

AN ANALYSIS OF INTERPERSONAL ATTITUDES THROUGH DORMITORY-BASED EDUCATION OF TEACHER CANDIDATES:

(PARTICIPANTS OF TEACHERS PRE-SERVICE PROFESSIONAL TRAINING PROGRAM- BACHELORS DEGREE GRADUATES, TEACHING IN THE FRONTIER, OUTLYING AND UNDERDEVELOPED REGIONS (PPG-SM3T), RIAU UNIVERSITY)

Yustina¹ and Dahnilsyah²

Email/Mobile: hj_yustin@yahoo.com/ 082169834222

danil_71@yahoo.com/08117573657

*Biology Education Laboratory¹ and The English Education Study Program²
Math and Science Education Department/Language and Art Education Department
Education Faculty Riau University*

Abstract:

This study investigated interpersonal attitude through dormitory-based life of PPG-SM3T participants and was conducted from March to September, 2015. It had 2 periods. Each periods lasted for 3 months. Total sampling technique was applied: 64 participants. They represented Biology, Physics, Chemistry and Economics study programs and were divided in to 5 groups. Parameters in this study covered 9 items for interpersonal attitudes. The employed data analysis was descriptive: means and percentages. The findings demonstrated that the mean score was $\geq 3,6$: In the 1st period, the creative score reached 71,88% and improved to be 84,38% in the 2nd period. Discipline attitude in the 1st period was 76,56% and improved 100% in the second period. The score for courtesy in the 1st period was 84,37% and increased 100% in the 2nd period. Disciplined, courteous and creative attitudes in the 1st period need guidance. After following guidance in the 2nd period, only creative attitude need guidance. This study concludes that such guidance is effective to build interpersonal attitudes.

Keywords: *interpersonal attitude, Dormitory-based education, PPG-SM3T*

INTRODUCTION

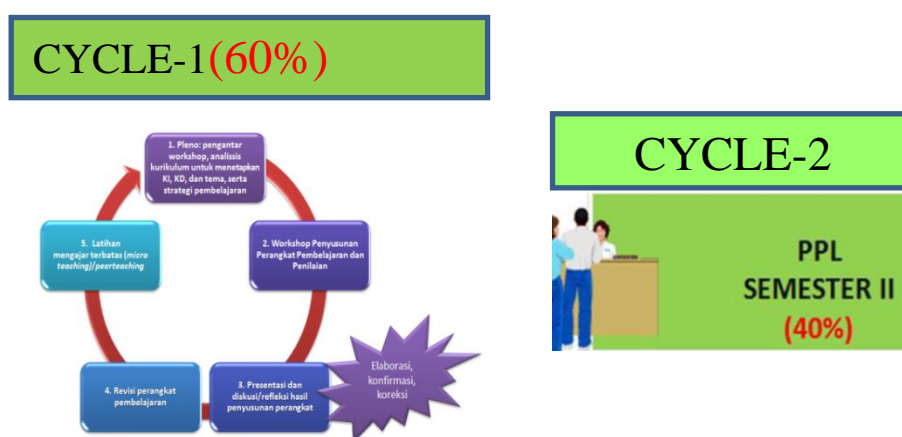
One of the key issues that receive scholarly attention in education development, particularly in the frontier, outlying and underdeveloped regions (SM-3T) are the shortage of teachers, below standar qualifications of teachers, unevenly distribution of both school facilities and teaching personels, teachers' low competence as well as the mismatched between the work and educational background of teaching staff. Besides, the number of school drop outs which are relatively still high and school participation and attendance are also severely still low.

The policy of the ministry of education in accelerating education development in these regions are realized in a program of the so called bachelors degree graduates teaching at the frontier, outlying and underdeveloped regions. in indonesia is called SM-3T which stand for *Sarjana Mengajar di daerah terdepan, terluar dan tertinggal*. It is a community service of the bachelors graduates in education to participate in accelerating

the education development in the 3T regions for one year in their preparation before pursuing for the pre-service teachers professional training program (PPG).

The objective of PPG as stipulated in the regulation of minister of education and culture no.87, 2013 is to produce competent teachers in planning, acting and evaluating the instruction; following up the evaluation; conducting guidance and training for learners; doing various research as well as developing sustainable professionalism (Kemendikbud, 2013).

The instruction system of PPG-SM3T covering workshop, instructional materials development and field experience program which are administered underan intensive direct supervision of supervisor and mentoring teachers. The implementation of PPG-SM3T-UR's program in the form of non-block can be seen in picture-1 below:



Picture-1. The cycles of non-block activity of PPG-SM3T UR.

The main orientation of PPG is to build the quality of knowledge competence and pedagogics and acquire the ethic professions. In the ethic profession development therefore does need an appropriate instruction climate in the form of dormitory-based education. The objectives of this dormitory-based education program are: a) educating the participants to be virtuous, outstanding, independent, disciplined, mentally and physically healthy; b) producing teacher candidates whose empathy and enable to adapt with the heterogenous environments; c) creating professional, decisive, strong, intelligent, democratic, honest, and care personalities.

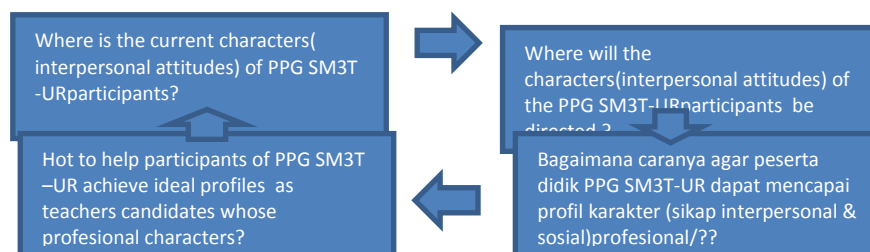
Referring to the problem identification based on the field observation and suggestion sheet distributed to the PPG-SM3T participants, which was administered in the first two week of PPG-UR, it was discovered the following data: 1) 60% of participants were not satisfied with the limited facilities of the dorm; 2) lack of gratefulness and outspoken; 3) less disciplined, i.e., breaching the regulations and agreements; 4) easily to make complains, particularly to the dormitory atmosphere and workload; 5) often to ask for their rights rather than do their responsibilities; 6) lack of courtesy in using oral communication and manner to the interlocutor and the other inherited characters of the participants. All of these weak traits may lead to the constraints in achieving the external competence targets of the profesion ethics

particularly the positive attitudes of the teacher candidates of PPG-SM3T, Riau University.

Students of the pre-service teacher professional training program are adult people who have significantly learnt compared with children who acquire new behaviours. (Sweeney & Cromley, 2002). Learning activities of adult learners tend to select things which are directly applied. Education for adults by nature is the capability improvements in tackling life problems at present. Nevertheless, as learners, the participants of PPG-SM3T still need guidances including building up the character values.

The character assessment is indicated by attitudes which are actualized in opinions, feelings and beliefs towards certain stimuli. Regulation of Minister of Education and Culture no. 81A, 2013 says that to measure attitudes, some techniques can be applied: observation, self evaluation, peer evaluation and journals.

The attitudes can be formed through social interaction (Gerungan, 2000). The PPG-SM3T-UR program need well organized management that can be observed from the periodical managerial. In this respect, periodical managerial expect comprehensive evaluation as one of the cycles. Evaluation on a program can be administered to the undergoing program. The evaluated components among others are contracts, contexts input and processes (Stufflebeam, 2007). Evaluation towards these components allows to design process that meet the preferred products. Referring to the recommended modifications of Ridlo (2014), It describes how both condition and description of the evaluation towards PPG SM3T-UR participants as illustrated in table 1.



Picture 2. The Need Conditions for Evaluative study

This study is aimed at analyzing the interpersonal attitudes of PPG-SM3T participants of Riau University. The research contribution can be valuable input for the improvement of PPG program in the future and to establish policies in accelerating the quality development of teachers and ethic profession in Riau province which in turn serves as feedback in encountering the paradigms of teachers professional education.

Table-1. The Matrics of the connection of input variable, parameter, sumber data/informasidanmetode

No	Variabel	Parameter	Source of data/ information	Methods
1	Students input components	Interpersonalattitudes	Evaluation sheet, Peer evaluation questionnaire	Portpolio

2	Input Components of Dormitory supervisor (PA) and the program coordinator-PenggerakKegiatan (PK)	Interpersonal attitudes	Evaluation sheets observations, ,Jurnals	Portpolio
3	Input Components of facilities	Environment and instructors	Evaluation sheets observation	Portpolio

2. METHODS

This descriptive study was conducted during the pre-service teachers professional training program, Riau University from March to September, 2015. The populations were PPG-SM3T participants using the total sampling techniques which involved 48 females and 16 males. Technically, participants in the dormitory life were divided in to 5 groups of neighbourhood (RT), and each of the neighbourhood represented 4 study programs and six universities/Teacher training institutions (LPTK). RTI, II, III and RTIV consisted of 12 person (led by female village head)), RTV had 16 persons (led by RT and male village head)

Each of RT led by a head of neighbourhood and village head. The village head is accountable to : 1) Head district of dormitory (The dormitory security officer) and 2) Program coordinator and 3) the dormitory supervisor. The distribution of each neighbourhood is shown in table-2.

The parameter of this study composed of 9 items of interpersonal attitude indicators: 1. spirituality, 2. honesty, 3. responsibility 4. courtesy, 5. independence, 6. creativeness, 7. discipline, 8. tidiness, 9. self confidence. The supporting parameters are the available facilities in the dorm. Parameters, sources of data, instruments and collection methods are shown in table-1.

The data collection instrument used the observation sheets and questionnaires referring to the PPG-SM3T program (Diktendik, 2015). The evaluation was administered by the participants, program coordinator and the dormitory supervisor. The gathered data submitted by the participants (peer evaluation); 2) program coordinator (a. scout, b. spirituality, c. cultural and social and 3) the dormitory officers (head district of dormitory and dormitory supervisor) The data of dormitory facilities were provided in the evaluation sheet using portpolio method.

The data collection was administered within 2 periods: 1st period from March to June 2015 and the 2nd period from June to September 2015. The peer evaluation from the participants was conducted once in a month; the program coordinator held evaluation in the course of the program and was recapitulated at the end of the program (within 3 months); evaluation from the dormitory supervisor was conducted everyday through field observation and behaviour records gained from the participants journal/diary and was recapitulated. The observation was conducted by referring to the available descriptors for each of indicators of interpersonal attitudes.

Table-2. The distribution of participants based on LPTK, Field of studies, Gender at each of neighborhodd

No	LPTK/Teaching Institutions	Fields of study				Jm	PA- Head district of the dorm-PK				
		Bio	Fis	Kim	Eko		Female village head				ML
							RT1	RT2	RT3	RT4	RT5
1	UR	1*-6	3*-2	2*-8	3*-11	9*-27	2 ^{1,3,3} , 2 ⁴	1 ^{1,1,2} , 1 ^{3,3,4}	2 ^{1,3,3} , 1 ⁴	1 ^{1,1,2} , 3 ^{3,2,4}	1 ^{1,3,2} , 2 ^{3,3,4}

2	UNP	-	4	6	-	10	2 ²	2 ² ,1 ³	3 ³	2 ³	-
3	UNSYIAH	-	5 [*] -2	-	-	5 [*] -	1 ²	-	-	1 ²	5 ²
4	UNMUL	-	-	1	-	1	-	1 ³	-	-	-
5	UNIMA	1 [*] 3	-	-	-	1 [*] -	1 ¹	-	1 ¹	1 ¹	1 ¹
6	UPI	1 [*] -5	-	-	-	1 [*] -	1 ¹	2 ¹	1 ¹	1 ¹	1 ¹
Total		3 [*] - 14	8 [*] -8	2 [*] -15	3 [*] - 11	16 *- 48	12	12	11	12	16

Notes: * Sign (MALE). 1¹(BIOLOGY); 1²(PHYSICS); 1³(CHEMSTRY); 1⁴(ECONOMICS)

The employed data analysis was descriptive, i.e. percentages and means, and were presented in both tables and graphics. The analysis of interpersonal attitudes in the 1st period of each participants or RT whose mean scores (<3,5) would be followed up by special guidance as the score of ethics weighs 40% from the total score in determining the passing (Dikti, 2015).

3. FINDINGS AND DISCUSSION

4.

3.1. Findings

a. Interpersonal Attitudes of Teacher candidates of PPG-SM3T UR in the 1st Period.

The results of interpersonal attitudes of this study consists of nine items which are shown in table 3 below:

The mean scores for interpersonal attitudes of the teacher candidates of PPG-SM3T UR's participants in the 1st period (March – Mei 2015) in table-2 sequentially from the lowest to the highest scores: RT III, I, II, IV and RT V with each score 3,32; 3,42; 3,60; 3,63 and 3,6. Furthermore, the number of participants with the scores below 3,5 in each of group of RT, in percentages are as follows: 5 persons from RT I (7,9%); 4 persons from RT II (6,3%); 8 persons from RT III (12,6%); 3 persons from RT IV (4,8%); 5 persons from RT V (7,9%). Totally, 25 persons (38,9%) of the participants gain score below 3,5 and based on the group, the lowest score is (<3,5) from RT III with the mean scores is 3,32 and from RT I with the mean score is 3,42 which implies that these two RT need targeted guidances.

In accordance with the interpersonal attitude evaluation, 3 items are gained with the mean scores below 3,5 sequentially from the lowest score and the number of participants who need special guidance from each of items: item 6 (creativity) there are 18 participants with the score is 3,22 (28,12%); item 7 (discipline) there are 15 participants with the score is 3,36 (23,43%) and item 4 (Courtesy) there are 10 people with the score 3,47 (28,12%). In general, there are 25 participants (38,9%) need special guidances of the 9 items of the interpersonal attitudes.

Two interpersonal attitudes are categorized into the passing score (3,50) and needs to be taken into account to get guidance: item 3 (responsibility) and item 9 (self confidence). Whereas, the other 4 items with the score > 3.5, i.e. devotion, honesty, tidiness and self confidence are categorized in to excellent.

Table-3. Interpersonal Attitudes of Teachers candidates of PPG-SM3T-UR through dormitory-based education in the 1st period from March to Mei, 2015.

No	Items of Evaluation	Group of RT					Mean score	Remarks/ Guidance Level
		I	II	III	IV	V		
1	Spirituality	3.58	3.77	3.55	3.67	4.00	3.71	TPK
2	Honesty	3.75	3.83	3.64	3.83	3.94	3.80	TPK
3	Responsibility	3.50	3.58	3.23	3.78	3.42	3.50	TP
4	Courtesy	3.41	3.48	3.24	3.58	3.62	3.47	10(15.8%)
5	Independence	3.42	3.75	3.27	3.58	3.73	3.55	TP
6	Creativeness	3.04	3.33	3.18	3.19	3.38	3.22	18(28,12%)
7	Discipline	3.28	3.14	3.15	3.64	3.62	3.36	15 (23.43%)
8	tidiness	3.33	3.92	3.37	3.83	3.56	3.60	TPK
9	Self condifidence	3.50	3.58	3.27	3.58	3.63	3.51	TP
Mean score Per-RT		3.42	3,60	3.32	3.63	3.65	3,55	
Number of participants who need guidances		5	4	8	3	5		
If the score < 3,5		7.9%	6,3%	12,6%	4,8%	7,9%	25(38,9%)	

Notes: TP: Tingkat Pertimbangan (consideration level)
Tidak Pembinaan Khusus (No guidance)

TPK:

b. Interpersonal Attitudes of Teacher Candidates of PPG-SM3T UR in the 2nd Period.

After following guidances in improving the interpersonal attitudes of the participants of PPG SM3T UR, in the next three monts, the evaluation was conducted again through field observation of the improvements of the positive attitudes in the dormitory-based life which was administered in the 2nd period: from June to August 2015, as shown in table-4 below:

The mean scores for interpersonal attitudes of the teacher candidates of PPG-SM3T UR in the 2nd period (Table-4), sequentially from the lowest to the highest score: RT III, I, II, IV and RT V, each of the score is: 3,41; 3,46; 3,63; 3,66 and 3,71. Furthermore, the number of participants with the score below 3,5 (below satisfaction category) from each of the group of RT in percentages (%) are as follows: there are 7 from RT III (11,1%); 5 persons from RT I (7,9%); 2 persons from RT II (3,2%); 3 persons from RT IV (4,8%); 4 persons from RT V (6,3%). Totally there are 21 persons (33,3%) who gains score below 3,5 and in group, the identified lowest score (<3,5): RT III and RT I.

Tabel-4. Interpersonal Attitudes of Teacher Candidates of PPG-SM3T-UR through Dormitory-based Education in the 2nd Period from June to August, 2015.

No	Evaluation Items	Group of RT					Means core	Remarks/ Guidance
		I	II	III	IV	V		

								Level
1	Spirituality	3.58	3.75	3.67	3.67	4.00	3.73	TPK
2	Honesty	3.75	3.83	3.64	3.83	3.94	3.80	TPK
3	Responsibility	3.50	3.58	3.39	3.81	3.50	3.56	TP
4	Courtesy	3.50	3.61	3.45	3.69	3.81	3.61	TPK
5	Independence	3.42	3.75	3.27	3.58	3.77	3.56	TP
6	Creativeness	3.14	3.33	3.18	3.19	3.40	3.25	10(15.8%)
7	Discipline	3.44	3.31	3.48	3.78	3.75	3.55	TP
8	Tidiness	3.33	3.92	3.36	3.83	3.56	3.60	TPK
9	Self confidence	3.50	3.58	3.27	3.58	3.63	3.51	TP
Meanscores Per-RT		3.46	3.63	3.41	3.66	3.71	3.58	
Number of participants who need guidance		5	2	7	3	4		
If the score $i < 3,5$		(7,9%)	(3,2%)	(11,1%)	(4,8%)	(6,3%)		
							21 orang	(33,3%)

Notes: TP: Tingkat Pertimbangan (Consideration level) TPK: No special guidance

Based on the items of interpersonal attitudes, 1 items is identified with the score below 3,5 i.e. item 6 (creativeness) with 10 person obtain the score 3,25 (15,8%). In general, 21 (33,3%) of participants needs especial guidance in improving the 9 interpersonal attitudes. Two interpersonal attitudes are categorized into the passing score (3,50) and are considered to follow the guidance: item 3 (responsibility), independence, discipline, and item 9 (Self confidence). Whereas, the other 4 items with the score $> 3,5$, i.e. devotion, honesty, tidiness, and courtesy are categorized into excellent.

3.2 Discussion

Based on the 9 items of interpersonal attitude indicators, the lowest score was in the creativeness area. In the 1st period, 18 person gained the score $< 3,5$ after following the counseling and guidance, in the 2nd period, it decreased to be 10 persons. This indicates that in percentage, the gained score was 71,8% in the first period and improved to be 84,38% in the 2nd period. The score for creativeness area was $\geq 3,6$ or equals to ≥ 90 , it implies that 15,6% need guidance in this attitude.

Given the tight schedule of the pre-service teachers professional training (PPG): designing instruction materials for six semesters for senior high school level from X to XII grades and peer teaching in to a limited space of time had contributed to the less improvement of the interpersonal attitudes. Besides, when participating in the SM3T service program, the participants were assigned the works which did not meet to their professional disciplines of their field study which had caused the neglect of their professionalism. Consequently, at the beginning of the PPG program, the recalling of their real competence was urgently needed to reach the same perception and the development of instructional material concepts. Furthermore, the participants were usually accustomed to encountering the challenges and threats oriented of social condition and fully support from the decision makers had triggered their creativeness and capability to cope with the both challenges and needs in the local region. It was totally different with the PPG program that only require their professionalism as teacher

candidates (Yustina and Dahnilyah, 2015). Positive attitudes may automatically improve when receiving positive responses and meet to the needs of the environment.

In accordance with the PPG program, both attitudes and capability will also change to adapt with the demands of condition and needs. This had led to the low creativity due to the lack of challenging and motivation because of a number of reasons: 1) little opportunity, 2) less initiative of every personality, 3) lack of support, i.e. the limited availability of facilities (illustrated in the appendix), 4) limited time to develop new/unique ideas, 5) lack of appreciation to the participants' personalities and 6) the activities are only in a normative or normal standard.

These factors may cause the less initiative on the part of participants in tackling the problems: instable of the WIFI, less innovative in creating works and ideas in the wall magazines, less productive with the new/unique ideas in planning program activities and less innovative in developing interactive instruction media

The less optimization of creative attitude occurs because of the tight schedule and limited facilities. Someone's initiative is closely related with his/her scientific attitude competence to produce creativities in problem solving. Jonathan, O (2013) furthermore says the attitude competence effectively serves to identify problems which is the same as the scientific attitudes on how a problem can be solved.

Cakici and Turkmen (2013) argues learners' competence in developing new ideas are usually obtained in the early experience. It may encourage to create more varied creativities in the course of the instruction particularly related to providing opportunities and initiatives to each of personality. Creativity will automatically exist when we appreciate the learners' personalities and support to the produced creativities and innovations. This facts are as stated in Loveless et al (2006) who said that creativity presents as a complex concept which is closely related with the role of environment, psychomotoric and cognitive perspective and creativities as a reflection of individual independency.

Sahim-Pekmez et al (2009); Jonatahn (2013) argue creativity is a state of curiosity, thinking process and to be responsive to the previous experiences, in facing the various stimuli (objects, symbols, wishes, ideas, persons) which in turn it may produce a unique combination.

Munandar (1999) suggests in order to encourage creativities, learners needs to be given sufficient opportunities to get involved in a great deal of programs in creatively expressing themselves.

Item seven (discipline) in the first period, there were 15 participants who reached the score <3.5 (23,43%). It means that there were 76,56% of participants whose discipline score $\geq 3,6 = \geq 90$ and after the guidance, in the 2nd period, it increased 100%

The application of discipline values was not optimum in the first period because of it was only orally informed, the regulation book on life in the dormitory was distributed two months after the PPG program had undergone. In addition, there was no anyone who monitored. The participants therefore did not have any guidelines in the form of signs of regulation, sanctions and supervision. The role of instructor and relevant parties in the dormitory management were required to comprehend and synergize to implement the existing rules.

After the regulation book was distributed to the participants, it was disseminated and was directly implemented. This implied that both instructors and dormitory supervisor actively and sustainably should provide a good model to them on discipline and implement all of the terms and conditions that had been agreed upon. In the 2nd period, all of the participants enable to apply the discipline in accordance with the existing rules.

Usman (2008), said that in the course of instruction, someone needs to be trained to apply the discipline values for all of activities run well when being implemented together based on the social principles. Developing discipline attitude can not occur in a short time. It need the active role and participation of educators which were practiced in stages.

According to Ridlo (2014), establishing discipline can be in the form of role model to be directly implemented in the environment, i.e. in the course of instruction performed by lectures. Students will learn everything what they have observed from the lectures. (Phelp&Cherin Lee, 2003). Lectures can also guide his/her students to apply learning strategies in studying. Learning strategies instruction focuses on making students to be more active learners by teaching them how to learn and how to use what they have learned to be successful. In this respect, it is emphasized that implementing the learning strategies, providing good model, habituation and reinforcement, as well as reflective thinking enable to develop good characters.

Courtesy attitudes in the first period with the score $<3,5$ which was gained by 10 persons (15,8%) or 84,37% participants with the score $\geq 3,6 = 90$. In the 2nd period, participants gained the score $\geq 3,6$ and improved 100%.

The courtesy attitudes in the first period was not optimum due to the inherited character who tend to be cognitive oriented. It had caused the lack of development and to be less attention in behaving everyday that lead to be habits and personality.

Such situation become worse because of the inconducive atmosphere both in the dormitory and campus: lack of social sanction in the form of reminding from the lectures, friends and relatives to improve the impolite manners; lack of examples that can be a good model for the participants; there was no conditioning and sanction to the participants when breaching the aspects of courtesy and manners in the campus, i.e. how to dress neatly, expressing utterances, doing interaction, acting, etc. less sanction on the courtesy attitude contribute to the neglection of this attitude in social life. Consequently, impolite manners were observed and they became a habit.

After implementing the stages of guidance and provided role model to the participants which was begun by doing simple things in the course of active instruction: greeting politely each other, being attentive and show good manner to the speaking partner, responding politely, listening and appreciating different opinions, there had been significant improvements of the participants' interpersonal attitudes. This as a proof that positive responses from surrounding environment enable to stimulate the realization of positive attitudes of the participants. This had brought positive impact on the improvement of the participants' courtesy attitude. In the second period therefore, all of the participants enable to practice polite manners in behaving.

It is as stated in Yustina et al (2015); Yustina (2015) who claimed that positive attitude may develop when they meet to the needs and gain positive responses from the

environment. Yustina et al (2010) further said that positive attitudes develop and to be actualized when they provide benefits and good impacts on the participants and vice versa. In addition, as stated in a study of Ridlo & Irsadi (2012) who argued that development of character education values which is based on conservation can be initiated by simple things occur in the course of the active and effective instruction.

Above all, this study demonstrates that the PPG-SM3T-UR program through the dormitory-based education enable to build positive interpersonal attitudes after commencing the stages of guidances. This is supported by Pranita et al (2004) who argued that the PPG-SM3T program allow to form positive attitudes as part of character building and professional ethic as a fundament of competence in behaving individually and socially. In addition, Ridlo (2012) says through the input component evaluation, the program coordinator of PPG SM3T serve the right to guide all of the lecturers in planning and commencing the instruction process which is in accordance with the policy of both department and university.

4. CONCLUSION

Referring to the findings of this study, it concludes that interpersonal attitudes that require guidance in the 1st period: creative, discipline and courtesy. After commencing the guidance in the 2nd period, only creative attitude that require further counseling and guidances. Dormitory-based education in the form of active actions and establish good models and directly implement them by instructor, dormitory supervisor and environment appears to be effective to develop the interpersonal skills towards positive. The PPG-SM3T-UR program through the dormitory-based education allow to establish positive attitudes which are actualized in the teacher candidates' manners and behaviours of PPG-SM3T UR.

5. BIBLIOGRAPHY

- Diktendik. 2015. *Panduan Penilaian Pelaksanaan PPG-SM3T*. Jakarta.
- Cakici Y. and Turkmen N, (2013). An Investigation Of The Effect Of Project-Based Learning Approach On Childrens Achievement And Attitude In Science. *The Online Journal Of Science And Technology*. 3(2): 9-17
- Gerungan. 2000. *Psikologisosial: Suaturingkasan*. Bandung: Eresco
- Jonathan, O., 2013. Attitude Towards Science: a Review of the Literature and is Implication. *International Journal of Science Education*. 25(9): 1049-1079.
- Kemendikbud, 2013. *Panduan Pelaksanaan Program PPG-SM3T*. Kemendikbud. Jakarta.
- Loveless, A, Burton, J & Turvey, K. 2006. Developing conceptual frameworks for creativity, ITC and teacher education. *Thinking Skill and Creativity* (1) 3-13.
- Munandar, U.S.C. 1999. *Kreativitas & Keberbakatan Strategi Mewujudkan Potensi Kreatif & Bakat*. Penerbit PT Gramedia Pustaka Utama. Jakarta.
- Phelps, A.J. & Cherin Lee. 2003. The power of practice: what students learn from how we teach. [Versi Elektronik]. *Journal of Chemical Education*, 80 (7), 829 – 832.

- Pranita,E, Andreas Priyono, Budi Prasetyo. 2014. Biology Teacher Candidates Professional Attitudes Toward Teaching Profession. *Proceeding International Conference On Mathematics, Science, And Education*. ICMSE: pp B.28-B.32. 3 Desember 2014. ISBN: 978-602-14724-8-4.
- Ridlo, S. & Irsadi, A. 2012. Pengembangan Nilai Karakter Konservasi Berbasis Pembelajaran. *Jurnal Penelitian Pendidikan*. 29 (2): 145-154.
- Ridlo.S. 2014.Pengembangankarakterkonservasiuntukmahasiswa program PendidikanProfesi Guru SarjanaMengajar di daerahTerluar,Terdepan, danTertinggal (PPG-SM3T).LIK 43 (2) (2014).Diambilpadatanggal 22 September 2015 dari<http://journal.unnes.ac.id/nju/index.php/LIK>
- Sahim-Pekmez, E. Aktamis, H &Taskin, B,C. 2009. Exploring Scientific Creativity Of 7TH Grade Students. *Journal of Qafqaz University*. (26) 204-214.
- Slavoha, A., Savvina,J., Cacka,M. &Volonte,I. 2007. Creative Activity in Conception of Sustainable Development.Education.*International Journal of Sustainability in Higher Education*. 8(2): 142-154.
- Sweeney, T and Cromley, J. 2002. *Adult Learners:Teaching Strategies ti Improve Learning and Comprehension*. [Versielektronik]. RMC Research Corporation
- Stufflebeam, D.L. March 17, 2007. *CIPP evaluation model checklist: A tool for applying the fifth installment of the CIPP model to assess longterm enterprises*. 2nd ed. [VersiElektronik].Evaluation Checklists Project.Diambilpadatanggal 22 Agustus 2010 dari<http://www.wmich.edu/evalctr/checklis>
- Usman,M.U. 2008. *Menjadi Guru Profesional*.PT RemajaRosdaKrya. Bandung.
- Uday, S., 2014.Study of Sciencetific Attitude of B.E.D and B.E.D (Special) Pupil Teachers.Scholarly Research *Journal for Interdisciplinary Studies*. 2(13): 1815-1822.
- Yustina, KamisahOesman and T.S. Meerah. 2010. Innovative Approach Inculcating Positive Attitudes and Students Involvement Towards Environment In Biology Classroom. *Procedia Social and BehavioralSciencedirec* 2: 3775-3779. Published By Elsevier.
- Yustina. 2015. Profilketerampilandansikap sosialmelaluitugasproyekpadapeserta SM3T-UR tahun 2013-2014 di kabupatenlannyjaya-papua. *Jurnal Biogenesis*. Vol. 11 (2), hal 137-146 ,Februari 2015. ISSN:1829 -5460.
- Yustina and Danilsyah,2015. Creativity of SM3T Participants, Riau University, Indonesia in Developing Knowledge Using Project-Based Learning at Lany Jaya, PAPUA, Indonesia. *Research Journal of Educational Studies and Review* Vol. 1 (2), pp. 57-65, May, 2015 ISSN: 2449-183

_____0000_____