not necessary to supervise student teachers the whole period of practicum. It has been successful to some extent if they are practicing thier teaching.
opinion on difficulty	အကြီးမားဆုံးအခက်ခဲမဟုတ်ဘူး တန်းပြ အစီအစဉ်ကို အကျိုးပြုတယ် အသစ်တစ်ခုဟာ ဘယ်အရာမဆို ချက်ချင်း အဆင်မပြေတတ်ဘူး practice ပေးလိုက်တဲ့အခါမှာ သုံးတတ်သွားမယ် နောက်တစ်ကြိမ်သုံးရင် အဆင်ပြေသွားပြီ it will be ok later TE 4: 11 - 11 (0)	It's not the biggest difficulty, it's beneficial for practicum program. New one is not immediately feasible to the situation. They will learn from thier practice and the next time, they will be ok.
difficulties at the beginning state	သင်ကြားတဲ့အခါ ကျောင်းကသင်နေကျ ပုံစံ မဟုတ်ဘဲ အသစ်ထွင်သင်တဲ့အခါ အရမ်းကြီး ချောမွေ့ မနေဘူးလို့ သုံးသပ်မိတယ်သင် နေကျမဟုတ်ဘဲ အတိုင်းအတာ တစ်ခု သင်လိုက်တဲ့အခါ အလေ့အကျင့်နည်းသေးတော့ ကလေးဘက်က participation က ချက်ချင်း မရနိုင်ဘူး ကိုယ်တစ်ယောက်ပဲ ဒီပုံစံ စ ပြောတဲ့အခါ child centered approach က သဘောမပေါက်ရင် ခက်တတ်တယ် TE 4: 8 - 8 (0)	If they use teaching method that is not used by schools, it will not be ok. Students will not be used to with thier teaching method immediately. It is difficult to use CCA at the first time.
communication	Personal feeling- ပင်မ သင်နေတဲ့ ဆရာမတွေနဲ့ လူမှုဆက်ဆံရေး- personal feeling of student teacher TE 4: 7 - 7 (0)	
practicum	တန်းပြဆိုတာ practice လုပ်လေ ကောင်းလေ perception on practicum TE 4: 5 - 5 (0)	
practicum	လက်တွေ့ တန်းပြက ပေးဖို့ အင်မတန် လိုအပ်ပါတယ် အကျိုးလဲ ရှိတယ် perception about practicum TE 4: 3 - 3 (0)	

Appendix 4 Questionnaires

Appendix/Enclosure #4

Informed Consent and Description of Research (online study-Questionnaire)

IN CASE PERSONAL DATA ARE NOT COLLECTED

You are to participate in research coordinated by Dr. Erika Kopp, Associate Professor, Faculty of Education and Psychology, Eotvos Lorand University. The research is carried out by highly qualified pedagogues and their assistants. The aim of this study is to explore the implementation of teaching practicum to improve the quality of the practicum and program development in Initial teacher education in Myanmar. Practicum is run by the cooperation between teacher education universities, colleges, practicing schools, and township administration offices. In this research, the practicum structure and implementation of the practicum will be viewed from the university side. From the university side, the key actor of the practicum includes student-teachers and teacher educators. Novice teachers will be included in the study in order to reflect on the practicum for their preparation to be teachers.

Participation is **voluntary**. It is also possible to terminate participation at any time and to decline from answering questions without having to give reasons for this.

Questionnaires have to be filled out during the study which will last for about 15-20 minutes. The results of this study will later be used in publications and will also be presented at scientific conferences. If requested, written or verbal information will be provided on these events.

Data will be collected anonymously during the study and no other personal data will be obtained either.

All information collected during the research process will be handled strictly confidentially.

By proceeding you agree that data collected on your person may be used for research purposes and that these will be accessible to other researchers.

I declare that I am over 18 years of age. I have received full detailed information concerning the conditions of my participation in the study. I agree with these conditions, and I am willing to participate.

O yes O no

Questionnaire 1 for student teacher

Practicum survey - edited version

Q111, I have been informed in full about the circumstances of my participation in the study. I agree to these conditions and wish to participate.

- o Will participate and answer
- o I don't want to participate

Q1. Gender

- o Male
- o Female

Q2 Age

- o 18-20
- o 21-23
- o 24-26

Q3 Specialization <h4>Specialization</h4>

	Choose a specialization		Choose a specialization		Choose a specialization	
	Physics	History	Chemical	Geography	Bio	Economics
Myanmar	o	o	o	o	o	o
English	o	o	o	o	o	o
Maths	o	o	o	o	o	o
PE	o	o	o	o	o	o

Q 4 Academic Year

- o B.Ed Third Year (Direct Intake)
- o B.Ed third year (College of Education)
- o B.Ed Fourth Year (Direct Intake)
- o B.Ed Fourth Year (College of Education)
- o EDC Second Year (College of Education)
- o other

Q6 Current School Currently attending university/college

- o YUOE
- o SUOE
- o Education Degree College
- o Other (Finished/not attended)

Q 7 Previous School Attended University/College

- o YUOE
- o SUOE
- o Education Degree College
- o Other (Finished/not attended)

Q8 Duration in 1st P The duration of the first practice period (including weekends)

- o 0 - 2 weeks
- o 3-4 weeks
- o 5-6 weeks
- o 7-8 weeks
- o more than 8 weeks

Q9 Duration in 2nd P The duration of the second practical exam period (including Saturdays and Sundays) *Please answer if you have rarely attended the second exam

- 0-2 weeks
- 3-4 weeks
- 5-6 weeks
- 7-8 weeks
- more than 8 weeks

Q10 1st Location The location of the school where the first practical class was attended

- Rural
- Urban
- Suburbs (not far from urban areas)

Q113 Please select the class taught in the first practical exam

- Primary level
- Intermediate level
- Upper level

Q11 2nd location

- Rural
- Urban
- Suburbs (not far from urban areas)

Q114 The class level taught in the second practical exam

- Primary level
- Intermediate level
- Upper level

Q12 Feeling/Emotion I would like to know your emotional state during the practical session. Also, describe your feelings during the practical exam. (For example: shy, afraid, happy, anxious, more self-confident, disappointed, etc.)

- Emotional state in the first practicum
- _____
- Emotional state in the second practicum
-

Q 13 General PS

Individuals living around us have their own problems, and difficulties. In general, in our daily life, careers, economy social relations; Often encountering problems related to topics such as health. But we have to go about our daily lives in some way, faced with problems and difficulties. When you encounter a problem, how do you usually solve it? If you have any problems, try solving them in the following sentences. Choose from the following methods used to solve problems.

- Find a way to solve it yourself.
- Soliciting and seeking advice and support from others such as colleagues, friends and parents.
- Trying to avoid the problem
- Trying to come to terms with the sources of the problem.

Q14 Coping 1 regular problems related to teaching when trainees are trained during practical training. The researchers found that they often encountered difficulties. If you have experienced teaching difficulties during the practical demonstration period, choose the difficulties that match your experience from the following teaching difficulties and continue to choose and describe the ways you solved those difficulties. (You can choose an unlimited number of difficulties and solutions that match your experience. Please choose more than at least two difficulties).

- o Difficulties in teaching students with weak learning skills.
- o Time management problems (eg being late for lessons).
- o Experiencing the problem of lack of/inadequate support.
- o Students' absentee
- o Discomfort in teaching with a learner-centered approach.
- o Studying and memorizing teaching methods, but not being able to use them effectively in the practical classroom.
- o Encountering negative observation and criticism from the subject teacher while teaching.
- o Encountering students who are not interested in the lesson.
- o Difficulty in teaching some lessons.
- o Teaching a lesson that has not been prepared in advance to substitute for an absent teacher.
- o Inability to manage group learning activities in the classroom.
- o Inconvenient classroom and seating for students to conduct group learning activities.
- o Because there are some special needs students in the classroom, the teaching should be inclusive of all learners.
- o Large number of students in the classroom.
- o Insufficient time to prepare and teach lessons.
- o Preparing questions for the exam.
- o Difficulty in correcting lessons.
- o If you have encountered any other difficulties in addition to the above (please write here)

_____

Display This Question:

Q 15 M1 Choose from the following how you deal with difficulties in correcting a lesson.

- o Studying from the Teacher's Guide.
- o Asking a veteran subject teacher.
- o Discussion with experienced teachers about teaching methods.
- o Self-study for practical application.
- o Preparing lessons together with classmates.
- o If there is another way, please write below.

_____

Q 16 D2 Choose from the following how you deal with the difficulties in teaching students with weak learning skills.

- o Re-teaching students who do not understand the lesson from the basic level.
- o Teaching more time to those students/students at the end of school.
- o Reflecting on his teaching methods.

- o Studying with a graduate external tutor.
- o Consultation with more experienced teachers.
- o Teaching with teaching methods that match the student's intelligence.
- o If there is another way, please write below.

_____

Q17D3 How to solve classroom and seating problems for group learning activities in the classroom?

- o Teaching on campus.
- o Avoiding the problem because there is no solution.
- o Consultation with the principal.
- o Discussion with relevant officials (principal).
- o If there is another way, please write below.

_____

Q 18 D4 How do you deal with time management? (eg being late for lessons)

- o Using the lecture method to keep the lesson consistent with the monthly content.
- o Observing the teaching of experienced teachers.
- o Reminding students that they will be punished for not being late for group assignments.
- o Reflecting on his teaching methods.

- o Telling the students that they will be given 1 point more if they can submit the group assignments accurately and completely on time so that they are not late.
- o If there is another way, please write below.

_____

Q19D5 How do you deal with the problem of lack/insufficient support?

- o Teaching aids are not perfect when students learn in groups, so teaching aids are used alternately
- o Discussion with principal to provide teaching aids.
- o Finding external sources of support.
- o Cost-effective solutions (eg practicing drawing at home and teaching drawing on the board)
- o Creating your own tutorials.
- o If there is another way, please write below.

_____

Q20D6 How do you deal with the problem of students missing classes?

- o Avoiding the problem because there is no way to solve it.
- o Consultation with other teachers to make students more interested in teaching methods and school lessons.
- o Vengeance.
- o Complaining to the principal or class teacher.
- o Organizing students to understand.
- o If there is another way, please write below.

_____

Q21D7 How do you solve the problem of not being comfortable teaching with a learner-centered approach?

- o Using the lecture method to be consistent with the monthly content/lessons.

- o Reflecting on his teaching methods.
- o Discussion with experienced teachers about teaching methods.
- o Avoiding the problem because there is no solution.
- o Learning from the Internet and explaining the lesson to understand.
- o If there is another way, please write below.

_____

Q22D8 How do you deal with the problem of studying and memorizing teaching methods but not being able to use them effectively in the practical classroom?

- o Observing the teaching of more experienced teachers.
- o Finding external sources of support.
- o Studying from the Teacher's Guide.
- o Researching a teaching method that suits a better lesson.
- o Studying and preparing various teaching methods in advance.
- o classroom situation; Preparing lessons by studying the student's situation in advance.
- o If there is another way, please write below.

_____

Q23D9 How do you deal with non-positive observational criticism from your subject teacher while you are teaching?

- o Self-encouragement.
- o Ignorance.
- o Teaching harder.
- o Showing acceptance of criticism.
- o If there is another way, please write below.

_____

Q24M10 How do you deal with students who are not interested in lessons?

- o Motivating students to become interested in the lesson.
- o Creating effective student groups for learning
- o Consulting with other teachers on teaching methods to make students more interested.
- o Reflecting on his teaching methods.
- o Ignorance.
- o If there is another way, please write below.

_____

Q25M11 How do you deal with the difficulties encountered in teaching some lessons? (Example: lesson difficulty, teaching method issue, classroom issue, student issue)

- o Self-study for practical application.
- o Studying with a graduate external tutor.
- o Asking a veteran subject matter expert.
- o Studying from the Teacher's Guide.
- o Learning from the Internet and connecting with other knowledge related to the lesson.
- o If there is another way, please write below.

_____

Q26M12 How do you deal with having absentee teachers attend classes?

- o Self-encouragement.
- o Avoiding difficulties because they don't see a way to solve them.
- o Learning from the Internet and explaining the lesson to understand.

- o Telling informative content.
- o If there is another way, please write below.

_____

Q27M13 How do you deal with not being able to manage group learning activities in the classroom?

- o Leaving the classroom
- o Strongly warning students that they will be punished for not being late for group assignments.
- o Ignorance.
- o Creating effective student groups for learning.
- o Systematic grouping (using sequences to group).
- o If there is another way, please write below.

_____

Q28M14 Since there are some special needs students in the classroom, how does a teacher deal with teaching to include all learners?

- o Avoiding difficulties because they don't see a way to solve them.
- o Discussion with experienced teachers about teaching methods.
- o Additional teaching time for students with slow learning at graduation.
- o Planning and teaching so that students can help each other.
- o If there is another way, please write below.

_____

Q29M15 How do you deal with the difficulty faced by the large number of students in the classroom?

- o Creating effective student groups for learning.
- o Avoiding difficulties because they don't see a way to solve them.
- o Discussion with experienced teachers about teaching methods.
- o Teaching with lecture method.
- o Taking the help of team leaders and maintaining discipline.
- o If there is another way, please write below.

_____

Q30M16 How do you deal with preparing questions for the exam?

- o Studying from the Teacher's Guide.
- o Learning from the Internet.
- o Asking a veteran subject matter expert.
- o Studying old questions.
- o Studying the purpose of the lesson and preparing questions that will make the purpose come out.
- o If there is another way, please write below.

_____

Q31M17 How do you deal with not having enough time to prepare and teach a lesson?

- o Obtaining administrative support.
- o Avoiding difficulties because they don't see a way to solve them.
- o Discussion with experienced teachers about teaching methods.
- o If there is another way, please write below.

_____

Q110M18 Write down how you solved this problem

Q98 Coping 2
Researches in various countries have indicated that there are difficulties in managing the behavior of students in the classroom during the practical training period. Therefore, during your internship, please select from the following problems related to disturbing behavior of students and describe how to deal with them. (You can choose an unlimited number of difficulties and solutions that match your experience. Please choose more than two difficulties.)

- o Disruptive relationships with students who engage in disruptive behavior.
- o Facing the problem of bullying among students.
- o Some students not actively participating in group learning activities.
- o Managing Disobedient Students.
- o Talking to each other while studying.
- o Lack of respect.
- o Making fun of studying.
- o Fighting among students in the classroom.
- o Lack of friendly behavior among students.
- o If you have encountered any other difficulties in addition to the above (please write here)

Display This Question:
Q99M1 How do you resolve conflict with students who engage in disruptive behavior?

- o Discipline for not engaging in disruptive behavior.
- o Talking to other teachers and getting encouragement.
- o Ignoring.
- o Building good relationships with students.
- o Disturbing behavior of a student who is making a statement that the student's behavior is inappropriate for the teaching profession.
- o Investigate the cause of disruptive behavior and plan accordingly.
- o If there is another way, please write below.

_____

Q109 D2 How do you deal with the problem of bullying among students?

- o Encouraging a bullied student.
- o Punishing a student who bullies.
- o Reasoning that bullying behavior should not be done.
- o Discussing and questioning the class teacher.
- o Problem solving by interviewing individual students who engage in disruptive behavior.
- o If there is another way, please write below.

_____

Q101D3 How do you deal with some students not actively participating in group activities?

- o Strongly reminding students not to be late in group assignments.
- o Warning with facial expressions.
- o Taking a tour and asking questions.
- o Ignoring.
- o Punishment for not completing group activities.
- o Communicate and organize the benefits of teamwork.

- o If there is another way, please write below.

_____

Q103D4 How do you deal with managing disobedient students?

- o Self-reflection and changing one's behavior.
- o Getting the advice of a veteran subject teacher.
- o Punishment.
- o Ignoring disruptive behavior of students.
- o Problem solving by interviewing individual students who engage in disruptive behavior.
- o Teaching students to be obedient.
- o If there is another way, please write below.

_____

Q104D5 How do you deal with students talking to each other during class?

- o Banging the table with a stick to get students' attention.
- o Warning students who are engaging in disruptive behavior.
- o Ignoring.
- o Asking questions about the lesson to students who are talking while teaching.
- o Make eye contact and warn students who are talking while teaching.
- o Teaching that you should focus on the text while studying.
- o If there is another way, please write below.

_____

Q105D6 How do you deal with the problem of disrespect?

- o Self-reflection and changing one's behavior if necessary.
- o Keeping the mind calm.
- o Complaining to families at home.
- o Ignoring.
- o Consultation with the class or principal.
- o Telling that we should treat each other with respect.
- o If there is another way, please write below.

_____

Q106D7 How do you deal with the problem of people making fun of you in class?

- o Self-reflection and changing one's behavior.
- o Getting class teacher feedback.
- o Building good relationships with students.
- o Leaving the classroom.
- o A rebuke that teaching should not be mocked.
- o If there is another way, please write below.

_____

Q107D8 How do you deal with the problem of students fighting in the classroom?

- o Informing parents.
- o Telling the school disciplinary eam.
- o Self-mediation.
- o Punishment.
- o Investigating the cause of the fight.
- o Explaining the consequences of conflict/fight
- o If there is another way, please write below.

_____

Q108D9 How do you deal with students' lack of friendly behavior?

- o Building a close and open relationship between teacher and student.
- o Ignoring.
- o Consulting with a friend
- o Unable to find a solution.
- o If there is another way, please write below.

_____

Q120 How do you solve this problem?

Q134 Coping others

Researchers have found that pre-service teachers often experience other difficulties when they are trained during practical training. If you have encountered any other difficulties in addition to the difficulties mentioned above during the practical demonstration period, please select the difficulties you encountered from the list below and continue to choose and describe the ways you solved those difficulties. (You can choose an unlimited number of difficulties and solutions that suit your experience)

- o Stress.
- o Difficulty in writing practicum reports/Journal
- o Negative opinions of school teachers on us.
- o Dean of the Grade 9 and another teacher did not like me.
- o The school's operational problems (not enough teachers, transportation difficulties).
- o Low voice.
- o Experiencing social awkwardness.
- o Poor relationship with students' parents.
- o If you have encountered any other difficulties in addition to the above (please write here)

_____

Display This Question:

Q135M1 How do you deal with stress?

- o Getting help from a family member or other close friend who has a teaching career.
- o Keeping calm.
- o Talking to friends about emotional problems.
- o Reading motivational books
- o If there is another way, please write below.

_____

Q136 How do you deal with difficulty in writing a class report?

- o Calling a friend for help.
- o Consultation with veteran teachers of the subject.
- o Getting feedback from teachers at teacher education universities/degree colleges.
- o Self-study of how to write.
- o If there is another way, please write below.

_____

_____

_____

Q137 How do you deal with school teachers not seeing their teachers well?

- o Keeping his mind calm.
- o Trying to control his emotions and get along with other teachers.
- o Self-reflection and changing behavior if necessary.
- o Calling a friend and confiding.
- o If there is another way, please write below.

_____

Q138D4 How do you deal with displeasing behavior in a class teacher or other teacher?

- o Ignorance.
- o Keeping his mind calm.
- o Talking to friends about emotional problems.
- o Trying to control the emotions and get along with other teachers.
- o Self-reflection and changing behavior if necessary.
- o If there is another way, please write below.

_____

Q139D5 How do you deal with the operational problems of the school (not enough teachers in that school, far from transportation)?

- o Unable to find a solution.
- o Getting help and advice from the principal.
- o Getting help from third parties.
- o If there is another way, please write below.

_____

Q140D6 How do you solve low voice problem?

- o Self-reflection and behavior change.
- o Unable to find a solution.
- o Raising the voice.
- o If there is another way, please write below.

_____

Q141D7Social problem How do you deal with experiencing social awkwardness?

- o Trying to control his emotions and get along with other teachers.
- o Self-reflection and behavior change.
- o Talking to friends about emotional problems.
- o Getting help from a family member or other close friend who has a teaching career.
- o Ignorance.
- o If there is another way, please write below.

_____

Q142D7 How do you deal with the problem of not being able to deal with students' parents?

- o Self-reflection and behavior change.
- o Getting help and advice from the principal.
- o Discussing with other teachers and getting advice on how to communicate with students' parents.
- o Ignorance.
- o If there is another way, please write below.

_____

Q143D8 Write down how you solved your problem.

Q144 Coping strategy
Listed below are the strategies most likely to be used by pre-service teachers when dealing with difficulties encountered during practical work. Please describe the teaching, learning, and experience in the last practical training. classroom management: Think of the other difficulties and inconveniences you face. If you have any problems, please let me know the solutions you usually use. Therefore, carefully read the methods used to solve the difficulties encountered in practical training below and choose the frequency you use.

	N	R	S	O	A
Studying from the Teacher's Guide.					
Establishing effective student groups for learning.					
Learning from the Internet and explaining the esson to understand.					
Asking an experienced subject matter expert about lesson.					
A cost-effective solution for teaching aids (eg ractice drawing at home and teach drawing on the oard, rotate teaching assistants)					
Motivating students to be interested in the lesson.					
Preparing lessons together with classmates.					
Studying from a graduate external tutor.					
Self-encouragement.					
Skipping the difficulty because there is no way to olve it.					
Discussion with experienced teachers about eaching methods.					
Reflecting on teaching methods.					
Teaching slow learners over time after school time					
Leaving the classroom.					
Corporal Punishment.					
Observing the teaching of more experienced eachers.					
Using the lecture method to be in line with the nonthly content/lessons.					
Discussion with principal to provide teaching ids.					
Solving self-study when there are difficulties elated to the subject/pedagogy.					
Re-teaching students with weak learning skills rom the basic level.					
Reminding students that they will be punished for ot being late on group assignments.					

Discipline students from engaging in disruptive ehavior.					
Using facial expressions to warn students who are ngaging in disruptive behavior.					
Punishment for unfinished assignment.					
Informing parents.					
Talking to other teachers and getting ncouragement.					
Warning students who are engaging in disruptive ehavior.					
Ignoring students' disruptive behavior.					
Telling families about problems encountered at chool.					
Asking a colleague or classmate or another xperienced teacher for help in dealing with tudents' disruptive behavior.					
Warning students with a stick.					
Self-reflection and change behavior if it is ecessary.					
Building good relationships with students.					
Banging the table with a stick to get students' ttention.					
Reminding students not to be late for group ssignments.					
Trying to control emotions and get along with ther teachers.					
Thinking about teaching methods for students with earning disabilities.					
Getting help and advice from the principal.					
Calling a friend and discuss about the problem.					
Discussing with other teachers and getting advice n how to deal with students' parents.					
Discussing with classmates for teaching aids.					
Talking to friends about emotional problems.					
Getting help from a family member or other friend who has a teaching career .					
Getting feedback from a teacher at a teacher ducation university/degree college.					
Ignorance					
Comforting oneself by buying something.					
Self-blame.					
Stop trying to solve problems.					
Looking at a difficult situation with humor.					
Inform yourself that the difficulty is temporary.					
Scolding.					
Sleeping more than usual.					
Buying and eating a favorite food.					

Trying to forget it all.					
Treating others badly when angry/depressed.					
Realizing that you have no control over the roblem.					
Staying away from people.					
Shouting					
Anticipating the worst outcome.					
Reporting to school disciplinary team.					

Q145 Please, I would like to know your opinion about mentoring during your internship. So, read the sentences below and choose your opinion.

	TD	D	N	A	TA
A more experienced teacher helped in managing students' disruptive behavior.					
I got help in teaching from a more experienced teacher.					
I asked an experienced subject expert teacher about the lesson					
During the training period, less experienced instructors need mentoring from a more experienced instructor.					
Mentoring from a more experienced teacher is needed only when the teacher is facing difficulties.					
*During the class period, the school principal does not visit and provide guidance					
* No guidance provided by subject leader					

Q147 Practicum We would like to know your opinion about your practicum experience. So, read the sentences below and choose your opinion.

	T D	D	N	A	TA
The theories learned in university/degree college cannot be applied in the practical classroom (it has to be taught depending on the conditions of the school).					
There are gaps between the written lesson plan and the actual teaching in the classroom					
Practicum prepares student-teachers to be ready and to know the problems they might face in the classroom in advance.					
The practicum period is important for gaining classroom experience.					
I want to have someone to be observed and evaluated during the practice teaching period.					
It is necessary to increase the period of practicum.					
Although we have learned the use of teaching aids in the university/college, we were not able to teach using the teaching aids in the classroom.					
The teachers in the school do not have any friendly relationship with the student-teachers.					
After the practice teaching, the attitude and feelings towards the teaching career have changed.					

During practicum, we had the opportunity to learn how to prepare and teach a lesson that are appropriate to the children.					

Q148 Program We would like to know your opinion on the program of the university/degree college you are attending. So, read the sentences below and choose your opinion.

	TD	D	No comm	A	Tot A
The teaching methods taught in the Institute of Education/Degree College are at a high level for reuse in basic schools.					
Teaching methods taught in a university/degree college are different from the teaching methods used in the actual classroom.					
I want the teachers in the education university/degree college to teach me practical lesson.					
In the university of education/degree college, I learned about learner-centered teaching method, but in the practicum, I had to use only teacher-centered teaching method.					
Subjects at university/degree college need to be restructured to connect with basic school lessons.					
I would like the University of Education/Degree College to prepare in advance about the difficulties that the prospective teachers might face in their practicum.					
During the practicum, I would like teachers from the university/degree college to come and evaluate and give comments while student-teachers are teaching in the classroom.					
Before the practicum, we have to learn the experiences of the teachers from the university/degree college and prepare for the practicum.					
The knowledge learned from the university/degree college can be used to some extent in the practicum.					
Prior to the time of practicum, students-teachers are grouped together at the University of Education/Degree College to develop teaching aids and conduct peer group teaching.					
I think the lessons we learnt in a university/degree college are more theoretical than practical.					
Lessons learned at the University/Degree College are linked to the new primary and secondary curriculum.					

Q149Comparison, we describe the qualification standards relevant to teacher educators and the two roles that can deliver those standards. Please select one or both of the roles that prepare you to meet the qualification criteria below.

	Pro gram	Prac ticum
Using various methods in teaching subjects to develop students' nowledge, skills and understanding.		
To select and adapt various teaching methods according to the haracteristics of learners		
To evaluate the appropriateness of the content to be taught to the tudents		
Understand and use different forms of assessment to guide and support earning		
To understand the factors in the out-of-school environment that can nfluence students' personality development and learning		
Students' social emotional and cognitive development contributes to the earning and development of students' intelligence, skills and culture.		
To understand the context of traditional and value-based ethics, language nd ethnicity of learners in the teaching and learning process.		
To understand and respect the concepts and meanings of different ultures		
To have students engage in learning activities individually or ollaboratively with others.		
To develop personal teaching practice through learning from other eachers and professional development opportunities.		
To be knowledgeable and understand how to choose and use various lassroom management techniques in managing teaching and learning rocesses.		
To conduct teaching and learning processes related to the characteristics f learners.		
To reflect on own teaching practice.		
To understand how to learn through formal, non-formal and informal earning methods to continue and develop professional knowledge, skills nd attitudes		

Questionnaire 2 for novice teacher

Novice teacher survey (Myanmar-Unicode version)

Q111 လေ့လာမှုတွင် ကျွန်ုပ်၏ပါဝင်မှု အခြေအနေများနှင့်ပတ်သက်၍ အသေးစိတ် အချက်အလက် အပြည့်အစုံကို ကျွန်ုပ်သိရှိခဲ့ပါသည်။ ဤအခြေအနေများကို ကျွန်ုပ်သဘောတူပြီး ပါဝင်လိုပါသည်။

o ပါဝင်ဖြေဆိုပါမည် (1)

o မပါဝင်လိုပါ (2)

Q29 အင်တာနက်အသုံးပြုသည့်ဖုန်းနံပါတ်ကို အောက်တွင်ရေးသားဖော်ပြပေးပါရန်။

_____

Q1. Gender

o Male

o Female

Q2 Age.

o ၂၀-၂၂

o ၂၃-၂၅

o ၂၅-၂၇

Q3 Teaching experience သင်ကြားရေးလုပ်သက်

o ၆လ-၁နှစ်

o ၁နှစ်-၂နှစ်

o ၂နှစ်-၃နှစ်

o ၃နှစ်အထက်

Q 7 Previous School တက်ရောက်ခဲ့ဖူးသော တက္ကသိုလ်/ ကောလိပ်

o YUOE (ရန်ကုန်ပညာရေး)

o SUOE (စစ်ကိုင်းပညာရေး)

o Education Degree College (ပညာရေးဒီဂရီ ကောလိပ်)

o ပညာရေးကောလိပ်နှင့် ပညာရေးတက္ကသိုလ် (ပေါင်းကူး)

o အခြား (အောက်တွင်ရေးသားပေးပါရန်) (10)

_____

Q8 Duration in P လက်တွေ့တန်းပြဆင်းခဲ့ ဖူးသည့် ကာလကြာချိန် (စနေ၊ တနင်္ဂနွေရက်များအပါအဝင်)

o ၀-၂ပတ် (1)

o ၂-၄ပတ် (5)

o ၄-၆ပတ် (6)

o ၆-၈ပတ် (7)

o ၈ပတ်နှင့် အထက် (8)

Q 9 လက်ရှိသင်ကြားမှု လက်ရှိကျောင်းတွင် သင်ကြားပေးရသည့် အတန်းဆင့်

o မူလတန်းဆင့် (1)

o အလယ်တန်းဆင့် (4)

o အထက်တန်းဆင့် (5)

Q10 လက်ရှိကျောင်း လက်ရှိကျောင်းတည်နေရာ

o မြို့ပြ (2)

o ကျေးရွာ (3)

o ဆင်ခြေဖုံး (မြို့ပြနှင့် မနီးမဝေးနေရာ) (5)

Q 13 General PS ကျွန်ုပ်တို့ပတ်ဝန်းကျင်တွင် နေထိုင်သော လူတစ်ဦးတစ်ယောက်ချင်းစီတွင် ကိုယ်စီ ပြဿနာများ၊ အခက်အခဲများ ရှိတတ်ပါသည်။ ယေဘူယျအားဖြင့် ကျွန်ုပ်တို့အားလုံး၏နေ့စဉ် ဘဝတွင် အသက်မွေးဝမ်းကြောင်းလုပ်ငန်း၊ စီးပွားရေး၊ လူမှုပေါင်းသင်းဆက်ဆံရေး၊ ကျန်းမာရေးတို့ စသည့် အကြောင်းအရာများနှင့်သက်ဆိုင်သော ပြဿနာများကြုံတွေ့ရလေ့ရှိသည်။ သို့သော် ကျွန်ုပ်တို့သည် ကျွန်ုပ်တို့၏နေ့စဉ်ဘဝကို ဆက်လက်ရှင်သန်ရန် နည်းလမ်းအချို့ဖြင့် အခက်အခဲများ၊ ပြဿနာများကို ရင်ဆိုင်ဖြေရှင်းရသည်။ အောက်ပါစာကြောင်းများတွင် ပြဿနာများစဉ်းစား ဖြေရှင်းနည်းကို ဖော်ပြထားပါသည်။ ပြဿနာတစ်ခုခုကြုံလာခဲ့ပါက ယေဘူယျအားဖြင့် သင်မည်သို့ စဉ်းစား ဖြေရှင်းလေ့ရှိသနည်း ။ သင်၏အခက်အခဲ၊ ပြဿနာများစဉ်းစား ဖြေရှင်းနည်းကို အောက်ပါတို့မှ ရွေးချယ်ပေးပါ။

- ကိုယ်တိုင်နည်းလမ်းရှာ၍ ဖြေရှင်း ခြင်း။ (1)
- သူငယ်ချင်း၊ မိဘ၊ လုပ်ဖော်ကိုင်ဖက် စသည့်တခြားသူများ၏ အကြံဉာဏ်နှင့် ပံ့ပိုးကူညီမှုကို တောင်းခံ၍ဖြေရှင်းခြင်း။ (4)
- ပြဿနာကို ရှောင်ရှားရန် ကြိုးစားခြင်း (5)
- ပြဿနာ၏ အရင်းအမြစ်များနှင့် လိုက်လျောညီထွေဖြစ်အောင် ကြိုးစားခြင်း။ (6)

Start of Block: Block 9 Mentoring

Q14 ကျေးဇူးပြု၍ လုပ်ငန်းခွင်ဝင်စ ကာလအတွင်း အကူအညီအထောက်အပံ့ရယူခြင်း၊ လမ်းညွှန်ပေးခြင်း (mentoring)နှင့် ပတ်သက်၍ သင်၏ သဘောထားအမြင်ကို သိရှိလိုပါသည်။ သို့ဖြစ်ပါ၍ အောက်ပါ စာကြောင်းများကို ဖတ်၍ သင်၏သဘောထား အမြင်ကို ရွေးချယ်ဖော်ပြပေးပါ။

	လုံးဝသဘောမတူပါ။ (6)	သဘောမတူပါ (7)	ထင်မြင်ချက်မပေးလိုပါ	သဘောတူပါသည်	လုံးဝသဘောတူပါသည် (10)
*အတွေ့အကြုံပိုများသော ဆရာ/မစီမှ lesson plan ရေးနည်းနှင့် ပတ်သက်၍ အကူအညီရခဲ့သည်။ (1)					
အတွေ့အကြုံပိုများသော ဆရာထံတွင်ကျောင်းသား/သူများ၏ စိတ်အနှောင့်အယှက်ဖြစ်စေသောအပြုအမူများကို စီမံခန့်ခွဲရန် အတွက် အကူအညီရယူခဲ့သည်။ (10)					
ကျောင်းအုပ်ကြီးထက် လုပ်ဖော်ကိုင်ဖက်များနှင့် အတွေ့အကြုံရှိ ဆရာများထံမှ အများစု၏ အကူအညီကို အများဆုံး ရရှိသည်။ (11)					
ဝါရင့်ဘာသာရပ်ကျွမ်းကျင် ဆရာ/မထံတွင် သင်ခန်းစာ အကြောင်းကို မေးမြန်းခဲ့သည်။ (12)					
ကျောင်းအုပ်ကြီးမှ ကူညီလမ်းညွှန်မှု ပေးခြင်းမရှိပါ။ (15)					
သူငယ်ချင်းများနှင့် အတွေ့အကြုံများဖလှယ်ပြီး အကြံပြုချက်များ ရယူသည်။ (16)					
မိသားစုဝင်များအား ကျောင်းမှ ပြဿနာများကို ပြောပြပြီး သူတို့၏ ပံ့ပိုးကူညီမှုကို ရယူသည်။ (17)					

Q15 practicum သင်၏ လက်တွေ့တန်းပြအတွေ့အကြုံသည် လုပ်ငန်းခွင်ဝင်သောအခါ မည်သည့်အတိုင်းအတာထိ အထောက်အကူပြုသည်နှင့်ပတ်သက်၍ သင်၏သဘောထား အမြင်ကို သိချင်ပါသည်။ ကျေးဇူးပြု၍ အောက်ပါစာကြောင်းများကိုဖတ်ပြီး သင့်ထင်မြင်ချက်နှင့် ထပ်တူကျသော ရွေးချယ်မှုကို ရွေးချယ်ပေးပါ။

	လုံးဝသဘောမတူပါ	သဘောမတူပါ	ထင်မြင်ချက်	သဘော	လုံးဝသဘောတူပါ

			မပေးလိုပါ	တူပါသည်	သည်
တန်းပြဆင်းသည့်အချိန်သည် ကာလတိုအတွင်း လေ့ကျင့်သင်ကြားရသည်ဖြစ်သောကြောင့် သင်ကြားမှု အဆင်ပြေချောမွေ့ပြီး၊ စာသင်ခန်းအတွင်း ကျောင်းသားများ၏ အမျိုးမျိုးသော အပြုအမူများကို စီမံခန့်ခွဲရသော်လည် စိတ်အနှောက်အယှက် ဖြစ်ခြင်း မရှိပါ။ (1)					
တန်းပြကာလအတွင်း လေ့ကျင့်သင်ကြားမှုမှ အတွေ့အကြုံကောင်းများ ရရှိခဲ့သည်။ (4)					
လက်တွေ့တန်းပြကာလ ရက်သတ္တပတ်နှင့် တန်းပြဆင်းရသည့် အကြိမ်အရေအတွက်ကို တိုးမြှင့်ရန် လိုအပ်ပါသည်။ (5)					
လက်တွေ့ တန်းပြကာလမတိုင်မီ ဆရာ/မလောင်းများသည် တက္ကသိုလ်/ဒီဂရီကောလိပ်တွင် micro teaching နှင့် peer group teaching ကဲ့သို့သော သင်ကြားမှုများဖြင့် မကြာခဏ လေ့ကျင့် သင်ကြားသင့်ပါသည်။ (6)					
တက္ကသိုလ်/ ဒီဂရီကောလိပ်မှ သင်ခန်းစာများပို့ချရာတွင် အကြောင်းအရာ၏ ယေဘုယျအချက်များကို ရှင်းပြပြီး လက်တွေ့သင်ခန်းစာများဖြင့် ပေါင်းစပ်သင်ကြား ပေးမည်ဆိုပါက ပိုကောင်းမည်ဟု ထင်ပါသည်။ (7)					
လက်တွေ့တန်းပြ အတွေ့အကြုံသည် လုပ်ငန်းခွင်ဝင်စအချိန် သင်ကြားမှုများအတွက် များစွာအထောက်အကူဖြစ်စေပါသည်။ (11)					
လက်တွေ့တန်းပြအတွေ့အကြုံကြောင့် မိမိကိုယ်ကို ပိုယုံကြည်မှုရှိလာပါသည်။ (12)					
လက်တွေ့တန်းပြဆင်းချိန် အတွင်းသင်ထောက်ကူပစ္စည်းများကို အသုံးပြု၍ သင်ကြားပေးနိုင်ခဲ့ ပါသည်။ (9)					
တန်းပြကာလသည် အချိန်တိုဖြစ်သောကြောင့် သင်ကြားမှုအတွေ့အကြုံနှင့်ပတ်သက်၍ စံနမူနာ အဖြစ်လေ့လာခဲ့ရသော်လည်း၊ လုပ်ငန်းခွင်အတွေ့အကြုံ များကို ထိထိရောက်ရောက် သိရှိနားလည် သည့် အဆင့်သို့မရောက်ရှိခဲ့ပါ ။ (8)					
တက္ကသိုလ်/ကောလိပ်တွင် စာတွေ့သင်္ဘောတရားများကို သင်ကြားပို့ချပေးပြီး ကျောင်းတွင် လက်တွေ့ တန်းပြသင်ကြားသည့်အခါ					

လက်တွေ့ သင်ကြားရသည့် အတွေ့အကြုံရသည်ဟု ခံစားရပါသည်။ (13)					
တက္ကသိုလ်/ကောလိပ်တွင် သင်ယူစဉ်ကာလအတွင်းလက်တွေ့တန်းပြဆင်းရသော အတွေ့အကြုံကြောင့် လုပ်ငန်းခွင်ဝင်သောအခါ သင်ကြားရာတွင် ပတ်ဝန်းကျင်အသစ်ဖြစ် သော်လည်း ရင်းနှီးကျွမ်းဝင်သည်ဟု ခံစားမိပါသည်။ (14)					
လုပ်ငန်းခွင်မဝင်ခင်တန်းပြဆင်းချိန်မှသင်ကြားရေးအတွေ့အကြုံများ ရရှိထားသောကြောင့် လုပ်ငန်းခွင်ဝင်စအချိန်တွင် အဆင်ပြေပါသည်။ (15)					
လက်တွေ့တန်းပြဆင်းရာမှ မိမိ၏အားနည်းချက်များကို သိရှိဆင်ခြင်နိုင်သောကြောင့် လုပ်ငန်းခွင်ဝင်သောအခါ အခက်အခဲမရှိပါ။ (16)					

Q16 Program သင်တက်ရောက်ခဲ့သည့် တက္ကသိုလ်/ဒီဂရီကောလိပ်၏ program အပေါ် သင်၏သဘောထားအမြင်ကို သိရှိလိုပါသည်။ သို့ဖြစ်ပါ၍ အောက်ပါ စာကြောင်းများကို ဖတ်၍ သင်၏သဘောထား အမြင်ကို ရွေးချယ်ဖော်ပြပေးပါ။

	လုံးဝ သဘော မတူပါ (1)	သဘော မတူပါ (2)	ထင်မြင်ချက် မပေးလိုပါ (3)	သဘော တူပါသည် (4)	လုံးဝ သဘော တူပါသည် (5)
တက္ကသိုလ်/ဒီဂရီကောလိပ်၌ သင်ခန်းစာများပို့ချရာတွင် လုပ်ငန်းခွင်ဝင်မည့် ဆရာ/များ စာသင်ခန်းတွင် လက်တွေ့အသုံးပြုသင်ကြားနိုင်မည့်နည်းလမ်းများကို ပိုမိုအလေးထားပေးသင့်ပါသည်။ (11)					
ပညာရေးတက္ကသိုလ်/ဒီဂရီကောလိပ်မှ လုပ်ငန်းခွင်ဝင်မည့် ဆရာ/မများကိုပြင်ဆင်ပေးရာတွင် စာသင်ခန်းတွင် ကြုံတွေ့နိုင်သည့်အခက်အခဲများ (ဥပမာ-ကျောင်းသားဦးရေများသော အတန်းအရွယ်အစားကို စီမံခန့်ခွဲနည်း) ကိုမျှော်မှန်း၍ ကြိုတင်ပြင်ဆင်ပေးစေလိုပါသည်။ (15)					
ပညာရေးတက္ကသိုလ်/ဒီဂရီကောလိပ်ရှိ ဆရာ/မ များကိုယ်တိုင် သင်ကြားနည်းများကို လက်တွေ့သင်ကြားပြသ ပေးစေလိုပါသည်။ (16)					

ကျောင်းသားဗဟိုပြုသင်ကြားမှုကို တက္ကသိုလ်/ ဒီဂရီကောလိပ်တွင် သင်ကြားခဲ့သော်လည်း (အချိန်ကန့်သတ်ချက်ရှိခြင်း၊ ကျောင်းသားများ၏အခြေခံအသိပညာ နည်းခြင်း၊ အတန်းတွင်း ကျောင်းသားအရေအတွက်များပြားခြင်း၊ အုပ်စုဖွဲ့ဆွေးနွေးရန် နေရာအကန့်အသတ်ရှိခြင်းကြောင့်) စာသင်ခန်းတွင် အသုံးမပြုနိုင်ပါ။ (17)					
တက္ကသိုလ်/ဒီဂရီကောလိပ်တွင် သင်ယူလေ့လာရသော သင်ခန်းစာနှင့် စာသင်ခန်းအတွင်း လက်တွေ့ကျင့်သုံးနည်းလမ်းများကြားကွာဟမှု အနည်းငယ် ရှိပါသည်။ (18)					
တက္ကသိုလ်/ဒီဂရီကောလိပ်သင်ခန်းစာများသည် လုပ်ငန်းခွင်ဝင်စ ဆရာ/မများအတွက် သင်ကြားရေး နည်းလမ်းများနှင့် သင်ခန်းစာ ပြင်ဆင်ရာတွင် အသုံးဝင် သည်။ (20)					
ပညာရေးတက္ကသိုလ်/ ဒီဂရီကောလိပ်တွင် သင်ယူရသော သင်ခန်းစာများသည် လက်တွေ့ထက် စာတွေ့ပိုင်း ပို၍များသည်ဟု ထင်ပါသည်။ (24)					

Q17 Comparison အောက်တွင် လုပ်ငန်းခွင်ဝင်စ ဆရာ/မများနှင့် သက်ဆိုင်သော အရည်အချင်းစံသတ်မှတ်ချက်များ နှင့် ထို စံသတ်မှတ်ချက်များ ကို ပေးစွမ်းနိုင်သော အခန်းကဏ္ဍနှစ်ခုကို ဖော်ပြထားပါသည်။ သင့်အား အောက်ဖော်ပြပါ အရည်အချင်းစံသတ်မှတ်ချက်များကို ရရှိစေရန် ပြင်ဆင်ပေးသည့် အခန်းကဏ္ဍတစ်ခု (သို့) နှစ်ခုစလုံးကို ရွေးချယ်ဖော်ပြပေးပါ။

	တက္ကသိုလ်/ ကောလိပ်တွင် လေ့လာသင်ယူရသော program (1)	လက်တွေ့ တန်းပြ (2)
ဘာသာရပ်များသင်ကြားရာတွင် နည်းလမ်းအမျိုးမျိုးကို အသုံးပြု၍ ကျောင်းသားများ၏ အသိပညာ၊ ကျွမ်းကျင်မှုနှင့် နားလည်မှုကို တိုးတက်အောင်ဆောင်ရွက်ရန် (12)		
သင်ယူသူများ၏ ဝိသေသလက္ခဏာများနှင့်သက်ဆိုင်သော သင်ကြားရေးနည်းလမ်းအမျိုးမျိုးကို ရွေးချယ် ပြုပြင်ပြောင်းလဲ၍ သင်ကြားရန် (35)		
ကျောင်းသားများအတွက် သင်ကြားသည့် အကြောင်းအရာများသည် သင့်လျော်မှုရှိ/မရှိ အကဲဖြတ်ရန် (25)		

သင်ယူမှုကို လမ်းညွှန်ရန်နှင့် ပံ့ပိုးရန်အတွက် အကဲဖြတ်စစ်ဆေး သည့်ပုံစံ အမျိုးမျိုးကို နားလည်ပြီး အသုံးပြုတတ်ရန် (26)		
ကျောင်းသားများ၏ ကိုယ်ရည်ကိုယ်သွေး ဖွံ့ဖြိုးတိုးတက်မှုနှင့် သင်ယူမှုကို လွှမ်းမိုးနိုင်သည့် ကျောင်းပြင်ပပတ်ဝန်းကျင်ရှိ အကြောင်းရင်းများကို သိရှိ နားလည်ရန်။ (27)		
ကျောင်းသား/ကျောင်းသူများ၏ လူမှုရေး၊ စိတ်ခံစားမှု နှင့် သိမြင်မှုဆိုင်ရာ ဖွံ့ဖြိုးတိုးတက်မှုများသည် ကျောင်းသား/ကျောင်းသူများ၏ ယဉ်ကျေးမှု၊ ဉာဏ်ရည် နှင့် စွမ်းရည်များ ဖွံ့ဖြိုးတိုးတက်ရေးကို သင်ယူရန် အထောက်အကူဖြစ်ပုံကို သိရှိနားလည်ရန်။ (28)		
သင်ကြားရေး နှင့် သင်ယူမှု လုပ်ငန်းစဉ်များတွင် သင်ယူသူများ၏ လူမျိုးရေး၊ ဘာသာစကား၊ ရိုးရာနှင့် တန်ဖိုးအခြေခံ ကျင့်ဝတ်ဆိုင်ရာ နောက်ခံအကြောင်း အရာများကို နားလည်ရန်။ (37)		
မတူညီသော ယဉ်ကျေးမှုများ၊ အယူအဆများနှင့် အဓိပ္ပါယ်များကို နားလည် လေးစားရန်။ (41)		
ကျောင်းသားများကို တစ်ဦးချင်း (သို့) အခြားသူများနှင့် ပူးပေါင်းကာ သင်ယူမှု ဆိုင်ရာ လှုပ်ရှားမှုများ လုပ်ဆောင်စေရန်။ (39)		
အခြားသော ဆရာများထံမှ သင်ယူခြင်းနှင့် အသက်မွေးဝမ်းကျောင်းဆိုင်ရာ ဖွံ့ဖြိုး တိုးတက်ရေး အခွင့်အလမ်းများမှတဆင့် ကိုယ်ပိုင်သင်ကြားရေး အလေ့အကျင့်ကို တိုးတက်အောင်ဆောင်ရွက်ရန်။ (42)		
သင်ကြားရေးနှင့် သင်ယူမှုလုပ်ငန်းစဉ်များကိုစီမံရာတွင် အမျိုးမျိုးသော စာသင်ခန်း စီမံခန့်ခွဲမှုနည်းစနစ်များကို ရွေးချယ်၍ လိုက်လျောညီထွေ အသုံးပြုရမည်ကို တတ်ကျွမ်းနားလည်သူဖြစ်ရန်။ (43)		
သင်ယူသူများ၏ ဝိသေသလက္ခဏာများနှင့် သက်ဆိုင်သည့် သင်ကြားရေးနှင့် သင်ယူမှုလုပ်ငန်းစဉ်များကို လုပ်ဆောင်တတ်ရန်။ (44)		
မိမိ၏ သင်ကြားရေးအလေ့အကျင့်ကို ပြန်သုံးသပ်ရန်။ (45)		
လုပ်ငန်းခွင်ဆိုင်ရာ အသိပညာ၊ ကျွမ်းကျင်မှုနှင့် စိတ်နေသဘောထားကို ဆက်လက်တိုးတက်စေရန် formal, non-formal and informal learning နည်းလမ်းများဖြင့်လေ့လာသင်ယူရမည် ကို နားလည်ရန်။ (46)		

Selected examples from Quantitative data analysis

1. Content validity checking example

Content Validity Ratio = (ne − N/2) / (N/2) = (4 − 5/2) / (5/2) = 0.6

Question	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	CVR
1	✓		✓	✓	✓	0.6
2		✓	✓	✓		0.2
3	✓				✓	-0.2
4	✓	✓		✓		0.2

Items	Exp 1	Exp 2	Exp 3	Exp4	Exp5	Exp6	Exp7	Exp 8	Exp 9	Exp10		
1.	1 1 1	1 0 1	1 1 1	0 1 1	1 1 1	0 1 1	1 1 1	0 1 1	1 1 1	6 8 9	0.6 0.8 1	0 0 1
2. (a)	1	1	1	0	1	1	1	0	1	7	0.7	0
(b)	1	1	1	1	1	1	1	1	1	9	1	1
(c)	1	1	1	1	1	1	1	1	1	9	1	1
(d)	1	1	1	0	1	1	0	1	1	7	0.7	0
(e)	1	1	1	1	1	1	1	1	1	9	1	1
(f)	1	1	1	0	1	1	1	1	1	8	0.8	0
(g)	1	1	1	1	1	1	1	1	1	9	1	1
(h)	1	0	1	1	1	1	0	1	1	7	0.7	0
(i)	1	1	1	0	1	1	1	1	1	8	0.8	0
(j)	1	1	1	1	1	1	0	1	1	8	0.8	0
(k)	1	1	1	1	1	1	1	1	1	9	1	1
(l)	1	1	1	1	1	1	0	1	1	8	0.8	0
(m)	1	0	1	0	1	1	1	1	1	7	0.7	0
(n)	1	1	1	1	1	1	1	0	1	8	0.8	0
(o)	1	1	1	1	1	1	1	1	1	9	1	1
(p)	1	1	1	1	1	1	1	1	1	9	1	1
(q)	1	1	1	1	1	1	1	1	1	9	1	1
(1	1	0	1	1	1	1	1	1	1	8	0.8	0
3.	1	0	1	0	1	1	0	0	1	5	0.5	0
4.	1	1	1	0	0	0	0	0	0	3	0.3	0
5.	1	0	1	0	1	1	1	1	0	6	0.6	0
6.	0	0	1	0	1	0	0	0	0	2	0.2	0
7.	1	1	1	1	1	1	0	1	1	8	0.8	0
8.	1	0	1	0	0	1	0	0	0	3	0.3	0
9.	1	0	0	0	1	0	1	1	0	4	0.4	0
10.	1	1	1	0	0	0	0	1	0	4	0.4	0
11.	1	1	1	1	1	0	0	1	1	7	0.7	0

12.		1	1	1	0	1	0	0	1	1	6	0.6	0
13.	(a)	1	0	1	1	0	0	1	0	1	5	0.5	0
	(b)	1	1	1	1	1	1	1	1	1	9	1	1
	©	1	1	1	1	1	1	1	1	1	9	1	1
	(d)	1	1	1	1	1	1	1	1	1	9	1	1
	€	1	1	1	1	0	1	0	1	1	7	0.7	0
	(f)	1	1	1	0	1	1	1	1	1	8	0.8	0
	(g)	1	1	1	0	1	1	1	1	1	8	0.8	0
	(h)	1	1	1	1	1	1	1	1	1	9	1	1
	(i)	1	1	1	1	1	1	1	1	1	9	1	1
	(j)	1	1	1	1	1	1	1	1	1	9	1	1
	(k)	1	1	1	1	1	1	1	1	1	9	1	1

The value of CVI for all categorial and numerical component in questionnaire for student teachers
Competency- 0.97, 0.85
Program-0.93, 0.7
Practicum-0.96, 0.8
Mentoring-0.92, 0.62
Coping strategies-0.97, 0.85
Other difficulties-0.92, 0.85
Behavior difficulties-0.89, 0.63
Teaching difficulties-0.86, 0.44
Coping general- 0.8

2. Reliability tests examples

[DataSet1] D:\SPSS data file for student teachers\Survey for final analysis (328 participants) -for normality.sav

Reliability tests for scale items in questionnaire 1 for student teacher

Case Processing Summary			
		N	%
Cases	Valid	326	99.4
	Excluded[a]	2	.6
	Total	328	100.0
a. Listwise deletion based on all variables in the procedure.			

Reliability Statistics for coping strategies scale items		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.897	.897	60

Reliability Statistics for mentoring scale items		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.729	.703	7

Reliability Statistics for practicum scale items		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.733	.737	10

Reliability Statistics for university scale items		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.757	.768	12

3. Descriptive statistics examples

Descriptive statistics for comparing student teachers' perceptions on mentoring, practicum and program

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Meanmentoring	326	1.83	5.00	3.9969	.50246
Meanpracticum	325	2.80	5.00	4.0003	.38220
Meanprogram	321	2.27	4.82	3.7080	.43139
Valid N (listwise)	321				

4. Multiple response test example

Multiple response test for student teachers' teaching difficulty (multiple choice items)

Case Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
$Teachingdif[a]	327	99.7%	1	0.3%	328	100.0%
a. Dichotomy group tabulated at value 1.						

$Teachingdif Frequencies				
		Responses		
		N	Percent	Percent of Cases
Teachingdf[a]	DT1,Teaching students with weak learning skills	142	12.3%	43.4%

	DT2, Time management problems (eg being late for lessons timeline)	62	5.4%	19.0%
	DT3, lack of / insufficient teaching aids	163	14.1%	49.8%
	DT4, Student absenteeism	27	2.3%	8.3%
	DT5, teaching with a learner-centered approach.	78	6.8%	23.9%
	DT6, unable to use different teaching methods effectively in the practical classroom	75	6.5%	22.9%
	DT7 observation and criticism from the subject teacher while teaching.	16	1.4%	4.9%
	DT8, encountering students who are not interested in the lesson	96	8.3%	29.4%
	DT9, teaching some lessons	85	7.4%	26.0%
	DT10, teaching unprepared lessons on behalf of absent teachers	81	7.0%	24.8%
	DT11, Inability to manage group activities in the classroom.	23	2.0%	7.0%
	DT12, Inconvenient classroom and seating for students to do group learning activities	64	5.5%	19.6%
	DT13, some special needs students in the classroom	36	3.1%	11.0%
	DT14, large number of students in the classroom	87	7.5%	26.6%
	DT15, Insufficient time to prepare lessons and teach	56	4.8%	17.1%
	DT16, Preparing exam questions during the practicum	27	2.3%	8.3%
	DT17, difficulty in lesson preparation	19	1.6%	5.8%
	DT18, other difficulty	18	1.6%	5.5%
Total		1155	100.0%	353.2%
a. Dichotomy group tabulated at value 1.				

Inferential statistics examples

5. T test

Descriptive statistics for comparing male and female student teachers' perceptions on mentoring, practicum and program

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Meanmentoring	Male	132	3.9949	.68547	.05966
	Female	194	3.9983	.32591	.02340
Meanpracticum	Male	132	4.0742	.47753	.04156
	Female	193	3.9497	.29085	.02094
Meanprogram	Male	131	3.8064	.54035	.04721
	Female	190	3.6402	.32081	.02327

T-test table

Independent Samples Test											
		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Mean mentoring	Equal variances assumed	44.650	<.001	-.059	324	.477	.953	-.00333	.05678	-.11504	.10837
	Equal variances not assumed			-.052	171.641	.479	.959	-.00333	.06409	-.12983	.12317
Meanpracticum	Equal variances assumed	35.060	<.001	2.917	323	.002	.004	.12450	.04268	.04054	.20846
	Equal variances not assumed			2.675	197.246	.004	.008	.12450	.04654	.03272	.21628
Meanprogram	Equal variances assumed	34.725	<.001	3.450	319	<.001	<.001	.16619	.04818	.07141	.26098
	Equal variances not assumed			3.157	193.025	<.001	.002	.16619	.05264	.06238	.27001

Independent Samples Effect Sizes					
		Standardizer[a]	Point Estimate	95% Confidence Interval	
				Lower	Upper
Meanmentoring	Cohen's d	.50324	-.007	-.228	.215
	Hedges' correction	.50440	-.007	-.227	.214
	Glass's delta	.32591	-.010	-.231	.211
Meanpracticum	Cohen's d	.37785	.329	.106	.552
	Hedges' correction	.37873	.329	.106	.551
	Glass's delta	.29085	.428	.202	.653
Meanprogram	Cohen's d	.42422	.392	.167	.616

	Hedges' correction	.42522	.391	.166	.615
	Glass's delta	.32081	.518	.289	.746

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control group.

6. ANOVA test

Descriptive statics for comparing student teachers' perceptions on mentoring, practicum and program according to their academic year in university

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Meanmentoring	YUOE	247	3.9507	.43209	.02749	3.8966	4.0049	1.83	5.00
	Education Degree College	55	4.2242	.74135	.09996	4.0238	4.4247	2.33	5.00
	Recent graduate	24	3.9514	.36276	.07405	3.7982	4.1046	3.00	5.00
	Total	326	3.9969	.50246	.02783	3.9422	4.0517	1.83	5.00
Meanpracticum	YUOE	246	3.9533	.32522	.02073	3.9124	3.9941	2.80	4.90
	Education Degree College	55	4.2400	.49762	.06710	4.1055	4.3745	3.20	4.90
	Reccent graduate	24	3.9333	.42902	.08757	3.7522	4.1145	2.80	5.00
	Total	325	4.0003	.38220	.02120	3.9586	4.0420	2.80	5.00
Meanprogram	YUOE	243	3.6637	.33094	.02123	3.6219	3.7055	2.36	4.82
	Education Degree College	54	3.9091	.69951	.09519	3.7182	4.1000	2.27	4.73
	Recent graduate	24	3.7045	.43988	.08979	3.5188	3.8903	2.73	4.73
	Total	321	3.7080	.43139	.02408	3.6606	3.7554	2.27	4.82

One Way ANOVA test for comparing student teachers' perceptions according to acedamic level on mentoring, practicum and university program

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Meanmentoring	Based on Mean	20.887	2	323	<.001
	Based on Median	20.378	2	323	<.001
	Based on Median and with adjusted df	20.378	2	307.306	<.001

	Based on trimmed mean	21.833	2	323	<.001
Meanpracticum	Based on Mean	17.925	2	322	<.001
	Based on Median	16.852	2	322	<.001
	Based on Median and with adjusted df	16.852	2	302.044	<.001
	Based on trimmed mean	18.069	2	322	<.001
Meanprogram	Based on Mean	50.941	2	318	<.001
	Based on Median	40.896	2	318	<.001
	Based on Median and with adjusted df	40.896	2	237.417	<.001
	Based on trimmed mean	53.341	2	318	<.001

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Meanmentoring	Between Groups	3.419	2	1.709	7.021	.001
	Within Groups	78.634	323	.243		
	Total	82.052	325			
Meanpracticum	Between Groups	3.812	2	1.906	14.104	<.001
	Within Groups	43.518	322	.135		
	Total	47.330	324			
Meanprogram	Between Groups	2.661	2	1.331	7.438	<.001
	Within Groups	56.889	318	.179		
	Total	59.550	320			

ANOVA Effect Sizes[a]

		Point Estimate	95% Confidence Interval	
			Lower	Upper
Meanmentoring	Eta-squared	.042	.007	.088
	Epsilon-squared	.036	.001	.083
	Omega-squared Fixed-effect	.036	.001	.082
	Omega-squared Random-effect	.018	.001	.043
Meanpracticum	Eta-squared	.081	.030	.139
	Epsilon-squared	.075	.024	.133
	Omega-squared Fixed-effect	.075	.024	.133
	Omega-squared Random-effect	.039	.012	.071
Meanprogram	Eta-squared	.045	.009	.093
	Epsilon-squared	.039	.002	.087
	Omega-squared Fixed-effect	.039	.002	.087

	Omega-squared Random-effect	.020	.001	.045
a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.				

Post Hoc test to check the different between certain academic year group

Multiple Comparisons							
Games-Howell							
Dependent Variable	(I) Current school	(J) Current school	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Meanmentoring	YUOE	Education Degree College	-.27350*	.10368	.028	-.5224	-.0246
		Not attended/Finished	-.00065	.07899	1.000	-.1955	.1942
	Education Degree College	YUOE	.27350*	.10368	.028	.0246	.5224
		Not attended/Finished	.27285	.12440	.079	-.0245	.5702
	Not attended/Finished	YUOE	.00065	.07899	1.000	-.1942	.1955
		Education Degree College	-.27285	.12440	.079	-.5702	.0245
Meanpracticum	YUOE	Education Degree College	-.28675*	.07023	<.001	-.4552	-.1183
		Not attended/Finished	.01992	.08999	.973	-.2039	.2437
	Education Degree College	YUOE	.28675*	.07023	<.001	.1183	.4552
		Not attended/Finished	.30667*	.11032	.020	.0403	.5731
	Not attended/Finished	YUOE	-.01992	.08999	.973	-.2437	.2039
		Education Degree College	-.30667*	.11032	.020	-.5731	-.0403
Meanprogram	YUOE	Education Degree College	-.24542*	.09753	.038	-.4800	-.0109
		Not attended/Finished	-.04087	.09227	.898	-.2703	.1886
		YUOE	.24542*	.09753	.038	.0109	.4800

	Education Degree College	Not attended/Finished	.20455	.13086	.269	-.1091	.5182
	Not attended/Finished	YUOE	.04087	.09227	.898	-.1886	.2703
		Education Degree College	-.20455	.13086	.269	-.5182	.1091
*. The mean difference is significant at the 0.05 level.							

One way ANOVA test for comparing perceptions of student teachers from different school locations in first practicum

Descriptives									
						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Meanmentoring	Rural	210	4.0278	.53669	.03703	3.9548	4.1008	2.33	5.00
	Urban	79	3.9177	.40198	.04523	3.8277	4.0078	2.00	5.00
	Sub-urban	37	3.9910	.48741	.08013	3.8285	4.1535	1.83	5.00
	Total	326	3.9969	.50246	.02783	3.9422	4.0517	1.83	5.00
Meanpracticum	Rural	209	4.0258	.39541	.02735	3.9719	4.0798	2.80	4.90
	Urban	79	3.9329	.34557	.03888	3.8555	4.0103	2.80	5.00
	Sub-urban	37	4.0000	.37268	.06127	3.8757	4.1243	2.90	4.80
	Total	325	4.0003	.38220	.02120	3.9586	4.0420	2.80	5.00
Meanprogram	Rural	208	3.7264	.46389	.03217	3.6630	3.7898	2.27	4.73
	Urban	78	3.7121	.37019	.04192	3.6287	3.7956	2.73	4.82
	Sub-urban	35	3.5896	.33827	.05718	3.4734	3.7058	2.64	4.27
	Total	321	3.7080	.43139	.02408	3.6606	3.7554	2.27	4.82

Tests of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Meanmentoring	Based on Mean	2.442	2	323	.089
	Based on Median	3.007	2	323	.051
	Based on Median and with adjusted df	3.007	2	316.674	.051
	Based on trimmed mean	2.872	2	323	.058
Meanpracticum	Based on Mean	1.136	2	322	.323

	Based on Median	.904	2	322	.406
	Based on Median and with adjusted df	.904	2	320.178	.406
	Based on trimmed mean	1.126	2	322	.326
Meanprogram	Based on Mean	3.133	2	318	.045
	Based on Median	3.310	2	318	.038
	Based on Median and with adjusted df	3.310	2	306.827	.038
	Based on trimmed mean	3.172	2	318	.043

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Meanmentoring	Between Groups	.697	2	.348	1.383	.252
	Within Groups	81.356	323	.252		
	Total	82.052	325			
Meanpracticum	Between Groups	.495	2	.248	1.702	.184
	Within Groups	46.835	322	.145		
	Total	47.330	324			
Meanprogram	Between Groups	.562	2	.281	1.516	.221
	Within Groups	58.988	318	.185		
	Total	59.550	320			

ANOVA Effect Sizes[a,b]

		Point Estimate	95% Confidence Interval	
			Lower	Upper
Meanmentoring	Eta-squared	.008	.000	.035
	Epsilon-squared	.002	-.006	.029
	Omega-squared Fixed-effect	.002	-.006	.028
	Omega-squared Random-effect	.001	-.003	.014
Meanpracticum	Eta-squared	.010	.000	.039
	Epsilon-squared	.004	-.006	.033
	Omega-squared Fixed-effect	.004	-.006	.033
	Omega-squared Random-effect	.002	-.003	.017
Meanprogram	Eta-squared	.009	.000	.037
	Epsilon-squared	.003	-.006	.031
	Omega-squared Fixed-effect	.003	-.006	.031
	Omega-squared Random-effect	.002	-.003	.016

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

b. Negative but less biased estimates are retained, not rounded to zero.

Robust Tests of Equality of Means					
		Statistic[a]	df1	df2	Sig.
Meanmentoring	Welch	1.764	2	94.533	.177
Meanpracticum	Welch	1.900	2	92.404	.155
Meanprogram	Welch	2.226	2	96.118	.113
a. Asymptotically F distributed.					

Multiple Comparisons							
Games-Howell							
Dependent Variable	(I) Type of school in 1st P	(J) Type of school in 1st P	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Meanmentoring	Rural	Urban	.11006	.05846	.147	-.0280	.2482
		Sub-urban	.03679	.08827	.909	-.1761	.2497
	Urban	Rural	-.11006	.05846	.147	-.2482	.0280
		Sub-urban	-.07327	.09201	.707	-.2944	.1479
	Sub-urban	Rural	-.03679	.08827	.909	-.2497	.1761
		Urban	.07327	.09201	.707	-.1479	.2944
Meanpracticum	Rural	Urban	.09293	.04754	.127	-.0195	.2054
		Sub-urban	.02584	.06710	.922	-.1361	.1878
	Urban	Rural	-.09293	.04754	.127	-.2054	.0195
		Sub-urban	-.06709	.07256	.627	-.2411	.1069
	Sub-urban	Rural	-.02584	.06710	.922	-.1878	.1361
		Urban	.06709	.07256	.627	-.1069	.2411
Meanprogram	Rural	Urban	.01428	.05284	.961	-.1106	.1392
		Sub-urban	.13679	.06560	.102	-.0210	.2946
	Urban	Rural	-.01428	.05284	.961	-.1392	.1106
		Sub-urban	.12251	.07090	.202	-.0472	.2922
	Sub-urban	Rural	-.13679	.06560	.102	-.2946	.0210
		Urban	-.12251	.07090	.202	-.2922	.0472

One way ANOVA test for comparing perceptions of student teachers from different school locations in second practicum

Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
	Rural	187	4.0508	.53821	.03936	3.9732	4.1284	2.33	5.00

Meanmentoring	Urban	107	3.8879	.46569	.04502	3.7986	3.9771	1.83	5.00
	Sub-urban	29	4.0690	.32586	.06051	3.9450	4.1929	3.33	5.00
	Total	323	3.9985	.50404	.02805	3.9433	4.0536	1.83	5.00
Meanpracticum	Rural	186	4.0462	.39044	.02863	3.9898	4.1027	2.90	4.90
	Urban	107	3.9224	.36712	.03549	3.8521	3.9928	2.80	5.00
	Sub-urban	29	4.0138	.36127	.06709	3.8764	4.1512	3.30	4.80
	Total	322	4.0022	.38341	.02137	3.9601	4.0442	2.80	5.00
Meanprogram	Rural	186	3.7219	.48347	.03545	3.6520	3.7918	2.27	4.73
	Urban	105	3.7117	.36678	.03579	3.6407	3.7827	2.64	4.82
	Sub-urban	27	3.5825	.25745	.04955	3.4806	3.6843	3.18	4.27
	Total	318	3.7067	.43295	.02428	3.6589	3.7545	2.27	4.82

Tests of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Meanmentoring	Based on Mean	3.382	2	320	.035
	Based on Median	3.966	2	320	.020
	Based on Median and with adjusted df	3.966	2	312.051	.020
	Based on trimmed mean	3.889	2	320	.021
Meanpracticum	Based on Mean	.867	2	319	.421
	Based on Median	.516	2	319	.597
	Based on Median and with adjusted df	.516	2	318.199	.597
	Based on trimmed mean	.848	2	319	.429
Meanprogram	Based on Mean	5.658	2	315	.004
	Based on Median	5.391	2	315	.005
	Based on Median and with adjusted df	5.391	2	283.433	.005
	Based on trimmed mean	5.609	2	315	.004

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Meanmentoring	Between Groups	1.966	2	.983	3.939	.020
	Within Groups	79.839	320	.249		
	Total	81.805	322			
Meanpracticum	Between Groups	1.045	2	.523	3.614	.028
	Within Groups	46.143	319	.145		
	Total	47.188	321			
Meanprogram	Between Groups	.462	2	.231	1.235	.292
	Within Groups	58.957	315	.187		
	Total	59.419	317			

ANOVA Effect Sizes[a,b]				
			95% Confidence Interval	
		Point Estimate	Lower	Upper
Meanmentoring	Eta-squared	.024	.000	.062
	Epsilon-squared	.018	-.006	.057
	Omega-squared Fixed-effect	.018	-.006	.056
	Omega-squared Random-effect	.009	-.003	.029
Meanpracticum	Eta-squared	.022	.000	.060
	Epsilon-squared	.016	-.006	.054
	Omega-squared Fixed-effect	.016	-.006	.053
	Omega-squared Random-effect	.008	-.003	.027
Meanprogram	Eta-squared	.008	.000	.033
	Epsilon-squared	.001	-.006	.027
	Omega-squared Fixed-effect	.001	-.006	.027
	Omega-squared Random-effect	.001	-.003	.014
a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.				
b. Negative but less biased estimates are retained, not rounded to zero.				

Robust Tests of Equality of Means					
		Statistic[a]	df1	df2	Sig.
Meanmentoring	Welch	4.548	2	92.552	.013
Meanpracticum	Welch	3.682	2	78.408	.030
Meanprogram	Welch	2.920	2	89.599	.059
a. Asymptotically F distributed.					

Multiple Comparisons							
Games-Howell							
						95% Confidence Interval	
Dependent Variable	(I) Type of school in 2nd P	(J) Type of school in 2nd P	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Meanmentoring	Rural	Urban	.16295*	.05980	.019	.0220	.3039
		Sub-urban	-.01816	.07218	.966	-.1920	.1557
	Urban	Rural	-.16295*	.05980	.019	-.3039	-.0220
		Sub-urban	-.18112*	.07542	.050	-.3622	.0000
	Sub-urban	Rural	.01816	.07218	.966	-.1557	.1920
		Urban	.18112*	.07542	.050	.0000	.3622
Meanpracticum	Rural	Urban	.12381*	.04560	.019	.0162	.2314
		Sub-urban	.03244	.07294	.897	-.1453	.2102
	Urban	Rural	-.12381*	.04560	.019	-.2314	-.0162
		Sub-urban	-.09136	.07590	.457	-.2753	.0926
	Sub-urban	Rural	-.03244	.07294	.897	-.2102	.1453
		Urban	.09136	.07590	.457	-.0926	.2753
Meanprogram	Rural	Urban	.01021	.05038	.978	-.1085	.1289
		Sub-urban	.13940	.06092	.066	-.0072	.2860
	Urban	Rural	-.01021	.05038	.978	-.1289	.1085
		Sub-urban	.12920	.06112	.096	-.0179	.2763
	Sub-urban	Rural	-.13940	.06092	.066	-.2860	.0072
		Urban	-.12920	.06112	.096	-.2763	.0179
*. The mean difference is significant at the 0.05 level.							

7. Chi-square tests example

Checking the student teachers' difficulties related to student misbehaviors across rural, urban and sub-urban schools

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
DB1, Relationship problem with misbehaving students * Type of school in 1st P	328	100.0%	0	0.0%	328	100.0%
DB1, Relationship problem with misbehaving students * Type of school in 2nd P	325	99.1%	3	0.9%	328	100.0%
DB2, Bullying problems among stuents * Type of school in 1st P	328	100.0%	0	0.0%	328	100.0%
DB2, Bullying problems among stuents * Type of school in 2nd P	325	99.1%	3	0.9%	328	100.0%
DB3, Inactive stuent during group activities * Type of school in 1st P	328	100.0%	0	0.0%	328	100.0%
DB3, Inactive stuent during group activities * Type of school in 2nd P	325	99.1%	3	0.9%	328	100.0%
DB4, Managing disobedient students * Type of school in 1st P	328	100.0%	0	0.0%	328	100.0%
DB4, Managing disobedient students * Type of school in 2nd P	325	99.1%	3	0.9%	328	100.0%
DB5, Chatting with friends during the lesson * Type of school in 1st P	328	100.0%	0	0.0%	328	100.0%
DB5, Chatting with friends during the lesson * Type of school in 2nd P	325	99.1%	3	0.9%	328	100.0%
DB6, lack of paying respect to teachers * Type of school in 1st P	328	100.0%	0	0.0%	328	100.0%
DB6, lack of paying respect to teachers * Type of school in 2nd P	325	99.1%	3	0.9%	328	100.0%
DB7, Making fun of teacher's teaching * Type of school in 1st P	328	100.0%	0	0.0%	328	100.0%
DB7, Making fun of teacher's teaching * Type of school in 2nd P	325	99.1%	3	0.9%	328	100.0%
DB8, students fighting in the classroom * Type of school in 1st P	328	100.0%	0	0.0%	328	100.0%
DB8, students fighting in the classroom * Type of school in 2nd P	325	99.1%	3	0.9%	328	100.0%
DB9, students are not closed to the teacher * Type of school in 1st P	328	100.0%	0	0.0%	328	100.0%
DB9, students are not closed to the teacher * Type of school in 2nd P	325	99.1%	3	0.9%	328	100.0%
DB10, other difficulty * Type of school in 1st P	328	100.0%	0	0.0%	328	100.0%
DB10, other difficulty * Type of school in 2nd P	325	99.1%	3	0.9%	328	100.0%
DB11, other difficulty (text) * Type of school in 1st P	328	100.0%	0	0.0%	328	100.0%
DB11, other difficulty (text) * Type of school in 2nd P	325	99.1%	3	0.9%	328	100.0%

DB1, Relationship problem with misbehaving students * Type of school in 1st P

Crosstab					
Count					
		Type of school in 1st P			
		Rural	Urban	Sub-urban	Total
DB1, Relationship problem with misbehaving students	Not selected	176	57	28	261
	No 1	36	22	9	67
Total		212	79	37	328

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.571[a]	2	.102
Likelihood Ratio	4.426	2	.109
Linear-by-Linear Association	3.015	1	.082
N of Valid Cases	328		
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.56.			

DB2, Bullying problems among stuents * Type of school in 1st P

Crosstab					
Count					
		Type of school in 1st P			
		Rural	Urban	Sub-urban	Total
DB2, Bullying problems among stuents	not selected	166	62	27	255
	No2	46	17	10	73
Total		212	79	37	328

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.550[a]	2	.760
Likelihood Ratio	.528	2	.768
Linear-by-Linear Association	.322	1	.571
N of Valid Cases	328		
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.23.			

8. Factor analysis tables

Descriptive statistics for factor analysis

Descriptive Statistics Showing the Mean and Standard Deviation of Student-Teachers' Common Coping Strategies

(N=328)

Items of Coping strategies	Mean	SD	Skewness	Kurtosis
CS1, Studying from the Teacher's Guide.	3.65	1.20	-.41	-1.07
CS2, Establishing effective student groups for learning.	3.56	1.06	-.34	-.80

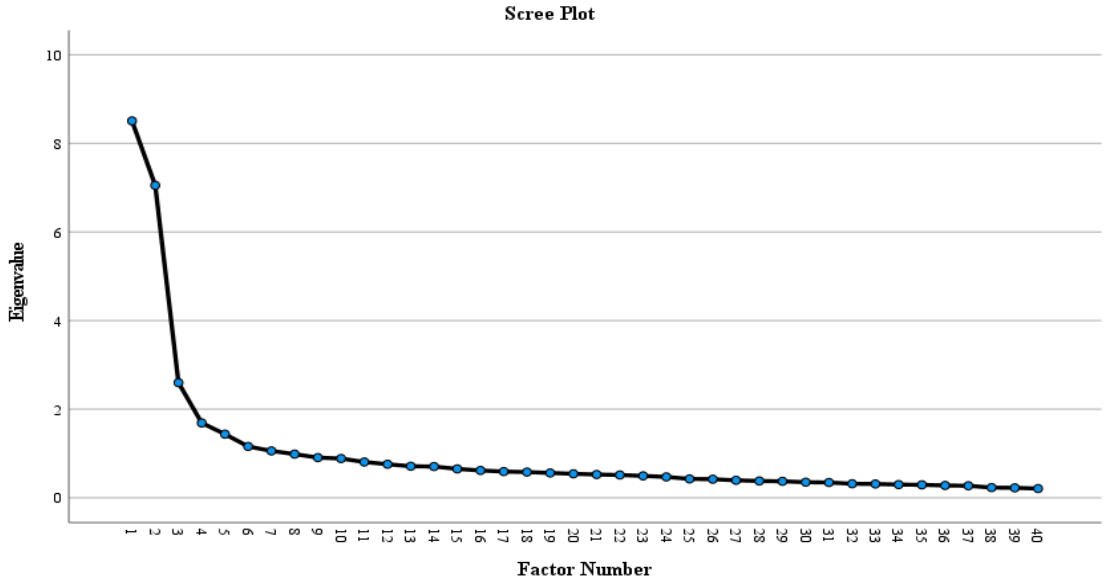
CS3, Learning from the Internet and explaining the lesson to understand.	3.23	1.07	.01	-1.04
CS4, Asking an experienced subject matter expert about a lesson.	3.45	1.05	-.25	-.75
CS5, A cost-effective solution for teaching aids	3.63	1.00	-.43	-.61
CS6, Motivating students to be interested in the lesson.	4.17	.904	-1.14	1.16
CS7, Preparing lessons together with classmates.	3.29	1.16	-.28	-.71
CS8, Studying from a graduate external tutor.	1.84	.97	1.10	.70
CS9, Self-encouragement	4.26	.92	-1.18	.66
CS10, Skipping the difficulty because there is no way to solve it.	1.75	1.02	1.22	.64
CS11, Discussion with experienced teachers about teaching methods.	3.61	1.02	-.46	-.50
CS12, Self-reflecting on teaching methods.	4.12	.85	-.89	.63
CS13, Teaching slow learners over time after school time	2.98	1.10	.20	-.79
CS15, Corporal punishment	1.63	.83	1.25	1.22
CS16, Observing the teaching of more experienced teachers.	3.66	.99	-.53	-.26
CS17, Using the lecture method to be in line with the monthly content/lessons.	3.05	1.20	.09	-1.00
CS18, Discussion with principal to provide teaching aids.	3.05	1.13	.01	-.77
CS19, Self-studying when there are difficulties related to the subject/pedagogy.	3.84	.94	-.66	.04
CS20, Re-teaching students with weak learning skills from the basic level.	3.35	1.08	-.12	-.93
CS21, Reminding students that they will be punished for not being late on group assignments.	2.30	1.08	.67	-.12
CS22, Discipline students from engaging in disruptive behavior.	3.27	1.06	-.07	-.82
CS23, Using facial expressions to warn students who are engaging in disruptive behavior.	3.19	1.01	-.04	-.58
CS24, Punishment for unfinished assignment.	2.33	1.04	.37	-.66
CS25, Informing parents.	2.32	.96	.75	.39
CS26, Talking to other teachers and getting encouragement.	3.00	1.07	.00	-.48
CS27, Warning students who are engaging in disruptive behavior.	3.00	.95	.22	-.71
CS28, Neglecting students' disruptive behavior	2.05	1.06	.69	-.41
CS29, Telling families about problems encountered at school.	2.99	1.21	.00	-.86
CS30, Asking a colleague or classmate or another experienced teacher for help in dealing with students' disruptive behavior.	2.95	1.07	.16	-.71
CS31, Warning students with a stick.	1.90	1.00	1.05	.61
CS32, Self-reflection and change behavior if it is necessary.	3.55	1.14	-.54	-.38
CS33, Building good relationships with students.	4.14	1.01	-1.22	.94
CS34, Banging the table with a stick to get students' attention.	2.15	1.20	.77	-.42
CS35, Reminding students not to be late for group assignments.	3.19	1.00	.20	-.86
CS36, Trying to control emotions and get along with other teachers.	3.79	1.11	-.71	-.32

CS37, Thinking about teaching methods for students with learning disabilities.	3.89	.94	-.70	.09
CS38, Getting help and advice from the principal.	3.21	1.09	.12	-.87
CS39, Calling a friend and discuss about the problem.	2.96	1.17	.04	-.77
CS40, Discussing with other teachers and getting advice on how to deal with students' parents.	3.03	1.12	.05	-.72
CS41, Discussing with classmates for teaching aids.	3.38	1.09	-.34	-.62
CS42, Talking to friends about emotional problems.	3.12	1.11	-.01	-.69
CS43, Getting help from a family member or other friend who has a teaching career .	3.08	1.10	.19	-.75
CS44, Getting feedback from a teacher at a teacher education university/degree college.	3.03	1.25	.08	-.97
CS45, Neglecting	1.71	.99	1.34	1.15
CS46, Comforting oneself by buying something.	2.17	1.16	.60	-.66
CS47, Self-blame.	1.88	.97	.67	-.71
CS48, Stop trying to solve problems.	1.61	.99	1.56	1.48
CS49, Looking at a difficult situation with humor.	2.40	1.22	.45	-.77
CS50, Informing yourself that the difficulty is temporary.	3.58	1.09	-.54	-.46
CS51, Scolding.	1.84	.97	1.22	1.29
CS52, Oversleeping	2.27	1.13	.49	-.62
CS53, Buying and eating a favorite food.	2.83	1.23	.01	-.96
CS54, Trying to forget it all.	2.29	1.11	.50	-.48
CS55, Treating others badly when angry/depressed.	1.72	1.00	1.12	.18
CS56, realizing that you have no control over the problem.	2.21	1.11	.55	-.54
CS57, Staying away from people.	2.10	1.12	.73	-.36
CS58, Shouting/Screaming	1.78	.99	1.01	-.03
CS59, Anticipating the worst outcome.	2.25	1.08	.51	-.47
CS60, Reporting to school disciplinary team.	2.24	.88	.43	-.21
logCS14	1.0987	.18	1.61	1.29

Communality value checking

Communalities		
	Initial	Extraction
CS4, Asking an experienced subject matter expert about a lesson.	.520	.442
CS6, Motivating students to be interested in the lesson.	.458	.420
CS11, Discussion with experienced teachers about teaching methods.	.560	.512
CS12, Self-reflecting on teaching methods.	.489	.444
CS13, Teaching slow learners over time after school time	.407	.408
CS15, Corporal punishment	.538	.537
CS16, Observing the teaching of more experienced teachers.	.514	.475
CS18, Discussion with principal to provide teaching aids.	.513	.547
CS19, Self-studying when there are difficulties related to the subject/pedagogy.	.455	.436
CS20, Re-teaching students with weak learning skills from the basic level.	.458	.453
CS21, Reminding students that they will be punished for not being late on group assignments.	.453	.517
CS24, Punishment for unfinished assignment.	.453	.424
CS26, Talking to other teachers and getting encouragement.	.497	.544

CS30, Asking a colleague or classmate or another experienced teacher for help in dealing with students' disruptive behavior.	.502	.503
CS31, Warning students with a stick.	.640	.688
CS32, Self-reflection and change behavior if it is necessary.	.452	.433
CS33, Building good relationships with students.	.646	.691
CS34, Banging the table with a stick to get students' attention.	.479	.456
CS36, Trying to control emotions and get along with other teachers.	.513	.477
CS37, Thinking about teaching methods for students with learning disabilities.	.542	.510
CS38, Getting help and advice from the principal.	.561	.517
CS39, Calling a friend and discuss about the problem.	.524	.513
CS40, Discussing with other teachers and getting advice on how to deal with students' parents.	.623	.600
CS41, Discussing with classmates for teaching aids.	.465	.454
CS42, Talking to friends about emotional problems.	.615	.697
CS43, Getting help from a family member or other friend who has a teaching career .	.524	.548
CS44, Getting feedback from a teacher at a teacher education university/degree college.	.469	.489
CS45, Neglecting	.487	.493
CS46, Comforting oneself by buying something.	.531	.545
CS47, Self-blame.	.457	.402
CS48, Stop trying to solve problems.	.541	.569
CS51, Scolding.	.500	.456
CS52, Oversleeping	.497	.499
CS53, Buying and eating a favorite food.	.498	.498
CS54, Trying to forget it all.	.433	.447
CS55, Treating others badly when angry/depressed.	.471	.472
CS56, Realizing that you have no control over the problem.	.471	.432
CS57, Staying away from people.	.568	.578
CS58, Shouting/Screaming	.535	.521
logCS14	.475	.440
Extraction Method: Principal Axis Factoring.		



Pattern Matrix[a]							
	Factor						
	1	2	3	4	5	6	7

CS33, Building good relationships with students.	.852						
CS32, Self-reflection and change behavior if it is necessary.	.680						
CS37, Thinking about teaching methods for students with learning disabilities.	.672						
CS6, Motivating students to be interested in the lesson.	.603						
CS36, Trying to control emotions and get along with other teachers.	.581						
CS19, Self-studying when there are difficulties related to the subject/pedagogy.	.578			.282			
CS12, Self-reflecting on teaching methods.	.492			.339			
CS21, Reminding students that they will be punished for not being late on group assignments.		.775					-.260
CS15, Corporal punishment		.736					
CS31, Warning students with a stick.		.734					
CS24, Punishment for unfinished assignment.		.657					-.285
CS34, Banging the table with a stick to get students' attention.		.641					
CS51, Scolding.		.464					
CS46, Comforting oneself by buying something.			.767	.311			
CS53, Buying and eating a favorite food.			.761				
CS52, Oversleeping			.604				
CS54, Trying to forget it all.			.603	-.253			
CS57, Staying away from people.			.578				.286
CS56, Realizing that you have no control over the problem.			.478				
CS55, Treating others badly when angry/depressed.			.378				.362
CS47, Self-blame.			.344				.257
CS18, Discussion with principal to provide teaching aids.				.683			
CS13, Teaching slow learners over time after school time				.638			
CS44, Getting feedback from a teacher at a teacher education university/degree college.	-.251			.614			
CS20, Re-teaching students with weak learning skills from the basic level.	.333			.573			
CS38, Getting help and advice from the principal.				.402			
CS26, Talking to other teachers and getting encouragement.					.760		
CS4, Asking an experienced subject matter expert about a lesson.					.577		
CS11, Discussion with experienced teachers about teaching methods.					.576		

CS30, Asking a colleague or classmate or another experienced teacher for help in dealing with students' disruptive behavior.					.571		
CS16, Observing the teaching of more experienced teachers.	.342				.395		
CS40, Discussing with other teachers and getting advice on how to deal with students' parents.				.302	.379		
CS42, Talking to friends about emotional problems.						.757	
CS43, Getting help from a family member or other friend who has a teaching career .						.600	
CS39, Calling a friend and discuss about the problem.						.538	
CS41, Discussing with classmates for teaching aids.				.345		.399	
CS48, Stop trying to solve problems.							.723
CS45, Neglecting							.635
logCS14		.250					.385
CS58, Shouting/Screaming		.267					.340
Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.[a]							
a. Rotation converged in 10 iterations.							