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Teaching Proficiency and Preparedness of Pre-service Secondary Mathematics Teachers: its Implications to Actual Practice

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Abstract Teacher training institutions in the Philippines offering Bachelor of Science in Education major in Mathematics like the MUST aimed to produce globally competitive graduates ready for the challenge in becoming the next breed of excellent secondary mathematics educators in the field. However, are the prospective secondary mathematics teachers indeed ready for the challenge? This study would answer this question aimed at identifying the level of competence of these soon-to-be mathematics teachers. It would attempt to examine the pre-service mathematics subject matter knowledge (SMK), expertise in lesson planning activities, classroom management skills, instructional strategies and motivation, communication and questioning skills and professionalism from the cooperating teachers (CT's) perspective. Data collected were analyzed using frequency count, percentage, mean and standard deviation. Result revealed that the level of SMK of the prospective mathematics teachers was proficient and the rest of the competence indicators were on the approaching proficiency level which implies that although they were proficient with mathematics content, these prospective mathematics teachers are not fully equipped with all the necessary teaching skills. The trainings they received from the university during their academic years was adequate but not sufficient. The researcher then recommends that the university may consider designing an intensive professional development training program to be included in the curriculum for these prospective mathematics teachers before they will be deployed in the field.

Keywords: *pre-service secondary mathematics teachers, cooperating teachers, teaching proficiency, teacher preparedness*

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1. Introduction

The national government of the Philippines through the Department of Education (DepEd) had successfully implemented Republic Act 10533 otherwise known as the 'Enhanced Basic Education Curriculum of 2013" or simply called as the K-12 Curriculum Act. This remarkable change in the educational system of the country was in compliance with the 12 years basic education curriculum around the world. In effect, graduates of the Philippines educational system would be comparable to the graduates of the other countries of the world and would mean greater chances of employment in the globally competitive world. The ASEAN integration in the year 2015 and beyond would mean member countries of the ASEAN can actually apply for work in the Philippines and vice versa and therefore Filipino graduates should be equipped with the necessary skills and the DepEd K-12 curriculum hoped to fill the gap which the previous 10 years basic educational system of the country did not fully provide to its graduates. In terms of mathematics, the Philippines always lag behind from other countries in the region as evidenced by the performance of the country in the 2003 Third International Mathematics and Science Study (TIMMS) showed that the country ranked 34th out of the 38 countries participating in the survey. In 2008, even with only science high schools participating in the Advanced Mathematics category, the country ranked lowest among ten (10) countries. This underwhelming performance of the Filipino students in the international test comparisons motivated mathematics teachers to continually find effective teaching methodologies and conduct researches on how to develop deeper thinking and problem-solving skills of students. Both national and international mathematics organizations of teachers such as Mathematical Society of the Philippines (MSP), Philippine Council of Mathematics Teacher Educators (MATHTED), ICMI (International Commission on Mathematical Instruction) and the National Council of Teachers of Mathematics (NCTM) in the US and among others hold conferences to discuss recent and relevant issues concerning the teaching and learning of mathematics across all levels through presentation of research outputs of mathematics educators around the country and the world.

Mathematics teachers play an important role in the development of students' mathematical proficiency and therefore teacher training institutions of the country need to produce well-trained graduates who were excellent in both content and pedagogy [2,5,8,11]. These skills can be developed along with their experience in the actual classroom practice but as much as possible, these pre-service mathematics teachers were already school-ready when they will be emerged in the workplace. Mindanao University of Science and Technology (MUST) presently named as the University of Science and Technology of the Philippines (USTP) mandated to provide advanced education in science and mathematics started offering the course Bachelor of Science in Education major in Mathematics through the Commission on Higher Education (CHED) Memorandum Order (CMO) No. 30 series of 2004 or the Revised Policies and Standards for Undergraduate Teacher Education Curriculum since 2008. The university has produced already five batches of graduates of this program and most of these graduates already worked in either public or private high schools in the city and even to some parts of Northern Mindanao. The majority of these secondary mathematics education graduates has been successful in taking in the licensure examination for teachers. The passing rate of these graduates was always higher than the national passing rate, in fact, the first batch of graduates got an overwhelming 92.86% passing rate while batch 2015 graduates got 77% passing rate. There was already a decline from the licensure examination for teachers passing rate and this is quite alarming for the university. In an effort to produce quality graduates and earned 100% passing rate in the licensure examination for teachers, the Department of Mathematics Education of the university with the assistance of the DepEd division of Cagayan de Oro, immersed these pre-service teachers in the field to have experiential learning and teach high school students applying what they have learned in their academic years in the university. In order to examine the level of proficiency and preparedness of these pre-service teachers in the actual teaching scenario as observed by their cooperating teachers, this study was conducted. The result would be of beneficial for the university to know what specific area these pre-service teachers' needs to be cultivated and appropriate training would be created to address these problems and could be a solution for the underwhelming performance of the graduates in the licensure examination for professional teachers.

2. Objectives of the Study

This research sought to determine the level of proficiency and preparedness of the pre-service secondary mathematics teachers of MUST as perceived by the cooperating teachers in the field. Specifically, the level of proficiency and preparedness would be measured in terms of the following criterions:

1. Subject Matter Knowledge (SMK)
2. Lesson Planning
3. Classroom Management
4. Instructional Strategies and Motivation
5. Communication Skills
6. Questioning Skills
7. Professionalism.

3. Methods

3.1. Design and Data Gathering Procedures

This study utilized both qualitative and quantitative research design. The pre-service mathematics teachers were given the opportunity to have experiential learning from both in-campus and off-campus immersion. Immediately after securing an approval of the teaching assignment of these respondents from the School Principal, the chairperson of the Secondary Mathematics Education program and the Dean of the college, the Cooperating Teachers (CT) would be given class observation instrument to measure their student teacher proficiency and preparedness of classroom teaching considering class size, attitude and working environment. The class observation and evaluation would be done using pre and post conferences of the teaching demonstration. Aside from the scheduled teaching demonstration, the CT's would also observe critical areas not covered in the demonstration such as punctuality and their ability to follow instructions and openness to suggestions from the cooperating teacher. During the teaching demonstration, the student teaching coordinator would be invited to sit down and discuss with the cooperating teacher on how the student teacher would be helped to improve on some areas needing attention. This was also done in order to validate on what really happened during the actual teaching demonstration and to avoid biased and unfair judgment from the cooperating teachers.

3.2. Respondents of the Study

The respondents of this study were the thirty-seven (37) pre-service secondary mathematics teachers of the Department of Mathematics Education of the College of Policy Studies, Education and Management of MUST, 14 of them were males and 23 females. These respondents were on their final semester in the university, they started as eighty (80) students but some of the students failed in their academic subjects and eventually culled from the program and others students stopped for personal and financial reasons. Majority of these pre-service mathematics teachers were assigned in the public secondary schools and some were retained in the university because of their lacking academic subjects not taken the same as the regular students. These respondents were deployed in the field through the memorandum of agreement between the university and DepEd of the division of Cagayan de Oro City being the catch basin of these graduates. The school assignment of these respondents was made in accordance to their proximity to their home location to the school. These respondents were under the guidance of a cooperating teacher and the student teaching coordinator. As to how they would be distributed in the school, the mathematics coordinator takes charge of the justified distribution with the approval of the School Principal. They would be oriented with school policies and other important matters concerning their work, the school, and the students. Because these were public high schools, it would be expected to cater large classes ranging from 60 to 70 students per section.

These pre-service mathematics teachers would report to the school and render eight (8) working hours per day parallel to the regular teacher working hours in the school. The table below shows the distribution of the respondents by station:

Table 1. Distribution of the Respondents by Station

Station	Frequency	Percentage
Cagayan de Oro National High School	9	24.32%
Lapasan National High School	10	27.03%
Agusan National High School	3	8.11%
Macabalan National High School	2	5.40%
Opol National High School	3	8.11%
Mindanao University of Science and Technology	10	27.03%
Total	**37**	**100%**

3.3. Instrumentation and Statistical Tools

This study utilized a validated student teacher observation form across all teacher education programs of the college. The survey questionnaire was developed by the faculty of the college to measure pre-service teachers' mastery of lesson planning, subject matter competence, classroom management, instructional strategies and motivation, communication skills, questioning skills and professionalism. At the end of the semester, cooperating teachers gave report cards of their student teachers. In the report card, cooperating teachers were required to write verbal comments and suggestions for the improvement of the student teacher and to provide student teaching coordinator additional basis for final grade computation of the student teacher.

The level of competence of the pre-service mathematics teachers in the different aspects would be measured using mean and standard deviation. The mean of the different aspects would be interpreted using the table below:

Table 2. Mean Intervals and Description

Mean Intervals	Description
3.50 – 4.00	Very Good
2.50 – 3.49	Good
1.50 – 2.49	Fair
1.00 – 1.49	Poor

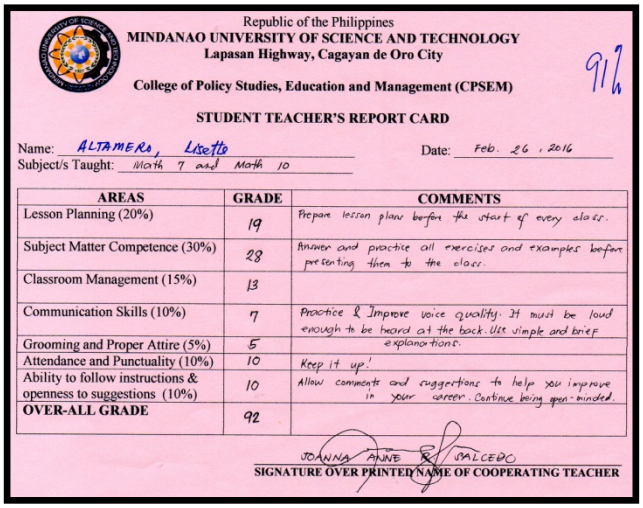
The demographic profile of the respondents would be computed using frequency count and percentage.

4. Results and Discussion

Table 3. Mean Level of Subject Matter Knowledge (SMK)

Competence Indicator	Mean	SD	Description
Subject Matter Knowledge (SMK)	27.29	2.012	Proficient

Table 3 above displays the mean level of subject matter knowledge (SMK) of the pre-service mathematics teachers as perceived by the cooperating teachers. SMK was measured in terms of the pre-service mathematics teachers' demonstration of mastery of the subject matter content, updated knowledge and awareness on the current trends and issues of the subject, ability to integrate the subject to practical circumstances and learning intents of students and shares information on the state-of-the-art theory and practice of the mathematics discipline. Result showed that they were proficient as indicated by the overall mean of 27.29 out of 30 points. This implies that the mathematics content they learned during their academic years in the university was adequate and sufficient. This could be attributed to their exposure to the number of mathematics courses they were able to take up and the exposure and trainings of the mathematics teachers handling these specialization subjects. Three of the report cards of the pre-service mathematics teachers showing the rating of the cooperating teachers were shown below:



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College of Policy Studies, Education and Management (CPSEM)

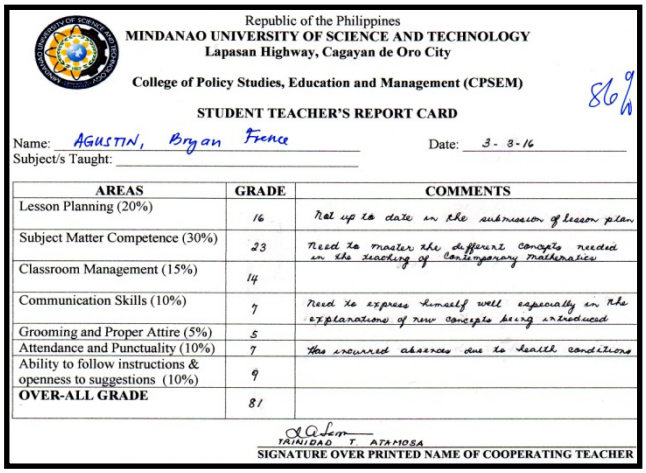
STUDENT TEACHER'S REPORT CARD

Name: ALTAMERA, Lisetto Date: Feb. 26, 2016
Subject/s Taught: Math 7 and Math 10

AREAS	GRADE	COMMENTS
Lesson Planning (20%)	19	Prepare lesson plans before the start of every class.
Subject Matter Competence (30%)	28	Answer and practice all exercises and examples before presenting them to the class.
Classroom Management (15%)	13	
Communication Skills (10%)	7	Practice & Improve voice quality. It must be loud enough to be heard at the back. Use simple and brief explanations.
Grooming and Proper Attire (5%)	5	
Attendance and Punctuality (10%)	10	Keep it up!
Ability to follow instructions & openness to suggestions (10%)	10	Allow comments and suggestions to help you improve in your career. Continue being open-minded.
OVER-ALL GRADE	92	

JOANNA ANNE R. VALCEDO
SIGNATURE OVER PRINTED NAME OF COOPERATING TEACHER

Figure 1. Pre-Service Mathematics Teacher 1 Sample Report Card



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STUDENT TEACHER'S REPORT CARD

Name: AGUSTIN, Bryan Fience Date: 3-8-16
Subject/s Taught:

AREAS	GRADE	COMMENTS
Lesson Planning (20%)	16	Not up to date in the submission of lesson plan.
Subject Matter Competence (30%)	23	Need to master the different concepts needed in the teaching of Contemporary Mathematics
Classroom Management (15%)	14	
Communication Skills (10%)	7	Need to express himself well especially in the explanations of new concepts being introduced
Grooming and Proper Attire (5%)	5	
Attendance and Punctuality (10%)	7	Has incurred absences due to health conditions
Ability to follow instructions & openness to suggestions (10%)	9	
OVER-ALL GRADE	81	

TRINIDAD T. ATAMOSA
SIGNATURE OVER PRINTED NAME OF COOPERATING TEACHER

Figure 2. Pre-Service Mathematics Teacher 2 Sample Report Card

Table 4. Mean Level of Pre-Service Mathematics Teachers' Lesson Planning Competence

Indicators	Mean	SD	Description
1. Defines objectives clearly.	3.24	0.555	Good
2. Links subject matter to students' interest and experiences.	2.97	0.517	Good
3. Clearly identifies sequential development of activities.	3.12	0.456	Good
4. Use relevant examples.	3.26	0.489	Good
5. Allocates time to activities in accordance with objectives.	3.15	0.584	Good
6. Indicates transition procedures from one activity to the next.	3.16	0.450	Good
7. Indicates evaluation procedures.	3.21	0.446	Good
8. Adapts and revises lessons as unit progresses.	2.93	0.423	Good
9. Plans a variety of teaching strategies.	2.80	0.491	Good
10. Relates subject matter to other knowledge.	2.92	0.360	Good
OVERALL	**3.08**	**0.477**	**GOOD**

The table above revealed that in terms of lesson planning competence, the pre-service teachers showed a good performance as indicated by the overall mean of 3.08. In all indicators, the respondents also showed a good performance with the respondents' ability to use varied examples received the highest mean and planning a variety of teaching strategies as the lowest. This implies that student-teachers are quite good in presenting illustrative examples which would capture the concept in the lesson. Not far from the highest mean, these respondents' were able to present the objectives clearly and assessment of learning was evident in the prepared lesson plan. However, these respondents need to be exposed to different teaching strategies so they can choose a variety of teaching methods and apply in their classes not relying much on lecture-discussion method. Moreover, they need to be trained on how important is technology in their mathematics classes. Samples of verbatim comments of the selected ten (10) cooperating teachers on the pre-service mathematics teachers' lesson planning competence are shown below:

CT 1: "When making objectives, always consider the affective domain."
CT 2: "Develop timeliness in submitting the lesson plan."
CT 3: "The lesson plan is well written and contains all essential elements (objectives, materials, procedures and assignments."
CT 4: "He needs to improve his handwriting."
CT 5: "Minimize the time you spend talking as a teacher, keep the focus on the learner."
CT 6: "Well organized."
CT 7: "Attainable and measurable"
CT 8: "He has the knowledge in designing lessons with congruent objectives, learning activities and instructional materials. He uses relevant examples."
CT 9: "He makes sure that his students' are motivated."
CT 10: "Improve your penmanship"

The pre-service mathematics teachers were knowledgeable in preparing organized, attainable and measurable lesson objectives of a lesson plan, however, they need to put more emphasis on designing student centered activities which promotes engagement, collaboration, and communication and mathematical tasks which helps develop students' critical thinking and problem solving skills Timeliness and consideration of the affective domain in the lesson plan should also be given attention.

Table 5. Mean Level of Pre-Service Mathematics Teachers' Classroom Management Competence

Indicators	Mean	SD	Description
1. Establishes workable routines.	3.25	0.480	Good
2. Gives clear direction before and not during activities.	3.16	0.533	Good
3. Administers rules consistently and fairly.	3.17	0.423	Good
4. Monitors students' behavior consistently.	3.05	0.402	Good
5. Creates a friendly and positive classroom climate.	3.35	0.478	Good
OVERALL	**3.19**	**0.477**	**GOOD**

In all indicators of classroom management competence of pre-service mathematics teachers, they received a good rating from the cooperating teachers. They showed friendly and positive classroom atmosphere which is really important for greater learning opportunities. Monitoring students behavior is another which the teacher need to consider, students' who misbehave in the class could be a distraction for other students' who are very eager to learn and detrimental to the learning competence of the student himself. Teachers who strive for excellence will incorporate a vast array of behavior management approaches in order that all children are engaged in a meaningful learning environment. Effective teachers creating and maintaining an orderly, productive classroom environment has long been viewed as one of the essential elements in teaching competence (LaCaze, McCormick & Meyer, 2012). Below were some of the verbal comments of the cooperating teachers in terms of classroom management practices of the pre-service mathematics teachers assigned to them:

CT 11: "Classroom management is difficult especially if you are dealing with Grade 7 students. Even though, she is small but she handled it with grace."
CT 12: "She maintains order and discipline inside the class."
CT 13: "Needs to be strict during quizzes and discipline the class during discussion."
CT 14: "He always monitors the students' behavior. He is able to create a friendly environment".
CT 15: "She is concerned for a safe and conducive learning environment".
CT 16: "We can't avoid students' who are hard headed but try to be more patient with them."
CT 17: "Has variety of strategies in managing the class."
CT 18: "Learn more on how to manage the classroom especially with large size of the class."
CT 19: "Flexible and maintains composure even at times of difficult situation"

The above verbal comments showed that the pre-service mathematics teachers tried to maintain order and discipline in the class applying different strategies however the size of the class sometimes becomes difficult to handle. Further probing showed that they need to improve their classroom management skills that they should not be intimidated by the class behavior and they need to design activities which promotes active learning minimizing students' inappropriate behaviors during class discussion. It is also recommended that they should provide effective conventional and non-conventional management styles by considering students' different backgrounds to produce a safe, caring and orderly classroom environment capable of honing students' mathematical skills at a maximum rate. As a matter of fact, it is acknowledged that for productive learning environments to exist, classroom management must be intertwined with effective instruction that is engaging and meaningful [6].

The overall mean level of the pre-service mathematics teachers' instructional strategies and motivation competence is 3.10. This indicates that the pre-service mathematics teachers demonstrated a good performance in using varied effective instructional strategies which would be appropriate for the learner's need. Additionally, these respondents were very clear in their lesson objectives in the class as reflected in their lesson plan however, they sometimes failed to make a summary of the activity and did not all the time provide students with interesting and meaningful assignments. Assignments are reinforcement methods and could boost learning retention among students. Some CT's noted that these pre-service

mathematics teachers were very much concern on how the topics should be met within the timeframe as reflected in their syllabus but did not thoroughly examine if concepts were captured very well by the students. In effect, they tend to talk and discuss very fast and even forgot to reteach concepts which were not perfectly absorbed and applied by the students. In fact one CT commented:

"There are times when students do not understand immediately your explanation, try your best to find another way of explaining it so that your students can understand it clearly".

Table 6. Mean Level of Pre-Service Mathematics Teachers' Instructional Strategies and Motivation Competence

Indicators	Mean	SD	Description
1. Gains full attention of the learners at the beginning of the lesson.	3.19	0.472	Good
2. Makes the intent of the lesson clear to the learners.	3.23	0.461	Good
3. Maintains student attention during the lesson.	3.10	0.426	Good
4. Executes smooth transition from one activity to another.	3.02	0.474	Good
5. Checks frequently for understanding during the lesson.	3.15	0.457	Good
6. Paces the lesson appropriately.	3.12	0.359	Good
7. Provides a summary of the lesson content.	2.92	0.437	Good
8. Re-teaches the lesson when necessary.	3.11	0.501	Good
9. Provides regular reviews.	3.20	0.379	Good
10. Provides interesting and meaningful assignments.	2.91	0.443	Good
OVERALL	**3.10**	**0.441**	**GOOD**

Table 7. Mean Level of Pre-Service Mathematics Teachers' Communication Skills Competence

Indicators	Mean	SD	Description
1. Expresses thoughts fluently.	3.09	0.433	Good
2. Speaks at an appropriate rate.	3.17	0.528	Good
3. Uses acceptable voice expression and pitch projection.	3.23	0.357	Good
4. Uses appropriate vocabulary.	3.10	0.363	Good
5. Displays command of standard grammar.	3.04	0.396	Good
6. Responds appropriately to both verbal and non-verbal messages.	3.20	0.504	Good
OVERALL	**3.14**	**0.430**	**GOOD**

Table 7 showed the report of status pre-service mathematics teachers' level of communication skills. Result revealed that they only performed good as indicated by the mean of 3.14. They had established good and acceptable voice expression and pitch projection but were not really excellent of the language. Moreover, they always find time to respond to students verbal and non-verbal messages and quite good in expressing their thoughts using the appropriate vocabulary. With this result, they need to be trained on how to improve their language skills most especially that they will be teaching mathematics. They need to be both experts on the language of teaching and more so the language of mathematics. Language problem is one of the major factors contributing towards the poor performance of many students in mathematics [3]. Communicating mathematics to students in a classroom is mediated by language. Therefore, language has a crucial role to play in communicating and developing mathematics education [10] and the National Council of teachers of Mathematics (NCTM) stressed the importance of role of language in mathematics teaching and learning. In the study, communication has been emphasized as an essential part of Mathematics and Mathematics education [9]. Some of the CT's comments are displayed below:

CT 21: "He has the ability to connect and communicate with his students. A little improvement is needed."
CT 22: "He found ways to communicate students to their level of understanding."
CT 23: "Smooth flow of well-organized logical ideas in every discussion."
CT 24: "She has the ability to convey ideas and concerns at students' level."
CT 25: "Results showed that the students' comprehended the lessons taught. He speaks well with modulated voice."
CT 26: "Communication skills can be develop through time, just keep on practicing…."

Table 8. Mean Level of Pre-Service Mathematics Teachers' Questioning Skills Competence

Indicators	Mean	SD	Description
1. Presents questions in a logical sequence.	3.09	0.558	Good
2. Uses questions as diagnostic tools.	3.06	0.446	Good
3. Ask clear questions.	3.10	0.458	Good
4. Distributes questions evenly among students.	3.00	0.417	Good
5. Restructure questions if necessary.	2.99	0.542	Good
6. Paces questions appropriately (e.g. wait time)	3.05	0.484	Good
7. Acknowledge students' answers and responds with appropriate feedback.	3.19	0.394	Good
8. Encourage students' questions.	3.22	0.399	Good
9. Incorporates students' questions into the lesson when possible.	3.07	0.267	Good
OVERALL	**3.08**	**0.440**	**GOOD**

Questioning techniques used by mathematics teachers has been proven as an effective tool to develop students' interest, critical thinking skills, motivate students to become actively involved in lessons, evaluate students' preparation and check on homework or seatwork completion, review and summarize previous lessons, nurture insights by exposing new relationships, assess achievement of instructional goals and objectives and stimulate students to pursue knowledge on their own [4]. The result above showed that the pre-service mathematics teachers manage to perform quite good in the different indicators. They knew how to encourage students' to ask questions but not really that very good in restructuring questions whenever needed to meet the learning demand of the students. It is essential that the teacher understand the importance of "good question-asking skills" in mathematics lessons. The teachers need to create a variety of situations in which their own questions relate to the proposed questions, as well as recognizing situations that call for fostering the skill of question-asking and addressing them immediately and in the long run. To achieve this, it is necessary to plan the teaching by choosing question items that suit the student population, the teaching goals, the different needs and the teacher's own teaching style [1].

Table 9. Mean Level of Pre-Service Mathematics Teachers' Professionalism Competence

Indicators	Mean	SD	Description
1. Come to class on time.	3.61	0.311	Very Good
2. Dresses appropriately at all times.	3.51	0.289	Very Good
3. Displays willingness to learn under the cooperating teacher's guidance.	3.55	0.360	Very Good
4. Shows emotional control.	3.50	0.238	Very Good
5. Respects proper authority.	3.58	0.299	Very Good
6. Demonstrates dependability.	3.51	0.255	Very Good
7. Acts in the most appropriately manner in the presence of the students.	3.58	0.311	Very Good
OVERALL	**3.55**	**0.295**	**VERY GOOD**

Professionalism in teaching could be one of the most important aspect in the soon to be working careers of these future mathematics teachers in the field. As molders of the youth, professional teachers should recognize that the interest and welfare of the students are his first and foremost concern. Teaching is considered to be the noblest profession and thus these incoming teachers should manifest genuine enthusiasm of their profession. Specifically, in this study, professionalism would be measured in terms of the pre-service mathematics teachers social regard for learning, that is, they abide by and implemented school policies and procedures, demonstrated punctuality in accomplishing the tasks assigned to them and attendance in all occasions, maintained appropriate appearance and decorum and showed appropriate behavior in dealing with learners,, peers and superiors. In the result above, it showed that the pre-service mathematics teachers deployed in the field already showed a very good performance with punctuality receiving the highest rating from the CT's. This only proved that these respondents have already valued how important time and they also demonstrated high respect to their superiors and act like a professional teacher in front of their students. The result also showed that they were very open to constructive criticisms they received from their CT's. The comments of some CT's about their ability to follow instructions and openness to suggestions were shown below:

CT 27: "Allow comments and suggestions to help you improve in your career. Continue being open-minded."
CT 28: "He is willing to learn and has the ability to follow instructions."
CT 29: "Assures her cooperating teacher that she has a good performance by the following the suggestions given."
CT 30: "She listens to my instructions and assist me whenever we have activities at school."
CT 31: "She is very obedient."
CT 32: "Demonstrate initiative and assumes responsibility."

5. Concluding Statements

Teacher training institutions in the Philippines like the Mindanao University of Science and Technology (MUST) should continually provide adequate and sufficient trainings for the prospective mathematics teachers to become fully competent and become an instrument in the declining status of mathematics achievement of Filipino students as shown in the local, national and international comparisons. The majority of the students received such in the case of MUST do not really possess the necessary skills which they need to master during their high school days. In fact, many of the students taking College Algebra failed on their first take since they were not fully equipped with the foundation skills. In this case, the university may consider thorough screening process of those high school entrants to the university who would wish to enroll in the program. Moreover, teachers handling professional education subjects should look into innovative ways on how current trends in education be applied in the real teaching and learning of mathematics concepts. They need to really exposed teacher education students through authentic learning from their subjects supported with feasibility studies. In fact, it was recommended that teachers with the particular specialization should be the one teaching the professional education subjects of these prospective teachers of the field and even more teachers handling teacher education students should also well-trained and competent on how to train these prospective mathematics teachers. Intensive professional development workshops should be considered by the program heads before these pre-service mathematics teachers graduate. The academic years they have rendered in the university is not sufficient for them to really capture the ideas and apply them in the real classroom setting. The licensure examination in which these teachers would take after graduation would not be the sole basis for them to become effective and efficient in the field, their experience and professional enhancement should be taken seriously and hopefully be a contributory factor for the success not only in licensure examination results of the secondary mathematics education graduates but more on their impact to students learning in mathematics.

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