

TEACHING APTITUDE OF STUDENT TEACHERS IN YANGON UNIVERSITY OF EDUCATION

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Abstract

The purpose of this study was to investigate the teaching aptitudes of student teachers in Yangon University of Education (YUOE). The sample for this study consisted of 477 student teachers 250 males (117 from first-year and 133 from fourth-year) and 227 females (123 from first-year and 104 from fourth-year). Teaching aptitude test developed and standardized by Bingham (1937) and by Dr. R.P. Singh & Mrs. S. N. Sharma (2005) containing 30 items. These items were constructed with 28 multiple-choice questions and two open-ended questions. The reliability coefficient was found to be 0.705. The finding revealed that the student teachers make a significant difference in their aptitude due to variations in their gender, educational level, age group, specialization, and locality. This analysis results found that female student teachers are seen to be significantly better than male student teachers. According to the research findings, it was found that fourth-year student teachers may have higher aptitudes than first-year student teachers. There was a significant difference in age group. The regular attending older age group student teachers have a higher aptitude than the other groups. Similarly, there were also significant in specialization. The science major specialization student teachers have higher teaching aptitude than the others. There was no significant difference in locality. As a result of this study, it was found that there were significant differences in aptitude measures between gender, age group, educational level, and major specialization. It was hoped that the findings of this study will be useful to teachers, educators, and student teachers to know the importance of teaching aptitude. The findings of this study will be useful to improve the understanding of student teachers' teaching aptitude. This study indeed provides a positive impact on teacher educators for facilitating their student teachers with effective training.

Keywords: Aptitude, Teaching aptitude, Student teachers, Teaching.

Introduction

Nowadays in our education era, student teachers play an important role in the lives of teachers. In establishing a good education system in Myanmar, teachers' aptitude tests are an important factor in the success of education programs and can be investigated for the various factors that may affect education. In the education process, the teacher is the main pillar, and some specific abilities are necessary for gaining success in personal activities. So, a teacher should have a positive and right aptitude to guide the students. The teacher's performance is dependent to a great extent on his aptitudes and beliefs. Thus, it is made clear that a teacher should have an aptitude to teach, which an aptitude is the potential ability of an individual that promise future fruition into perfection (as cited in Spearman, 1927). Aptitude is a component of the capability to do certain kinds of work at a certain level, which can also be considered "talent". It describes the skills and ability of an individual to learn in the future. Aptitude is also a spontaneous or acquired capacity or ability and a tendency, capacity, or inclination to learn or understand. An individual's aptitude, when it means the capacity to acquire proficiency under appropriate conditions that is, his potentialities at present, as revealed by his performance on selected tests has predictive values. (Sharma & Ahmed, 2016).

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Teaching needs three qualities that are knowledge, communication, and aptitude. A teacher who possesses good teaching aptitude must be aware of the essentials of teaching like planning a lesson, motivating students, using the teaching-learning materials, following innovative teaching-learning strategies, consideration, group activities, and continuous and comprehensive evaluation. The above abilities that help an individual gain a required degree of proficiency or achieve success in a specific field are called aptitudes. An innate, acquired, learned, or developed component of competency for a certain kind of work at a certain level is also called aptitude. The teacher's teaching aptitude may also affect job satisfaction and his responsibilities toward academic activities. There are so many factors that have dominant roles in teachers' aptitude. A variety of factors seem to go along with teachers' aptitude and are dependent upon certain personal traits, intellectual and temperamental, and these often will enable the teacher to get over even drastic constraints imposed on his performance.

Therefore, in teacher education programs, it is necessary to give adequate importance to the teaching aptitude of student teachers. In selecting student teachers for teacher education institutions, it is essential to have an aptitude test. It is fortunate that many universities now started using aptitude components in their B.Ed. Entrance examinations. It has been made to study the teaching aptitude of the student teachers undergoing B.Ed. Course. Therefore, for the professional preparation of student-teachers, the study of teaching aptitude infatuated by them is very important. This study attempted to observe and compare the teaching aptitude of the student teachers. The success of any educational process depends on teacher effectiveness, teaching aptitude, attitude toward teaching, personality, and many more factors. For educational improvement, teaching aptitude becomes one of the major determinants of teacher effectiveness, and it is necessary to become an effective teacher.

Purposes of the Study

The purpose of the study was to investigate the teaching aptitude of student teachers in Yangon University of Education (YUOE).

The specific objectives of the study were:

- (i) to find out the significant difference in teaching aptitude of student teachers in YUOE by gender
- (ii) to examine the significant difference in teaching aptitude of student teachers in YUOE by age
- (iii) to investigate the significant difference in teaching aptitude of student teachers in YUOE by education level
- (iv) to study the significant difference in teaching aptitude of student teachers in YUOE by specialization
- (v) to examine the significant difference between student teachers of teaching aptitude according to locality

Research Questions

The research questions of the study were as follows:

- Are there any significant differences in the teaching aptitude of student teachers according to gender?

- Are there any significant differences in the teaching aptitude of student teachers according to age group?
- Are there any significant differences in the teaching aptitude of student teachers according to education level?
- Are there any significant differences in the teaching aptitude of student teachers according to students' specialization?
- Are there any significant differences in the teaching aptitude of student teachers according to locality?

Scope of the Study

The participants of this study were first-year and fourth-year student teachers (250 males and 227 females) from Yangon University of Education.

Definitions of Key Terms

Aptitude. Aptitude is a condition symptomatic of a person's relative fitness, of which one essential aspect is his readiness to acquire proficiency, his potential ability and another is his readiness to develop an interest in exercising that ability (Bingham, 1942).

Teaching Aptitude. Teaching aptitude is a specific capacity or special ability, distinct from the general intellectual ability of an individual, indicative of his probable success in a particular field after receiving an appropriate opportunity for learning or training (Kaur, 2014).

Student Teachers. Student teachers are those who are getting training or studying in B.Ed. course to become teachers (Ei Mon Mon Aung, 2019).

Teaching. Teaching is closely related to learning, the student's activity of appropriating this knowledge (Tricot, 2012).

Review of Related Literature

Aptitude can be defined as someone's natural capability to do something, and teaching aptitude refers to an individual's innate ability and character in teaching and learning (as cited in Rathod, 2021). It can also be defined as an individual's potential to effectively impart knowledge or skills to others, particularly after receiving appropriate training or education. Bingham (1937) defines aptitude as a condition or set of characteristics regarded as sympathetic to an individual's ability to acquire responses. He associates aptitude with the qualities that define an individual's behavior, which suggests how successfully they can learn to address and resolve particular types of challenges. Aptitude encompasses a range of characteristics that signal an individual's ability to gain specific knowledge, skills, or organized responses through training, such as learning a language, pursuing music, or performing mechanical tasks.

Good aptitude teachers can transform the educational experience, making it not only effective in imparting knowledge but also enjoyable and inspiring for students. Kaur (2007) established that academic achievement, teaching aptitude, and personality traits are the predictors of success in elementary teacher training. Cooley and Paul argued that these words "yesterday's achievement is today's ability and tomorrow's aptitude." Teaching aptitude is one of the major determinants of teacher effectiveness, and it is also found to be a good predictor of teacher effectiveness (Beena, 1995). The effectiveness of teacher education can be enhanced through

various approaches, such as refining the curriculum and enhancing practical teaching experience. Mastery in teaching is essential in this context.

Dave (1983) revealed that male and female teachers do not differ significantly in their Aptitude towards the teaching profession. Rawat and Srivastava (1984) established significant differences between male and female teacher trainees in their Aptitude towards the teaching profession. Beena (1995) indicated that teaching aptitude is a significant predictor of teaching effectiveness. Sajjan (1999) found a significant difference in teaching aptitude between male and female student teachers, and Kaur (2002) found that female teachers are more effective in their teaching than male teachers. Rodger (2007) in a study examined a possible aptitude treatment interaction between teaching clarity and student test anxiety. The findings indicated that both high and low teacher clarity had a notable positive impact on achievement motivation, but there was no interaction observed between teacher clarity and student test anxiety concerning aptitude.

Usha (2010) revealed a significant difference between the teaching aptitude of effective and ineffective male and female teachers. Rajasekar and Seetharaman (2013) stated that B.Ed. student teachers were below average in their teaching aptitude. Studies reviewed that the majority of male and female teachers differ significantly in their teaching aptitude, as reported by the studies conducted by Rawat and Srivastava (1984), Sajjan (1999), Kaur (2002), and Usha (2010). Kuraishy and Ahmed (2010) conducted a study in which academic background is an important factor in shaping the teaching aptitude of prospective teachers. The findings of the study revealed that high academic group members are more effective in teaching aptitude compared to those in the low academic group. It was also found that the male prospective teachers have a higher level of teaching aptitude and professional information. Kaur, (2014) conducted a comparative study of the teaching aptitude of B.Ed. student teachers. The main objective of the study was to find out teacher training programs to address any identified disparities in teaching aptitude based on gender or educational stream. The findings revealed that there was no significant difference between male and female student teachers. In this study, no significant difference was found between arts and science student teachers.

Method

Research Method

Descriptive research design and questionnaire survey method were used in this study.

Sampling

A total of 477 student teachers (males = 250, females = 227) from YUOE were selected as a sample to participate in this study. First-year student teachers (males =117, females =123) were randomly selected from different sections and fourth-year student teachers (males =133, females =104) were also selected from different sections in YUOE. A simple random sampling method was used.

Research Instrumentation

In this study, the teaching aptitude test developed and standardized by Bingham (1937) was used, and the Teaching Aptitude Test questionnaire developed by Dr. R.P. Singh and Mrs. S. N. Sharma (2005) was used for data collection for this study. This questionnaire classified two

types of items (multiple choice questions and open-ended questions). Each item of these questionnaires was scored according to the following categories, “1” for the right answer and “0” for the wrong answer. In open-ended items, similar codes were grouped into categories (categories 1 - 6) according to the student teachers’ responses. After the expert review was conducted for the content validity. The Cronbach’s alpha was 0.705 for the teaching aptitude questionnaire.

Data Analysis and Findings

Comparison of Teaching Aptitude of Student Teachers by Gender

Concerning the student teachers’ teaching aptitude, the gender difference was worthwhile to explore. To confirm the gender difference in the student teachers’ teaching aptitude, an independent samples *t*-test was applied. The mean scores and standard deviations for both male and female student teachers were reported in Table 1.

Table 1 The Results of Independent Samples *t*-test for Teaching Aptitude by Gender

Variable	Gender	<i>N</i>	Mean	<i>SD</i>	<i>t</i>	<i>p</i>
Total aptitudes	Male	250	14.18	4.433	-3.728***	.000
	female	227	15.66	4.219		

Note *** The mean difference is significant at .001 level.

Regarding gender, although a slight variation of mean scores exists in teaching aptitude, significant differences were found. According to the mean results, the females’ teaching aptitude was higher than that of males. There was a significant difference in *t*-test results ($t = -3.728$, $p < 0.001$ level). It is concluded that the teaching aptitude of female student teachers was higher than that of male student teachers.

Kanti (2011) conducted a study on the teaching aptitude of prospective teachers and found that female prospective secondary school teachers have a higher teaching aptitude when compared to their male counterparts. Krishna (2008) studied the teaching aptitude of students of B.Ed. colleges and which the female students possess more teaching aptitude than male students. The above research findings were similar to the results of this study that female prospective teachers have better teaching aptitude than male prospective teachers. This study finding was not consistent with Kulshreshtha and Heeranandini’s (2006) results. Kulshreshtha and Heeranandini’s (2006) findings suggested that prospective teachers of both groups (male and female) have a higher aptitude for teaching.

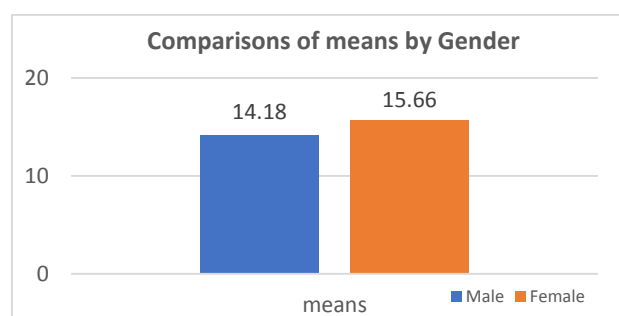


Figure 1 Comparison of Means by Gender

Comparison of Teaching Aptitudes of Student Teachers by Educational Level

To examine the teaching aptitude of student teachers from YUOE by educational level, descriptive statistics were analyzed. The analyses revealed slight differences in means and standard deviations for teaching aptitude by their educational level.

Table 2 The Results of Independent Samples *t*-test for Teaching Aptitudes by Educational Level

Variable	Educational level	N	Mean	SD	<i>t</i>	<i>p</i>
Aptitude	First-year	240	14.33	3.947	-2.797**	.005
	Fourth-year	237	15.45	4.741		

Note ** The mean difference is significant at .01 level.

According to the results of *t*-test, it was confirmed that there are significant differences in teaching aptitude. It was seen that significant differences exist among aptitudes measured by educational level. It may be said that fourth-year student teachers have higher aptitudes ($t = -2.797$, $p < 0.01$ level) than first-year student teachers.

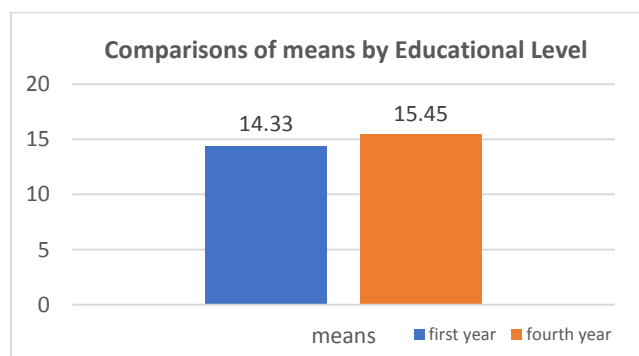


Figure 2 Comparison of Means by Educational Level

Comparison of Teaching Aptitudes of Student Teachers by Locality

Table 3 The Results of Independent Samples *t*-test for Teaching Aptitudes by Locality

Variable	Location	N	Mean	SD	<i>t</i>	<i>p</i>
Aptitude	Yangon Region	68	15.25	4.061	.741	.459
	Other Regions	409	14.82	4.445		

According to the results shown in Table 3, the mean values of total aptitudes for both Yangon and other regions were nearly the same and not significant. Thus, there were no significant differences between student teachers' aptitudes in Yangon and other regions.

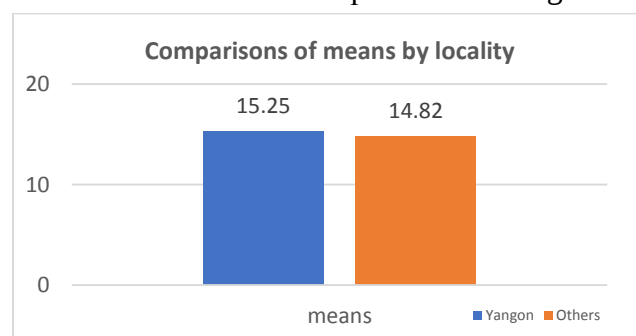


Figure 3 Comparison of Means by Locality

Comparison in Teaching Aptitudes of Student Teachers by Age Group

Table 4 Descriptive Statistics for Teaching Aptitudes of Student Teachers by Age Group

Age Groups	Number	Mean	SD
17-19 years	221	14.29	3.959
20-22 years	167	16.16	4.682
23-25 years	89	13.96	4.391

The results showed that there was a slight difference in the teaching aptitude of student teachers according to their age groups. The mean scores of student teachers in the 20-22 years age group were the highest. According to the descriptive results, the older age group and regular attending student teachers have greater aptitudes. There were mean differences in teaching aptitude by age group. Therefore, to examine whether these differences were statistically significant or not, a one-way analysis of variance (ANOVA) was conducted.

Table 5 The ANOVA Results of Teaching Aptitude for Student Teachers by Age Group

Total aptitude	Sum of squares	df	Mean square	F	P	
Between group	426.321	2	213.160	11.547***	.000	
Within group	8750.337	474	18.461			

Note *** The mean difference is significant at .001 level.

According to the ANOVA results, it was found that there was a significant difference in the teaching aptitude of student teachers by age groups at the 0.001 level (see Table 5). Thus, in 20-22 years age group had the greatest different aptitude. The Tukey HSD comparison procedure was computed (see Table 6).

Table 6 Results of Tukey HSD Comparison for Student Teachers of Teaching Aptitude by Age Group

(I)Age group	(J)Age group	(I-J) Mean Difference	P
(20-22 years)	(17-19 years)	1.868***	.000
	(23-25 years)	2.207***	.000
(17-19 years)	(20-22 years)	-1.868***	.000
	(23-25 years)	.339	.804

Note: *** The mean difference is significant at .001 level.

According to Tukey HSD results, it is easily seen that student teachers' aptitudes in the 20-22 years age group were significantly higher than those of the student teachers in the 17-19 years age group and 23-25 years age group. Thus, this research found that the student teachers in the 20-22 years age group had the highest positive aptitudes among these three groups.

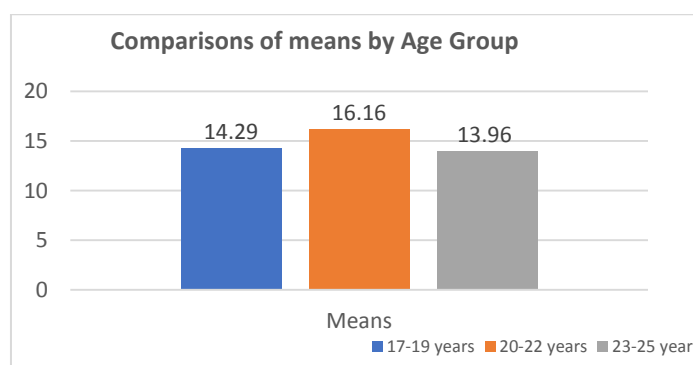


Figure 4: Comparison of Means by Age Group

Comparison of Teaching Aptitudes of Student Teachers by Specialization

Table 7 Descriptive Statistics for Teaching Aptitudes of Student Teachers by Specialization

Specialization	Number	Mean	SD
Science	225	15.66	4.715
Art-science	96	14.61	3.908
Art	156	13.94	3.987

The results showed that there was a slight difference in the teaching aptitude of student teachers according to their specialization. The mean scores of science major specialized student teachers were the highest. There were mean differences in teaching aptitude by their specialization. Therefore, to examine whether these differences were statistically significant or not, a one-way analysis of variance (ANOVA) was conducted.

Table 8 The ANOVA Results of Teaching Aptitude of Student Teachers by Specialization

Total aptitude	Sum of squares	df	Mean square	F	P
Between group	281.911	2	140.955	7.511***	.001
Within group	8894.747	474	18.765		

Note *** the mean difference is significant at .001 level.

According to the ANOVA results, it was found that there was a significant difference in the teaching aptitude of student teachers by specialization at the 0.001 level (see Table 8). Therefore, to find out which science major specialized student teachers had the greatest difference. The Tukey HSD comparison procedure was computed from this result (see Table 9).

Table 9 Results of Tukey HSD comparison for Student Teachers of Teaching Aptitude by Specialization

(I)Specialization	(J)Specialization	(I-J) Mean Difference	P
Science	Art-Science	1.043	.119
	Art	1.722***	.000
Art- Science	Science	-1.043	.119
	Art	.679	.449

Note: *** The mean difference is significant at .001 level.

According to Tukey HSD results, it is easily seen that student teachers' aptitudes in science major specialized student teachers were significantly higher than those of the student teachers in other major specializations. This can be concluded that the science major specialized student teachers had the highest positive aptitudes among these three groups.

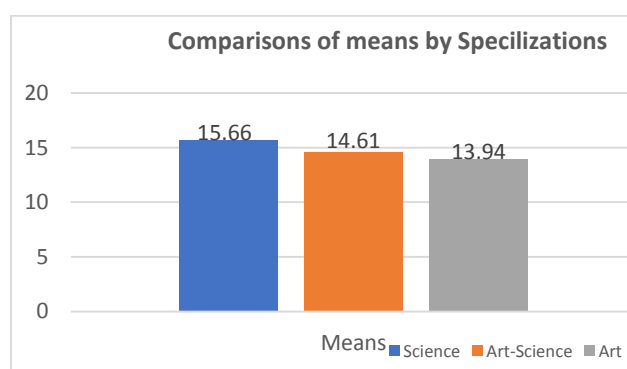


Figure 5 Comparison of Means by Specialization

After quantitative survey questions, this study follows the open-ended questions as a qualitative phase for knowing what factors affect student teachers' aptitude. In the qualitative phase, student teachers were given the opportunity to respond with their opinions by answering these two open-ended questions. All qualitative data were systematically coded and analyzed collectively, and the findings were then presented to an education professional for peer debriefing. Related codes were classified into different categories. An analysis of all qualitative data was conducted to answer the research questions, resulting in the identification of several overarching themes. Student teachers were encouraged to share their thoughts on two open-ended questions concerning the elements that influence teaching aptitude tests.

Question No. 29 asked about the student teachers' beliefs and feelings regarding their aptitude concerning teaching. The student teachers' responses, frequency to the respective factors, and the percentages are shown in Table 10.

Table 10 Responses, Frequency, and Percentage of the Teaching Aptitude Test

No.	Responses	Frequency	Percentage
1	The student teachers want to become teachers because of their interest in teaching. It is their hobby and ambition. Student teachers also have dreamed of becoming teachers since their childhood.	163	34.6%
2	The student teachers want to become teachers because they want to share their knowledge with the next generation. They also want to cultivate their pupils in their native place. They will support their pupils' education as much as they can.	89	18.7%
3	The student teachers want to become teachers because they hope that only the teacher can improve the future education. They want to contribute to their pupils, and community and create a better society with education as a teacher.	134	28.1%
4	The student teachers choose to become teachers because of job opportunities. On the other hand, they have no chance to attend another university according to their family's socio-economic situation.	27	5.7%
5	The student teachers choose to become teachers because of their parents' pressure and their surrounding persons forcing them to attend this university. Some of the student teachers arrive at this university because it is also their grandmother's dream.	52	10.9%
6	The student teachers weren't interested in teaching, but they attended this university because of their Matriculation Examination marks.	10	2.1%

163 respondent student teachers (34.6%) said that they are interested in teaching and their ambition is to become teachers. 134 respondent student teachers (28.1%) believed that they

hoped that they, as teachers, could contribute to society with education. 89 respondent student teachers (18.7%) believed that they wanted to share knowledge with the next generations. 52 respondent student teachers (10.9%) said that they attend this university because of their parents' force. 27 respondent student teachers (5.7%) mentioned that they chose to become teachers because of job opportunities. 10 respondent student teachers (2.1 %) said that they arrived at this university according to matriculation examination marks. According to the student teachers' responses, most of the student teachers were interested in their professional jobs and had high aptitudes for their future lives to become teachers.

Question No. 30 asked about how to handle a weak student in their teaching-learning situation. The student teachers' responses, the frequency of respective methods, and the percentages are shown in Table 11.

Table 11 Frequency and Percentage of Respective Methods on How to Handle a Weak Student

No	Responses	Frequency	Percentage
1	By providing encouragement, praise, motivation, and reinforcement to weak students. The student teachers want to create a positive learning environment.	101	21.2%
2	By trying to know what the weak student needs. By knowing their students' rate and pace, they will communicate with their students patiently, closely, and friendly.	69	14.5%
3	By studying their weak students' backgrounds thoroughly. Thus, they will know their students' limitations, emotions, and difficulties, and they will support their students to become stronger and have better mental health.	113	23.7%
4	By solving problems using various teaching strategies and appropriate methods. (such as giving feedback, doing remedial, making revisions, etc.)	138	28.9%
5	By searching to know everything about their weak students and closely interacting with their students' daily lifestyles. They want to create a private place, especially for their weak student.	31	6.5%
6	By doing research on this problem and finding a way to contribute to their students' needs and weaknesses. They don't ignore everything concerning the weak students.	25	5.2%

138 out of 477 respondent student teachers (28.9%) expressed how to handle a weak student in their teaching and learning situation by using various suitable ways. 113 respondent student teachers (23.7%) said that they will support their students to become stronger and have better mental health. 101 respondents (21.2%) of student teachers said that they want to create a positive learning environment. 69 respondents (14.5%) of student teachers pointed out that they

will try to know their weak student needs. 31 respondents (6.5%) of student teachers believed that they wanted to know everything about their weak students and closely interact with their students. 25 respondent student teachers (5.2%) said that they can contribute to their students' needs and weaknesses by doing research. According to item No. 30 student teachers' responses, most of the student teachers have high teaching aptitudes, and they also have high problem-solving skills. The student teachers know how to use suitable teaching strategies and methods when they find many challenges in their real situations.

Conclusion and Discussion

The main objective of the study was to investigate the teaching aptitude of student teachers in YUOE and to find out the improvement in teaching aptitude. The study used a quantitative research design with a questionnaire survey method. A total of 477 respondents from Yangon University of Education as the sample for the study. The investigation focused on various factors such as gender, age group, educational level, specialization, and locality about the teaching aptitude of student teachers. The findings indicated that female student teachers demonstrated a higher level of teaching aptitude compared to their male counterparts. Sharma (2006) conducted a study of teaching aptitude and found that female art student teachers secured significantly higher mean scores than their male counterparts art student teachers. Like many other studies, the present study also reflects the importance of female student teachers who possess more teaching aptitude. The results reported no significant difference in the measure of locality. It was revealed that student teachers of Yangon and other regions do not differ significantly in their teaching aptitude. In this study, there are significant differences in student teachers' teaching aptitude by their specialization, age groups, and educational level.

The present study investigates the essential elements of teaching aptitude among B.Ed. student teachers, highlighting that when these future educators demonstrate positive aptitudes, they are more adept at managing classrooms, understanding child psychology, and crafting activities that resonate with the interests and needs of their students. Teaching aptitude is an inherent trait, comparable to specific skills and abilities, that influences an individual's success and character. Additionally, the teaching aptitude of student teachers is shaped not only by their intelligence, academic achievements, or gender but also reflects a broader spectrum of their personality, including cognitive, emotional, and physical competencies. The effectiveness of any educational system hinges on the qualifications of its teachers, along with their instructional capabilities, teaching methodologies, personality characteristics, and various other elements. Thus, having proficient teachers is crucial for enhancing education, as their skills have a significant effect on the learning environment. Teaching aptitude plays a critical role in determining a teacher's capability to foster student engagement and drive academic achievement. Thus, a good teacher must have a good teaching aptitude, and so the introduction of the teaching aptitude test may help to improve the efficiency of the program as a part of the entrance examination for the teacher education program.

Limitations and Suggestions of the Study

There were some limitations in this study. The researcher selected the samples from only Yangon University of Education. So, the selected survey area was small. If the sample area is

more than one university, the results obtained from the data were more generalized and representative of the whole population. To confirm the findings, the target population should be selected from different universities and colleges. Teaching aptitude involves more than merely achieving a certain level during professional development or training; it is crucial to sustain that same aptitude or mindset over time. The teaching aptitude entrance test helps to ensure that people who want to become teachers have the right skills and qualities. By assessing candidates before they enter a teaching education program, the test helps improve the overall quality and effectiveness of the program. This way, better-prepared teachers can ultimately lead to better education for students.

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