

PROFESSIONAL DEVELOPMENT FOR PRE-SERVICE TEACHER:

A Case Study of Professional Development Program for Pre-service Teacher in State University in Central Indonesia

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Abstract

The present study was a case study which aimed at exploring pre-service teachers' perceptions of PPG-SM3T program for their professional development. PPG-SM3T program is a professional development program for pre-service teacher in Indonesia. Research design of this study was quantitative design and used convenience sampling. The sample was 60 pre-service teachers who graduated from PPG-SM3T program in a state university in central Indonesia. Instrument used to collect data for the present study was questionnaire and analysis consisted of Principal Component Analysis, Reliability test, and Exploratory Data Analysis were done in order to analyse the data. From the results of analysis, it was found that generally pre-service teachers who took PPG-SM3T program in the mentioned university response positively toward the program. It was found to be very effective for most of them as a preparation to be professional teachers. Workshop and field teaching practice were two features in the program that particularly helpful to prepare them to be professional teacher. However, it was also found that more supervision is needed for pre-service teacher during the program as well as non-teaching activities. Some specific cases also need to be considered for future improvement.

Keywords:

Pre-service teacher's perception, PPG-SM3T program, professional development, teacher education in Indonesia

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Introduction

1.1 Background of the Study

Teachers are important component of education in the realization of educational goals. They are also the most important person in teaching who manages learning experiences and environments. In teaching, teachers use themselves and their knowledge, skills, attitude, and practice and students learning achievement highly depends on teachers' readiness in establishing the activity (Namunga and Otunga, 2012). Teachers play an important role in teaching and learning process to improve student outcomes and their effects towards students' learning appear to be sustained and accumulative (Darling-Hammond, Wei, & Johnson, 2012). Studies on teacher effects towards students' achievement have found that teachers determine differences in students' learning and they also can make a bigger difference to students' educational success than most other variables (Darling-Hammond, 2006). The influence of good or bad teacher not only affects students' learning during their present year but also in their further years.

In many literatures, teachers are required to have good competences, performance, actively involved in professional development, engage knowledge with current issues, conduct the tasks ethically, and show commitment or responsibility in teaching practice at school. Teachers also require to engage in learning opportunity in professional development such as workshop, mentoring, and training to support their role (Tanang and Abu, 2014). Teacher professional development is a priority of education systems and teachers themselves for teachers need to update their skill and knowledge base. Studies have shown that professional development programs develop teachers' knowledge, pedagogical skills, increase confidence in teaching and also develop positive attitude on teaching and student learning (Radford, 1998; Stein et al., 1999).

Helping teachers to update their knowledge and skills and to deal with change, as well as to manage human resources is necessary and professional development helps teachers to achieve better achievement in above matters (Tanang & Abu, 2014). The core of professional development for teachers is about teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students' growth (Avalos, 2011). In case of Indonesia, the government have launched teacher professional development program (PPG) to help pre-service and in-service teachers developing their professionalism. Courses provided

in this program allow teachers to have plenty of opportunities to learn what a teacher should do and need to know in order to be effective and this program is believed to improve quality of teacher (Republika, 2014). Many researches have focused on Indonesia's teachers professionalism and professional development as well as the factors that affect their formation. However, only little that focuses on the views of teachers themselves regarding these issues. The present study aimed at exploring pre-service teachers' perception about the professional development program they have joined for their professional development. Teachers' perceptions could provide a reflective context for a further discussion on the issue of their professional development. Examining pre-service teachers' perceptions is important for it could provide a new focus for hidden potential in teacher professional development programs and an understanding of the effect the method they used in their courses (Tarman, 2012).

1.2 Aims and Objectives

The present study is about a professional development program for pre-service teacher in Indonesia called PPG-SM3T program. The research question of the study is: What are the perceptions of pre-service teachers about PPG-SM3T program for their professional development? This study aims at exploring pre-service teachers' perceptions of PPG-SM3T program for their professional development. More specifically, the objectives of the study are:

1. To find out to pre-service teachers perception on opportunities provided by PPG-SM3T program to learn to teach.
2. To find out pre-service teachers' perceptions on how well PPG-SM3T program prepare pre-service teachers with adequate professional knowledge.
3. To find out pre-service teachers' view on how well PPG-SM3T program prepare pre-service teacher with professional practice.
4. To find out pre-service teachers' perceptions on how well PPG-SM3T program prepare them to engage personally and socially in the profession.

1.3 Scope and Limitations of the Research

Every research study has its limitation and delimitation and attempt should be made in order to minimize their interference and impact since they may challenge the accuracy of the study. Present study is a case study where the case is an object of interest in its own right and the researcher aims to provide and in-depth elucidation of it (Bryman, 2012). It is about a pre-service teacher professional development program which took place in one state university in central Indonesia. The population is graduates of the PPG-SM3T program in the chosen university. Since the research takes place at a specific place in a specific time, it cannot be generalized and cannot be applied to other scenarios beyond the case. The research is mainly about pre-service teachers' perceptions of PPG-SM3T program for their professional development. Variables used in this study are the ones that closely related to opportunity provided in the program for its participants to learn to teach, teachers' professional knowledge, provided practice and professional engagement provided by the program for teachers to develop their professionalism. Bias in this study may come from social desirability. In order to answer the research question, the present research has to rely on subjective indications and issues related to the phenomenon of social desirability bias cannot be excluded entirely. Moreover, since the researcher is a native Indonesian and was educated as a teacher in Indonesia, it can be seen an advantage regarding language barrier and background knowledge about Indonesian teacher education. However, this matter could also lead to the risk of bias and negligence of important facts that are taken for granted.

1.4 Significance of the Study

Educational research is essential in providing scientific justification for exploring strengths and weaknesses of an educational institution as well as for its development in the future. The role of PPG-SM3T program is crucial to support government programs for better teacher quality. To be able to provide high-quality education, teachers must be equipped with adequate knowledge and skills that are necessary for their teaching which brings positive learning outcomes. This research is high significance for various reasons. The results of the research will provide some considerations and suggestions specifically for future development of the program and for teacher professional development in general. Considering small number of research of pre-service teacher in Indonesia, findings of this study can be used as additional reference for researchers who want to do research in the same field.

1.5 Context of the Study

1.5.1 Overview of Indonesia

Indonesia is an archipelagic nation located in Southeast Asia region. The form of its government is republic with third-largest democracy and a president directly elected by their people. Demographically, the nation is young and has a growing middle class population. With population over 250 million people, Indonesia is the fourth most population country in the world after China, India, and the United States. The economy is the biggest in Southeast Asia and having strong GDP growth of between 5.0 and 6.5 % for over a decade. More than 50% of the population live on the island of Java, where the capital of Indonesia, Jakarta, is located. In international relations, Indonesia is the founding father of ASEAN, participated in the United Nations membership, APEC, member of G-20 major economics, and soon will be joining OECD.

Figure 1. Map of Indonesia



Consisting of more than 17 thousands islands, Indonesia is the largest archipelago in the world. Currently, it consists of 34 provinces and five of them have special status. *Aceh*, *Daerah Istimewa Yogyakarta*, *Papua Barat*, and *Papua* have wider privilege of legislation and higher level of autonomy than other provinces.

Around 95% of Indonesian population is Austronesian, and there are also tribal groups of Melanesian, Polynesians, and Micronesian especially in eastern part of Indonesia. This country has about 300 ethnics group. Majority of population in the western part of Indonesia is Malay, while in the east is Papua tribe which has roots in the islands of Melanesia. Javanese is the largest ethnic group and politically most dominant in the population reaching almost 42% of the Indonesia entire population. Furthermore, there is also minority migrants population such as Chinese, Indian, and Arabic. Although

constitutionally Indonesia is not an Islamic nation, more than 80% of their population is Muslim which entitled them as a country with the most Muslim population in the world. Indonesia recognizes 6 religions, from the biggest to the smallest group, namely Christian, Catholic, Hindu, Buddha, and Confucianism.

Most people in Indonesia speak the local language as their mother tongue. However, the national language *Bahasa Indonesia* is taught at schools in the entire nation. Indonesia has more than 700 local languages. Among those hundreds of languages, the most varied is in the islands of *Papua* and *Kalimantan* while the least is in Java. Indonesia's strategic position has big influence in their cultural, social, political, and economic sectors. Their history is also heavily influenced by other nations. Indonesian archipelago became an important trade region since 7th century when *Sriwijaya* kingdom had religious and trade relationships with China and India. Kingdoms of Hindu and Buddha in the early centuries, followed by traders who brought Islam, as well as European powers which came to monopolize the spice trade in Maluku during the age of discovery also gave big influence to this nation. Indonesia declared their independence at the end of World War II. During independence, Indonesia has been challenged by natural disasters, corruption, separatism, democratization process, and rapid economic change.

1.5.2 The National System of Education

The Indonesian school system is immense and diverse and the character of its educational system reflects the diverse religious heritage, its struggle for a national identity, and the challenge of resource allocation in a developing archipelagic nation with young and growing population. Indonesian education system is the third largest education system in the Asia region and the fourth largest in the world. The government of Indonesia manages nearly 46 million students enrolled in over 40,000 primary and secondary schools with almost 3 million teachers (World Bank, 2010). In the last few decades, the government of Indonesia has made a great effort to improve access to basic education. The net enrolment rates for primary education are increasing and are on track to achieve the target of 100% of MDG 2 by 2015, although around 3% to 5% of Indonesian children aged 7 to 14 are still not enrolled in school (Lundine, Hadikusuma, and Sudrajat, 2013). Inequality in terms of access in higher education and the quality of basic education are still following. Net enrolment rates for secondary education were steady but still low compared to Brunei or Thailand. Indonesia was also lagging behind its

ASEAN neighbours in pre-primary and higher education with gross enrolment rates of 48% and 32%.

Education is central to the Indonesian government's development agenda. The Law on National Education No. 20 Year 2003 emphasizes that all Indonesian citizens have the right to education, that the government has obligation to finance basic education without charging fees, and that the government is mandated to allocate 20% of its expenditure on education (World Bank, 2015). The Teacher and Lecturer Law 2005 (or more often called Teacher Law 2005) also introduces important changes to the employment conditions and requirements for the certification of teachers in order to improve quality of education. The level of education in Indonesia includes formal school system consists of basic education, secondary education, and higher education. In basic education, nine-year compulsory education policy is implemented targeting children at the age of 7-15 years. Apart from the levels of education mentioned above, pre-school education is also provided. However, this type of education is not compulsory.

At the central level, the schools in Indonesia are operating under the management of several ministries. Since 2014, former Ministry of Education (MOEC) is separated into two ministries namely Ministry of Culture, Elementary Education, and Secondary Education (MCSESE) and Ministry of Research, Technology, and Higher Education (MRTHE). Public secular schools and non-Muslim private schools are under the responsibility of MCSESE, higher education institutions are managed by MRTHE, while religious-based schools are administrated under the Ministry of Religious Affairs (MORA). According to regulation of quality assurance of education system, national education is a shared responsibility among the central government, local government, and community and the quality education assurance is also the responsibility of these three elements. At the provincial and districts levels, education is managed by the provincial education office, provincial religious affair office, institute for educational quality assurance, and district education office.

The education services in Indonesia are available in public and in private. At the primary, junior and high secondary level, the majority of education service is public. The private schools that exist in almost all levels of education are normally religion-based, such as *Madrasah* and *Pesantren* (private Islamic schools), and Christian schools. Less than 10% of MORA schools are public, which represents less than 20% of all students enrolled in the religious educational system. At the post-secondary level, there are more private education institutions than public institutions, and there are also higher Islamic

institutions under MORA. Universities in Indonesia normally have more autonomy in curriculum and internal structure than primary and secondary schools. Yet, for about 80% to 90% state universities budgets in Indonesia are funded by government subsidies.

Indonesian education has undergone a major significant reform in almost all spheres of the field. The reform encompasses three major areas of education such as the philosophy and objectives, management, and curriculum (Raihani, 2007). There is an emphasis on religious and moral values, intellectual competences, and democratic values. In terms of management, Indonesia education has now shifted from centralization to decentralization where significant authority and responsibility are transferred from the central to local district governments. A type of school-based management has been implemented with the target to empower and involve local communities in the process of education. In regards to curriculum, the matter is even more complicated. In eleven years, Indonesia has implemented three different curriculums. Nowadays, Indonesia becomes the only country that implements two curriculums, School-Based Curriculum and *Kurikulum 2013*, both for primary and secondary education.

The World Bank has engaged in research related to education in Indonesia for years. According to this organization, the focus of efforts for education in Indonesian now is on the quality and of institutions as well as its public expenditures. The vast majority of primary-age students attend school in Indonesia and universal education is available through year nine. It is a great achievement but still insufficient for giving all children quality education where it is found that many of these students are still not learning. Indonesia ranks among the lowest 10 of 57 countries in reading, math and science by the 2009 PISA rankings of educational attainment among 15-year old students. 50% of Indonesian students assessed scored were still below the basic proficiency level even with some learning gains reflected in the 2007 TIMSS test (World Bank, 2010). Schools at primary level in Indonesia have adequate resources to provide proper education but often lack in quality standards, particularly for teachers especially in remote areas. There are many difficult and remote places with limited infrastructure, human and financial resources. The number of teachers working in remote areas is also limited. Their professional competencies were mostly underdeveloped because lack of support, facilities, or resources. At junior secondary level, the improvements are still slower than other levels where only 55% of children from low-income families are enrolled in junior secondary schools. School infrastructure and teachers also need to be given more attention in this level. It is quite common to see junior high schools with 40-50 students in a classroom in

Indonesia. Advantaged children need to be given more opportunity to attend basic education, particularly in rural areas where there are many cases of drop-out students mostly because they have help their family to earn money (World Bank, 2015).

1.5.3 Teachers in Indonesia

Teacher Education system in Indonesia is established and managed by the government. University of education became the institutions which hold responsibility to produce teachers since 1989. Originally, the university of education was called Institute for Teacher Training and Education (IKIP) and established across the country in 1963. In 1998, the status of IKIP was changed from institute of education to university of education in order to improve the equality of existing tertiary teacher trainings and enable them to produce better quality teachers. Among countries in the world, Indonesia has one of the largest and most diverse teachers in the world. With reaching almost 3 million teachers, such a large number becomes significant challenge in the efforts of managing them. Out of 1.250.000 primary school teachers in 2006, only about 200.000 teachers hold a bachelor degree. Majority of them were only senior secondary school and Diploma 2 graduates (Jalal, et.al, 2009: 7).

A study about general competency of teachers in Indonesia reported by World Bank (2010) finds that teachers have low competency score test on subject knowledge, pedagogic skills, and general academic intelligence where the average score of the teachers who took the test were below 50%. In addition, Indonesian teachers are also on the low level of professional knowledge, skills, motivation, and efforts. Indonesian teachers are lack of mastery of the material being taught, there is mismatch between teachers' subject areas studied and taught, lack of effective ways of teaching and authority in front of students, have low motivation and dedication to become a real educator, lack of emotional maturity, independence of thought, and attitude determination of being educators. Most teachers are only serves as a teacher and not as an educator. The input in university of education also have relatively low intellectual level compared to those entering non university of education (Tanang and Abu, 2014). According to the World Bank, a study which was done in 2007 about teacher behavior in the classroom describes that traditional learning method of rote learning was mostly used in Indonesian classroom and tend to correlate negatively with the results of TIMSS test. Teaching techniques which is positively correlated with the results of TIMSS test are underused in Indonesian

classroom compared to other countries. Indonesian students also have less experience in group interaction compared to students from other countries.

1.5.4 PPG Program for Pre-service Teachers in Indonesia

PPG (*Pendidikan Profesi Guru*) is a one-year professional development program for pre-service teacher to prepare graduates who hold bachelor degree from education and non-education university and have talents and interests as teachers to master full teacher competencies based on national standards to be able to obtain certificate of professional educators in early childhood education, primary education, and secondary education (Regulation of Minister of Education No 87, 2013). The background of this program is based on Teacher Law 2005 where the candidate teachers must have academic qualification, master teacher competencies, hold certificate of educators and have the ability to realize national education goals. PPG program aims to produce competent prospective teachers in planning, implementing, assessing learning, following up the results of the assessment, coaching and training learners, conducting research, and able to develop sustainable professionalism. Graduating from this program, participants are expected to master their field of study especially in the area of knowledge and pedagogy. They are also expected to be able to organize educational learning, knowing in-depth about their students, and develop sustainable professionalism. There are two types of PPG program for pre-service teacher: PPG-SM3T and PPG regular. Basically, these two programs have similar management. The differences are only on the aspects below:

Table 1. PPG-SM3T and PPG regular

Components	PPG-SM3T	PPG regular
Input	Specific for graduates of university of education	For graduates of education or non-education university
Fee	Free	Need to pay tuition fee
Specific requirement	Had joint SM3T program for one year beforehand	Had joint one-year matriculation program beforehand
	Boarding program	Without boarding program

Specific for PPG-SM3T program, participants in this program are required to join SM3T program for one year beforehand. SM3T program is a program where the participants are

sent by the government to teach at schools in areas such as underdeveloped regions, border regions, and the country's outermost regions. After completing this one-year program, all the participants have opportunity to join PPG program for free (PPG-SM3T). During PPG-SM3T, participants are required to stay in a dorm together with other participants (which is called boarding program) and obliged to follow all the rules in this boarding program.

Areas of expertise to be taken of students in PPG program must comply with levels of education as well as teaching subject. Otherwise, participants whose qualification do not match with the specified academic qualification must take matriculation program for one year. Academic qualifications for participants of this program are:

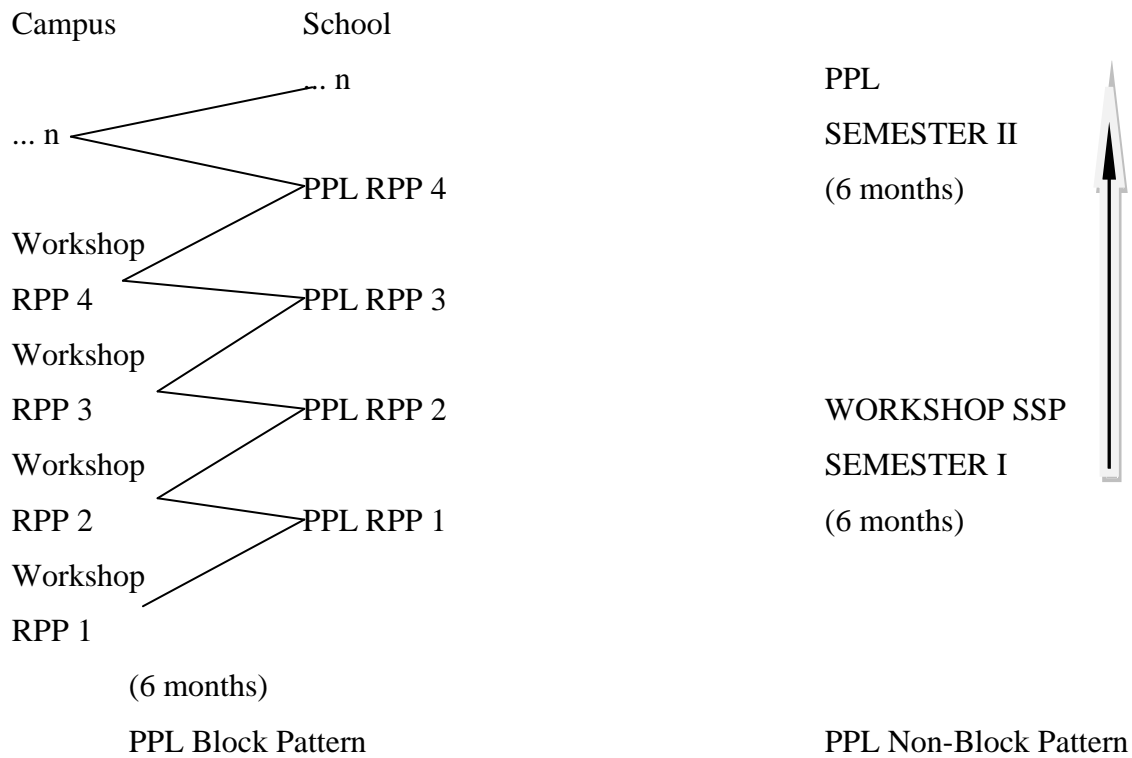
- a. Bachelor degree in education which linear to teacher professional development program to be pursued,
- b. Bachelor degree in education which allied with teacher professional development program to be pursued, with additional matriculation program.
- c. Bachelor or diploma 4 degree from non-education university which linear to teacher professional development program to be pursued, with additional matriculation program.
- d. Bachelor or diploma 4 degree from non-education university which allied with teacher professional development program to be pursued, with additional matriculation program.
- e. Bachelor in Psychology for PPG program in early childhood education or elementary school, with additional matriculation program.

PPG program is organized by universities which run the required teacher education program and recognized by the Minister of Education (Regulation of Minister of Education No 87, 2013). In the second year of the program, there were 14 state universities spread throughout the nation assigned to established PPG program for pre-service teacher. Students who pass the selection then reported to the Director General of Higher Education to obtain PPG registration number. Quota of participants for each major in PPG program in each assigned university is determined nationally by Minister of Education. Each assigned university established different number of majors. Any shortage of participants occurred in the assigned university can be covered by accepting students from different university or moving their participants to other university.

Structure of curriculum in PPG program for pre-service teacher consists of workshop in developing learning media, teaching practice through micro teaching, peer teaching, field teaching practice, and subject enrichment program. In workshop, participants are given knowledge and practice of teaching based on their field of study to prepare them for field teaching practice. Activities during workshop include preparation of learning media and assessment, presentation and discussion/reflection on the outcomes of learning media preparation, revision of the learning media, and micro teaching/peer teaching. In the end of workshop, participants are expected to produce syllabus, lesson plan, student worksheets, teaching materials, learning media, assessment tools, and a proposal for classroom action research. Participants do their field teaching practice at the assigned public schools. Workshop and field teaching practiced are organized with direct and intensive monitoring by program supervisor and supervising teachers officially assigned for the program. Same model of curriculum applied for both PPG-SM3T and PPG regular.

In the current academic year, the program has two different patterns of workshop and field teaching practice namely Non-block and Block pattern. Non-block pattern applies specific for Elementary Education major since the duration of PPG program for this major is only 6 months. Whereas, Block pattern applies for other majors besides Elementary Education and duration of PPG program for this majors is 12 months. Figure 2 below shows the two patterns:

Figure 2. Non-Block and Block patterns



Lecturers at PPG program must have educational qualifications at the lowest holding a master degree, having background in education, and preferably those who have certificate in accordance with the level of expertise and areas of expertise they teach. Competency test as part of the final exam consists of a written test and exam performance. Written test conducted by the assigned department. Exam performance also organized by the assigned department in the university where the examiners consist of program lecturers and representative of professional organization and/or other external parties. Participants who pass the competency test will obtain a registered professional certificate of educator issued by the assigned university. Participants will also entitled as "professional teacher" indicating that they are qualified as professional teacher.

Literature Review

2.1 Defining Profession, Professional, Professionalism

Talking about teacher professional development cannot be separated from the term *profession*, *professional*, and *professionalism*. According to Sanusi (1991), Satori (2007), and Saud (2010), profession is a position or job that requires expertise from its member. They must have knowledge and skills of the profession that is obtained from specific education regarding to the profession. Mohanty (2003, p. 225) mentions the nature and characteristics of profession are as follows:

- a. A profession requires a body of specialised knowledge and skills calling for a practical training.
- b. A profession renders an essential social service for the whole or a section of the society.
- c. A profession places service above the personal gains.
- d. A profession needs pre-service or in-service training or both.
- e. A profession requires a broad range of freedom and autonomy.
- f. A profession assures its members a life career, not a part-time job.
- g. A profession sets up a well disciplined and well-knit organization for ensuring its growth and safeguarding its interest.
- h. A profession evolves its own code of ethics which is scrupulously followed by its members.
- i. A profession is recognized by the state and the society in which it serves.

In addition to the opinion above, Darling-Hammond, Wei, and Johnson (2012) explain that generally professions set standards in three ways. First, it is through professional accreditation of preparation programs. Candidates of the profession are required to graduate from an accredited professional institution to be able to sit for state licensing examinations that test their knowledge and skill. The purpose of the accreditation process is to make sure that the preparation program provide comprehensive and up to date knowledge and structured training experiences. Second, it is through state licensing which grants permission to practice. In order to make sure that candidates have required knowledge they need to practice, licensing examination are organized. The tests in the licensing examination include components that examine applied practice in the field. These exams are usually developed by members of the profession and through state professional standards boards. Last is through

advanced certification. Members of a profession are required to have this type of certification as a professional recognition of high levels of confidence.

The term “professional” generally points out at two things: a person who holds a profession and appearance of a person in doing their profession (Sanusi, 1991; Satori, 2007; Saud, 2010). To be professional is *“to have acquired a set of skill through competency-based training which enables one to deliver, according to contract, a customer-led service in compliance with accountability procedures collaboratively implemented and managerially assured”* (Hartley and Whitehead, 2006 p: 176). A teacher is called professional if he/she is an expert in their field and equipped with adequate ability and skills to become a teacher. Most importantly, he/she must master methodological skill because this skill is the characteristics that distinguishes teacher with other professions (Budinarsih, 2005). Professionalism is about the quality of teachers’ work and indicates different aspects of teaching. It does not only about the mastery of knowledge management capabilities and its strategy or its implementation but also of an attitude (Tanang & Abu, 2014). According to Helsby (1995), the concept of professionalism is socially constructed and subject to geographical and cultural differences in interpretation which may change over time. Professionalism guides the work of professionals and highly influenced by development and policy.

The attempt to improve status and standing of being a professional is called professionalization (Hargreaves, 2000). This attempt can be done both through pre-service and in-service training. It is a lifelong process and never ending as long as a person announced his/herself as a member of a profession (Satori, 2007). Professionalization has two components: enhancing status and improving the quality of service. The assumptions underlying the need of professionalization for teachers are (Sanusi, 1991: 23):

- a. Subject in education is human who have willingness, knowledge, emotions, and feelings and potentials which can be developed. Furthermore, the foundation of education is human values that respect human dignity.
- b. Education is done intentionally and since it is consciously intended, it becomes normative, bound with local, national, and international norms and values, which constitutes as reference for the educators, learners, and education managers.
- c. Theories of education are hypothetical framework in addressing progress in education.
- d. Education starts from basic assumption about human being, that human have good potentials that can be developed. Therefore, education is the effort to develop those potentials.

- e. The essence of education happens in its process, that is, in situation where there is a dialogue between teacher and students which enables students to develop in desired direction in order to align with the values upheld in the community.
- f. There is a frequent dilemma between the main purpose of education, which is to make human to be better human; with instrumental mission, by using education as a tool of change or achieve something.

2.2 Teacher Professionalism

Teacher professionalism is a consensus of the norms, which may apply to being and behaving as a professional within personal, organizational, and a broader political condition; socially constructed; subject to geographical and cultural differences in interpretation; and may change over time (Day, 1999; Helsby, 1995). In order to be professional, a teacher are required to commit to the students and their learning, in-depth mastery of the subjects and how to teach them, responsible to monitor student learning outcomes through various means of evaluation, have ability to think systematically, and should be part of learning community within the profession (Supriadi, 1998). According to Snoek (2010, p. 9), characteristics of teacher's professionalism include:

- a. Professional autonomy, through professional monopoly in control over their own work.
- b. Involvement in the entrance of the profession.
- c. Control over the central values and good conducts within the profession through the use of ethical codes, connected to the sanctions for breaking the code.
- d. Membership of professional societies that can take responsibility of these elements.
- e. A focus on interpreting on dedication of the professional.
- f. Public accountability for outcomes of professional performance.
- g. A strong academic and practice knowledge base that underlies professional activities.
- h. Involvement in development of that knowledge base through involvement in academic research, action research, and self-study.
- i. Lifelong professional development of the members of the profession.
- j. Collaboration with colleagues and stakeholders.
- k. Involvement in the innovation of profession.
- l. Commitment of the teacher to support both the public and the state in their understanding of education matters.

Furthermore, Snoek (2010) also proposes 3 elements that contribute to the professionalism of teachers namely knowledge, skills, and attitudes. Attributes in knowledge consist of knowledge of the subject, knowledge of the teaching and learning process (including being up to date with relevant outcomes of educational research), knowledge of society and knowledge of policy and organisation in education. Attributes in skills consist of ability to communicate and discuss educational issues with a wider audience, to account the quality of work to the outside world, to conduct research within the practice of schools, to contribute to collaborative learning of professional communities, and to translate outcomes of educational research to innovations in the classroom/school. For attitudes, the attributes namely dedication to the learning of pupils, committed to the profession and the collective group of professionals, willing to contribute to the collective knowledge of the profession, committed to the ethical code of the profession and the integrity of his/her work, willing to account the quality of work to the outside world, focused on continuous professional development, and focus on improvement and innovation of teaching (p. 9).

2.3 Professional Development for Teachers

Professionals need to learn from experience, to update their competence, and ensure that their knowledge, skills, and understanding are also up to date. Pedagogical transformation of the teacher can be facilitated through on going teacher professional development which enables them to reflect on their own practice and improve their professional practice through interaction with other practitioners (Sari, 2012). Phenomenon about teachers' engagement in professional development has stressed the relationship between professionalism and teachers' professional development. Professionalism requires professional knowledge, competence, and expertise and the key concept for this professionalism is successful policies and strategies of professional development (Al-Hinai, 2007). In other words, professionalism is linked to and developed through professional development.

Professional development is a medium for teachers to develop their knowledge and skills in teaching. The notion professional development refers to a process where teachers review, renew, and extend their commitment as change agents to the moral purposes of teaching, as well as acquire and develop the knowledge, skills, plan, and practice with children, young people, and colleagues through each phase of their teaching lives with concepts of learning, engagement, and improved practice (Day, 1999; Bredeson, 2002). Teacher professional development should aim at enhancing the knowledge and skills of teachers by means of orientation, training, and support which contribute to the improvement

of the quality of the learning and teaching process and focusing on teacher core competencies such as improving teacher proficiency, understanding the students, managing practice of teaching skills, comprehending the other branches of knowledge as well as knowing and appreciating the teaching profession (Lessing & De Witt, 2007; Tanang et.al., 2014). A well-organized professional development program from its planning, process, and evaluation will be a benefit for the participating teachers. A successful learning program will bring a change in the way teachers conduct their duties and keep the status as professional. Teacher professional development program which designed with content focus, active learning approach, sufficient time to reflect, connected to policies and curriculum, and collaborative participation can maximized teachers' learning (Tanang and Abu, 2014).

Many literatures have identified principles of teacher professional development and in order to establish it effectively and successfully, the program is dependent on these principles. According to Lessing & De Witt (2007), there are three aspects included in the principles namely workshop, programs' personal values for teachers, and teachers' teaching approach. Further, they specify the principles of teacher professional development as follow:

- a. It should address specific needs of teachers and activities provided should be able to support teachers in applying the knowledge and teaching methodology.
- b. It should be a continuous process and contribute to the improvement of education.
- c. It should cater teachers' diversity so that their needs can be met.
- d. It should enable and support teachers, and provide instruction to gain competence, confidence commitment and sense of the joy of teaching.
- e. It should give teachers opportunities to apply their newly acquired knowledge in practice.
- f. It should have assessment as an integral part of the program and give chance for teacher to discuss with others what has been done.

Hadi (2002) adds aspects such as teacher's existing knowledge and beliefs, learning in the classroom practice, teachers as learners, learning subject and pedagogical content knowledge, as well as time and support given for teachers during teacher professional development program are also among the principles.

Successful teacher professional development program should give teachers opportunities to do learning to teach and enables them to improve their expertise through all kinds of means, media and methods. Attempts to support teachers' learning must realize that teachers' knowledge and beliefs about teaching, learning, learners, and subject matter play critical role in determining how they implement new instructional ideas. Further, teacher must be given opportunities to learn and reflect about new instructional strategies and ideas in the

context of their own classroom practice for it contribute to the development of teachers' knowledge and skills. They also should be given experiences with teaching approaches that are similar to those to be used in the classroom. In order to be successful in teaching, teachers should have deep and broad understanding of the subject. They should be provided with opportunities to enhance their knowledge of subject matter. Sustained time and support also must be provided for reflection, collaboration, and continued learning (Borko & Putnam, 1996). Teacher professional development program also should enable teachers to work with other colleagues to create organizations that support learning. They have to be given a chance to be a member of community of practitioners, sharing knowledge and commitments, working together with the community members to create coherent curriculum and systems to support students, and collaborate with them in ways that advance teachers' understanding and skills. These features are important because teaching profession is complex. It demands its professionals to know much on how to achieve their goals for students in unpredictable and non-routine situations. They should be able to put their understanding in practice and continue to learn from their colleagues in order to face new challenges (Darling-Hammond and Bransford, 2005).

Professional development should be a continuous process and contribute to the general improvement of education in order to proceed successfully. Studies show that teachers' participation in professional development activities gave positive impacts on teachers' beliefs and practices as well as students' performance in learning and on educational reforms in general (Tanang and Abu, 2014). Professional development program should include relevant activities such as improvement on teacher qualification, updating teachers' knowledge and understanding of their teaching subject, practicing to teach students with different background, developing practical competences and skills, learning new teaching methodologies, employing learning innovations and technologies, improving professionalism in ethics, as well as providing knowledge and skills to anticipate changes in society (Perraton et al., 2002) in order to give positive impact to teachers, students' performance and educational reform. Investing in teacher professional development programs and activities is crucial for teachers as well as for the teaching and learning process. It is important for teachers to strengthen their knowledge base to accomplish their educational duties and meet their educational demands.

2.4 Teaching as a Profession in Indonesia

Professions have developed in different ways in different societies. In many countries, characteristics of a profession are determined by the state because it is the major stakeholder in defining professionalism. However, the extent to which national government intervenes in teachers' work varied between time and place. The existence of professional development for teachers in one country is also influenced by how that country treats teaching, whether it is as a profession or merely a job. Professionalism as a support of teacher in performing their duties is influenced by the given professional development and policy employed which plays important role in the success of education reform.

In Indonesia itself, the position of *teaching* has shifted and government of Indonesia nowadays try to return its position as a profession, where it should be long time ago. In 2005, government of Indonesia established Teacher Law 2005 with the following major components (Chang et.al., 2014, p. 2):

- The core principle that teaching is a “profession”.
- The requirement that all teachers must meet a minimum standard of a four year degree before being certified and that all teachers should be formally certified after the four-year degree has being gained.
- The reform of pre-service teacher education institutions.
- A mandatory 24-period (18-hour) per week workload required to gain and maintain certification.
- A “special” area allowance to be paid to teachers in defined areas such as remote locations, border regions, and so forth.
- Improved processes of in-school induction and probation.
- A comprehensive system of teacher appraisal and public service salary increases.
- A more systematic program of continuing professional development.
- The merit-based appointment of principals and supervisors based on mastery of the four core competencies for educators.

The general aim of this law is to improve teacher quality in terms of competency and academic qualifications as well as other aspects related to teacher such as welfare, reward systems and status of teachers. Along with this law, the government also establish teacher certification and only those who are certified and holding certificate of “professional teachers” have the right to teach at schools.

Methodology

3.1 Research Design

The framework of the present study is a case study with quantitative research design. A case study entails the detailed and intensive analysis of a single case, concerned with particular nature of the case in question, and the researcher aims to provide an in-depth elucidation of it (Bryman, 2012). A case study also focuses on an individual actors or groups of actors and seeks to understand their perceptions of events (Cohen, Manion, and Morrison, 2007). Focus of the present study is a group of pre-service teachers who graduated from PPG-SM3T program in one state university in central Indonesia. This group of pre-service teachers took four different majors namely Citizenship, Biology, Physics, and Elementary Education. Quantitative research concerns with the reliability and validity of a study. Reliability usually refers to the consistency of a measure of a concept. In the present study, Cronbach's alpha is used to test internal reliability. A computed alpha coefficient will vary between 1 (denoting perfect internal reliability) and 0 (denoting no internal reliability). Validity refers to whether a measure that is devised of a concept really reflects the concept that it is supposed to be denoting. Validity of a study is related to its reliability. It means *"if a measure of a concept is unstable in that it fluctuates and hence is unreliable, it simply cannot be providing a valid measure of the concept in question"* (Bryman, 2012 p. 47). In order to include as many samples as possible, giving possible access for them, and possibility to ask as many questions as possible, the research method used in this study involved questionnaire as the instrument. Findings in a case study cannot be generalized to other cases or populations beyond the case. That is why, findings in the present research also cannot be applied to the PPG-SM3T program in general or in other assigned university since it serves as a sample of one specific case.

3.2 Research Instruments

3.2.1 The Questionnaire

The present study utilized self-completion questionnaire as the instrument to collect data. Questionnaire was used as the instrument to collect data for the present study for the advantages it has compared to other type of instruments. Since the researcher could not meet the participants in person and they were quite dispersed, using questionnaire was

cheaper, quicker to administer, and convenience for the participants. Besides, interference such as variability and presence effects of the researcher could be eliminated (Bryman, 2012). Since the participants did not speak in English, the language used in the questionnaire was Indonesian language. This questionnaire consists of six sections namely background information section, opportunities to learn provided by PPG-SM3T program, professional knowledge given by the program, professional practice provided in the program, professional engagement during the program, and additional questions section.

3.2.2 Variables in the Questionnaire

Variables used in the questionnaire for this study are mainly taken from questionnaire used in one of Victorian Institute of Teaching project called Future Teachers Project with some additions and changes. Some aspects from Indonesian Teacher Law 2005 were also added since the setting of the study was in Indonesia. There were 96 questions in the questionnaire which consists of several sections.

In background information section, participants were asked about their information including name, gender, age, the major they took in PPG-SM3T program, former university, and experience as teacher. In opportunity to learn section, participants were given a multiple response set of questions which consists of 17 questions. The main question asked were *“The next questions ask you about the opportunities to learn provided by PPG-SM3T program. Please give your answer by choosing one of the four options. To what extent PPG-SM3T program gave you the opportunity to: ...”*. In the next section, Professional Knowledge section, participants were given 14 multiple response questions with the main question *“The next session of the questionnaire asks you about how well PPG-SM3T program giving you a good understanding of aspects of teaching. Give your answer by choosing one of the four given option. Please indicate the extent to which PPG-SM3T program gave you a good understanding of: ...”*. In professional practice section, there were two main questions asked to the participants. First was *“Give your answer by choosing one of the options. Please indicate the extent to which PPG-SM3T program prepared you to: ...”* and there were 21 multiple response questions given along with this main question. The second one was *“Please think about your field teaching practice during the final semester of your PPG-SM3T program, to what extents do you agree with the following statements: ...”*. There were 10 multiple response questions given along with this main question. In relation to professional engagement section, there were also two different main questions given to the participants. The first one is *“Give your answer by*

choosing one of the options. Please indicate the extent to which PPG-SM3T program prepared and gave you opportunity to: ...” and 16 multiple response questions were given along with this main question. The second one is *“give your answer by choosing one of the options. During your PPG-SM3T program, how often did you: ...”*. Six multiple response questions were given along with this main question. In the additional questions section, participants were asked about supervision during field teaching practice, workshops given by the program, features in the program, recommendation on the program, and overall effectiveness of the program.

3.2.3 Reliability test

Reliability test was done for each of the component. Results of Reliability test shows that all the components have Cronbach’s Alpha value greater than 0.5 which means the data are reliable to be analyzed. Component of Learning the Practice of Teaching has Cronbach’s Alpha value 0.837 and the Cronbach Alpha value for Learning via Feedback and To Do Evaluation component is 0.502. Components Knowledge about the Students and Knowledge about the Subject have Cronbach’s Alpha value of 0.805 and 0.736. Value of Cronbach’s Alpha of Practice about Classroom Management component is 0.772 while component of Practice to do with Curriculum and Assessment has Cronbach Alpha value of 0.807. Quality of Field Teaching Practice component has Cronbach’s Alpha value of 0.859. Personal and Social Component and Reflection and Working with Others, has Cronbach’s Alpha value of 0.793 and 0.759. Component of Non-teaching Activities has Cronbach’s Alpha value of 0.759. More about reliability results can be seen in Appendix B.

3.3 Research Procedures

3.3.1 The Participants

As explained in Chapter 2, there were 14 state universities assigned to organize PPG-SM3T program in Indonesia year 2014. Since the present study is a case study, one state university was then chosen which was located in central Indonesia as the place to conduct the study. It was chosen for its quality was in middle level compared to the remaining universities. In other words, it was neither among the best universities nor among the worst. From the 14 state universities, this university ranked number 7 according to statistics from 4 International Colleges and University site and number 8

according to Webometrics 2015 site. Convenience sampling was used to select the participants for this research. Using this sampling strategy could not allow the researcher to generalize the findings of the research, however, they could provide a springboard for further research or allow links to be forged with existing findings in the area (Bryman, 2012). Total participants of the program were 85 persons and 60 of them responded to the questionnaire. These 60 respondents were the participants for this study. Among 60 people who responded to the questionnaire, 27 of them were male and 33 were female.

The education background of the participants was varied. They were all graduated from university of education, however, not all of them took their bachelor degree in the present state university. Forty eight of them were graduates of the present university and the rest took their bachelor degree in universities out of the region. All of them have passed from SM3T program before taking this PPG-SM3T program, however, they completed their SM3T in different places. The participants were also varied in terms of age that was among 23 to 28 years old. About 25 of the participants were below 25 years old and the rest were 25 years old and above. PPG-SM3T program established in this university offers 4 majors namely Physics, Biology, Citizenships, and Elementary Education. As much as 19 participants took major in Citizenship, 12 were Biology, 13 were in Physics, and 16 took Elementary Education.

3.3.2 Data Collection

Collecting data from far and dispersed participants was a challenge for the researcher. Survey application called Typeform was used as a tool to collect the data. It was the best choice for collecting data in such condition since it can reach more participants compared to traditional methods. Typeform was a convenient application where the participants were invited to go to a link to complete the questionnaire. The participants could use their cell phone, tab, or pc to complete the questionnaire. It was low cost, faster response, and especially for this study could reach more participants compared to the traditional survey. Respondents only need to go to the link provided then click or type their answer. The link to the questionnaire was shared on two social media namely Blackberry Messenger group and Facebook group. The members of these two groups were those who took PPG-SM3T program in the chosen university of education. Before sharing the link, the researcher had made contact with some key informants and asked them to invite her to their Blackberry Messenger and Facebook groups. As information, one of the key informants was coordinator for Biology class during his time

taking the program. Being able to join their BBM group and having key informants that was a class coordinator were advantages and very helpful for the researcher. The researcher could talk directly to most of the will-be-participants, did crosschecking, or asking questions about any aspect of PPG-SM3T program.

Before collecting the data, the researcher made a small try out of the questionnaire to 7 people to check if the content was confusing or if people who read it could easily understand the questions and made some revision. The researcher also introduced herself informally in BBM group saying that she would need their help to complete questionnaire for her thesis. The detailed information in form of introduction letter was later given along with the link to the questionnaire. Data collection was done on the first two weeks of March. The researcher scheduled 3 weeks for data collection: 2 weeks fixed and 1 week extension in case the data was insufficient. On the first week, the researcher shared the link in BBM groups but she asked the key informant to copy her post and shared it in the Facebook group. Less than 50% of the data was collected on the first week. On the second week, the researcher posted a reminder in the BBM group and shared the link to the questionnaire herself on the Facebook group. The reaction was satisfying, another 50% of the data was successfully obtained at the end of the second week.

3.3.3 Data Analysis

To be able to analyze the data, result of the questionnaire was imported from Typeform to Microsoft Excel. The data was analyzed by using SPSS program and graphs were generated by using Microsoft Excel. Several types of analysis were done to analyze the data namely, Principal Component Analysis (PCA), Reliability test, and Exploratory Data Analysis by looking at the frequencies, percentages, and doing cross-tabulation. Since the data collected for the present study was in a large number (60 respondents and 96 questions), PCA was delivered. PCA is widely used in data processing and dimensionality reduction (Zou, Hastie, and Tibshirani, 2006). It enables researcher to explore previously unknown groupings of variables, to seek underlying patterns, clustering, and groups (Cohen, Manion, and Morrison, 2007). The purpose of doing PCA is to reduce the number of observed variables to a smaller number which account for most of the variance of the observed variables. The resulted variables create components (Kim, 2008). Important things that should be considered in applying PCA are the values of Kaiser-Meyer-Olkin (KMO) and Bartlett's test and factor loading. KMO measures the

sampling adequacy and for the present study the value should be greater than 0.5 for the principal component analysis to proceed. Bartlett's test is another indication of the strength of the relationship among variables. Its value is also considered significant in the level of 0.05. Factor loading shows the correlation of the variable and the minimum acceptable factor loading value for this study is 0.5.

Reliability refers to the consistency of a measure of a concept. In relation to quantitative study, Reliability test was done to measure whether the device used in the present study (questions in the questionnaire) was consistent and reliable to measure the concept of the present study (teacher professional development) (Bryman, 2012). Reliability of the questionnaire used in the present study was tested using Cronbach's Alpha. This measured how consistent was the variables making up the scale with each other and provides a measure of the extent to which the scale is tapping a uni-dimensional construct. High value of Cronbach's Alpha means the data have uni-dimensional structure. A computed alpha coefficient ranges in value from 0 to 1 where 0 denotes no internal reliability and 1 denotes perfect internal reliability. The acceptable Cronbach's Alpha value in the present study is greater than 0.5.

After the components were generated by PCA and their reliabilities were tested, the next analysis was Exploratory Data Analysis by looking into their frequencies, means, and standard deviations. The purpose was to provide evidence whether there were any similarities or differences on participants' response toward each component. Finding frequencies and standard deviations were done in the multiple response set analysis in SPSS while frequencies were analyzed by computing the variables in each component. The purpose of computing variables was to create a new scale measure that combines several existing variables. In this study, one new variable would be created under the heading of each component after computing the variables in it. The last, cross tabulation was delivered. Cross tabulation, also known as contingency table analysis, is used to analyze categorical (nominal measurement scale) data. It is a two (or more) dimensional table that records the number (frequency) of respondents that have the specific characteristics described in the cells of the table. Cross tabulation is like a frequency table but it allows two variables to be simultaneously analysed so that relationships between the two variables can be examined. It helps to understand how two different variables are related to each other (Bryman, 2012).

3.4 Ethical Consideration

When a study includes human respondents, there are some ethical issues to be addressed. Ethical issues arise at a variety of stages when conducting a research. Bryman (2012) highlights that following certain kinds of ethics is highly important when conducting a research. During the present research, the researcher conducted the followings to minimize ethical issues. The participants were given information about the researcher's identity and background. Purpose of the research, content of questionnaire, importance of the data for the present study as well as for the researcher's thesis, and benefits that might be derived from the research were also explained. Before completing the questionnaire, the participants were given a description on how to complete the questionnaire and encouraged to ask if they have questions about any aspects of the research. Confidentiality of the institution where the participants taking PPG-SM3T program as well as the participants were taken into consideration. Participants were informed about things that would be done with the information they provided and all data was given strictly confidentially. Although they may be identifiable in the results of the questionnaire, participants were ensured that their identity would remain anonymous and would not be revealed in the thesis report. The concerns above were addressed twice; first time the researcher made contact with the participants before they were given the questionnaire, and second in an introduction letter preceding the questionnaire.

Analysis and Findings

4.1 Overview

The data collected in this study which was taken in March aims at finding out pre-service teachers' perception about PPG-SM3T program for their professional development. Out of 85 people of the total population of pre-service teachers who joint PPG-SM3T program in the chosen university, 60 (70.59%) of them responded to the questionnaire. The rest 25 people did not respond and the problem of accessibility is assumed to be the problem. Since it was shared through social media, they probably were either no longer active on Facebook or difficult to get internet access in their current place. As explained in the previous chapter, several steps were done in order to analyse the data for the present study namely Principal Component Analysis, Reliability test, and Exploratory Data Analysis. Summary of the finding will be delivered in a way that will present the answer of the research question.

4.2 Data Analysis

4.2.1 Demographic Findings

This part of chapter four presents results of the first section of the questionnaire. Participants in the present study are varied in terms of background such as gender, age, major, university background, and experience. From 60 respondents, 27 of them are male and 33 are female. As much as 25 people of the total 60 respondents were below 25 years old, whereas 35 of them were 25 years old and above. PPG-SM3T program in the present university offered 4 majors for cohort 2014-2015 namely Citizenship, Biology, Physics, and Elementary Education. The number of participants who took Citizenship class was 19 people, 12 participants took Biology class, 13 persons took Physics class, and the remaining 16 participants took Elementary Education class. Besides above classifications, participants in this study also vary in terms of their university background. From the 60 participants, 48 of them took their bachelor degree in the same university where the study took place and the other 12 got their bachelor degree in universities out of the region. In terms of experience, 9 of them had experience as teacher for more than 6 months, 32 participants had experience less than 6 months as teacher, and the rest 19 participants had no experience as teacher. Composition of students in every class can be seen on table below:

Table 2. Composition of students in every class.

	Citizenship	Biology	Physics	Elementary Education	Total
Male	9	5	7	6	27
Female	10	7	6	10	33
Below 25 years old	6	7	6	6	25
25 years old or above	13	5	7	10	35
University in central Indonesia	8	12	12	16	48
University out of central Indonesia	11	0	1	0	12
More than 6 months experience	2	1	3	3	9
Less than 6 months experience	11	6	8	7	32
No experience	6	5	2	6	19

4.2.2 Principal Component Analysis

Principal Component Analysis was done towards multiple response sets data in the questionnaire which consists of Opportunity to Learn section, Professional Knowledge section, Professional Practice section, and Professional Engagement section. Opportunity to Learn section has KMO value of 0.579 (higher than 0.5) and 0.000 (less than 0.05) significance which means the data is appropriate for PCA. Result of PCA shows those variables in this section are at best loaded when it is divided into two components. Two variables from the original data of this multiple response set did not load strongly on either of the component (their factor loadings are lower than 0.5) and they were omitted. The first component is called Learning the practice of teaching. Variables create this component are:

3. Learn how to present subject/materials in ways that build on students' existing understanding.
4. Learn methods of teaching specific to your subject.
5. See models of expert teachers in action.
6. Learn methods for reflecting on your teaching.
7. Practice analysing and reflecting on examples of your practice.
8. Identify specific areas of your practice that you needed to develop.
15. Learning to plan and prepare units of work.
16. Learn to establish reflection activity in the class.

The second component is Learning via feedback and to do evaluation. Variables create this component consist of:

9. Practice new teaching skills with feedback from your supervisor or supervising teacher.
10. Receive useful feedback about your teaching from your program supervisor.
12. Learn to assess and evaluate students' progress in learning.
14. Learn how to diagnose students' achievement in relation to expected learning outcomes.
17. Learn to establish remedial and enrichment program for students.

KMO value of Professional Knowledge section, is 0.751 and also has significant value of 0.000 which shows that this set of multiple response questions is appropriate for PCA. Result of PCA also shows that variables in Professional Knowledge section are at best loaded when it is divided into two components. Two variables from the original set were reduced since variables also did not load strongly on neither of the components. The first component is called Knowledge about the Students. Variables create this component are:

7. How to identify students' characteristics.
8. The effect of the social, cultural, religious, and ethnic backgrounds of students on their learning.
9. How individual students learn and develop.
11. How to use findings from research to improve your knowledge and practices.
12. The interconnectedness of learning across subject areas.
13. How cultural and gender differences can effect communication in the classroom.
14. Ethical standards and codes of conduct expected of teachers.

The second component is Knowledge about the Subject. Variables create this component consist of:

1. Mastery of materials, structure and concepts of the knowledge relevant to your subject.
2. Mastery of standard competencies and basic competencies of the subject you teach.
4. How to build on students' existing knowledge and experience.
5. Current developments in the subject you teach.
6. Resources to support your students' learning in your subject areas.

Professional Practice section has KMO value of 0.667 and 0.000 significance so we can conclude that this set of data is appropriate as well for PCA. Results of PCA found that variables in this section are at best loaded when it is divided two components. Five of the original variables were omitted since those variables did not load strongly on either of the components. The first component is called Practice about classroom management. Variables create this component consist of:

8. Using ICT in the classroom.
9. Give useful and timely feedback to students about their learning.
10. Encourage your students to use critical thinking skills.
11. Establish an active and productive learning environment.
14. Encourage appropriate student behaviour.
15. Provide flexible learning pathways.
16. Include effective classroom management strategies into your teaching.

The second component is Practice in curriculum and assessment. Variables create this component are:

1. Develop curriculum effectively.
2. Design teaching and learning units/programs relevant to your students.
3. Communicate ideas and information clearly to your students.
5. Locate suitable curriculum materials and teaching resources.
6. Establish appropriate learning goals for your students.
7. Set up learning activities to help students achieve learning goals.
13. Use motivational strategies effectively.
18. Assess and monitor the progress of your students.
21. Develop assessment tasks that promote learning.

The third component in Professional Practice section has KMO value of 0.807 and highly significant (0.000) so the data is appropriate for PCA. No variable is reduced in this component and they are at best loaded when in one component. The researcher decided to put the component under the name Quality of Field Teaching Practice component.

Variables create the component are:

1. My supervising teacher had a clear idea of what my program required me to do as part of my practicum.
2. I had a clear understanding of what was expected of me as a teacher in order to pass the practicum.
3. I used teaching standards as a guide to evaluating and reflecting on my teaching.
4. My supervising teacher used clear standards when reviewing my lessons with me.
5. Overall, the feedback I received from my supervising teacher helped me to improve my teaching.
6. The method used to assess my ability to teach was valid.
7. My program supervisor and my supervising teacher had similar views on good teaching methods.
8. My supervising teacher generally valued the ideas and approaches I brought from the workshop during PPG-SM3T program.
9. Overall, my practicum experience as a valuable part of my preparation to become a teacher.
- 10 My supervising teacher used criteria/standards provided by my program for evaluating my teaching.

The next section, Professional Engagement, has KMO value of 0.709 in 0.000 significant. From this result, the researcher is confident to say that the data in this scale is appropriate for PCA. Result of PCA shows that variables in Professional Engagement section are at best loaded when it is divided into 2 components. Four variables were reduced. The first component is Personal and Social Components. Variables create this component consist of:

2. Reflect on your professional knowledge.
9. To act in accordance with law, religious and social norms.
10. To present self as a honest person with noble character that can be exemplified by students and surrounding community.
11. To present self as a mature, wise, and steady person.
12. Show work ethic, high responsibility, proud as a teacher, and self-confidence.

14. To use effective communication with other teachers, students' parents, and surrounding community.
15. To adapt effectively at school and surrounding environment.
16. To communicate with own community or community of other profession through various media.

The second component is Reflection and Working with Others. Variables create this component are:

3. Identify your learning needs.
5. Work with parents, guardians, or community.
6. Work with non-teaching professionals.
8. Use assessments to give effective feedback to parents or guardians.

The last section of Professional Engagement has KMO value of 0.675 and significance in 0.000 so the data is appropriate for PCA. Variables on this set of multiples response questions are at best loaded when they have one component. For this set of multiple response questions, the researcher decided to put it under heading Non-teaching Activities component. One variable from the original set was omitted. Variables create Non-teaching Practice component consists of:

1. Observe teachers in their classrooms.
2. Join in regular meeting of teachers (e.g planning, reviewing students' work, etc).
3. Visit families or local community agencies or organizations.
4. Conduct small research projects as part of the PPG-program.
5. Assist with non-teaching activities (e.g as a tour committee, camps, providing private tutorial, etc).

More about PCA results can be seen on Appendix A.

4.2.3 Exploratory Data Analysis

Data in the present study consists of 10 components and several additional questions. In order to analyse the data in the ten components, three ways of data analysis were done. Firstly, data in each component was analysed in order to find how the participants' response toward each component in general and see in which component the participants responded differently. Secondly, data in each component was categorized into 5 categories (gender, age, major, university, and experience) and cross tabulation was done in order to find out which type of participants responded differently in the mentioned components. Besides looking at their frequency, the researcher also looked into and compared the means and standard deviations of each category to provide more evidence on how participants in each category response toward each component. Thirdly, analysis was done on cases in order to find out in which cases the participants responded differently.

Further results of means, standard deviations, and graphs of each component can be seen in Appendix C.

4.2.3.1 Analysis on each Component and Additional Questions

a. General results of the 8 components

According to the results of Principal Component Analysis, there are two components in Opportunity to Learn section namely Learning the Practice of Teaching component and Learning via Feedback and To Do Evaluation component. In Opportunity to Learn section, participants were asked *“The next questions ask you about the opportunities to learn provided by PPG-SM3T program. Please give your answer by choosing one of the options. To what extent PPG-SM3T program gave you the opportunity to: ...”*. Professional Knowledge section also has two components: Knowledge about the Students and Knowledge about the Subject components. The main question asked in this section is *“The next section of the questionnaire asks you about how well PPG-SM3T program giving you a good understanding of aspect of teaching. Give your answer by choosing one of the options. Please indicate the extent to which PPG-SM3T program gave you a good understanding of: ...”*. There are three components in Professional Practice, however, only two will be discussed here namely Practice about Classroom Management component and Practice about Curriculum and Assessment component. In Practice about Classroom Management and Practice about Curriculum and Assessment components, participants were asked *“Give your answer by choosing one of the options. Please indicate the extent to which PPG-SM3T program prepared you to:...”*. Lastly, there are also three components in Professional Engagement section but only 2 of them are discussed here namely Personal and Social component and Reflection and Working with Others component. Main question in Personal and Social component and Reflection and Working with Others component is *“you’re your answer by choosing one of the options. Please indicate the extent to which PPG-SM3T program prepared and gave you opportunity to: ...”* (To see variables in each component, please refer to Principal Component Analysis section).

In order to get general response on each component, computing variables were done by adding results of all the variables in each component based

on their measurement scale. The purpose of delivering computing variables was to create a new scale measure/variable that combines several existing variables. This new variable would show the general picture of each component, how the participants respond generally to the component. One example as follows, after adding results of variables in Learning the Practice of Teaching component, it was found that there were 328 cases with “a major extent” answer, 133 cases with “a moderate extent” answer, 12 cases with “a minor extent” answer, and 3 cases with “not at all” answer. The result of analysis shows that the participants’ answer towards the eight components is positive. Majority of the answers were “a major extent”, moderate number of “a moderate extent” answers, and only small number of “a minor extent” and “not at all”. Table 3 below shows general results of the participants answering the 8 components.

Table 3. Frequencies of the components.

Section	Components	A major extent (case)	A moderate extent (case)	A minor extent (case)	Not at all (case)	Missing (case)	Total (case)
Opportunity to Learn	Learning the Practice of Teaching	328 (68.33%)	133 (27.71%)	12 (2.50%)	3 (0.63%)	4 (0.83%)	480
	Learning via Feedback and To Do Evaluation	208 (69.33%)	85 (28.33%)	4 (1.33%)	0	3 (1.00%)	300
Professional Knowledge	Knowledge about the Student	247 (58.81%)	149 (35.48%)	21 (5.00%)	0	3 (0.71%)	420
	Knowledge about the Subject	208 (69.33%)	79 (26.33%)	9 (3.00%)	2 (0.67%)	2 (0.67%)	300
Professional Practice	Practice about Classroom Management	313 (74.52%)	102 (24.29%)	2 (0.48%)	3 (0.71%)	0	420
	Practice to do with Curriculum and Assessment	422 (78.15%)	111 (20.56%)	6 (1.11%)	1 (0.19%)	0	540
Professional Engagement	Personal and Social	403 (83.96%)	72 (15.00%)	1 (0.21%)	0	4 (0.83%)	480

	Component						
	Reflection and Working with Others	123 (51.25%)	84 (35.00%)	23 (9.58%)	5 (2.08%)	5 (2.08%)	240

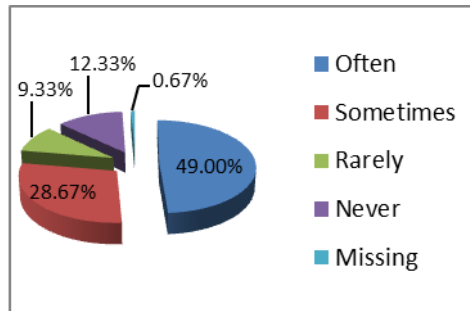
Looking at the table above, we can see that there is no significant difference appear on the participants' answer in every component. In general, more than half of cases in each component are answered by "a major extent option". However, if we look closely at the section of Professional Engagement, both of its components show different answers compared to the other components. Personal and Social component have the highest number of positive answer compared to the rest components with 83,96% "a major extent", 15.00% "a moderate extent", and only 0.21% answer of "a minor extent" from the total cases. However, unlike the remaining component, answers in Reflection and Working with Others component is more diverse. Not as much as Personal and Social component or the remaining components, this component only gain 51.25% "a major extent" answer and higher number of "a moderate extent", "a minor extent", and "not at all" answers (35.00%, 9.58%, and 2.08).

The means of every component also shows positive answer. If we rank from the highest, Personal and Social component has the highest mean (3.8455), followed by Practice in Relation to Curriculum and Assessment component (3.7667), Practice about Classroom Management component (3.7262), Learning via Feedback and to Do Evaluation component (3.6842), Knowledge about the Subject component (3.6550), Learning the Practice of Teaching component (3.6505), Knowledge about the Student component (3.5405), and mean of Reflection and Working with Others is the lowest (3.3653). However, although all the components show positive answer, components in Professional Engagement section is likely to show difference in terms of value of means. Personal and Social component hold the most positive answer among others while Reflection and Working with Others shows the least positive. Looking at the standard deviation, the result of analysis shows that only one section has normally distributed data that is Professional Knowledge section. Data in the remaining section are dispersed; however, the highest dispersion is seen in the section of Professional Engagement. The complete means, standard deviations, and graphs of each component can be seen at Appendix C.

b. Non-teaching Activities and Quality of Field Teaching Practice components.

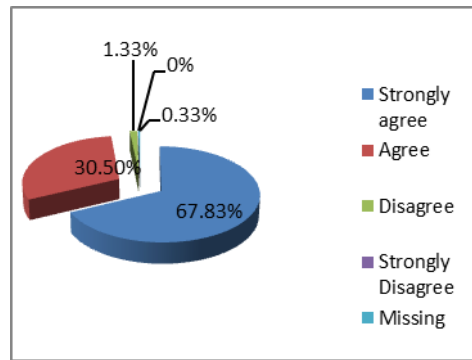
Result of analysis in these two components also shows that participants respond positively towards the questions. However, participants' answer is more diverse in Non-teaching Activities component and where most of them chose "often" (49.00%) and followed by "sometimes" (28.67%). One interesting results appears between the options "rarely" and "never". Compared to 9.33% of "never" answer, option "rarely" only counts 12.33% of the total case. In Non-teaching Activities component, participants were asked "Give your answer by choosing one of the options. During your PPG-SM3T program, how often did you: ...".

Chart 1. General Response on Non-teaching Activities component



However, if we compare the frequencies between positive and negative answers in Non-teaching Activities and Quality of Field Teaching Practice component, the latter section is likely have more positive answer. The answer in this section is mainly "strongly agree" (67.83%), followed by "agree" option that counts 30.50% of the total cases, and small portion of "disagree" (1.33%). Result of the analysis shows that none of the participants chose the option "strongly disagree" in every question. Meanwhile, main question for Quality Field Teaching Practice component was "Please think about your field teaching practice during your final semester of your PPG-SM3T program and give your answer by choosing one of the options. To what extent do you agree with the following statements: ...". Pie chart below shows the frequencies of each type of answer in Quality of Field Teaching Practice component:

Chart 2. General response of Quality of Field Teaching Practice component

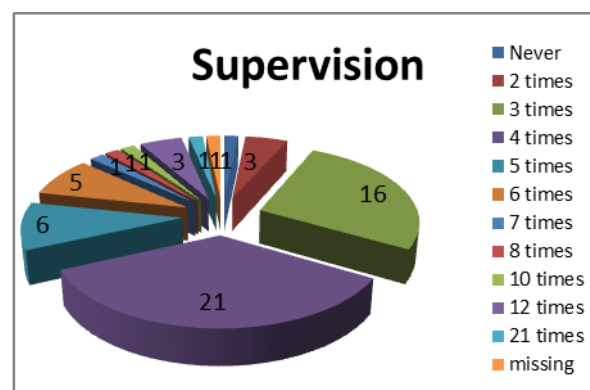


Another significant difference can be seen from the means and standard deviation. Although the participants respond positively towards the two components, result of analysis shows Non-teaching Activities component has lower means than Quality of Field Teaching Practice component (3.1500 compared to 3.6679). If we compare both sections, the value of their standard deviation shows that the data is not normally distributed.

4.2.3.2 Additional Questions section.

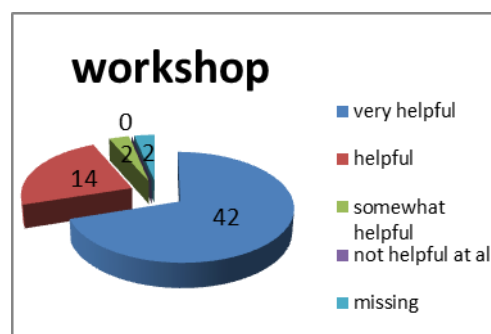
In this section, participants were asked about supervision during field teaching practice, workshop during the program, features in the program, recommendation of the program, and overall effectiveness of the program. When they were asked how many times they were observed by their supervisor during field teaching practice, their answers are varied from never to 21 times. Most of the participants answer 4 times, while the least answer is either 7 times, 8 times, or 10 times. Only one participant who answered never and 21 times. Pie chart below shows frequency of the participants' answer:

Chart 3. General Response on Supervision during PPG-SM3T program



The participants answer positively when they were asked how helpful the workshop was during PPG-SM3T program for their field teaching practice. The options given were “very helpful”, “helpful”, “somewhat helpful”, and “not helpful at all”. From the options given, high number of participants answered “very helpful”, followed by “helpful”, and a small number of participants answered “somewhat helpful”. None of the participants answered “not at all”.

Chart 4. General Response on Workshop during PPG-SM3T program



When the participants were asked to describe main feature of PPG-SM3T program that help in particular to prepare them to be professional teacher, the answers were mainly *workshop* and *field teaching practice*. They argued that:

“Workshop and field teaching practice increase our pedagogic and professional competencies”

“ ... field teaching practice for during that time I was situated in real school environment. From field teaching practice I gained much experience in facing various student characteristics as well as in preparing learning”

“Workshop. Because in workshop we were given knowledge and practice from supervisor and supervising teacher to be able to teach well”

“Through workshop, discussion in preparing learning media with supervisor and supervising teacher was very effective to form professional teacher”

“I think the most helpful part was workshop because during workshop we were expected to be able to develop all the learning tools such as syllabus, lesson plan, as well as assessment. Moreover, we were also given chance to do peer teaching and assessed by experts in education and supervising teacher and it really trained us to be professional teachers”

Besides workshop and field teaching practice, some students also answer that *boarding program* and *learning to conduct classroom action research* also help them increasing their professionalism:

“Boarding program, workshop, field teaching practice, and learning to conduct classroom action research”

“Field teaching practice gives me chance to directly apply the knowledge I know about teaching. During 6-month workshop, we were taught to make learning tools from planning to evaluation. Boarding program taught us to behave socially and respect each other and also to build our manner”

“Workshop is very helpful in developing learning media. During workshop, we also have chance to deepen the learning materials. During field teaching practice, many schools activities out of teaching enriching our experience”

“Boarding life could build disciplined and professional teacher. Moreover, workshop could develop teacher professionalism through critical thinking and team work. Field teaching practice as a form of implementation of teacher’s performance”

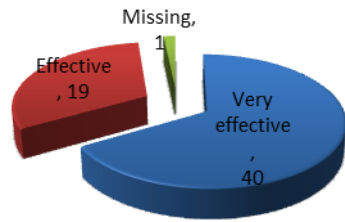
“Workshop, making teaching plan, conducting classroom action research, and field teaching practice.”

The next question is about their description on the elements that should have been included in the program to better prepare them to be professional teacher. Responding to this question, the answers are varied. Participants argued that PPG-SM3T program should include:

- a. Extracurricular coaching practice.
- b. Initial observation at schools.
- c. Leadership training.
- d. Knowledge about four teacher competencies.
- e. Sports week, scouts, and other creative events.
- f. Providing books about techniques or tips to make learning fun and liked by the students.
- g. Educational psychology.
- h. Knowledge about school administration such as syllabus, yearly program, semester program, etc.
- i. Providing non-teaching activities.
- j. In-depth curriculum assessment.
- k. Knowledge about students’ characteristics.
- l. Special program to develop personal competency.
- m. Journalism.

When they were asked if they would recommend PPG-SM3T program to those who interested to become a teacher, all of them answer that they would recommend the program and none of them answer that they would not recommend the program. Lastly, the participants were asked the overall effectiveness of the program in preparing them to be professional teacher. The answer is very positive where 40 of them chose “very effective” and 19 of them chose “effective”.

Chart 5. General Result on the Effectiveness of PPG-SM3T program.



4.2.3.3 Cross Tabulation analysis on Components

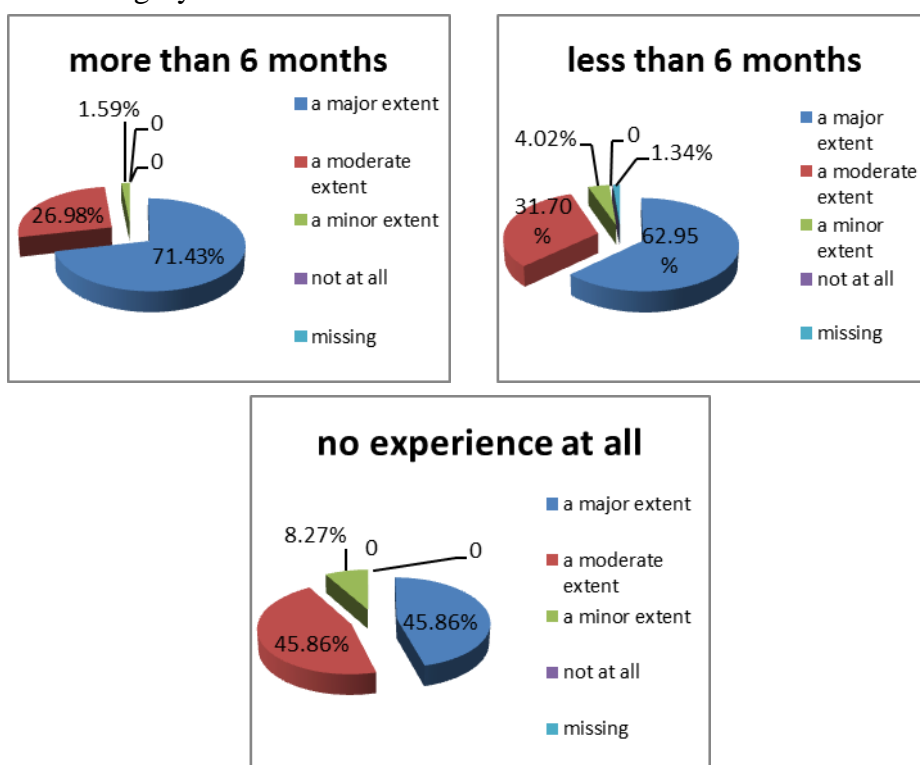
Cross Tabulation analysis categorized the data in each component into 5 categories and each category consisted of different group. Gender category consists of male and female; age category is divided into those who are below 25 years old and 25 years old and above; major category consists of Citizenship, Biology, Physics, and Elementary Education; university group is whether they previously graduated from university in central Indonesia or out of central Indonesia; and experience category is divided into those who have more than 6 months experience, less than 6 months and no experience. Results of Cross Tabulation analysis shows that from the 10 components, more varieties of responses are found in 3 components namely Knowledge of Student component, Reflection and Working with Others component, and Non-teaching Activities component.

a. Response towards Knowledge of the Students component

In response to the Knowledge of the Students component, the response was found different in experience category compare to the remaining four categories. Looking at the data in the three groups of participants in this category, its distribution is likely to disperse and they share different value of means. The highest means value is in more experienced group (3.6984) while the lowest value (3.3759) is seen at inexperienced group. Other evidence that the three groups in experience category answer differently can also be seen from the frequencies of the options appears in this category. Majority of those who are experienced chose “a major extent” option in answering the cases. Meanwhile, options “a moderate extent” and “a minor extent” are found more in less experienced participants. More different answers are found in those who do not have experience. “A major extent” and “a moderate extent” options share the same portion in this group. “A minor extent” option is also

found to be chosen to answer the case more in this group compared to the other two. Portion of responses toward Knowledge about the Students component in experience category can be seen on the chart below:

Chart 6. Responses toward Knowledge about the Students component in Experience category

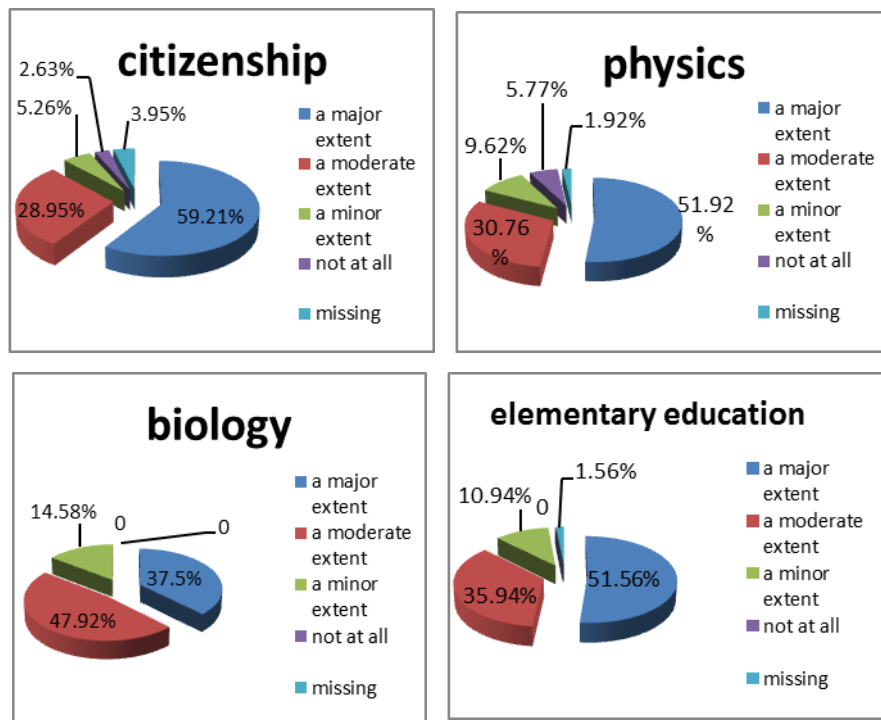


b. Response towards Reflection and Working with Others component

The next component to be found having diverse answer is Reflection and Working with Others. Categories found to have diverse answers are in terms of major and experience. Participants in major category responded differently toward this component. Data in this category is found to be dispersed and they share different value of means. Biology class has the lowest mean (3.1667) while the highest appears in Citizenship class (3.5263). Participants in Biology class are likely to response less positive than participants in other classes according to the analysis. More than half of participants in Citizenship, Physics, and Elementary Education class responded to the cases with “a major extent” option, followed by “a moderate extent”, and few number of participants had answered “a minor extent” and “not at all”. Specific for “not at all” option, some participants in Citizenship and Physics

class were likely to answer some of the cases with this option, but not in Elementary Education class. In Biology class, the cases were highly answered with “a moderate extent” option, and then followed by “a major extent” option. Although none of the participants in this class chose “not at all” option to answer the cases, it appears that this class has the highest portion of cases answered by “a minor extent” compared to other classes. The portions can be seen on the charts below:

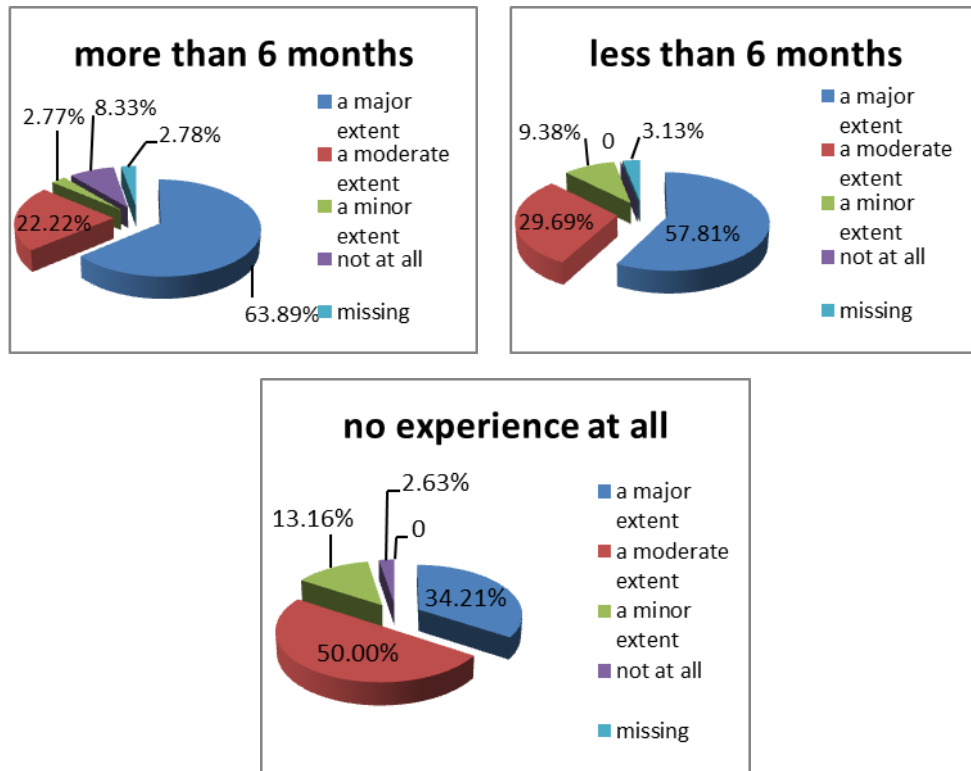
Chart 7. Responses toward Reflection and Working with Others component in Major category



Varieties in experience category also found when they response to Reflection and Working with Others component. The data is spread uneven and value of means in each group is also different. The highest mean is in less experienced group (3.5052) while the lowest is in inexperienced group (3.1184). Looking at their frequencies, more experienced participants are likely to response more positive compared to other groups. The highest portion of cases responded with “a major extent” option appears in this group. Less experienced group has fewer cases answered with “a major extent” option and none of participants in this group answered the case with “not at all” option. However, compared to more experienced group, less experienced group has more cases answered with “a moderate extent” and “a minor extent” options. The least positive answer is likely in inexperienced group.

It has the least cases answered with “a major extent” option with few cases are answered with “not at all” option. More cases are answered with “a moderate extent” and “a minor extent” options by this group compared to the other groups (*see charts below*).

Chart 8. Responses toward Reflection and Working with Others component in Experience category

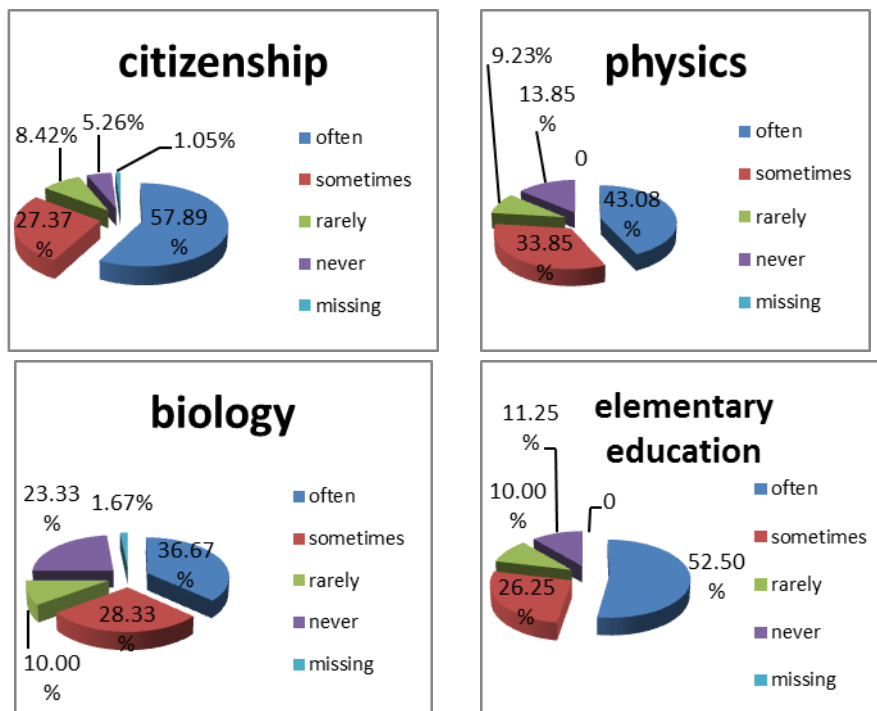


c. Response toward Non-teaching Activities component

When participants were asked questions regarding how often they did the mentioned activities in the questionnaire, the answers are found varied in major category. Like other components discussed previously, data dispersion is also found in the response of this category toward Non-teaching Activities component and each group in the category hold different value of means. The highest value is in Citizenship class (3.3974) while the lowest is in Biology class (2.7875). Looking at the frequencies, it appears that those in Citizenship and Elementary Education class responded more positive than those in Physics and Biology class. Majority of participants in these two classes chose to answer the case with “a major extent” option. There is not much different in the portion of cases answered with

“sometimes” and “rarely” options in these two classes, however, option “not at all” seems to be more chosen in Elementary Education class than in Citizenship class. Less positive response toward Non-teaching Activities component is found in Physics and Biology classes. When they are compared, Physics class has higher portion of cases answered with “often” and “sometimes” options while Biology class has higher portion of “rarely” and “never”. *See charts below.*

Chart 9. Responses toward Non-teaching Activities component in Major category



4.2.3.4 Cross Tabulation analysis on Cases

As explained previously, comparison on cases was done in order to explore out in which cases the participants response differently. According to the result of analysis, participants’ response is varied on the following cases:

- See model expert teachers in action.
- Learn establish remedial and enrichment program for students.
- How to identify students’ characteristics.
- The effect of the social, cultural, religious, and ethnic backgrounds of students on their learning.
- How individual students learn and develop.
- How to use findings from research to improve own knowledge and practices.

- g. How cultural and gender differences can affect communication in the classroom.
- h. Using ICT in classroom.
- i. To communicate with own community or community of other profession through various media.
- j. Work with parents, guardians, or community.
- k. Work with non-teaching professionals.
- l. Use assessments to give effective feedback to parents or guardians.
- m. Observe teachers in their classrooms.
- n. Join in regular meeting of teachers.
- o. Visit families or local community agencies or organizations.

Frequencies of each case can be seen in Appendix D.

- a. See models of expert teachers in action

Learning the Practice of Teaching component only has one case with varied responses that is “See models of expert teachers in action” case. Result of analysis shows that all 5 categories responded differently toward this case. In gender category, male participants responded less positive than female participants. Majority of male participants chose “a moderate extent” option to answer the case compared to their counterparts. Option “a minor extent” also being chosen more in this group and one male participant found to choose option “not at all” to answer the case. Similar with male participants, older participants also have different view toward the current case. Most of them answer the case with “a moderate extent” option compared to the younger group which mostly chose the option “a major extent” to answer the case. Different with their counterparts, more participants who chose “a minor extent” also appear more in this group and one older participant is found to answer the case with “not at all” option while there is no younger participant chose such option to answer the case. According to major category, those who were in Citizenship and Physics majors are likely to have different view of the case compared to the remaining two majors. Majority of them chose to answer the case with “a moderate extent” option and two of them are found to choose “a minor extent” option to answer the case. The least positive response is found to be in Citizenship major.

Variety of answers is also found in university category. Compared to group of graduates from university in central Indonesia, half of those who formerly graduated from university out of central Indonesia chose the option “a moderate extent” and one is found choosing the option “a minor extent” to answer the case. However,

although majority of those who graduated from university in central Indonesia chose “a major extent” option to answer the case, it is also found that there are six of them who chose “a minor extent” option while only one of graduates from university out of central Indonesia used the same option to answer the case. In experience category, majority of those in more experienced and inexperienced group answer the case with “a moderate extent” option. None of those in more experienced group chose “a minor extent” option to answer the case but two of those inexperienced used the same option to answer the case. Although majority of those in less experienced group answer the case with “a major extent” option, there are still five of them chose “a minor extent” option and one chose “not at all” to answer the case. More specific result can be seen on the table below:

Table 4. Cross tabulation on case “See models of expert teachers in action”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
Male	9 (33.33%)	13(48.15%)	4 (14.81%)	1 (3.70%)	0	27
Female	21 (63.64%)	8 (24.24%)	3 (9.10%)	0	1 (3.03%)	33
Below 25 years old	18 (72.00%)	4 (16.00%)	3 (12.00%)	0	0	25
25 years old or above	12 (34.29%)	17 (48.57%)	4 (11.43%)	1 (2.86%)	1 (2.86%)	35
Citizenship	7 (36.84%)	9 (47.37%)	2 (10.53%)	0	1 (5.26%)	19
Biology	7 (58.33%)	4 (33.33%)	0	1 (8.33%)	0	12
Physics	6 (46.15%)	4 (30.77%)	3 (23.08%)	0	0	13
Elementary Education	10 (62.50%)	4 (25.00%)	2 (12.50%)	0	0	16
University in central Indonesia	26 (54.17%)	15 (31.25%)	6 (12.50%)	1 (2.08%)	0	48
University out of central Indonesia	4 (33.33%)	6 (50.00%)	1 (8.33%)	0	1 (8.33%)	12
More experienced	3 (33.33%)	6 (66.67%)	0	0	0	9
Less experienced	19 (59.38%)	6 (18.75%)	5 (15.63%)	1 (3.13%)	1 (3.13%)	32
No experience	8 (42.11%)	9 (47.37%)	2 (10.53%)	0	0	19

b. Learn to establish remedial and enrichment program for students

Other component which has a case with varied responses is Learning via Feedback and To Do Evaluation component. The case is “Learn to establish remedial and enrichment program for students”. From the 5 categories, varieties are found in major and experience categories. In major category, Citizenship and Biology classes are found to have less positive response toward the case compared to the remaining two majors where their participants mostly answered the case with “a moderate extent” options. However, compared to Biology class, Citizenship class has the least positive response. In experience group, less experienced group is found to have the most positive response toward the case where majority of participants in this group responded to the case with “a major extent” option. Both more and inexperienced group have less positive response, however, it seems like inexperienced group has the least positive response toward the case. More than half of those from inexperienced group used “a moderate extent” option to answer the case and they also have two participants answered the case with “a minor extent” option. Table below shows more specific result:

Table 5. Cross tabulation on case “Learn to establish remedial and enrichment program for students”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
Citizenship	6 (31.48%)	11 (57.89%)	1 (5.26%)	0	1 (5.26%)	19
Biology	5 (41.67%)	6 (50.00%)	1 (8.33%)	0	0	12
Physics	7 (53.85%)	6 (46.15%)	0	0	0	13
Elementary Education	8 (50.00%)	7 (43.75%)	1 (6.25%)	0	0	16
More experienced	4 (44.44%)	4 (44.44%)	1 (11.11%)	0	0	9
Less experienced	17 (53.13%)	14 (43.75%)	0	0	1 (3.13%)	32
No experience	5 (26.32%)	12 (63.16%)	2 (10.53%)	0	0	19

c. How to identify students’ characteristics

The next five cases belong to Knowledge about the Students component. The first one is “How to identify student’s characteristics” case. Out of five categories, participants’ answers are found diverse in university category and experience category.

More than half of graduates from university outside of central Indonesia are found to choose option “a moderate extent” to answer the case. In experience category, inexperienced participants are likely to have less positive toward the case compared to the remaining two groups in this category where more than half of them also chose “a moderate extent” option to answer the case. The specific result can be seen on the table below:

Table 6. Cross tabulation on case “How to identify student’s characteristics”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
University in central Indonesia	25 (52.08%)	22 (45.83%)	1 (2.08%)	0	0	48
University out of central Indonesia	5 (41.67%)	7 (58.33%)	0	0	0	12
More experienced	5 (55.56%)	4 (44.44%)	0	0	0	9
Less experienced	18 (56.25%)	13 (40.63%)	1 (3.13%)	0	0	32
No experience	7 (36.84%)	12 (63.16%)	0	0	0	19

d. The effect of the social, cultural, religious, and ethnic backgrounds of students on their learning

The second case is “The effect of the social, cultural, religious, and ethnic backgrounds of students on their learning” case. According to the Major and experience category, in response to this case, participants are likely to response differently. In major category, those who were in Biology major is found to have less positive response toward the case compared to the rest three majors. Majority of them chose “a moderate extent” option to answer the case and they also have three participants using “a minor extent” option as the answer for the case. In experience category, participants are obvious to have more positive response on current case since participants in all the groups in this category majority chose “a moderate extent” to answer the case. However, if we look at the details, inexperienced group actually has less positive response compared to the remaining two since it has seven participants chose “a moderate extent” option while four chose “a minor extent”. Specific result is on the table below:

Table 7. Cross tabulation on case “The effect of the social, cultural, religious, and ethnic backgrounds of students on their learning”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
Citizenship	13 (68.42%)	5 (26.32%)	1 (5.26%)	0	0	19
Biology	4 (33.33%)	5 (41.67%)	3 (25.00%)	0	0	12
Physics	7 (53.85%)	4 (30.77%)	2 (15.38%)	0	0	13
Elementary Education	9 (56.25%)	6 (37.50%)	1 (6.25%)	0	0	16
More experienced	7 (77.78%)	2 (22.22%)	0	0	0	9
Less experienced	18 (56.25%)	11 (34.38%)	3 (9.38%)	0	0	32
No experience	8 (42.11%)	7 (36.84%)	4 (21.05%)	0	0	19

e. How individual students learn and develop

The third case is “How individual students learn and develop” case. Different response to this case is found in major and experience category. In major category, participants in Physics class are found to have the least positive response toward the case compared to the remaining group. Majority of participants in this group responded with “a moderate extent” toward the case. The same result also appears in experience category where more than half of inexperienced group’s members also gave their answer by choosing “a moderate extent” option.

Table 8. Cross tabulation on case “How individual students learn and develop”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
Citizenship	11 (57.89%)	7 (36.84%)	0	0	1 (5.26%)	19
Biology	6 (50.00%)	5 (41.67%)	1 (8.33%)	0	0	12
Physics	3 (23.08%)	10 (76.92%)	0	0	0	13
Elementary Education	10 (62.50%)	6 (37.50%)	0	0	0	16
More experienced	6 (66.67%)	3 (33.33%)	0	0	0	9
Less experienced	17 (53.13%)	13 (40.63%)	1 (3.13%)	0	1(3.13%)	32
No experience	7 (36.84%)	12 (63.16%)	0	0	0	19

f. How to use findings from research to improve your knowledge and practices

The fourth case is “How to use findings from research to improve your knowledge and practices” case. Result of analysis found that one category has different response toward the case that is experience category. Inexperienced participants are likely to have the least positive response in the group. Almost half of them chose the option “a moderate extent” option. While none of participants in the remaining two groups answered with “a minor extent” option, inexperienced group have two of their members answered with the option.

Table 9. Cross tabulation on case “How to use findings from research to improve your knowledge and practices”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
More experienced	6 (66.67%)	3 (33.33%)	0	0	0	9
Less experienced	23 (71.88%)	8 (25.00%)	0	0	1 (3.13%)	32
No experience	8 (42.11%)	9 (47.37%)	2 (10.53%)	0	0	19

g. How cultural and gender differences can affect communication in the classroom

The last case from Knowledge about the Students components to be found having different response from the participants is “How cultural and gender differences can affect communication in the classroom” case. Similar with the previous case, the same result appears on this case where response toward this case differs in experience category. Inexperienced group is likely to have the most participants that respond less positive toward the case. Majority of participants that belong to this group answered the case with “a moderate extent” option and they also have five participants responded to the case with “a minor extent” option. Portion of participant responded with “a minor extent” option is the highest in this group (*see contingency table below*).

Table 10. Cross tabulation on case “How cultural and gender differences can affect communication in the classroom”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
More experienced	5 (55.56%)	3 (33.33%)	1 (11.11%)	0	0	9
Less experienced	19 (59.38%)	10 (31.25%)	3 (9.38%)	0	0	32
No experience	6 (31.58%)	8 (42.11%)	5 (26.32%)	0	0	19

h. Using ICT in the classroom

There is one case in Practice about Classroom Management component which appears to gain diverse response namely “Using ICT in the classroom” case. From 5 categories, major category is found to have diverse response toward this case. In this category, Elementary Education class is found to have the least positive response toward the case. Although majority of the responses are “a major extent” option, this class has the highest portion of responses with “a moderate extent” and “not at all” options, and one of its participants also responded toward the case with “a minor extent” option.

Table 11. Cross tabulation on case “Using ICT in the classroom”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
Citizenship	17 (89.47%)	2 (10.53%)	0	0	0	19
Biology	8 (66.67%)	3 (25.00%)	0	1 (8.33%)	0	12
Physics	12 (92.31%)	1 (7.69%)	0	0	0	13
Elementary Education	7 (43.75%)	6 (37.50%)	1 (6.25%)	2 (12.50%)	0	16

i. To communicate with own community or community of other profession through various media

Personal and Social component has one case with varied responses namely “To communicate with own community or community of other profession through various media” case is a part of to Personal and Social component. In case this case, major category is likely to have different response toward the case among other categories. Result of analysis found that Biology class has the least positive response

toward the case compared to other classes in the category. More than half of participants in this class chose “a moderate extent” option to answer the case and one of its participants also chose “a minor extent” option to respond to the case. Contingency table below shows the specific result.

Table 12. Cross tabulation on case “To communicate with own community or community of other profession through various media”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
Citizenship	14 (73.68%)	4 (21.05%)	0	0	1 (%)	19
Biology	4 (33.33%)	7 (58.33%)	1 (8.33%)	0	0	12
Physics	12 (92.31%)	1 (7.69%)	0	0	0	13
Elementary Education	12 (75.00%)	4 (25.00%)	0	0	0	16

j. Work with parents, guardians, or community

The next three cases belong to Reflection and Working with Others component. The first case to be analysed is “Work with parents, guardians, or community” case. According to the result of analysis, participants in 3 categories have different response toward the case. Less positive response in major category is found in Biology and Physics classes. Majority of participants in these two groups responded to the case with “a moderate extent” option. Biology class has two participants who responded to the case with “a minor extent” option while three participants in Physics class responded the case with “a minor extent” option and one responded with “not at all” option. In university category, those who graduated in university in central Indonesia have less positive response compared to graduates from university out of central Indonesia. Majority of them responded with “a moderate extent” option. Furthermore, there are seven participants who graduated from university in central Indonesia responded with “a minor extent” option and one with “not at all” option. In experience category, inexperienced participants are likely to have less positive response toward the case compared to the experienced participants. Most of them answered the case with “a moderate extent” option. Four participants in this group also found to answer to the case with “a minor extent” option. More specific results can be seen in the table below:

Table 13. Cross tabulation on case “Work with parents, guardian, or community”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
Citizenship	12 (63.16%)	5 (26.32%)	2 (10.53%)	0	0	19
Biology	2 (16.67%)	8 (66.67%)	2 (16.67%)	0	0	12
Physics	4 (30.77%)	5(38.46%)	3 (23.08%)	1 (7.69%)	0	13
Elementary Education	8 (50.00%)	5(31.25%)	2 (12.50%)	0	1 (6.25%)	16
University in central Indonesia	18 (37.50%)	21 (43.75%)	7 (14.58%)	1 (2.08%)	1(2.08%)	48
University out of central Indonesia	8 (66.67%)	2 (16.67%)	2(16.67%)	0	0	12
More experienced	5 (55.56%)	3 (33.33%)	0	1 (11.11%)	0	9
Less experienced	18 (56.25%)	8 (25.00%)	5 (15.63%)	0	1 (3.13%)	32
No experience	3 (15.79%)	12 (63.16%)	4 (21.05%)	0	0	19

k. Work with non-teaching professionals

The second case belongs to Reflection and Working to Others component is “Work with non-teaching professionals” case. In major category, Physics class is likely to have the most positive response toward the case compared to the other three classes. The three classes; Citizenship, Biology, and Elementary Education, are found the have less positive response toward current case but the least is likely in Biology class. Majority of participants in these three classes responded the case with “a moderate extent” option. Participants responded with “a minor extent” option are one in Citizenship class, three in Biology class, and four in Elementary Education class. One participant in Citizenship class and one in Elementary Education also chose the option “not at all” to respond to the case. See contingency table below for more specific results:

Table 14. Cross tabulation on case “Work with non-teaching professionals”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
Citizenship	7 (36.84%)	8 (42.11%)	1 (5.26%)	1 (5.26%)	2 (10.53%)	19
Biology	2 (16.67%)	7 (58.33%)	3 (25.00%)	0	0	12
Physics	7 (53.85%)	5 (38.46%)	0	1 (7.69%)	0	13
Elementary Education	3 (18.75%)	9 (56.25%)	4 (25.00%)	0	0	16

1. Use assessments to give effective feedback to parents or guardians

The last case to be analysed that belongs to Reflection and Working with Others component is “Use assessments to give feedback to parents or guardians” case. When the participants were given the case, it was found that participants’ answers are diverse according to major and experience category. In major category, Biology and Physics class are likely to have less positive response compared to the remaining classes but Biology class has the least among others. Majority of participants in this group responded to the case with “a moderate extent” option. In experience category, inexperienced participants are likely to have less positive response among the groups in the category. Majority of participants in this group also responded to the case with “a moderate extent” option. More specific results can be seen on the table below:

Table 15. Cross tabulation on case “Use assessments to give effective feedback to parents or guardians”

	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (respondents)
Citizenship	11 (57.89%)	6 (31.58%)	1 (5.26%)	1 (5.26%)	0	19
Biology	4 (33.33%)	6 (50.00%)	2 (16.67%)	0	0	12
Physics	6 (46.15%)	4 (30.77%)	2 (15.38%)	1 (7.69%)	0	13
Elementary Education	9 (56.25%)	7 (43.75%)	0	0	0	16
More experienced	7 (77.78%)	0	1 (11.11%)	1(11.11%)	0	9
Less experienced	17 (53.13%)	13 (40.63%)	2 (6.25%)	0	0	32
No experience	6 (31.58%)	10 (52.63%)	2 (10.53%)	1 (5.26%)	0	19

m. Observe teachers in their classroom

The last three cases to gain diverse response belong to Non-teaching Activities component. The first case is “Observe teachers in their classroom”. According to analysis, category which has diverse result is major category. Result of analysis shows that only Elementary Education class gains the most response in “often” option. Participants in the remaining three classes are majority responded to the case with “sometimes” option with more than half are in Citizenship and Biology classes.

Table 16. Cross tabulation on case “Observe teachers in their classroom”

	Often	Sometimes	Rarely	Never	Missing	Total (respondents)
Citizenship	7 (36.84%)	11 (57.89%)	1 (5.26%)	0	0	19
Biology	2 (16.67%)	10 (83.33%)	0	0	0	12
Physics	5 (38.46%)	6 (46.15%)	2 (15.38%)	0	0	13
Elementary Education	9 (56.25%)	7 (43.75%)	0	0	0	16

n. Join in regular meeting of teachers

The next case belongs to Non-teaching Activities component is “Join in regular meeting of teachers”. Similar with the previous case, diverse response toward this case are also found in major category. Only those in Citizenship class are found to response more positive toward the case compared to the remaining classes. The class which has highest number of participants responding with “sometimes” option is Physics, while “rarely” and “never” are in Biology class.

Table 17. Cross tabulation on case “Join in regular meeting of teachers”

	Often	Sometimes	Rarely	Never	Missing	Total (respondents)
Citizenship	11 (57.89%)	5 (26.32%)	1 (5.26%)	2 (10.53%)	0	19
Biology	2 (16.67%)	1 (8.33%)	2 (16.67%)	7 (58.33%)	0	12
Physics	2 (15.38%)	7 (53.85%)	1 (7.69%)	3 (23.08%)	0	13
Elementary Education	7 (43.75%)	5 (31.25%)	1 (6.25%)	3 (19.75%)	0	16

o. Visit families or local community agencies or organizations

The last case to have diverse response in Non-teaching Activities component is “Visit families or local community agencies or organizations”. Result of analysis also found that the diverse response is found when the data is analysed based on their major. The case is found to gain less positive response in the four classes. The class with highest “often” response is in Citizenship class. The highest portion of “sometimes” option is in Physics class, Elementary Education class has highest portion of those who chose “rarely” option, while the highest portion of those who response with “never” option is in Biology class.

Table 18. Cross tabulation on case “Visit families or local community agencies or organizations”

	Often	Sometimes	Rarely	Never	Missing	Total (respondents)
Citizenship	8 (42.11%)	3 (15.79%)	5 (26.32%)	3 (15.79%)	0	19
Biology	1 (8.33%)	2 (16.67%)	2 (16.67%)	7 (58.33%)	0	12
Physics	1 (7.69%)	4 (30.77%)	2 (15.38%)	6 (46.15%)	0	13
Elementary Education	2 (12.50%)	4 (25.00%)	5 (31.25%)	5 (31.25%)	0	16

4.3 Summary and Interpretation of the Findings

The present study was designed to address a major question: What are the perceptions of pre-service teachers about PPG-SM3T program for their professional development? The present study has four objectives which are:

- a. To find out to pre-service teachers’ perception on the nature of opportunities provided by PPG-SM3T program to learn to teach.
- b. To find out pre-service teachers’ perceptions on how well PPG-SM3T program prepare them with adequate professional knowledge.
- c. To find out pre-service teachers’ perceptions on how well PPG-SM3T program prepare them with professional practice.
- d. To find out pre-service teachers’ perceptions on how well PPG-SM3T program prepare them to engage personally and socially with their profession.

In general, pre-service teachers who took PPG-SM3T in the assigned university in central Indonesia viewed that the program gave positive impact to their professional development. This can be seen where majority of pre-service teachers responded positively towards each component being analysed in the program. Unfortunately, duration of supervision is still inadequate since most participants are only given supervision only 4 times during their field teaching practice. In terms of workshop, pre-service teachers also responded positively where majority of them viewed that the workshop was very helpful for their field teaching practice. Within the main features of the program, pre-service teacher mentioned that workshop and field teaching practice were particularly helpful to prepare them to be professional. Workshop is very helpful for them since *it gives them knowledge and practice to teach before teaching in real school*, while field teaching help them for *they are situated in real life school and can gain much experience to face various students' characteristics*. Majority of these pre-service teacher suggested that elements such as extracurricular coaching practice, leadership training, knowledge about four teacher competencies, educational psychology, knowledge about school administration, special program to develop their personal competency, etc should be included in PPG-SM3T program. Elements they suggested are, in fact, rarely found to be given during their previous teacher education program. All pre-service teachers who took PPG-SM3T program in this assigned university had same voice that they would highly recommend the program for those who are interested to be a teacher. They also responded positively that, overall, PPG-SM3T program is mainly effective in preparing them to be professional teacher. There are 10 components and 96 cases analysed in the present study. Majority of the components have positive response from the participants. Only 3 of them appear to have diverse response namely knowledge of the students component, reflection and working with others component, and non-teaching activities component. Participants also responded positively toward majority of the cases. Out of 96 cases, only 15 are found to have diverse response.

4.3.1 Pre-service teachers' perception on the opportunities provided by PPG-SM3T program to learn to teach.

In general, pre-service teachers who took PPG-SM3T program in the assigned university viewed that the program gave them the needed opportunities to learn to a major extent in order to increase their professional development. There is no meaningful difference on pre-service teachers' perception in relation to learning the practice of teaching and

learning via feedback and to do evaluation. Only slightly different response appears on two cases in Opportunity to Learn section and need to be considered namely opportunity to *see models of expert teachers in action* and opportunity to *learn to establish remedial and enrichment program for students*. A number of participants seem to have different expectation and responded that PPG-SM3T program moderately prepared them with opportunity to *see models of expert teachers in action*. Furthermore, majority of inexperienced participants in Citizenship and Biology classes responded less positive in terms of opportunity to *learn to establish remedial and enrichment program for students* provided by the program. These participants have different expectation toward the case and responded that the program only prepared them to a moderate extent.

4.3.2 Pre-service teachers' perceptions on how well PPG-SM3T program prepare them with professional knowledge.

Majority of pre-service teachers also responded positively toward PPG-SM3T program that it prepared them with professional knowledge to a major extent. However, there are some aspects in knowledge about students component that are inadequately provided by the program and need to be improved. From 7 cases in this component, 5 of them are varied in response namely *identifying students' characteristics*; knowledge on *the effect of the social, cultural, religious, and ethnic backgrounds of students on their learning*; knowledge about *how individual students learn and develop*; knowledge on *how to use findings from research to improve your knowledge and practices*; and *how cultural and gender differences can affect communication in the classroom*. Inexperienced pre-service teacher who graduated from university out of central Indonesia responded that the program only prepares them professional knowledge to *identify students' characteristics* to a moderate extent. In relation to professional knowledge on *the effect of the social, cultural, religious, and ethnic backgrounds of students on their learning*, inexperienced teacher who were in Biology class also responded that the program only prepares them to a moderate extent. For inexperienced teachers who were in Physics class, the program only prepares them to a moderate extent in relation to professional knowledge about *how individual students learn and develop*. In addition, all inexperienced teachers seem to have less positive response that PPG-SM3T program only prepare them to a moderate extent in professional knowledge about *using findings from research to improve own knowledge and practices* and *how cultural and gender differences can affect communication in the classroom*.

4.3.3 Pre-service teachers' perceptions on how well PPG-SM3T program prepare them with professional practice.

Pre-service teachers who took PPG-SM3T program in the assigned university is likely to have the most positive response in relation to how they are prepared with professional practice. There is no meaningful difference on pre-service perception toward how the program prepared them in terms of professional practice about classroom management, curriculum, and assessment. Majority of them positively viewed that the program has prepared them with adequate professional practices for the development of their professionalism. One improvement needed in the program is related to professional practice in classroom management especially regarding *using ICT in the classroom*. Majority of pre-service teachers in Elementary Education class responded that PPG-SM3T program only prepare them to a moderate extent in relation to this case.

4.3.4 Pre-service teachers' perceptions on how well PPG-SM3T program prepare them to engage personally and socially in the profession.

How the program prepared pre-service teacher to engage personally and socially in their profession is likely the component of PPG-SM3T program to gain the least positive response from pre-service teachers. Findings of analysis show that, in general, differences appear on pre-service teachers' perceptions about professional engagement especially on reflection and working with others component and non-teaching activities component. Majority of inexperienced participants who were in Biology class are likely to response the least positive where they only viewed that PPG-SM3T program only prepared them to a moderate extent regarding reflection and working with others component. Additionally, participants in Biology and Physics classes also have different perception in relation to non-teaching activities component for the activities provided by the program in those two classes are still inadequate.

It appears that cases related to personal and social component does not have much diverse responses compared to those in reflection and working with others component and non-teaching activities component. Among the cases in personal and social component, participants are likely to view that professional engagement provided in the program considering *communicating with own community or community of other profession through various media* did not meet their expectation especially for those who were in Biology class. Participants in the present study are found to have different perceptions on many cases

considering reflection and working with others component and non-teaching activities component. From 4 cases in personal and social component, 3 of them appear to have varied response. Based on the responses, the program still inadequately prepared pre-service teachers with professional engagement related to *working with parents, guardian or community; working with non-teaching professionals; and using assessments to give effective feedback to parents or guardians*. Furthermore, there is also lack of non-teaching activities provided in the program to enable pre-service teacher to engage with other components in education. From 5 cases in non-teaching activities component, 3 of them have varied response namely *observing teachers in their classroom, join in regular meeting of teachers, and visit families or local community agencies or organizations*. Majority of inexperienced participants in Biology and Physics classes who graduated from university in central Indonesia responded that PPG-SM3T program only prepared them opportunity to a moderate extent considering professional engagement on *working with parents, guardian or community*. Furthermore, majority of inexperienced participants in Citizenship, Biology, and Elementary Education also viewed that the program only prepare them with opportunity to *work with non-teaching professionals* in moderate extent. Inexperienced pre-service teachers in Biology class also have different perception and responded that the program only provided them opportunity in *using assessment to give effective feedback to parents or guardians* to a moderate extent. Additionally, all pre-service teachers in Biology class felt that activities related to *observe teachers in their classroom and visit families or local community agencies or organizations* are still inadequate, whereas all pre-service teachers in Physics class viewed that activities related to *join in regular meeting of teachers* are also inadequate.

Discussion and Conclusion

5.1 Discussion and Suggestion

According to the result of the present study, professional development program for pre-service teacher (PPG-SM3T program) established in a state university in central Indonesia generally gave positive impact for the professional development of its participants although some aspects in the program need to be improved in the future. Majority of participants viewed that workshop and field teaching practice during the program were helpful to prepare them to be professional. All of participants would gladly to recommend the program for those who are interested to be teacher. Overall, majority of participants viewed that the program was very effective in preparing them to be professional. Among the 10 components being analysed, only 3 components appear to have diverse response namely knowledge of the student component, reflection and working with others component, and non-teaching activities components. Moreover, only 15 cases are found to have diverse response among the total 68 cases.

The first aspect to be improved is duration of supervision. Majority of the participants are only given 4 times supervision by their supervising teacher during their field teaching practice. More opportunity should be given to participants to meet and discuss with their supervising teacher in order to improve their teaching. Other aspect is that professional development program should aid teachers from all level of experience to reach development in their professionalism. However, it seems that professional development program in the present study only reach those who are experienced and still could not reach the inexperienced participants. Among the components, majority of inexperienced participants viewed that the program still insufficient to prepare them with adequate knowledge about students and also opportunity to work with others. Majority of inexperienced participants are also found to respond less positive in 9 out of 15 cases that gain varied response from the participants. Professional development program should ensure that the courses it delivers can aid all group of teachers, from inexperienced to experienced teachers, to develop their professionalism.

Next aspect is in the content of the workshop. Workshop holds an essential role in PPG-SM3T program. In the workshop, pre-service teachers are prepared with knowledge and practices before entering field teaching practice. In the present study, there are still a number

of participants who view that the program inadequately prepared them with knowledge about students' characteristics, learning, and development. A number of participants also feel unsatisfied with the opportunity provided by the program for them to learn on establishing remedial and enrichment program. Knowledge about students' characteristics, learning and development is essential for teacher in order to give proper response to students' needs. They should be given more opportunity to learn how to establish remedial and enrichment program so that they can better reflect on students' weaknesses and know how to deal with it. In the future, PPG-SM3T program should consider these aspects and provide its participants with more knowledge and opportunity to learn those aspects.

Teacher needs to be well prepared to work in a culturally heterogeneous environment and to understand the relevance of diverse cultural backgrounds to the students' development. However, in case of Indonesia, it is found that PPG-SM3T program also insufficiently prepared its inexperienced participants with knowledge on the effect of gender, social, cultural, religious, and ethnic backgrounds differences towards students' learning and communication in the classroom. Indonesia is a heterogeneous country and facing heterogeneous classroom is not impossible for teachers. However, there is lack consideration about this matter from the government. Even during their preparation, it is uncommon to see teachers in Indonesia learn specifically about the mentioned matters. Teachers should understand that their attitudes as well as their knowledge on incorporating their students' culture into their teaching will influence what students learn and the quality of their learning (Darling-Hammond and Bransford, 2005). Merely aware of culture differences among students is not enough for teachers. They have to be aware of how learning takes place in different cultures. This matter is crucial especially when cultural perspective of the teacher is very different from students in her classroom. It is a must for him/her to learn about the cultural contexts the children bring with them into the classroom. Giving proper preparation to work in a multicultural environment is essential for pre-service teachers in Indonesia. Multicultural education can be one solution to be included in PPG-SM3T program to prepare them facing heterogeneous classroom.

Another aspect of the program to be considered for future improvement is to expose teachers more with research so that they can learn from its findings. Finding from the present study indicates that inexperienced participants of the program are provided inadequate knowledge on how to make use research findings to improve their knowledge and practice. Educators have long considered action research as a valid method of professional

development (Goldstein, 2007). Learning from research findings can provide pre-service teachers with up-to-date knowledge about the current development in education. For this matter, PPG-SM3T as teacher professional development program should be able to expose its participants more with current research in education so that they can learn from it and make use of it to improve their knowledge and practices.

Nowadays, the use of ICT cannot be separated from daily life as well as education and teachers are challenged to adapt the revolution of technology information in improving their professionalism. Teacher and school are not the only source and centre of learning for learning activities are no longer limited by time and space. There are many learning resources and sources of information can facilitate a person to learn. Teacher can have many advantages if they are technology illiterate. However, it seems like PPG-SM3T program have to adjust its program so that they can help the participants to properly use ICT for their teaching. Finding of the present study finds that majority of participants in Elementary Education class felt unsatisfied on the practice given by the program regarding using ICT in the classroom. Teacher professional development program need to produce technology illiterate teaching professionals so they could teach their students to use technology within particular disciplines (Darling-Hammond and Bransford, 2005). The use of ICT should be infused in teacher professional development program courses to enable teachers to practice how to use the tools within their disciplines.

Supervising teachers and supervisor hold crucial role in PPG-SM3 program since they are the ones who has role to be a model for the pre-service teachers' as well as supervising them study during the program. However, in the present study, a number of participants viewed that PPG-SM3T program likely did not provide them with adequate opportunity to see their models in action (giving example in teaching). Majority of participants in Citizenship, Biology, and Physics classes also felt lack of opportunity to observe other teachers in their classroom. In some cases, supervising teachers or other teachers may not agree if training teachers come to their class too often. One solution can be done by recording them teaching in their classrooms. By doing so, training teachers do not need to always be exist in the class and can indirectly observe many classes. This activity is also good for model teachers as reflection. They can discuss about what he/she has done during teaching and the discussion might help to improve their teaching method.

Besides lack of opportunity to observe model teachers, majority of participants in Biology, Physics, and Elementary Education classes also felt lack of opportunity to join

regular teacher meetings during PPG-SM3T program. This result is actually not surprising. In Indonesia, it is not common to see training teachers have many opportunities to join teacher meetings especially if it is related to their main role as a teacher for example meeting on curriculum development or about school administration. Most of the time, they are allowed to join teachers meeting when it is about ceremonial activity such as school anniversary or about national exams. In reality, the things such as school administration and curriculum development are one of the basic things that teachers should be mastered when they teach in real school. By giving more chances for pre-service teachers to join teacher meetings, it could enable them not only to engage with school community in a formal school activity aside of teaching but also provide them opportunity to learn things related to school directly from the school itself. Pre-service teachers might be given knowledge about curriculum development during their professional development program, however, they could learn it better if they experience it directly at school and see how the school and experienced teachers “deal” with curriculum, school administration, etc.

Being a teacher is not merely teaching in the classroom, working with students and school administration. In conducting learning, teachers are required to cooperate with their colleagues, parents, social community, as well as other professional or non-professional community for they also hold important role in students’ education. Communities within and outside the school have a significant role in influencing teachers’ professional development. Community engagement is an important dimension to the teachers’ role and responsibility. Providing pre-service teachers with adequate activities that enables them to engage with other components of education would be an advantage for the pre-service themselves as initial practice before facing real school. In relation to the present study, PPG-SM3T program is likely lack in providing its participants with such activities. Working with parents or guardians is crucial in students’ learning. One way to know students better is to be in the community where they live or where their parents work. Not all parents may have time to actively involve in their children’s learning. In this matter, the teacher need actively *draw* parents to involve in their children’s learning. Involving parents in students learning activities, delivering feedback to parents about their children’s learning or simply visiting students in their house is not only a way to know students better but also a good way for pre-service teachers to learn to build communication and relation with parents.

The last aspect in PPG-SM3T to be improved in the future is more opportunity for the participants to work with non-teaching professionals and surrounding community. Finding

of the present study finds that majority of participants in Biology class viewed that the program still inadequately provided them with opportunity that enabled them to use various media to communicate with either own community or community of other profession. Majority of participants in Biology, Citizenship, and Elementary Education classes also viewed that the program only provided a little chance for them to be able to work with non-teaching professionals. To develop their professionalism, teachers are required not only to know what happened around education world but also other sectors connected to it. Activities such as visiting local communities, organizations, and cooperation with non-teaching professionals are also needed to broaden pre-service teachers' knowledge. These activities will enable teachers to involve in the community and make teaching meaningful and relevant. Having community engagement in their professional development program could give benefit for pre-service teachers because, aside of giving experience on working with surrounding community, it will give them greater sense of responsibility, social connectedness, as well as develops their insights.

5.2 Conclusion

National education is not merely the responsibility of school or teachers or government alone. When the result of education did not meet expectation, it is so often that society mainly points their finger on school and teachers. It is not totally wrong, nor totally right. Our society often forget that education is a shared responsibility among school, teachers, government, parents, as well as the society and all those components are related one another. In education itself, teacher plays as a "tool" to deliver what has planned by the government for national education and applies it in the classroom. The role of this "tool" is very significant. No matter how good government's plans for national education, no matter how good the policy or curriculum the government have prepared, it will be meaningless if teachers do not know how to apply or develop it properly to meet the needs of student. One way to improve this "tool" is by providing professional development program. However, just merely putting the program on the spot will change nothing. Aspects such as the input, its content and policy, how the program will be managed and delivered, who will be responsible, cooperation with other sectors, its sustainability and better improvement in the future need to be considered in order to meet the demands in education bring the successfulness of the program.

Researches related to teacher professional development as well as findings of the current study have shown that professional development for teachers is important. Participants in teacher professional development program in one assigned state university in central Indonesia mostly responded positively toward the program even though there are also some notable aspects in the program still need to be improved. *Study period* of a teacher cannot merely end by the time they hold teacher certificate. Instead, it is a lifelong learning. What teacher educates is human. Human development and world development are in line and cannot be separated. That's why, aligned with these developments, teachers should be prepared with proper knowledge and their professionalism also need to be developed from time to time.

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APPENDIX A
PRINCIPAL COMPONENT ANALYSIS

1. Opportunity to Learn section

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.579
Bartlett's Test of Sphericity	Approx. Chi-Square
	315.525
	df
	136
	Sig.
	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.741	27.888	27.888	4.741	27.888	27.888
2	1.721	10.124	38.011	1.721	10.124	38.011
3	1.642	9.659	47.670	1.642	9.659	47.670
4	1.450	8.528	56.199	1.450	8.528	56.199
5	1.195	7.027	63.226	1.195	7.027	63.226
6	1.057	6.215	69.441	1.057	6.215	69.441
7	.953	5.609	75.049			
8	.796	4.681	79.731			
9	.684	4.021	83.752			
10	.657	3.867	87.619			
11	.509	2.996	90.615			
12	.422	2.480	93.095			
13	.361	2.126	95.220			
14	.289	1.700	96.920			
15	.260	1.530	98.450			
16	.148	.872	99.322			
17	.115	.678	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component					
	1	2	3	4	5	6
Learn methods for reflecting on your teaching	.782					
Practice analysing and reflecting on examples of your practice	.735					

Identify specific areas of your practice that you need to develop	.652	
Learn to establish reflection activity in the class	.640	
Learn methods of teaching specific to your subject	.634	
Plan and prepare unit of work	.634	
Master learning principles and theories	.459	
Make clear links between theoretical and practical aspects of teaching	.397	.357
Learn to establish remedial and enrichment program for students		.580
Practice new teaching skills with feedback from your supervisor or supervising teacher		.578
Receive useful feedback about your teaching from your program supervisor		.558
Learn how to diagnose student achievement in relation to expected learning outcomes		.549
Learn to assess and evaluate student progress in learning	-.327	.532
Receive useful feedback about your teaching from your supervising teacher		.455
Examine student work in relation to standards for student learning		

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	.916	.402
2	-.402	.916

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with Kaiser

Normalization.

2. Professional Knowledge section

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.751
Bartlett's Test of Sphericity	Approx. Chi-Square
	249.274
	df
	91
	Sig.
	.000

Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.780	34.142	34.142	4.780	34.142	34.142
2	1.753	12.525	46.667	1.753	12.525	46.667

3	1.198	8.557	55.224	1.198	8.557	55.224
4	1.039	7.421	62.646	1.039	7.421	62.646
5	.909	6.492	69.138			
6	.838	5.984	75.122			
7	.799	5.708	80.830			
8	.648	4.626	85.456			
9	.497	3.550	89.006			
10	.395	2.818	91.824			
11	.373	2.665	94.489			
12	.344	2.454	96.943			
13	.232	1.659	98.602			
14	.196	1.398	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component			
	1	2	3	4
How to analyse student existing understanding of the topics in the subject you teach	.763			
How cultural and gender differences can affect communication in the classroom	.700	-.305	-.328	-.355
How to identify students' characteristics	.696	-.332		
How to use findings from research to improve your knowledge and practices	.662			-.360
Current developments in the subject you teach	.661	.451		
The effect of the social, cultural, religious, and ethnic backgrounds of students on their learning	.657	-.352		
Ethical standards and codes of conduct expected of teachers	.621			
Mastery of standards competencies and basic competencies of the subject you teach	.589			
How to use effective communication with students	.538			.506
Resources to support your students' learning in your subject areas	.525	.390	.348	
How to analyse student existing understanding of the topics in the subject you teach	.467		-.441	.337
How to build on students' existing knowledge and experience	.407	.710		
Mastery of materials, structure, and concepts of the knowledge relevant to your subject	.384	.406	-.389	
The interconnectedness of learning across subject areas		-.478	.593	.335

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Rotated Component Matrix^a

	Component	
	1	2
Mastery of materials, structure, and concepts of the knowledge relevant to your subject	.048	.557
Mastery of standards competencies and basic competencies of the subject you teach	.349	.507
How to analyse student existing understanding of the topics in the subject you teach	.260	.423
How to build on students' existing knowledge and experience	-.123	.809
Current developments in the subject you teach	.237	.764
Resources to support your students' learning in your subject areas	.168	.631
How to identify students' characteristics	.752	.173
The effect of the social, cultural, religious, and ethnic backgrounds of students on their learning	.733	.133
How individual students learn and develop	.662	.393
How to use effective communication with students	.370	.400
How to use findings from research to improve your knowledge and practices	.647	.249
The interconnectedness of learning across subject areas	.530	-.189
How cultural and gender differences can affect communication in the classroom	.738	.197
Ethical standards and codes of conduct expected of teachers	.629	.206

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	.783	.622
2	-.622	.783

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with Kaiser

Normalization.

3. Professional Practice section

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.667
Bartlett's Test of Sphericity	Approx. Chi-Square
	534.285
	df
	210
	Sig.
	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.220	29.620	29.620	6.220	29.620	29.620
2	2.054	9.781	39.401	2.054	9.781	39.401
3	1.859	8.854	48.255	1.859	8.854	48.255
4	1.624	7.735	55.990	1.624	7.735	55.990
5	1.123	5.350	61.339	1.123	5.350	61.339
6	1.089	5.186	66.525	1.089	5.186	66.525
7	.941	4.479	71.004			
8	.864	4.114	75.118			
9	.824	3.924	79.042			
10	.706	3.363	82.405			
11	.646	3.077	85.482			
12	.604	2.875	88.357			
13	.459	2.186	90.543			
14	.394	1.876	92.419			
15	.350	1.666	94.085			
16	.347	1.651	95.736			
17	.302	1.437	97.173			
18	.198	.941	98.114			
19	.168	.798	98.912			
20	.139	.664	99.576			
21	.089	.424	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component					
	1	2	3	4	5	6
Provide flexible learning pathways	.688				-.320	
Include effective classroom management strategies into your teaching	.659					-.355
Communicate ideas and information clearly to your students	.648		-.427			
Design teaching and learning units/programs relevant to your students	.634				.333	
Develop curriculum effectively	.633		.404			

Develop assessment tasks that promote learning	.629	.421				
Use motivational strategy effectively	.593					-.379
Establish appropriate learning goals for your students	.579	.347				
Encourage appropriate student behaviour	.576	-.482		.356		
Keep useful records of your students' progress	.565				-.401	.348
Set up activities that meet the learning needs of students with diverse social, cultural, religious, and ethnic backgrounds	.534		.497			-.320
Develop questions to challenge students and stimulate critical thinking	.530		-.435			
Encourage your students to use critical thinking skills	.528	-.478	-.358			
Locate suitable curriculum materials and teaching resources	.517					
Give useful and timely feedback to students about their learning	.516	-.370		-.423		
Set up learning activities to help students achieve learning goals	.406	.390		.376		
Assess and monitor the progress of your students	.380	.370			.362	.351
Establish an active and productive learning environment	.444	-.544				
Elevate students' confidence and self-esteem	.334		.526	.402	.307	
Using ICT in the classroom	.489		-.522	-.409		
Use assessment to give effective feedback to your students	.348	.331		-.598	.360	

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

Rotated Component Matrix^a

	Component	
	1	2
Develop curriculum effectively	.248	.648
Design teaching and learning units/programs relevant to your students	.259	.639
Communicate ideas and information clearly to your students	.381	.535
Develop questions to challenge students and stimulate critical thinking	.470	.278
Locate suitable curriculum materials and teaching resources	.210	.522

Establish appropriate learning goals for your students	.165	.654
Set up learning activities to help students achieve learning goals	.012	.562
Using ICT in the classroom	.504	.187
Give useful and timely feedback to students about their learning	.627	.102
Encourage your students to use critical thinking skills	.712	.034
Establish an active and productive learning environment	.698	-.072
Elevate students' confidence and self-esteem	.384	.087
Use motivational strategy effectively	.264	.576
Encourage appropriate student behaviour	.749	.065
Provide flexible learning pathways	.651	.322
Include effective classroom management strategies into your teaching	.576	.357
Set up activities that meet the learning needs of students with diverse social, cultural, religious, and ethnic backgrounds	.403	.352
Assess and monitor the progress of your students	.008	.530
Use assessment to give effective feedback to your students	.013	.480
Keep useful records of your students' progress	.468	.330
Develop assessment tasks that promote learning	.149	.742

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	.709	.706
2	-.706	.709

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with Kaiser

Normalization.

4. Non-teaching Activities component

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.675
Bartlett's Test of Sphericity	Approx. Chi-Square
	104.849
	df
	15
	Sig.
	.000

Component Matrix^a

	Component	
	1	2
Join in regular meetings of teachers	.837	
Visit families or local community agencies or organizations	.817	

Assist in wider non-teaching school activities	.724	.541
Conduct small research projects	.632	.625
Observe other teachers in their classroom	.537	-.314
Plan lessons together with other colleagues	-.401	.411

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Component Matrix^a

	Component
	1
Join in regular meetings of teachers	.837
Visit families or local community agencies or organizations	.817
Assist in wider non-teaching school activities	.724
Conduct small research projects	.632
Observe other teachers in their classroom	.537
Plan lessons together with other colleagues	-.401

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Professional Engagement section

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.709
Bartlett's Test of Sphericity	Approx. Chi-Square
	288.431
	df
	120
	Sig.
	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.729	29.557	29.557	4.729	29.557	29.557
2	1.991	12.441	41.999	1.991	12.441	41.999
3	1.562	9.761	51.760	1.562	9.761	51.760
4	1.284	8.024	59.784	1.284	8.024	59.784
5	1.104	6.898	66.682	1.104	6.898	66.682
6	.955	5.972	72.654			
7	.781	4.879	77.533			
8	.701	4.382	81.915			
9	.555	3.469	85.384			
10	.509	3.182	88.566			
11	.468	2.925	91.490			
12	.401	2.505	93.995			

13	.328	2.047	96.042		
14	.291	1.816	97.858		
15	.182	1.138	98.996		
16	.161	1.004	100.000		

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component				
	1	2	3	4	5
To present self as a mature, wise, and steady person	.744				-.380
To present self as a honest person with noble character that can be exemplified by students and surrounding community	.684	-.365			
To adapt effectively at school and surrounding environment	.668	-.359			
To communicate with own community or community of other profession through various media	.656				
Show work ethic, high responsibility, proud as a teacher, and self confidence	.620			.343	
Use assessment to give feedback to parents or guardians	.617	.351	-.363	-.385	
Work with non-teaching professionals	.583	.496			
To use effective communication with colleagues, parents, and surrounding community	.529	-.302	.336		.336
Work with parents, guardians, or community	.559	.627		-.330	
Identify your learning needs		.626		.485	
To act in accordance with law, religious and social norms	.371	-.516			
Work collaboratively with other teachers	.466		.630		
Use students' data to develop an action plan for future improvement of your teaching practices		.334	.590		
To act objectively and not discriminating against students, colleagues, parents, and surrounding community	.340		.478		
Reflect on your professional knowledge	.479			.616	.304
Reflect on the effectiveness of your teaching	.525				.681

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Rotated Component Matrix^a

	Component	
	1	2
To present self as a honest person with noble character that can be exemplified by students and surrounding community	.771	
To adapt effectively at school and surrounding environment	.755	
To present self as a mature, wise, and steady person	.666	.344
To communicate with own community or community of other profession through various media	.618	.258
To use effective communication with colleagues, parents, and surrounding community	.607	
To act in accordance with law, religious and social norms	.596	-.218
Show work ethic, high responsibility, proud as a teacher, and self confidence	.525	.331
Reflect on your professional knowledge	.523	
Work collaboratively with other teachers	.454	.161
Reflect on the effectiveness of your teaching	.417	.321
Work with parents, guardians, or community	.110	.833
Work with non-teaching professionals	.203	.738
Identify your learning needs	-.132	.667
Use assessment to give feedback to parents or guardians	.313	.637
Use students' data to develop an action plan for future improvement of your teaching practices		.441
To act objectively and not discriminating against students, colleagues, parents, and surrounding community	.221	.280

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	.827	.562
2	-.562	.827

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with Kaiser

Normalization.

6. Quality of Field Teaching Practice component

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.807
Bartlett's Test of Sphericity	Approx. Chi-Square	229.176
	df	45
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.588	45.883	45.883	4.588	45.883	45.883
2	1.025	10.255	56.138	1.025	10.255	56.138
3	1.018	10.182	66.320	1.018	10.182	66.320
4	.754	7.536	73.856			
5	.664	6.635	80.491			
6	.579	5.791	86.282			
7	.470	4.698	90.980			
8	.441	4.410	95.390			
9	.293	2.925	98.316			
10	.168	1.684	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component		
	1	2	3
Overall, my field teaching practice experience as a valuable part of my preparation to become a teacher	.852		
My supervising teacher used criteria/standards provided by my program to evaluate my teaching	.778		
I used teaching standards as a guide to evaluate and reflect on my teaching	.765		-.422
Overall, the feedback I received from my supervising teacher helped me to improve my teaching	.740		
My supervisor and supervising teacher has similar views on good teaching method	.638		.335
The method used to assess my ability was valid	.623	-.512	
My supervising teacher used clear standards when reviewing my lessons with me	.616		.483
My supervising teacher generally valued the ideas and approaches I brought from the workshop	.603	-.428	

My supervising teacher had a clear idea of what my program required me to do as part of my field teaching practice	.501	.632	
I had a clear understanding of what was expected of me as a teacher in order to pass the field teaching practice	.579		-.603

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Component Matrix^a

	Component
	1
Overall, my field teaching practice experience as a valuable part of my preparation to become a teacher	.852
My supervising teacher used criteria/standards provided by my program to evaluate my teaching	.778
I used teaching standards as a guide to evaluate and reflect on my teaching	.765
Overall, the feedback I received from my supervising teacher helped me to improve my teaching	.740
My supervisor and supervising teacher has similar views on good teaching method	.638
The method used to assess my ability was valid	.623
My supervising teacher used clear standards when reviewing my lessons with me	.616
My supervising teacher generally valued the ideas and approaches I brought from the workshop	.603
I had a clear understanding of what was expected of me as a teacher in order to pass the field teaching practice	.579
My supervising teacher had a clear idea of what my program required me to do as part of my field teaching practice	.501

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

APPENDIX B

RELIABILITY TEST

1. Learning the Practice of Teaching component

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.837	.839	8

Intraclass Correlation Coefficient

	Intraclass Correlation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.373 ^a	.272	.495	6.129	56	392	.000
Average Measures	.826 ^c	.749	.887	6.129	56	392	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type A intraclass correlation coefficients using an absolute agreement definition.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

2. Learning via Feedback and To Do Evaluation component

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.502	.507	5

Intraclass Correlation Coefficient

	IntraclassCorrelation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.148 ^a	.056	.271	2.010	56	224	.000
Average Measures	.465 ^c	.230	.650	2.010	56	224	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

- a. The estimator is the same, whether the interaction effect is present or not.
- b. Type A intraclass correlation coefficients using an absolute agreement definition.
- c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

3. Knowledge about the Students component

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.805	.803	7

Intraclass Correlation Coefficient

	IntraclassCorrelation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.352 ^a	.248	.477	5.128	56	336	.000
Average Measures	.792 ^c	.697	.865	5.128	56	336	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

- a. The estimator is the same, whether the interaction effect is present or not.
- b. Type A intraclass correlation coefficients using an absolute agreement definition.
- c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

4. Knowledge about the Subject component

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.736	.732	5

Intraclass Correlation Coefficient

	IntraclassCorrelation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.339 ^a	.222	.475	3.794	57	228	.000
Average Measures	.720 ^c	.588	.819	3.794	57	228	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

- a. The estimator is the same, whether the interaction effect is present or not.
- b. Type A intraclass correlation coefficients using an absolute agreement definition.
- c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

5. Practice about Classroom Management component

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.772	.796	7

Intraclass Correlation Coefficient

	IntraclassCorrelation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.318 ^a	.220	.439	4.377	59	354	.000
Average Measures	.766 ^c	.663	.846	4.377	59	354	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

- a. The estimator is the same, whether the interaction effect is present or not.
- b. Type A intraclass correlation coefficients using an absolute agreement definition.
- c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

6. Practice in Curriculum and Assessment component

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.807	.821	9

Intraclass Correlation Coefficient

	IntraclassCorrelation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.312 ^a	.222	.426	5.192	59	472	.000
Average Measures	.803 ^c	.720	.870	5.192	59	472	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

- a. The estimator is the same, whether the interaction effect is present or not.
- b. Type A intraclass correlation coefficients using an absolute agreement definition.
- c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

7. Quality of Field Teaching component

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.859	.864	10

Intraclass Correlation Coefficient

	IntraclassCorrelation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.373 ^a	.279	.488	7.089	58	522	.000
Average Measures	.856 ^c	.795	.905	7.089	58	522	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

- a. The estimator is the same, whether the interaction effect is present or not.
- b. Type A intraclass correlation coefficients using an absolute agreement definition.
- c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

8. Personal and Social component

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.793	.802	8

Intraclass Correlation Coefficient

	IntraclassCorrelation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.311 ^a	.216	.431	4.827	56	392	.000
Average Measures	.783 ^c	.687	.858	4.827	56	392	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

- a. The estimator is the same, whether the interaction effect is present or not.
- b. Type A intraclass correlation coefficients using an absolute agreement definition.
- c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

9. Reflection and Working with Others component

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.759	.756	4

Intraclass Correlation Coefficient

	IntraclassCorrelation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.368 ^a	.209	.529	4.141	55	165	.000
Average Measures	.699 ^c	.514	.818	4.141	55	165	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

- a. The estimator is the same, whether the interaction effect is present or not.
- b. Type A intraclass correlation coefficients using an absolute agreement definition.
- c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

10. Non-teaching Activities component

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.759	.768	5

Intraclass Correlation Coefficient

	IntraclassCorrelation ^b	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.254 ^a	.109	.417	4.149	57	228	.000
Average Measures	.631 ^c	.380	.781	4.149	57	228	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

- a. The estimator is the same, whether the interaction effect is present or not.
- b. Type A intraclass correlation coefficients using an absolute agreement definition.
- c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

APPENDIX C
MEANS, STANDARD DEVIATIONS, AND GRAPHS OF EACH COMPONENT

1. Means and Standard Deviations of Each Component

		Report									
gender		Mean Learning the Practice of Teaching	Mean Learning via Feedback and to Do Evaluation	Mean Knowledge about the Students	Mean Knowledge about the Subject	Mean Practice about Classroom Management	Mean Practice in Relation to Curriculum and Assessment	Mean Personal and Social Component	Mean Reflection and Working with Others	Mean Non Teaching Activities	Mean Quality of Field Teaching Practice
male	Mean	3.6508	3.6815	3.5855	3.6704	3.7831	3.8189	3.9021	3.3056	3.1704	3.6963
	N	27	27	27	27	27	27	27	27	27	27
	Std. Deviation	.41677	.31505	.40099	.42568	.29483	.27931	.21754	.74140	.59667	.30443
	Median	3.6250	3.8000	3.7143	3.8000	4.0000	3.8889	4.0000	3.5000	3.2000	3.8000
	Minimum	1.88	2.60	2.67	2.40	3.00	2.67	3.00	1.00	1.80	3.00
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	2.13	1.40	1.33	1.60	1.00	1.33	1.00	3.00	2.20	1.00
female	Mean	3.6504	3.6864	3.5036	3.6424	3.6797	3.7239	3.7992	3.4141	3.1333	3.6447
	N	33	33	33	33	33	33	33	33	33	33
	Std. Deviation	.33449	.24726	.40037	.35971	.34262	.29150	.23373	.45762	.65713	.35132
	Median	3.7500	3.6000	3.5714	3.6000	3.7143	3.7778	3.8750	3.5000	3.2000	3.7000
	Minimum	2.88	3.20	2.71	2.40	2.57	3.00	3.00	2.50	1.60	2.90
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	1.12	0.80	1.29	1.60	1.43	1.00	1.00	1.50	2.40	1.10

	Range	1.13	.80	1.29	1.60	1.43	1.00	1.00	1.50	2.40	1.10
Total	Mean	3.6506	3.6842	3.5405	3.6550	3.7262	3.7667	3.8455	3.3653	3.1500	3.6679
	N	60	60	60	60	60	60	60	60	60	60
	Std. Deviation	.37044	.27732	.39936	.38759	.32352	.28764	.23054	.59898	.62565	.32933
	Median	3.7321	3.6000	3.5714	3.7500	3.7857	3.8889	3.9375	3.5000	3.2000	3.7500
	Minimum	1.88	2.60	2.67	2.40	2.57	2.67	3.00	1.00	1.60	2.90
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	2.13	1.40	1.33	1.60	1.43	1.33	1.00	3.00	2.40	1.10

Report

age		Mean Learning the Practice of Teaching	Mean Learning via Feedback and to Do Evaluation	Mean Knowledge about the Students	Mean Knowledge about the Subject	Mean Practice about Classroom Management	Mean Practice in Relation to Curriculum and Assessment	Mean Personal and Social Component	Mean Reflection and Working with Others	Mean Non Teaching Activities	Mean Quality of Field Teaching Practice
below 25	Mean	3.7714	3.7120	3.5657	3.6880	3.7771	3.8400	3.8250	3.4600	3.1220	3.7440
years old	N	25	25	25	25	25	25	25	25	25	25
	Std. Deviation	.27645	.32701	.35590	.36551	.30606	.20306	.24474	.44300	.61068	.28000
	Median	3.8750	3.8000	3.5714	3.8000	4.0000	3.8889	3.8750	3.5000	3.0000	3.8000
	Minimum	2.88	2.60	2.86	2.60	3.00	3.33	3.00	2.75	2.20	3.00
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	1.13	1.40	1.14	1.40	1.00	.67	1.00	1.25	1.80	1.00
25 years old	Mean	3.5643	3.6643	3.5224	3.6314	3.6898	3.7143	3.8602	3.2976	3.1700	3.6136
or above	N	35	35	35	35	35	35	35	35	35	35

	Std. Deviation	.40716	.23874	.43190	.40622	.33500	.32816	.22230	.68757	.64423	.35435
	Median	3.6250	3.6000	3.5714	3.6000	3.7143	3.7778	4.0000	3.5000	3.2000	3.7000
	Minimum	1.88	3.20	2.67	2.40	2.57	2.67	3.00	1.00	1.60	2.90
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	2.13	.80	1.33	1.60	1.43	1.33	1.00	3.00	2.40	1.10
Total	Mean	3.6506	3.6842	3.5405	3.6550	3.7262	3.7667	3.8455	3.3653	3.1500	3.6679
	N	60	60	60	60	60	60	60	60	60	60
	Std. Deviation	.37044	.27732	.39936	.38759	.32352	.28764	.23054	.59898	.62565	.32933
	Median	3.7321	3.6000	3.5714	3.7500	3.7857	3.8889	3.9375	3.5000	3.2000	3.7500
	Minimum	1.88	2.60	2.67	2.40	2.57	2.67	3.00	1.00	1.60	2.90
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	2.13	1.40	1.33	1.60	1.43	1.33	1.00	3.00	2.40	1.10

Report

major		Mean Learning the Practice of Teaching	Mean Learning via Feedback and to Do Evaluation	Mean Knowledge about the Students	Mean Knowledge about the Subject	Mean Practice about Classroom Management	Mean Practice in Relation to Curriculum and Assessment	Mean Personal and Social Component	Mean Reflection and Working with Others	Mean Non Teaching Activities	Mean Quality of Field Teaching Practice
citizenship	Mean	3.6776	3.6763	3.6090	3.7237	3.8496	3.6608	3.8487	3.5263	3.3974	3.6408
	N	19	19	19	19	19	19	19	19	19	19
	Std. Deviation	.23686	.24629	.39922	.37207	.16130	.26313	.20657	.62302	.56776	.30129
	Median	3.6250	3.6000	3.7143	3.8000	3.8571	3.6667	4.0000	3.7500	3.6000	3.7000
	Minimum	3.13	3.25	2.67	2.60	3.57	3.11	3.38	1.75	2.20	3.00

	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	.88	.75	1.33	1.40	.43	.89	.63	2.25	1.80	1.00
biology	Mean	3.6562	3.6333	3.4524	3.5167	3.5357	3.7500	3.6964	3.1667	2.7875	3.7333
	N	12	12	12	12	12	12	12	12	12	12
	Std. Deviation	.57929	.25346	.48285	.50061	.40002	.37642	.34651	.46872	.62527	.31431
	Median	3.8750	3.6000	3.5714	3.6000	3.5000	3.8889	3.7500	3.2500	2.7000	3.8000
	Minimum	1.88	3.40	2.71	2.40	3.00	2.67	3.00	2.25	1.80	3.00
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	2.13	.60	1.29	1.60	1.00	1.33	1.00	1.75	2.20	1.00
physics	Mean	3.6319	3.7538	3.4725	3.7538	3.8132	3.9145	3.9519	3.2692	3.0615	3.7077
	N	13	13	13	13	13	13	13	13	13	13
	Std. Deviation	.31965	.20255	.38414	.20255	.22875	.12133	.06330	.78701	.53157	.35931
	Median	3.6250	3.8000	3.4286	3.8000	3.8571	4.0000	4.0000	3.5000	3.0000	3.8000
	Minimum	2.88	3.40	2.86	3.40	3.29	3.67	3.88	1.00	2.20	3.00
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	1.13	.60	1.14	.60	.71	.33	.13	3.00	1.80	1.00
elementary education	Mean	3.6295	3.6750	3.5804	3.5969	3.6518	3.7847	3.8672	3.4010	3.2000	3.6188
	N	16	16	16	16	16	16	16	16	16	16
	Std. Deviation	.37799	.37859	.35940	.41812	.40057	.30488	.19615	.46370	.66933	.36555
	Median	3.6250	3.7000	3.5714	3.6000	3.7143	3.8889	3.9375	3.5000	3.4000	3.7000
	Minimum	2.88	2.60	3.00	2.40	2.57	3.00	3.38	2.50	1.60	2.90
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	1.13	1.40	1.00	1.60	1.43	1.00	.63	1.50	2.40	1.10
Total	Mean	3.6506	3.6842	3.5405	3.6550	3.7262	3.7667	3.8455	3.3653	3.1500	3.6679

N	60	60	60	60	60	60	60	60	60	60
Std. Deviation	.37044	.27732	.39936	.38759	.32352	.28764	.23054	.59898	.62565	.32933
Median	3.7321	3.6000	3.5714	3.7500	3.7857	3.8889	3.9375	3.5000	3.2000	3.7500
Minimum	1.88	2.60	2.67	2.40	2.57	2.67	3.00	1.00	1.60	2.90
Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Range	2.13	1.40	1.33	1.60	1.43	1.33	1.00	3.00	2.40	1.10

Report

		Mean Learning the Practice of Teaching	Mean Learning via Feedback and to Do Evaluation	Mean Knowledge about the Students	Mean Knowledge about the Subject	Mean Practice about Classroom Management	Mean Practice in Relation to Curriculum and Assessment	Mean Personal and Social Component	Mean Reflection and Working with Others	Mean Non Teaching Activities	Mean Quality of Field Teaching Practice
former university											
university in central Indonesia	Mean	3.6466	3.7042	3.5327	3.6490	3.7024	3.7870	3.8434	3.3472	3.0719	3.6875
	N	48	48	48	48	48	48	48	48	48	48
	Std. Deviation	.40413	.28580	.39618	.38558	.35096	.28428	.24254	.57795	.62355	.33683
	Median	3.7500	3.7000	3.5714	3.6750	3.7857	3.8889	3.9375	3.2500	3.2000	3.8000
	Minimum	1.88	2.60	2.71	2.40	2.57	2.67	3.00	1.00	1.60	2.90
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	2.13	1.40	1.29	1.60	1.43	1.33	1.00	3.00	2.40	1.10
university out of central	Mean	3.6667	3.6042	3.5714	3.6792	3.8214	3.6852	3.8542	3.4375	3.4625	3.5896
	N	12	12	12	12	12	12	12	12	12	12

Indonesia	Std. Deviation	.19462	.23400	.42833	.41201	.15076	.29902	.18335	.70004	.55232	.29762
	Median	3.6250	3.6000	3.5714	3.7750	3.7857	3.7778	3.9375	3.7500	3.6750	3.6500
	Minimum	3.38	3.25	2.67	2.60	3.57	3.11	3.50	1.75	2.40	3.10
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	.63	.75	1.33	1.40	.43	.89	.50	2.25	1.60	.90
	Total	Mean	3.6506	3.6842	3.5405	3.6550	3.7262	3.7667	3.8455	3.3653	3.1500
	N	60	60	60	60	60	60	60	60	60	60
	Std. Deviation	.37044	.27732	.39936	.38759	.32352	.28764	.23054	.59898	.62565	.32933
	Median	3.7321	3.6000	3.5714	3.7500	3.7857	3.8889	3.9375	3.5000	3.2000	3.7500
	Minimum	1.88	2.60	2.67	2.40	2.57	2.67	3.00	1.00	1.60	2.90
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	2.13	1.40	1.33	1.60	1.43	1.33	1.00	3.00	2.40	1.10

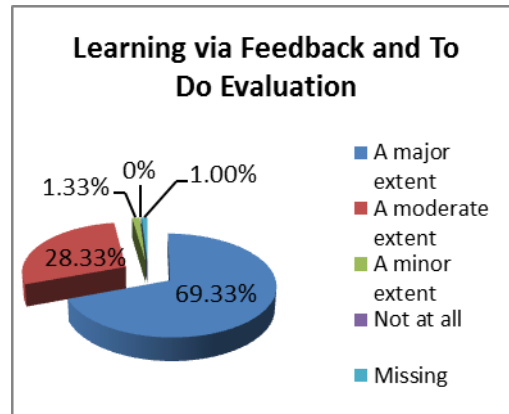
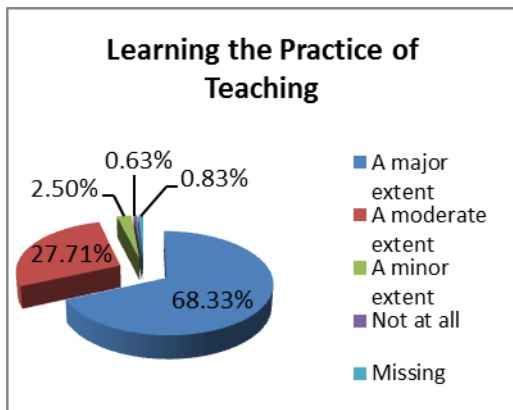
Report

experience	Mean Learning the Practice of Teaching	Mean Learning via Feedback and to Do Evaluation	Mean Knowledge about the Students	Mean Knowledge about the Subject	Mean Practice about Classroom Management	Mean Practice in Relation to Curriculum and Assessment	Mean Personal and Social Component	Mean Reflection and Working with Others	Mean Non Teaching Activities	Mean Quality of Field Teaching Practice	
more than 6 months	Mean	3.7460	3.6000	3.6984	3.7500	3.7143	3.8642	3.9028	3.3889	3.2000	3.7889
	N	9	9	9	9	9	9	9	9	9	9
	Std. Deviation	.17718	.44721	.23084	.19365	.26726	.12143	.13661	.95288	.62450	.30596
	Median	3.7143	3.6000	3.7143	3.6000	3.7143	3.8889	4.0000	3.7500	3.0000	3.9000

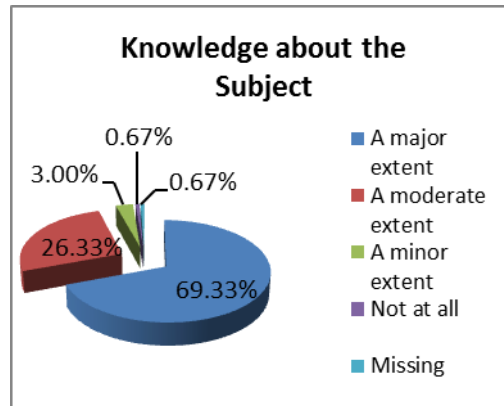
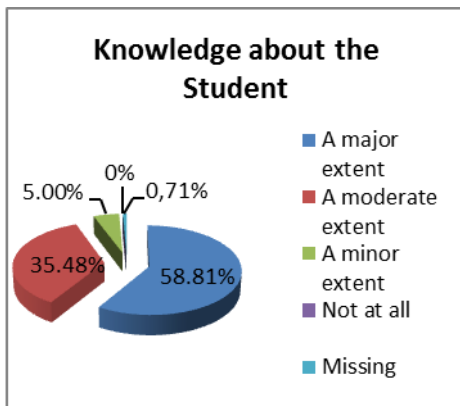
	Minimum	3.50	2.60	3.29	3.60	3.29	3.67	3.63	1.00	2.40	3.00
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	.50	1.40	.71	.40	.71	.33	.38	3.00	1.60	1.00
less than 6 months	Mean	3.6038	3.7391	3.5938	3.5984	3.7723	3.7604	3.8432	3.5052	3.3375	3.6867
	N	32	32	32	32	32	32	32	32	32	32
	Std. Deviation	.45251	.24781	.42091	.48134	.29891	.28796	.26559	.49818	.60642	.32254
	Median	3.6875	3.7000	3.7143	3.8000	3.8571	3.8333	4.0000	3.6250	3.6000	3.7500
	Minimum	1.88	3.25	2.67	2.40	3.00	2.67	3.00	2.25	1.80	3.00
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	2.13	.75	1.33	1.60	1.00	1.33	1.00	1.75	2.20	1.00
no experience at all	Mean	3.6842	3.6316	3.3759	3.7053	3.6541	3.7310	3.8224	3.1184	2.8105	3.5789
	N	19	19	19	19	19	19	19	19	19	19
	Std. Deviation	.27121	.21357	.38454	.25270	.38485	.34009	.20546	.49559	.53944	.34412
	Median	3.7500	3.6000	3.2857	3.6000	3.7143	3.8889	3.8750	3.2500	2.8000	3.7000
	Minimum	3.00	3.20	2.71	3.20	2.57	3.00	3.38	1.75	1.60	2.90
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.60	4.00
	Range	1.00	.80	1.29	.80	1.43	1.00	.63	2.25	2.00	1.10
Total	Mean	3.6506	3.6842	3.5405	3.6550	3.7262	3.7667	3.8455	3.3653	3.1500	3.6679
	N	60	60	60	60	60	60	60	60	60	60
	Std. Deviation	.37044	.27732	.39936	.38759	.32352	.28764	.23054	.59898	.62565	.32933
	Median	3.7321	3.6000	3.5714	3.7500	3.7857	3.8889	3.9375	3.5000	3.2000	3.7500
	Minimum	1.88	2.60	2.67	2.40	2.57	2.67	3.00	1.00	1.60	2.90
	Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	Range	2.13	1.40	1.33	1.60	1.43	1.33	1.00	3.00	2.40	1.10

2. Graphs

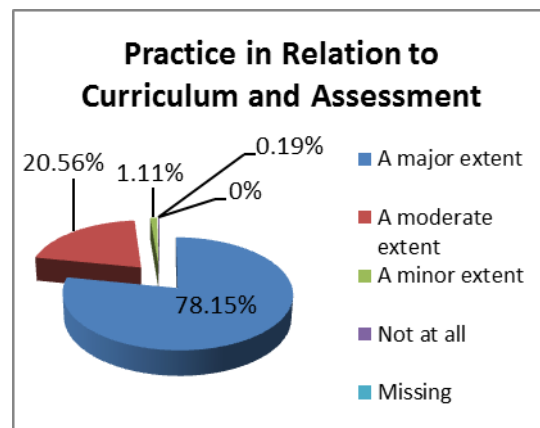
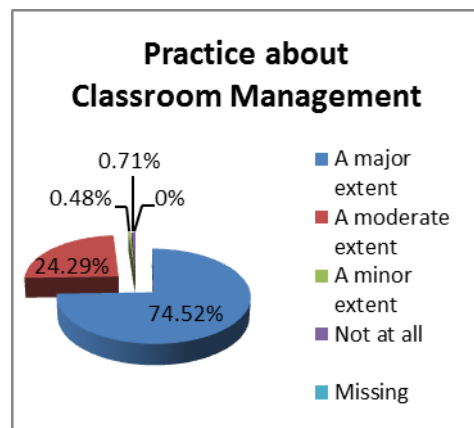
Opportunity to Learn section



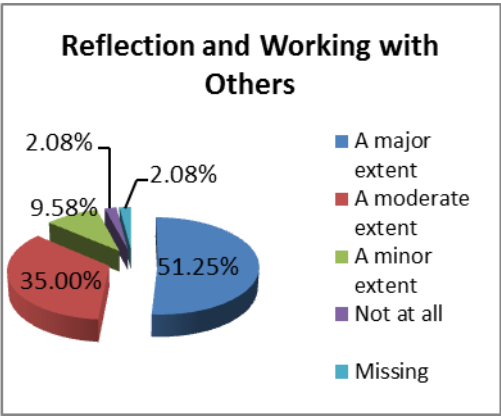
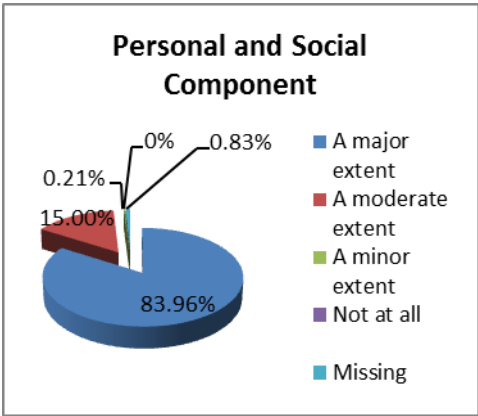
Professional Knowledge section



Professional Practice section



Professional Engagement section



APPENDIX D

QUESTIONNAIRE

Letter for the research participants:

Dear participants,

My name is Desak Deni and I am going to conduct a research for my thesis majoring in International and Comparative Education. It is a case study thesis targeting pre-service teachers who currently graduate from PPG-SM3T program in (state university in central Indonesia). I am looking for participants as many as possible; hence, I really need your help to complete the questionnaire. The aim of this is to find out pre-service teachers' perceptions on PPG-SM3T program in preparing them to be professional. The questionnaire will be divided into several sections. In the background information you will be asked to write your name. However, your identity will not be disclosed in the submitted paper, including the name of the institution. This is a web-based questionnaire and the way to complete it is very easy. You just click the link I give you and you will find the questionnaire there. There are two ways of answering this questionnaire in general. It is either you write the answer or click your answer on one of the boxes. It will take more or less 20 minutes to complete the questionnaire but it is worthy because the result will be very useful as a reflection and future development of the program in particular and the development of teachers in general. The result of the research can also give useful contribution for future research or researchers who want to conduct research in the same field, especially about teachers in Indonesia. This questionnaire is a very important of my thesis as well. So please help me to complete the questionnaire and please share it to your friends or to people whom you know taking PPG-SM3T program in the same university so they can complete the questionnaire and their voice can be heard as well. Thank you in advance for your kind help.

Best regards,

Desak Putu Deni Putri Adnyani

I. BACKGROUND INFORMATION

This first part of the questionnaire is about your background information. There are 6 questions and in responding to the questions, please mark or write in the appropriate box:

1 Please write your name:

2 Are you male or female? Male Female
 1 2

3 How old are you? years old

4 Please write the major you took in your PPG-SM3T program!

5 Where did you take your bachelor degree?

State university in central Indonesia State university out of central Indonesia

6 Did you have any experience in teaching before entering PPG-SM3T program?

No at all Yes, less than 6 months Yes, more than 6 months

II The next questions ask you about the opportunities to learn provided by PPG-SM3T program. Please give your answer by choosing one of the options. To what extent PPG-SM3T program gave you the opportunity to:

	A major extent	A minor extent	A moderate extent	Not at all
1 Master learning principles and theories	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2 Make clear links between theoretical and practical aspects of teaching.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3 Learn how to present subject/materials in ways that build on students' existing understanding.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4 Learn methods of teaching specific to your subject	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5 See models of expert teachers in action.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
6 Learn methods to reflect on your teaching.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7 Practise analysing and reflecting on examples of your practise.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
8 Identify specific areas of your practise that you	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

need to develop.

- 9 Practise new teaching skills with feedback from your supervisor or supervising teacher.
- 10 Receive useful feedback about your teaching from your supervisor
- 11 Receive useful feedback about your teaching from your supervising teacher.
- 12 Learn to assess and evaluate students' progress in learning.
- 13 Examine student work in relation to standards for student learning.
- 14 Learn how to diagnose students' achievement in relation to expected learning outcomes.
- 15 Plan and prepare units of work.
- 16 Learn to establish reflection activity in the class.
- 17 Learn to establish remedial and enrichment program for students.

III The next session of the questionnaire asks you about how well PPG-SM3T program giving you a good understanding of aspects of teaching. Give your answer by choosing one of the options. Please indicate the extent to which PPG-SM3T program gave you a good understanding of:

- 1 Mastery of materials, structure and concepts of the knowledge relevant to your subject.
- 2 Mastery of standard competencies and competencies of the subject you teach
- 3 How to analyse students' existing basic understanding of the topics in the subject you teach.
- 4 How to build on students' existing knowledge and experience.
- 5 Current developments in the subject you teach
- 6 Resources to support your students' learning in your subject areas.
- 7 How to identify students' characteristics.
- 8 The effect of social, cultural, religious, and ethnic backgrounds of students on their

	A major extent	A moderate extent	A minor extent	Not at all

learning.

- 9 How individual students learn and develop.
- 10 How to use effective communication with students.
- 11 How to use findings from research to improve your knowledge and practices.
- 12 The interconnectedness of learning across subject areas.
- 13 How cultural and gender differences can affect communication in the classroom.
- 14 Ethical standards and codes of conduct expected of teachers.

IV Give your answer by choosing one of the options. Please indicate the extent to which PPG-SM3T program prepared you to:

A major extent A moderate extent A minor extent Not at all

- 1 Develop curriculum effectively.
- 2 Design teaching and learning units/programs relevant to your students.
- 3 Communicate ideas and information clearly to your students.
- 4 Develop questions to challenge students and stimulate critical thinking.
- 5 Locate suitable curriculum materials and teaching resources.
- 6 Establish appropriate learning goals for your students.
- 7 Set up learning activities to help students achieve learning goals.
- 8 Using ICT in the classroom.
- 9 Give useful feedback to students about their learning.
- 10 Encourage your students to use critical thinking skills.
- 11 Establish an active and productive learning environment.
- 12 Elevate student confidence and self-esteem.

- 13 Use motivational strategies effectively.
- 14 Encourage appropriate student behaviour.
- 15 Provide flexible learning pathways.
- 16 Include effective classroom management strategies into your teaching.
- 17 Set up activities that meet the learning needs of students with diverse social, cultural, religious, and ethnic backgrounds.
- 18 Assess and monitor the students' progress
- 19 Use assessment to give effective feedback to your students.
- 20 Keep useful records of your students' progress.
- 21 Develop assessment tasks that promote learning

Give your answer by choosing one of the options. Please think about your teaching practicum during your final semester of your PPG-SM3T program, to what extent do you agree with the following statements:

- 1 My supervising teacher had a clear idea of what my program required me to do as part of my field teaching practice
- 2 I had a clear understanding of what was expected of me as a teacher in order to pass the field teaching practice
- 3 I used teaching standards as a guide to evaluate reflect on my teaching.
- 4 My supervising teacher used clear standards when and reviewing my lessons with me.
- 5 Overall, the feedback I received from my supervising teacher helped me to improve my teaching.
- 6 The method used to assess my ability to teach were valid.
- 7 My program supervisor and supervising teacher had similar views on good teaching methods.
- 8 My supervising teacher generally valued the ideas and approaches I brought from the workshop during PPG-SM3T program.
- 9 Overall, my practicum experience as a valuable part

Strongly agree	Disagree	Agree	Strongly disagree

of my preparation to become a professional teacher

- 10 My supervising teacher used criteria/standards provided by my program to evaluate my teaching.

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V Give your answer by choosing one of the options. Please indicate the extent to which PPG-SM3T program prepared and gave you opportunity to:

A major extent A moderate extent A minor extent Not at all

- 1 Reflect on the effectiveness of your teaching.
- 2 Reflect on your professional knowledge
- 3 Identify your learning needs.
- 4 Use students data to develop an action plan for future improvement of your teaching practices.
- 5 Work with parents, guardians, or community.
- 6 Work with non-teaching professionals.
- 7 Work collaboratively with other teachers.
- 8 Use assessments to give effective feedback to parents or guardians.
- 9 Be able to act in accordance with law, religious and social norms.
- 10 To present self as a honest person with noble character that can be exemplified by students and surrounding community.
- 11 To present self as a mature, wise, and steady person.
- 12 Show work ethic, high responsibility, proud as a teacher, and self-confidence.
- 13 Be able to act objectively and not discriminating against students, other teachers, parents, and surrounding community.
- 14 To use effective communication with other teachers, parents, and surrounding community.
- 15 To adapt effectively at school and surrounding environment.
- 16 To communicate with own community or community of other profession through various media.

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Give your answer by choosing one of the options. During your teaching practicum program, how often did you:

	Often	Sometimes	Rarely	Never
1 Observe other teachers in their classrooms.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 Join in regular meetings of teachers (e.g. planning, reviewing student work, etc).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Visit families or local community agencies or organizations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 Conduct small research projects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5 Assisting in non-teaching activities (e.g. helping on tour, camps, sports, providing individual tutoring, etc).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6 Plan lessons together with other student teachers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VI During your teaching practicum, about how many times were you observed by the supervisor from your PPG-SM3T program? times

VII How helpful was the workshop during PPG-SM3T program for your teaching practicum?

Very helpful	Helpful	Somewhat helpful	Not helpful at all
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

VIII Please briefly describe the main features of the program that were particularly helpful in preparing you to be professional teacher:

IX Please briefly describe any elements that you feel should have been included in the program, to better prepare you to be professional teacher!

X Would you recommend this PPG-SM3T program to a person interested in becoming a teacher?

Yes	No
<input type="text"/>	<input type="text"/>

XI Overall, how effective was your PPG-SM3T program in preparing you to be professional?

Very effective	Effective	Not at all effective	Somewhat ineffective	I do not know
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

APPENDIX E
FREQUENCIES OF EACH CASE

1. Learning the Practice of Teaching component

Variables	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (case)
Learn how to present subject/materials in ways that build on students' existing understanding	44	15	1	0	0	60
Learn methods of teaching specific to your subject	42	17	1	0	0	60
See models of expert teachers in action	30	21	7	1	1	59
Learn methods for reflecting on your teaching	45	14	1	0	0	60
Practice analysing and reflecting on examples of your practice	39	19	1	1	0	60
Identify specific areas of your practice that you need to develop	42	15	2	0	1	59
Learn to plan and prepare units of work	43	17	0	0	0	60
Learn to establish reflection activity in the class	43	15	0	0	2	58

2. Learning via Feedback and To Do Evaluation

Variables	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (case)
Practice new teaching skills with feedback from your supervisor or supervising teacher	46	13	0	0	1	60
Receive useful feedback about your teaching from your program supervisor	51	9	0	0	0	60
Learn to assess and evaluate students' progress in learning	47	12	1	0	0	60
Learn how to diagnose students' achievement in relation to expected learning outcomes	38	21	0	0	0	60

Learn to establish remedial and enrichment program for students	26	30	3	0	1	59
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3. Knowledge about the Students

Variables	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (case)
How to identify students' characteristics	30	29	1	0	0	60
The effect of the social, cultural, religious, and ethnic backgrounds of students on their learning	33	20	7	0	0	60
How individual students learn and develop	30	28	1	0	1	60
How to use findings from research to improve your knowledge and practices	37	20	2	0	1	60
The interconnectedness of learning across subject areas	44	15	0	0	1	60
How cultural and gender differences can affect communication in the classroom	30	21	9	0	0	60
Ethical standards and codes of conduct expected of teachers	43	16	1	0	0	60

4. Knowledge about the Subject

Variables	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (case)
Mastery of materials, structure, and concepts of the knowledge relevant to your subject	43	14	1	0	2	60
Mastery of standard competencies and basic competencies of the subject you teach	50	10	0	0	0	60
How to build on students' existing knowledge and experience	45	13	2	0	0	60
Current developments in the subject you teach	34	22	3	1	0	60

Resources to support your students' learning in your subject areas	36	20	3	1	0	60
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5. Practice about Classroom Management

Variables	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (case)
Using ICT in the classroom	44	12	1	3	0	60
Give useful and timely feedback to students about their learning	45	15	0	0	0	60
Encourage your students to use critical thinking skills	45	15	0	0	0	60
Establish an active and productive learning environment	52	8	0	0	0	60
Encourage appropriate students behaviour	48	12	0	0	0	60
Provide flexible learning pathways	39	20	1	0	0	60
Include effective classroom management strategies into your teaching	40	20	0	0	0	60

6. Practice about Curriculum and Assessment

Variables	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (case)
Develop curriculum effectively	42	16	2	0	0	60
Design teaching and learning units/programs relevant to your students	46	13	1	0	0	60
Communicate ideas and information clearly to your students	43	17	0	0	0	60
Locate suitable curriculum materials and teaching resources	45	12	3	0	0	60
Establish appropriate learning goals for your students	51	9	0	0	0	60
Set up learning activities to help students achieve learning goals	53	7	0	0	0	60

Use motivational strategies effectively	51	9	0	0	0	60
Assess and monitor the progress of your students	44	15	1	0	0	60
Develop assessment tasks that promote learning	47	13	0	0	0	60

7. Personal and Social component

Variables	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (case)
Develop curriculum effectively	51	8	0	0	1	60
Design teaching and learning units/programs relevant to your students	53	6	0	0	1	60
Communicate ideas and information clearly to your students	54	6	0	0	0	60
Locate suitable curriculum materials and teaching resources	53	7	0	0	0	60
Establish appropriate learning goals for your students	55	4	0	0	1	60
Set up learning activities to help students achieve learning goals	48	12	0	0	0	60
Use motivational strategies effectively	47	13	0	0	0	60
Assess and monitor the progress of your students	42	16	1	0	1	60

8. Reflection and Working with Others component

Variables	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (case)
Identify your learning need	48	9	1	0	2	60
Work with parents, guardians, or community	26	23	9	1	1	60
Work with non-teaching professionals	19	29	8	2	2	60
Use assessments to give feedback to parents or guardians	30	23	5	2	0	60

9. Non-teaching Activities component

Variables	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (case)
Observe teachers in their classrooms	23	34	3	0	0	60
Join in regular meeting of teachers	22	18	5	15	0	60
Visit families or local community agencies or organizations	12	13	14	21	0	60
Conduct small research projects	51	5	3	0	1	60
Assist in non-teaching activities	39	16	3	1	1	60

10. Quality of Field Teaching component

Variables	A major extent	A moderate extent	A minor extent	Not at all	Missing	Total (case)
My supervising teacher had a clear idea of what my program required me to do as part of my field teaching practice	45	14	1	0	0	60
I had a clear understanding of what was expected of me as a teacher in order to pass the field teaching practice	43	15	1	0	1	60
I used teaching standards as a guide to evaluate and reflect on my teaching	43	16	1	0	0	60
My supervising teacher used clear standards when reviewing my lessons with me	33	27	0	0	0	60
Overall, the feedback I received from my supervising teacher helped me to improve my teaching	44	16	0	0	0	60
The method used to assess my ability to teach was valid	36	21	2	0	1	60
My program supervisor and supervising teacher had similar views on good teaching methods	36	22	2	0	0	60
My supervising teacher generally valued the ideas and approaches I brought from workshop	39	20	1	0	0	60

Overall, the field teaching practice experience as a valuable part of my preparation to become a teacher	47	13	0	0	0	60
My supervising teacher used criteria/standards provided by my program to evaluate my teaching	41	19	0	0	0	60