

Personal Epistemologies and Teaching Styles of Filipino Preservice Elementary Teachers: Implications to Teacher Education Preparation Program

Asia Pacific Journal of
Multidisciplinary Research
Vol. 5 No.1, 31-40
February 2017
P-ISSN 2350-7756
E-ISSN 2350-8442
www.apjmr.com

Gilbert C. Magulod Jr. (Ph.D)

College of Teacher Education, Cagayan State University, Lasam, Cagayan,
Philippines
gilbertmagulod@rocketmail.com

Date Received: October 12, 2016; Date Revised: December 4, 2016

Abstract - *Pre-service teachers are guided by their personal beliefs on how knowledge is acquired which affect their teaching style preferences. To understand more closely how future teachers can be developed and better prepared, it is important to understand their knowledge belief structures and teaching style orientations. This study explored the relationship between the personal epistemologies and teaching styles of pre-service elementary teachers of Cagayan State University-Lasam. It employed descriptive correlational method of research. Data were gathered from the 78 fourth year BEED-Generalist students. The findings of the study revealed that the pre-service elementary teachers exhibit positive high personal epistemologies on the five dimensions while they perceived themselves high in all the five teaching styles. Significantly, mothers' education and family income define differences in the personal epistemologies of the respondents on the sources of knowledge. With respect to teaching style, sex and family income explain differences in personal model, facilitator and delegator teaching styles of the preservice elementary teachers. Female preservice teachers show more flexibility and dynamism in their teaching styles. Significantly, the personal epistemologies along stability of knowledge is an important factor that influence the preservice elementary teachers to have better display of formal authority teaching style. Finally, the preservice elementary teachers established themselves as constructivists they hold high belief on the pedagogical and methodical approach which is learner-centered.*

Keywords—*personal epistemologies, teaching styles, pre-service elementary teachers, teacher education*

INTRODUCTION

The teaching profession in the Philippines has been in its developmental and transformational stage. The challenges towards the changes of the global and technological world present concerns on how to produce teachers who are intellectually, professionally and humanistically prepared to teach diverse learners. The concern today presents much on the idea on how to produce global teacher who is armed with strong knowledge, skills, appropriate attitude and universal values to teach learners with both time tested as well as modern approaches in education in any place in the world.

ASEAN integration calls for preparation of teachers equipped with the necessary knowledge, skills and attitudes [1]. Having this as a concern, Teacher Education Institutions (TEIs) in the country

are tapped to develop the required competencies of graduates for ASEAN integration in their curriculum program. Thus, quality pre-service education is a key factor in quality Philippine education [2]. On the advent of K-12 program in the Basic Education, TEIs are highlighted with innovation to align their practices in the development of quality teachers. To ascertain the quality preparation, one must look at the personal belief system and teaching styles of preservice teachers.

Epistemological belief has been defined as a branch of philosophy that explores the identity of knowledge based on how it is being acquired, and how people know something that provided them justification for what they know. According to Mohammed and El-Habbal [3], this is the underlying beliefs about the nature of knowledge in terms of its

certainty, structure, organization, sources, and how manageable it could be. Bendixen and Rule [4] also noted that these are the beliefs about the nature of knowledge that influences learning and Teaching.

The preparation of a teacher is a developmental process. Pre-service teachers should have rich learning experience for them to develop their professional and pedagogical competencies. The working knowledge and teaching skill of preservice teachers needs to be accompanied by well-developed personal epistemologies and refined teaching styles. The belief about how knowledge is conceived and structured affects the teaching style preferences. Chan & Elliot [5] noted that determining the preservice teachers' beliefs on knowledge and their conceptions about teaching is necessary to look at their preparation for real world-application. The claim that preservice teachers' pedagogical performance and teaching approaches are affected by their beliefs is an important venture of this study.

According to Richardson [6] there is a direct connection between teachers' beliefs and their teaching practices. If preservice teachers' beliefs are not developed according to constructivism, the teacher is likely to fail when she or he begins constructivism teaching. Harun [7] concluded that it is important for both teacher and teacher candidates to be exposed to constructivist teaching, in order to construct or reconstruct their beliefs about teaching.

Preservice teachers' choice and preference to execute instructional process is generally one of the criteria in evaluating teaching effectiveness which is attributed to their teaching styles. Teaching style is one of the important factors affecting the development of teachers' professional expertise [8] that is always consistent with the teachers' personality type and varies among individuals [9]. Such teaching style pertains to the approach of the teacher in dealing with the pupils which affect the delivery of instruction.

The personal epistemological beliefs of preservice teachers can be associated with their teaching style. Grasha [10] identified five common teaching styles employed by teachers. These are expert, formal authority, personal model, facilitator, and delegator styles. These teaching styles are unique in their own special way in which may be advantageous or disadvantageous and the effectiveness of these styles are dependent on many factors like the nature of the learner, the learning process and the learning situation.

Having a clear picture on the personal epistemologies and teaching styles of preservice teachers may help them to know and learn more meaningfully to promote better learning outcomes for children in whom they would ultimately have responsibility in the future. The focus of this study investigated the relationship between personal epistemologies and teaching styles of preservice elementary teachers and their implications to the teacher education preparation program of Cagayan State University-Lasam.

OBJECTIVES OF THE STUDY

The general objective of the study was to identify relationship between personal epistemological beliefs and teaching styles of pre-service elementary teachers of Cagayan State University, Lasam Campus. Specifically, to identify the demographic profile of the respondents in terms of: age, types of HS graduated from parents' occupation, birth order, parents' education, and family monthly income; to assess the personal epistemological beliefs of the respondents; to determine the teaching styles of the respondents; to identify the differences on the personal epistemologies and teaching styles of the respondents when grouped according to their profile variables; and to test the relationship between the personal epistemologies and teaching styles of preservice elementary teachers.

Hypotheses:

This study tested the following research hypotheses presented in null form: (1) There is no significant difference on the epistemological beliefs and teaching styles of the preservice teachers when grouped according to their profile variables; (2) There is no significant relationship between the epistemological beliefs of the preservice teachers and their teaching styles.

METHODS

Research Designs

This study employed descriptive correlational method. The descriptive component of the study revolved around the investigation of the profile of the preservice elementary teachers, their personal epistemologies and their teaching styles. On the other hand, the correlational component is centered on the relationship between teaching styles and epistemological beliefs of the preservice teachers.

Participants

The participants of the study were the 78 fourth year Bachelor in Elementary Education-Generalist of Cagayan State University-Lasam undergoing practice teaching during the second semester of SY 2015-2016. The preservice teachers were taken in complete enumeration because they have already teaching exposure in the different cooperating schools. The opportunities and experiences they gained in their experiential learning courses embedded them to have a clear perspective on the real learning environment in the elementary classrooms.

Instruments and Procedures

This study utilized three-part questionnaire. The first part was a self-made questionnaire for the profile of the preservice elementary teachers. For the second part is the Personal Epistemologies Survey by Wood and Kardash [11] measures different epistemological beliefs. It consists of 38 items and it measures five (5) factors namely: speed of knowledge acquisition; structure of knowledge; sources of knowledge; control of knowledge acquisition; and stability of knowledge. On the other hand, the teaching styles of preservice teachers were measured using the Anthony Grasha Teaching Style Inventory [12] to identify the teaching styles of the preservice teachers. The instrument primarily determines the preferred teaching style. It consists of 40 items and it determines whether the preservice teacher prefers expert, formal authority, personal model, facilitator and delegator teaching style.

The collection of data started with the researcher requesting for permission from the associate dean of the College of Teacher Education. After having sought permission, the researcher administered questionnaire to the respondents on the 8th week of their deployment as practice teachers during their on-campus feed backing session. The objectives of the study were explained to them regarding their knowledge belief structures and teaching styles and they were asked to participate by answering the research instruments.

Data Analysis

To analyze the profile variables, frequency and percentage were used to provide the profile of the respondents, mean , weighted mean and standard deviation were used to determine the average scores of the respondents on their personal epistemological beliefs and teaching styles, meanwhile, Independent

Sample T-test and One-Way Analysis of Variance were used to determine if there exists a significant difference on the personal epistemologies and teaching styles when grouped according to their profile variables. Finally, the test for relationship was computed using the Pearson Product Moment Correlation. The hypotheses investigated in the study were tested at 0.05 level of significance. The scale of interpretation for the variables being measured to assess the personal epistemological beliefs and teaching styles of the respondents followed this range: 4.20-5.00: Very High/ Strongly Agree; 3.40-4.19: High/ Agree; 2.60-3.39: Moderate/ Undecided; 1.80-2.59: Low/ Disagree; 1.79: Very Low/ Strongly Disagree

RESULT AND DISCUSSION

Table 1. Profile of the Respondents (N=78)

Profile Variables		f	%
Sex	Male	20	25.64
	Female	58	74.35
Type of High School Graduated From	Public	42	53.84
	Private	36	46.15
Fathers' Occupation	Farming	61	78.20
	Teaching	3	3.84
	Driving	1	1.28
	Carpenter	2	2.56
	OFW	9	11.53
	Others	2	2.56
Mothers' Occupation	Housewife	70	89.74
	Teaching	3	3.84
	Vending	1	1.28
	OFW	4	5.12
Birth Order	1 st	19	24.35
	2 nd	22	28.20
	3 rd	15	19.23
	4 th	11	14.10
	5 th	1	1.28
	6 th	9	11.53
	7 th	1	1.28
Fathers' Education	Elementary undergrad	16	20.51
	Elem graduate	10	12.82
	HS undergrad	17	21.79
	HS graduate	14	17.94
	College Undergrad	16	20.51
	College Graduate	5	6.41

Table 1 (cont). Profile of the Respondents (N=78)

Profile Variables		f	%
Mother Education	Elementary undergrad	10	12.82
	Elem graduate	12	15.38
	HS undergrad	18	23.07
	HS graduate	18	23.07
	College Grad	13	16.66
Family Monthly Income	College undergrad	7	8.97
	Php 6,000- 8,000	67	85.89
	Php 8,001- 10,000	4	5.12
	Php 10,001- 12,000	2	2.56
	Php 12,001-14,000	1	1.28
	Php 14,001- 16,000	3	3.84
	More than 16,000	1	1.28

Table 1 presents the personal profile of the respondents. Results of the study showed that majority of the preservice elementary teachers were females with 74.35 percent and the males comprised of 25.64 percent. As regards to type of high school graduated from, 53.84 percent graduated from public schools and 46.15 percent finished secondary schooling in private schools. Relative to father's occupation of the preservice teachers majority were farmers with 78.2 percent, there were 11.53 percent OFWs, 3.83 percent were teachers, and only 2.56 percent were carpenters and plumbers. With respect to mothers' occupation, majority were housekeepers with 89.74%; there were 5.12 percent OFWs; 3.84 percent were teachers, and only 1.28 percent vendor.

As to the birth order, majority of the preservice elementary teachers were second born with 28.20 percent; 24.35 percent of them belonged to first born, 19.23 percent third born, 14.10 percent of them were fourth born; and only 1.28 percent were fifth and seventh born.

On the other hand, fathers' educational attainment shows that 21.79 percent were high school undergraduate; 20.5 percent were elementary undergraduate and college undergraduate; 17.94 percent were high school graduate; and only 6.41 percent were college graduate. In addition to such, mothers' educational attainment showed that high school undergraduates and high school graduates both obtained 23.07 percent; there were 16.66 percent college undergraduates; 12.82 percent were elementary graduates; and only 8.97 percent were college graduates.

However, preservice elementary teachers' family monthly income, 85.89 percent were those who have Php 6,000-8,000 monthly income bracket; 5.12

percent have Php 8,001-10,000; 3.84 percent have income of Php 14,001-16,000; only 2.56 percent have Php 10,001-12,000 income. Finally, barely 1.28 percent has an income of Php 16,000 and above.

Table 2. Personal Epistemologies of Preservice Elementary Teachers

Dimensions of Personal Epistemologies	Mean	Descriptive Value	Std. Dev.
Speed of Knowledge Acquisition	3.60	High/ Agree	0.46
Structure of Knowledge	3.71	High/ Agree	0.49
Sources of Knowledge	3.76	High/ Agree	0.50
Control of Knowledge Acquisition	3.51	High/ Agree	0.50
Stability of knowledge	3.40	High/Agree	0.59

Table 2 presents the personal epistemologies of the preservice elementary teachers of Cagayan State University- Lasam. It can be seen that the preservice teachers have "high" rating along the five dimensions of epistemological beliefs namely a) sources of knowledge with a category mean of 3.76 (high/agree); b) structures of knowledge with a category mean of 3.71 (high/agree); c) speed of knowledge acquisition with a category mean of 3.60 (high/agree); d) control of knowledge acquisition with a category mean of 3.51 (high/agree); and lastly, e) stability of knowledge with a category mean of 3.40 (high/agree).

The high rating of the preservice elementary teachers to the five dimensions of personal epistemologies implies that they exhibited high positive personal epistemologies. This explains their stand on the dynamics of knowledge, how they decide with the contending knowledge assumptions and claims, and their attitude and ability to judge new information that could affect their lives as future elementary teachers.

The highest mean among the epistemological beliefs of the preservice teachers is along with the belief on the sources of knowledge (3.76- high). The assessment on the source of knowledge measured the preservice teachers' belief regarding where knowledge came from. The "high" positive epistemological belief on this dimension shows that the preservice elementary teachers believed that knowledge is tentative and dynamic. The search for knowledge is unending and that they believed that pupils must be taught to utilize various approaches, methodologies

and sources of obtaining knowledge. Thus, the emphasis for the search of knowledge in the 21st century learning environment is geared towards determining the ways, approaches and techniques rather than the answers of solutions to the problem. For them, the role of an elementary teacher should facilitate the acquisition of knowledge of the pupils rather than just simply accepting and imparting the knowledge they learned. This implies that learning is better learned when it is experiential and constructivist in nature since this is the demand of 21st century learning. Consequently, the preservice elementary teachers view their prospective learners as unique, free choosing, and responsible creature made up of intellect and emotion. For them, this is an essential condition for man to be rational because they believe that one of the distinguishing characteristics of man is intelligence. Thus, the focus of an elementary teacher should be on what the pupils should experience on learning.

On the other hand, the high positive epistemological belief of the preservice elementary teachers with respect to structures of knowledge (3.71- high). This assessed their belief on the arrangement of whether it is a fact being represented from simple to complex theory. The finding of this study implies that preservice elementary teacher strongly believed that knowledge is structured and formed starting from simple facts to complex thought. This indeed reflects that being an elementary teacher the approach is usually inductive since lessons are presented from simple concepts to increasing complex thoughts. Moreover, they also hold the belief that in the elementary level, pupils' mental faculty is not yet developed, therefore it is imperative then that the information should be taught effectively to pupils when it is broken down into small parts and the use of concrete teaching materials or real examples will enact better learning. Parallel to this, the preservice teachers believed that the curriculum of school should be spiral and should determine by information that is essential for all pupils to know. This necessitates however, the use of programmed learning (sequential, step-by-step) as effective method of teaching. This is also attributed to the belief of the preservice students that before the learners will be promoted to the next grade level they should have mastered the prerequisite competencies.

As to control of knowledge acquisition (3.51-high), this dimension measured what the preservice teachers conception about their capacity to learn

whether that learning faculty is fixed at birth or that ability to learn changes as they become mature. The positive high belief of the respondents in this dimension implies that no one has the monopoly of knowledge. They believed that knowledge is an individual encounter to the problem thus relying in textbooks is not enough for them but knowledge should be validated from different sources or based on their own experiences. The creation of knowledge is a collective endeavor and not just a product of one or single individual. This also indicates that as preservice elementary teachers do not just believed concepts the way are presented rather they exert effort to be critical about them.

Relative to the speed of knowledge acquisition (3.60- high), this assessed the preservice teachers' belief about how they consider the pace and rate of learning of an individual. The high assessment of the preservice elementary teachers in this dimension shows that they believed that learning is dependent on how quickly a learner can absorb the concepts that are taught inside the classroom. This indeed implies that, as future elementary teachers, they claim that mastery of concepts on the part of the pupils is an indicator of successful learning. They also understand that their basic role is to teach their pupils no matter how difficult the concept is. Congruently, at the elementary level, the speed of knowledge acquisition becomes faster when the teachers start or use examples which are within their level of experiences. Moreover, the preservice elementary teachers adhered to the philosophy of essentialism or "back-to-basic-movement" emphasizing that basic reading, writing and arithmetic are the very solid foundation of knowledge.

Along with stability of knowledge (3.40- high) the preservice teachers have high personal epistemological belief, this dimension seeks to determine the preservice teachers' belief about the certainty of knowledge. The finding reveals that these preservice elementary teachers believed that knowledge as integrated construction rather than fragmented or compartmentalized. For them, knowledge is something that should be understood holistically because of its ultimate purpose is to weave all things for the betterment of man and the entire humanity. Moreover, the high belief of preservice teachers explains their graduate attribute as Bachelor in Elementary Education-Generalist who can teach all the subject areas in the elementary basic education curriculum being interrelated, integrated,

experiential, collaborative and contextualized. Moreover, they could recognize the beauty of multidisciplinary approach of teaching. Thus, for them using multidisciplinary shows the value of all fields of study in contributing and unveiling the mystery of man and the world as creations.

Teaching style in this study refers to the set of teaching strategy or instructional preference of preservice teachers are using. It was revealed in this study that the preservice elementary teachers perceived themselves “high” in all the five teaching styles of Grasha- Teaching Style survey. Table 3 shows the teaching styles of preservice elementary teachers. The teaching styles having the highest mean are expert teaching style (4.11- high) and facilitator teaching style (4.07-high), followed by personal model (4.06-high), delegator style (3.95- high), and lastly formal authority (3.84- high).

Table 3. Teaching Styles of Preservice Elementary Teachers

Teaching Styles	Mean	Descriptive Value	Std.Dev.
Expert	4.11	High	0.39
Formal Authority	3.84	High	0.39
Personal Model	4.06	High	0.36
Facilitator	4.07	High	0.42
Delegator	3.95	High	0.38

The preservice teachers assessed themselves to have a “high” value of expert teaching style. This finding indicates that they perceived themselves being knowledgeable and expert that will help pupils develop their potentials. They recognized themselves as the primary authority in the classroom whose task is to deposit and transmit knowledge making it sure that their prospective pupils are well learned and prepared. In doing so, they package themselves to maintain the status of an expert among pupils by displaying comprehensive knowledge and by challenging pupils to enhance their competence. Since these preservice teachers are BEED-Generalist, this implies that they possessed the competencies to teach children showing that they are the more mature individuals who will teach the less mature. Thus, they hold the belief that they have the fundamental role to transfer learning to their pupils as experts in the field.

As regards to facilitator authority teaching style, the preservice teachers rated themselves “high” with a mean of 4.07 and standard deviation of 0.42. This

finding revealed that they put high emphasis on teacher-students interactions. They hold the orientation that developing pupils’ potential should start by providing them guidance and direction during the instructional process. Allowing their learners to identify options, and encouraging them to ask questions and exploring alternatives to better understand the lesson is important. Moreover, they see themselves as future elementary teachers who have the goal of teaching by capacitating learners’ independence, allowing them to foster unique initiative and responsibility to learn. This is made possible by requiring to work pupils to do learning tasks with the availability of the teacher as consultant.

It can also be surmised from the table, that the assessment of the preservice elementary teachers along personal model teaching style is also rated “high” with a mean of 4.06 and standard deviation of 3.36. This implies that they have high orientation in “teaching by personal example.” As prospective elementary teachers, they set their standard as model to their learners using the teaching approach “learning by example.” This requires the preservice teachers to demonstrate to the learners how to learn and understand information. In this belief, observation and simulation of the preservice teacher’s process is necessary for the pupils to learn.

Meanwhile, their assessment along delegator style was also consistently rated “high” as evidenced by the mean of 3.95 and standard deviation of 0.38. This finding reveals that the preservice elementary teachers adhered to the orientation that learners must be taught by developing their ability as independent learners and giving importance to their learning autonomy. It suggests that their role as future teachers is to make the learners active and engaged in all the phases of learning process.

Finally, the preservice elementary teachers also assessed themselves “high” along formal authority obtained a mean of 3.84 and standard deviation of 3.84. This finding suggests that as future teachers, establishing goals of learning, setting standards and rules are important for them. In this style, they can recognize that they have the exemplar capacity to teach and they have power and authority over their learners in the classroom. Classroom management for them is important to carry out their desired learning outcomes for their learners. This further implies that as future teachers in the basic education level, they see that an excellent classroom management is important to deal with learners.

Table 4. Difference on the personal epistemological beliefs of preservice teachers when grouped according to their profile variables

Profile Variables	Speed of knowledge acquisition	Structure of knowledge	Sources of knowledge	Control of knowledge acquisition	Stability of knowledge
Sex	0.858 ns	0.669 ns	0.830 ns	0.960 ns	0.993 ns
Type of HS Graduated	0.527 ns	0.869 ns	0.438 ns	0.404 ns	0.215 ns
Father's Occupation	0.061 ns	0.118 ns	0.765 ns	0.138 ns	0.329 ns
Mother's Occupation	0.277 ns	0.916 ns	0.929 ns	0.395 ns	0.684 ns
Birth Order	0.263 ns	0.807 ns	0.982 ns	0.408 ns	0.253 ns
Father's Education	0.559 ns	0.138 ns	0.474 ns	0.791 ns	0.592 ns
Mother's Education	0.391 ns	0.534 ns	0.024*	0.447 ns	0.843 ns
Family Monthly Income	0.344 ns	0.644 ns	0.004*	0.817 ns	0.993 ns

*= significant at 0.05 level; ns= not significant at 0.05 level

Note: all other variables are not significant

Table 4 shows that there is a significant difference on the personal epistemologies of preservice elementary teachers when grouped according to their profile variable. Significant difference is seen along the sources of knowledge when grouped according to mothers' educational attainment and family monthly income.

Based on Post-Hoc tukey test, it showed that the significant difference on personal epistemologies is seen on the preservice elementary teachers whose mothers are college undergraduate. It must be noted that the study showed that college undergraduate is the highest educational attainment of mothers. This affirms the finding of Schommer and Easter [13] finding revealed that the more educated parents have and the more they expect their children to take responsibilities in the home and for their own thinking, the more likely children to develop a sophisticated system of epistemological beliefs. In the same manner, in the latest study of Topcu and Tuzun [14] they found out that the higher the educational

attainment of mother the better students developed knowledge of cognition skills and epistemology.

Moreover, there is also a significant difference on personal epistemologies specifically along sources of knowledge when grouped according to family income. As seen in the post-hoc tukey test, the difference is along those who have higher monthly income have higher beliefs on the sources of knowledge. Finally, no significant difference existed along sex, type of HS graduated from, parents' occupation and birth order.

Table 5 shows the difference in teaching styles of the preservice elementary teachers when grouped according to their profile variables. As clearly seen in the table, sex and family monthly income spelled differences along personal model teaching style. Post-Hoc tukey test revealed that female respondents significantly rated themselves higher compared to male respondents in terms of the importance of personal model, facilitator and delegator.

Table 5. Difference on the teaching styles of preservice teachers when grouped according to their profile variables

Profile Variables	Expert	Formal Authority	Personal Model	Facilitator	Delegator
Sex	0.110 ns	0.799 ns	0.019 *	0.039*	0.016*
Type of HS Graduated from	0.325 ns	0.818 ns	0.152 ns	0.118 ns	0.418 ns
Father's Occupation	0.061 ns	0.411 ns	0.306 ns	0.488 ns	0.399 ns
Mother's Occupation	0.212 ns	0.755 ns	0.590 ns	0.331 ns	0.870 ns
Birth Order	0.057 ns	0.330 ns	0.522 ns	0.379 ns	0.576 ns
Father's Education	0.688 ns	0.716 ns	0.122 ns	0.696 ns	0.206 ns
Mother's Education	0.191 ns	0.881 ns	0.210 ns	0.824 ns	0.206 ns
Family Monthly Income	0.343 ns	0.711 ns	0.595 ns	0.015*	0.204 ns

*= significant at 0.05 level; ns= not significant at 0.05 level

Note: all other variables are not significant

This implies that female preservice teachers show more flexibility and dynamism in teaching compared to male preservice teachers. This affirms the findings of Grasha [15] that women were more likely to use a facilitator or delegator style that emphasizes relating to students as a guide, consultant, or resource as opposed to transmitting knowledge, setting goals, and providing feedback as compared to male.

It can be explained that the higher rating given by preservice elementary teachers relative to personal model teaching style means that preservice female teachers strive to teach the class by personal examples. This also further implies that they perceived themselves having the acts as a role model by demonstrating skills and processes and then as a coach/guide in helping their future students develop and apply these skills and knowledge. This concurs what Rahimi and Asadolahi [16] finding that female teachers prefer extroverting, sensing and feeling of teaching in comparison to male.

Meanwhile, the higher rating of female preservice teachers as compared to male teachers along facilitator suggests that female tend to focus on activities emphasizing student-centered learning. This further implies that female teachers have higher tendency of being empathic on the personal interaction with the learners compared to males.

Moreover, the higher rating given by the female preservice teachers to delegator teaching style means that they allow learners to work independently on task at the same time work collaboratively with others compared to male preservice teachers. Finally, the rating along facilitator teaching style significantly differs in the family income of the respondents. It shows that those who belonged to have lower monthly income have higher assessment rating along

facilitator teaching style. It was also revealed that there is no significant difference existed along type of HS graduated, child position, father's occupation, mother's occupation, father's education, mother's education and family monthly income.

Table 6 shows the relationship between the personal epistemologies and teaching styles of preservice elementary teachers. It was found out that there is a significant relationship between stability of knowledge and formal authority teaching style with the computed *r* value of .2283 and *p* value of 0.044. Hence, the null hypothesis of the study was rejected at 0.05 level of significance. This means that the higher the belief of the preservice elementary teachers on the stability of knowledge tends to have higher formal authority teaching style. This implies that once knowledge has been established and becomes certain, teachers can now project expertise in the field and are conversant on what to expect from the learners, hence, stability of knowledge enables the preservice elementary teachers display a formal authority teaching styles.

Implications of Personal Epistemologies and Teaching styles of the preservice elementary teachers

From the findings of the study, it implies that CSU-Lasam preservice elementary teachers' personal epistemologies are founded in constructivism theory of learning. The constructivism as their view of learning is based on their belief that knowledge should be constructed by the learners themselves through their active involvement, hands-on experience and personal capacity to process information.

Table 6. Relationship between epistemological beliefs and teaching styles of preservice elementary teachers

		Expert	Formal Authority	Personal Model	Facilitator	Delegator
Speed of knowledge acquisition	r	-.0420	.1750	-.0082	-.016	-.0353
	p-value	.715	.125 ns	.943 ns	.884	.759 ns
Structure of Knowledge	r	.1152	.1042	.1312	.083	.111
	p-value	.315	.364 ns	.252 ns	.466	.330 ns
Sources of knowledge	r	.1201	.1793	.1502	.0641	.128
	p-value	.295	.116 ns	.189 ns	.577	.262 ns
Control of knowledge acquisition	r	.0216	.1598	-.0219	-.176	-.042
	p-value	.851	.162 ns	.849 ns	.123	.709 ns
Stability of knowledge	r	.1376	.2283	.0675	.040	.0086
	p-value	.230	.044 *	.557 ns	.728	.940 ns

*= significant at 0.05 level; ns= not significant at 0.05 level

Note: all other variables are not significant

This belief of the preservice elementary teachers discards the traditional role of the teacher as knowledge dispenser. This also suggests that these preservice elementary teachers have already developed the idea of having a learner-centered teaching approach which is a framework on how they are running instructional processes. Meanwhile, one of the identified objectives of the BEED-Generalist program Cagayan State University is to produce teachers who are capable to teach all the subject areas in the basic education curriculum. The high beliefs of these preservice elementary teachers along with the personal model, facilitator and delegator teaching styles basically matched with their orientation as subject experts and tacticians. This study generally implies that the preparation of the preservice elementary teachers' pedagogical knowledge and skill suited to the competencies they need to develop as elementary teachers.

CONCLUSION

Majority of the respondents were female, graduates of public high schools, fathers' occupation is farming while mother's occupation is housekeeping, most of them were second born, both parents were high school undergraduates, and has a family monthly income of Php 6,000-8,000. The preservice elementary teachers exhibit positive personal epistemologies on the five dimensions while they perceived themselves high in all the five teaching styles. Significantly, mothers' education and family income define differences in their personal beliefs along sources of knowledge. With respect to teaching style, sex and family income explain differences in their personal model, facilitator and delegator teaching styles. Female preservice elementary teachers show more flexibility and dynamism in their teaching styles compared to males. Meanwhile, the personal epistemologies along stability of knowledge is an important factor that influence the preservice elementary teachers to have better display of formal authority teaching style. Generally, the preservice elementary teachers established themselves as constructivists. It implies that their preservice preparation program oriented them high belief on the pedagogical and methodical approach which is learner-centered.

RECOMMENDATION

Teacher education institution must be able to determine and clarify the personal epistemologies of preservice teachers for this affect their teaching styles. The College of Teacher Education should inform the preservice elementary teachers on what personal epistemologies and teaching styles they adhered. Since the personal epistemologies of preservice elementary teachers is anchored on constructivism theory of learning, teaching methods aligned with this belief must be consistently used by the College to further develop the teaching competencies of the preservice elementary teachers. This may also be discussed to them before and after their off-campus training by way of conducting seminars or workshops with the themes along discovery method, collaborative group work, and problem-based learning as teaching methods of constructivism learning which will help them become better facilitators of knowledge and skills.

Meanwhile, training on classroom management and up-to-date recent advances in teaching will also help the preservice elementary teachers become experts and better facilitators since this study revealed that they adhered to personal model, facilitator and delegator teaching orientations which are needed in the 21st century learning environment.

Limitation of the present study focused on the BEED-Generalist program of certain Teacher Education Institution in the Philippines, similar study may be conducted to other programs in the teacher education with the inclusion of larger scope using qualitative and empirical method of investigation to have a better picture of the epistemological beliefs and teaching styles of preservice teachers.

REFERENCES

- [1] Ogena, E. B., (2013). Teacher Education Preparations for ASEAN 2015. Philippine Normal University.
- [2] CHED Memorandum Order (CMO) No. 30, s. 2004, Revised Policies and Standards for Undergraduate Teacher Education Curriculum
- [3] Mohammed, M. T. & El-Habbal M. (2013). The Relationship between Epistemic Beliefs and Academic Performance: Are Better Students always More Mature? *Journal of Educational and Developmental Psychology*
- [4] Bendixen, L. D., & Rule, D. C. (2004). An integrative approach to personal epistemology: A

- guiding model. *Educational Psychologist*, 39, 69-80. doi: 10.1207/s15326985ep3901_7
- [5] Chan, K.W., & Elliot, R.G. (2004). Relational Analysis of Personal Epistemology and Conceptions about Teaching and Learning. *Teaching and Teacher Education*, 20,817-831.
- [6] Richardson, V. (1996). *The role of attitudes and beliefs in learning to teach*. 2nd Edition (pp. 102-119). Macmillan: New York
- [7] Yilmaz, Harun (2011). Pre-Service teachers' Epistemological beliefs and Conceptions of Teaching.
- [8] Akbari, R., Mirhassani, A., &Bahri, H. (2005). The relationship between teaching style and personality type ofIranian EFL teachers. *Iranian Journal of Applied Linguistics (IJAL)*, 11, 1-28.
- [9] Cooper, C. (2001). Foreign language teaching style and personality. *Foreign Language Annals*, 34, 301-16.
- [10] Grasha, A.F. (1996). *Teaching with style: A practical guide to enhancing learning by understanding teaching and learning styles*. Pittsburgh, PA: Alliance Publishers, (800) 718-4287.
- [11] Wood, P., &Kardash, C. (2002). Design of studies of epistemology. In P. Hofer, & P. R. Pintrich (Eds.), *Personal epistemology: The Psychology of beliefs about knowledge and Knowing* (pp. 231-260). New Jersey: Erlbaum.
- [12] Grasha, A., (1996) *Teaching with style. A practical guide to enhancing learning by understanding teaching and learning styles*. Pittsburgh, PA; Alliance Publishers, International Alliance of Teacher Scholars, Inc
- [13] Schommer-Aikins, M., & Easter, M. (2006). Ways of Knowing and Epistemological Beliefs: Combined effect on academic performance. *Educational Psychology*, 26, 411-423. doi: 10.1080/01443410500341304
- [14] Topcu M. S. &Tuzun Y.O., (2009) *Elementary Students' Metacognition and Epistemological Beleifs Considering Science Achivement, Gender and Socioeconomic Status*, *Elementary Education Online*, 8(3), 676-693, 2009
- [15] Grasha, A.F. (2010) *A Matter of Style: The Teacher as Expert, Formal Authority, Personal Model, Facilitator, and Delegator* Author(s): *College Teaching*, Vol. 42, No. 4 (Fall, 1994), pp. 142-149
- [16] Rahimi M.&Asadolahi F. (2012). *Teaching Styles of Iranian EFL Teachers: Do Gender, Age, and Experience Make a Difference?* *International journal of English Linguistics*

COPYRIGHTS

Copyright of this article is retained by the author/s, with first publication rights granted to APJMR. This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license(<http://creativecommons.org/licenses/by/4>).