

## Investigating the Effects of Professional Practice Program on Teacher Education Students' Ability to Articulate Educational Philosophy

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### Abstract

*The purpose of this study was to investigate the changes in pre-service student teachers' ability to articulate a philosophy education during the field experience. Educational philosophy change for the participants (77) was measured by using Jersin's scale. Evaluations of scores involved comparison of pre and post the training program. Descriptive and differential statistics; frequency distributions, percentages, Z test and Fisher's Exact Test were used to examine the independence of the distribution of students on educational philosophies. The findings revealed that students' ability to articulate a philosophy of education did improve. A Fisher's Exact Test revealed statistically significant differences between pre and post-test scores in the distribution of students in **Progressivism** and **Essentialism** philosophies. The Z test results revealed that there are statistical significant change in **Progressivism** and **Essentialism** in favor of **Progressivism**. In contrast to those philosophies, the number and percentages of students under **Existentialism** remains the same before and after the onset of the program. On the basis of the study's findings, it was concluded that the practicum along with the treatment program had significantly assisted the reflection and articulation skills of student teachers who experienced it, and its retention and expansion were recommended for pre-service teacher training.*

**Keywords:** Teacher education, pre-service student teachers, educational philosophy, teachers' beliefs, professional practice programs

### 1. Introduction

Researchers and educators acknowledge the complexity involved in teaching and in learning to teach effectively (Kane; Sandretto & Heath (2002). Lincoln (1986,); Daresh, and Playko (1995); Nolan and Hoover (2008) indicated that authenticity and clarity in espousing a particular educational philosophy are the first important ingredients in effective teaching. Even more critical in developing a framework for successful teaching practice is an ability to analyze personal beliefs, attitudes, and values as components that form the basis of a personal educational philosophy (Kagan, 1992; Pajares, 1992; Morine-Dershimer & Kent, 1999). Witcher; Sewall; Arnold & Travers (2001) confirmed that there will always be a set of beliefs, attitudes and values (implicit or explicit) that guide teachers practice and reflects the teacher's educational philosophy in all aspects of the education process.

Researchers such as (Gerges, 2001; Pajares, 1992; Wilke, 2004) believed that teachers are required to make their teaching decisions on an explicit educational philosophy to improve the quality of educational outcomes. Emerging from this research is an understanding of the central role that teachers' personal philosophy plays in the development of teaching practice (Beswick, 2005). Articulating an educational philosophy is an extremely powerful activity for reviewing professional and personal values to determine how personal behavior actually matches the platform or philosophy of education. The different perceptions and assumptions that teachers have about the nature of people (learner), knowledge (the curricula) and existence of its various elements (the environment) have led to differences in their teaching practices which are interrelated with educational philosophies as mentioned in different educational sources, such as Ozmon and Carver (1995); Reed and Johnson (1996); Gutek, (1997); Knight, (1998); Nodding, (1998).

Pre-service teachers tend to have beliefs (implicit or explicit) about knowledge, learning, and teaching (pedagogical beliefs) that align with a philosophy of education (Weber & Mitchell, 1996).

In this context, Glickman, Gordon and Gordon (1998) indicated that there are three major educational philosophies that are directly related to the teaching process. Those are Essentialism, Progressivism, and Existentialism. Philosophical principals and educational applications of those philosophies were fully discussed in the above resources.

## **2. Rationale**

Like many other countries, educational reforms in Jordan in 1987 and 2002 recommended changes in school curricula, instructional strategies, evaluation techniques and teacher training. Reform in teacher education programs also tends to focus on improving the academic and professional quality and preparation (pedagogy and content knowledge) of prospective teachers through increased reliance on field-based experiences (Goodlad, 1984; Schulman, 1986a).

Researchers asserted the need for beginning teachers to develop reasoned reflection in order to manage their professional development within the school bureaucracy and also teach effectively (Eisenhart., Shrum., Harding., and Myers, 1985; Hytten, 2000). Of the four teacher education paradigms identified by Van Manen, (1977); Zeichner (1983) and further explicated by Tom (1985), inquiry-oriented teacher education appears to be promising in addressing the philosophical questions as well as the practical skills needed to achieve the desired intended learning outcomes.

The literature, which describes and advocates inquiry-oriented teacher education, provides numerous examples of case studies and overviews of the model (Zeichner, 1983, 1999; Zeichner and Listen, 1985; Goodman, 1985a, 1985b; Posner, 1985; Roth and Adler, 1985; Tom, 1985; Nolan and Hoover, 2008) but little evidence of attempts to identify discernible gains in student ability to reflect upon and synthesize their belief/value systems as they relate to their prospective roles as classroom teachers. Cruickshank and Armaline (1986) affirm the need for the identification of effective procedures to determine if field-based teaching experiences, as an intervention program, are accomplishing their intended purposes. Their observation remains timely valid. Their observation remains timely valid.

In Jordan, more research, in this area of teacher education needs to be done. Various strategies and experiences have been implemented by different researchers in previous years during teacher education, but the effectiveness of such experiences had not been systematically evaluated prior to the present study. Beyond the teacher education program of The University of Jordan, such studies are also very few. Therefore, the present study was conducted to answer the following research questions:

- Is the classification of student teachers in terms of their educational philosophies after joining the program linked to their classification before joining the program?
- What is the change percentage of the classification of student teachers in terms of their educational philosophy before and after joining the program?

## **3. Literature Review**

Much of the current researches about teachers' beliefs are an attempt to encourage excellence in teaching by emphasizing the important role that teachers' beliefs play in the practice of teaching. For example, Pajares, 1992 noted that "few would argue that the beliefs teachers hold influence their perceptions and judgments, which in turn, affect their behavior in classrooms"(p. 307).

In earlier research, Wells (1984) identified three forces which socialize the teacher into the school life: university training, the impact of bureaucratic attitudes and values, and the influences of teaching role models. She concurs with Zeichner and Tabachnick (1981) that the university should share responsibility with the school system to develop teachers' ability to question the education process and to exert influence in their workplace. Recognition of this reality has prompted a number of teacher educators and theorists to posit the need for careful attention to the development of a conscious and coherent philosophy of education on the part of prospective teachers (Soltis, 1982 Johnston, 1984). The theme arising from this research is the focus of the present study. Noting the lack of research attention to the role of a normative philosophy in teaching, Tymitz (1983) conducted an exploratory study to determine the extent to which teachers believed a philosophy of education was necessary and valuable to their professional lives.

Of her sample of forty in-service teachers, only six were able to articulate a clear philosophy of education. Slightly over half the teachers were able to express a partially integrated philosophy and discuss what a good or successful teacher can do. Nearly three-fourths of the participants believed that a well-articulated philosophy would improve their effectiveness as teachers. Tymitz points out that this teacher's initial lack of insight into the philosophical orientation of her teaching was typical of many in the study, as was nearly universal agreement that participants had neither formal instruction in the role of philosophy in teaching, nor systematic assistance in the development of a philosophy through their teacher education experience. Schön (1995) adds credence to Tymitz' findings that few teachers in her study were able to articulate a philosophical stance. Schön found that the majority of individuals were not aware of discrepancies between their espoused theories and their tacit theories in use which actually guided their daily actions.

Block & Haselip (1995) explained that beliefs vary in strength and kind depending on those beliefs. Thompson's (1992) review of the beliefs and conceptions of teachers noted that "thoughtful analyses of the nature of the relationship between beliefs and practice suggest that beliefs systems are dynamic, permeable mental structures, susceptible to change in light of experience"(p.49).

Putnam and Borko (1997) advocated that "teachers should be treated as active learners who construct their own understandings" (p. 1225). They explain that constructivist learning theories view learners as active participants in the learning process, in which they "construct new knowledge and understandings based on what they already know and believe" (p. 1225). Thus, for "professional development experiences to be successful in supporting meaningful change, they must take into account and address teachers' knowledge and beliefs" (p. 1281). In this context, three themes were identified in the literature that supports beliefs changeability through intervention programs. These are: philosophical beliefs, pedagogical and knowledge beliefs, and beliefs and practices.

In regard of philosophical beliefs Witcher., Sewall., Arnold & Travers (2001) and Hatcher (2008) conducted studies which aimed at examining the philosophical beliefs and self-efficacy of pre-service student teachers before and after participation in the field experiences. Results revealed statistically significant changes in their beliefs. It also indicated that pre-service teachers agreed with constructivist teaching values. The researchers also used a priori context analysis to code personal educational philosophies written by students before and after one term of intervention and were found to be effective. As for the second theme studies such as those done by Ongel (2003); Tsang, (2004); Swars., Smith., Smith., & Hart. (2006); Pease (2008) explored the pedagogical beliefs development of pre-service teachers enrolled in a highly-regarded teacher education program. Results revealed that post-bachelor degree programs have an impact on students' theoretical pedagogical knowledge, as consistent with the recent research. Almost most of the pre-service teachers did improve in their pedagogical knowledge from pre- to post-program in different degrees and different directions throughout the teacher education program.

The relationship between teachers' beliefs and teaching practice has been investigated by - Ravitz., Becker., & Wong, 2000; Ho and Toh (2000); Breen, Hird, Milton, Oliver and Thwaite (2001); Fives (2003); Carr (2004). Correlation analyses showed a significant relation for pedagogical beliefs, knowledge and performance among pre-service teachers. The findings also emphasized that the key to understand these interrelated relationships remains in teachers' reflections on their practices. In summary, this review of literature serves to identify and discuss support for the development, articulation of a philosophy of education and change. Numerous studies have indicated that universities, schools, and teachers themselves do not encourage reflection and inquiry. In addition, prospective teachers are expected to transform into the existing bureaucratic structure smoothly and uncritically (Freire, 1970; Giroux, 1983; Zeichner, 1999). Reflective, critical inquires can rarely be found in the schools. To encourage students to become more reflective and capable of ongoing growth and improvement, reflection and articulation of a coherent philosophy of education is viewed as a means for teacher educators. However, little is known about the ways students develop such integrated philosophy of education. Therefore, numerous researchers have asserted the need for further inquiry into the ways that students progress towards a well-integrated philosophy of education (Hillkirk, 1987; Pavlovich., Collins & Jones 2009).

#### ***4. Significance of the Study***

Reviewing the literature revealed ample discussion of the relationship between teachers' belief (espoused theories of action) and teachers' practices (theories in use) in teacher education (Kagan, 1992; Wideen., Mayer-Smith & Moon, 1998., Kane.; Sandretto & Heath, 2002).

However, the literature shows that few research paid attention to the teacher philosophy and effectiveness of the teacher training in improving the ability of student teachers to articulate an educational philosophy. It also suggests that teacher training programs need to be modified to help improve the ability of teachers to teach more effectively. The present study contributes to the growing body of literature that examines teachers' philosophy of education that guides their teaching practice.

Daresh and Playko (1995) indicated that the beliefs, attitudes, and values of teachers, which affect, whether explicitly or implicitly, their teaching behavior are positively reflected on improving their performance and maybe ultimately students' learning. This is regardless of the philosophy of education that student teachers possess. But the most important issue is whether the program enables the student teacher to articulate an explicit educational philosophy. This research is meant to pave the way for conducting similar studies in the future to examine the prevailing educational philosophy in the program in efforts to improve the quality outcomes of such programs through coordination among cooperating teachers at school system, university supervisors, faculty members, and educational leaders.

## **5. Methodology and Procedures**

### **5.1. Background**

Students enrolled in the elementary education program at the University of Jordan are required to complete two courses in field experiences prior to the student teaching program. The first, Practicum (1) EDCI 319, 3 credit hours, is taken during the junior year. In practicum (1) EDCI 319, students meet during 16 weeks and take place in a classroom setting. The second, Practicum (2) EDCI 419, 9 credit hours, is taken during the last semester in the senior year. Practicum (2) EDCI 419 takes place at cooperating schools for 16 weeks. During this course, each student is assigned to an elementary school cooperating with the university and spends five days per week with a cooperating teacher's classroom and is supervised by one of University supervisors. During this course, students meet one-hour in a weekly seminar setting on campus with their assigned university supervisor. Practicum (1) EDCI 319 and Practicum (2) EDCI 419 involve various assignments which engage students in basic teaching skills.

### **5.2. Subjects**

The participants for the present study consisted of 77 female student teachers enrolled in Curriculum and Instruction 419 course during the second semester of the academic year 2010/2011. Each student was randomly assigned to one of five University supervisors in the professional practice program.

### **5.3. Design**

This study is conducted on one group design with a pre-test and a post-test. This design is considered a quasi-experiment due to lack of control group. Thus, a paired sample was used to compare the holistic scores obtained by students' teachers on a philosophy test.

### **5.4. Instrumentation**

The instrument used for the present study was developed by Patricia Jersin (1972) called (What is your Educational Philosophy?). The test was comprised of 11 questions each of which tackles one aspect of the education process. Each question has four possible alternatives referring to one of the following three educational philosophies: Essentialism, Progressivism, and Existentialism.

Jersin applied this test to different educational groups and found that it has a high level of consistency and that it is capable of differentiating among those working in education based on their philosophical positions (Jersin, 1979). Likewise, Glickman, Gordon and Gordon (1998) used it to identify the educational philosophies of teacher educators, and believed it was capable of differentiating among common educational philosophies.

The questions in the test covered the following components of the educational process: The essence of education, the nature of learner, the role of education, the education environment, the goal of education, the role of the school, the school culture and environment, the process of learning, the role of the teacher, the content of the curricula and the preferred teaching methods.

To assess the psychometric characteristics of the test, it was translated into Arabic and presented to 10 faculty members to judge the accuracy of the translation, clarity and accuracy of the phrasing of items, the correlation and comprehensiveness of the alternatives for each question in the test. They were also invited to add any notes or suggestions if deemed necessary. Agreement ratio of 80% of the judges was deemed acceptable to establish content validity. Seeking content validity, the general type of modifications was related to language clarity through which the judges tried to make the test clearer and more understandable.

Based on their comments and suggestions, the amendments were completed and one further question about the evaluation methods of student learning was added, raising the total number of questions to 12. The reliability analysis was run on the test items using Cronbach's alpha for internal consistency on a sample of 30 student teachers from outside the participants after the lapse of three weeks from the first application. The resulting alpha was (89%).

Based on Jersin's test, the educational philosophy of a respondent is identified as follows: for each question the respondent is asked to draw a circle around the letter of the alternative which reflects his/her philosophical position; the recurrence of his/her scores, which possibly ranged from 0 to 12 maximum, is then calculated. Note that a score of 6 or above would place a respondent to one specific philosophy. That is, he/she believes in this educational philosophy. However, if the recurrence of answers is less than 6 for all of the three philosophies, then the respondent is classified under "eclectic".

### **5. 5. Treatment program**

Along with the course curriculum experienced by the participants (Practicum (2) EDCI 419 syllabus), the group members experienced a specially designed curriculum Kit beginning with EDCI 419. A curriculum Kit entitled "My educational platform", is a modified version of Sergiovanni and Starratt (2002) model for formulating an educational platform. Originally, this model was designed to help professional educators assess their views about a series of educational issues by stating and reflecting on their personal views. An educator's platform is structured to communicate the educator's deepest and truest beliefs, attitudes, and values. There is no single, perfect format for an educational platform. A platform may consist of a written statement which articulates educators' viewpoints on issues ranging from desired student outcomes to preferred school climate to expectations for community involvement in schools. This model includes twelve major themes: The aims of education, the major achievements of students, the social significance of the student's learning, the teacher's image of the learner, the value of the curriculum, the teacher's image, the preferred kind of pedagogy, the language of discourse in learning situations, the preferred kind of teacher-student relationships, the preferred kind of school climate, the role of the school and the content of the curricula from different schools of thoughts.

The purpose of using the above themes is to foster a sequence of discussion activities to stimulate philosophical questions that lead to involvement of student teachers in personal and group inquiry about significant educational issues which in turn raise awareness about their own understandings and commitments, and encourage them to become clearer about their prospective roles as future classroom teachers. Treatment topics focused on the academic, analytical and transformational skills. The participants considered and reflected upon guided questions which asked them to articulate their understandings and beliefs in relation to course topics in greater depth and detail. Repeatedly, they were asked to identify their positions in regards to above themes and provide a clear rationale for the chosen position.

To ensure that the curriculum Kit was implemented as intended, the researcher met with the students' supervisors and explained the purposes and organization of the treatment Kit prior to the beginning of EDCI 419 course. Each supervisor was asked to keep a reflective journal of their student teachers on a weekly basis. Additionally, the researcher observed each supervisor twice during the course of the study and confirmed that the curriculum Kit was being implemented as intended.

### **5. 6. Implementation of the Instrument**

The self-administered, self-scored test -My educational philosophy- was utilized at the beginning and at the end of the program. The supervisors in the program arranged for the researcher to meet the students in groups during the first week of the semester. In each meeting, a pre-test was implemented. A verbal explanation and directions for the completion of the instrument presented loudly prior to the administration of the instrument for each group by the researcher.



However, in keeping with the nature of the design, students were not informed about the exact purpose or nature of the research. At the end of each group meeting, each participant was given a copy of the study instrument. The researcher collected the completed instruments from the participants after they were given enough time to respond. A post-test was implemented at the end of the program following the same procedures. Then, the completed instruments from the 77 were collected. Students were also asked to articulate their philosophies and to include explanations of their beliefs concerning the major themes included in the curriculum Kit.

Students' final essays, which were written based on reflective journals, were collected, and analyzed in relation to at least five specific factors of a philosophy of education included in the above major themes of the curriculum Kit. Having gathered the first and second responses from the students, they were analyzed by using the Statistical Package for Social Sciences (SPSS), coming up with results, presenting and discussing them and proposing recommendations based on the results as follow:

**7. Findings and Discussion**

**Q. 1.** Is the classification of student teachers in terms of their educational philosophies after enrolling in the professional practice program linked to their classification before the program? To answer this question, Fisher's Exact Test was used to classify students based on the three educational philosophies that are the subject of research. This test was used given that data violates  $\chi^2$  assumption which states that the expected values in each cell should not be below .5. The findings are presented in the following table:

**Table 1.** Fisher's Exact Test Findings that show linkage between student classification in terms of their educational philosophies before and after the program

Philosophy type		Post			Total	
		Progressivism	Essentialism	Existentialism		
<b>Pre</b>	Progressivism	Frequency	24	6	4	34
		Percent	50.0%	27.3%	57.1%	44.2%
	Essentialism	Frequency	20	14	2	36
		Percent	41.7%	63.6%	28.6%	46.8%
	Existentialism	Frequency	4	2	1	7
		Percent	8.3%	9.1%	14.3%	9.1%
Total		Frequency	48	22	7	77
		Percent	100.0%	100.0%	100.0%	100.0%

**Fisher's Exact Test= 4.875    df = 4    sig = 0.272**

Results in table 1 indicate that there is no statistical significance correlation between the classification of students in terms of their educational philosophies before and after the program. The Fisher's Exact Test value was 4.399 at  $p < 0.05$ . This points out to the independence of the classification of students according to their educational philosophies before and after the training program.

In order to verify if these differences in the means are statistically significant in the number and percentages of students, classification based on their educational philosophies before and after the program, the Z test was run to identify the difference between the two independent percentages. Table 2 shows the differences between the two independent percentages for the pre and post-survey.

**Q. 2.** Are their significant statistical differences in the percentages of the classification of students in terms of their educational philosophies before and after joining the program?

**Table 2.** The Z test results for examining the significant differences between the two independent percentages for the pre and post-survey

Philosophy type	Pre	Post	Z Value	Sig
Progressivism	34 (44.2%)	48 (62.3%)	- 2.261	0238*
Essentialism	36 (46.8%)	22 (28.6%)	2.328	0199*
Existentialism	7 (9.1%)	7 (9.1%)	0.000	1.00

\*Sig  $p < 0.05$

The results in table 2 revealed that there are statistical significant differences between two independent percentages for classifying students based on their education philosophies before and after the program in progressivism and essentialism. The Z values were (- 2.261, 2.328) respectively. Those values are significant at  $p < 0.05$ . In the meantime, there were no statistical significance differences at  $p < 0.05$  between two independent percentages in the existentialism philosophy before and after the program, as the Z value was (0.000).

The above results showed that the highest percentage of change in philosophy type for student teachers was a positive change towards the Progressivism philosophy. In contrast to the Essentialism and progressivism philosophies, the number and the percentage of those who believe in the Existentialism remained the same before and after the program at 7 student teachers (9.1%). This indicates that the professional practice program contributed in increasing the number and percentages of student teachers who embraced the progressivism philosophy as a result of the training. Those results are consistent with the studies conducted by (Tymitz (1983; Witcher et al, 2001; Swars., Smith., Smith., & Hart. (2006); Hatcher 2008).

As noted above, the comparison between the two independent percentages of prior the onset of and after the treatment program showed that the students' ability and propensity to articulate and change their philosophies did improve. Analyses of the treatment's reflective journals that students responded in regards to the significant educational issues and questions rose during weekly seminars and were rated as being insightful and thorough. The following excerpts illustrate how writing reflective journals helps pre-service teachers to articulate a clear philosophical stance.

#### **Student teacher 1**

*I believe that the role of the school is to help each student to develop a sense of self-worth in which all children can discover their own unique abilities, talents and gifts. I believe that a major achievement of a student at any age is to be satisfied with his or her learning accomplishments and yet to intrinsically strive to do his or her best to become productive. As students mature, education should put more emphasis on the process of setting learning goals to develop certain attitudes and beliefs toward the learning process. Educators should provide students with the opportunity to build a foundation of basic knowledge and cognitive strategies that they will need to enable them to satisfy their own personal needs and educational goals in a safe and comfortable environment. Within this environment, each child's unique needs and interests can be met. Because all students are different, it is necessary to use a variety of teaching strategies to adequately meet students learning strategies and to help them learn meaningfully. Effective teacher should reinforce, give instructions, ask questions, and be friendly, caring, and aware of students' needs. With the interests of the child in mind, he/she needs to improve their listening skills, observing, using acceptance messages, and giving feedback to improve students' learning.*

#### **Student teacher 2**

*I believe that the teacher should be a leader and should have a vision and mission. Such a teacher has a deep seated belief that students are driven from within to learn, grow and attain self-actualization. By articulating the curriculum (the vision, mission statements, and learning outcomes), teachers should perceive it as a means to develop students thinking skills. The curriculum should be designed to be thought provoking, imaginative and nurturing which contribute to the overall growth and development of the child.*

*To maximize student learning, teachers should understand that each child is unique and that a teacher's expectations for one student might not be the same for another student; therefore, I believe that different kinds of teaching strategies can be effective depending on the situation, subject area, skills to be taught, teaching strategy, and students characteristics. Implementing this pedagogical knowledge, teachers may encourage learners to strive for achieving their personal and academic goals. Teachers should encourage children to seek out the resources necessary to activate effective learning. Children learn best when they are involved and when the learning material is relevant to their interests and needs. The teachers should also value teamwork with the school principal, colleagues and students to contribute in school improvement.*

Also the following is a comment mentioned by a participant on the open ended question regarding the development of an educational philosophy. How effective, the extent to which the program helps you to articulate a philosophy of education. Please describe your experience. The following is an example of a student's comments

**Student teacher 3:**

*The process of writing my reflective journals has been a challenging and valuable experience. Although I feel that I have beliefs, assumptions, and values, which affect my behavior, but I have never thought that I have articulated them in a certain way to guide my teaching practice. While I realize that I am still in process... I found as I tried to articulate my thoughts on journals that there was integration among the different education themes. In order to write on one theme of my education philosophy, I need to build upon the others themes, which gradually contributed to shape my thoughts more clearly. As a teacher, I know that what I do is valuable. Yet as I began to express my thoughts regarding the practice of teaching, my experience in writing reflective journals throughout the program has given me an insight of understanding what it means to be an effective teacher. However, this felt gap is motivating me to gain a better understanding of the teaching profession.*

The above findings and excerpts indicate that the implementation of the curriculum Kit along with the course curriculum EDCI 491 experienced by the participants enhanced the pre-service elementary teachers' ability most substantially in developing a clearer philosophy of education and support the conclusion that the treatment Kit should be retained and extended.

The results were encouraging and the intervention program affected the students' ability to articulate their philosophy of education; however, the important work that remains is determining how well these belief changes translate into teaching practices within a school culture; researchers argue. Although this task is daunting, however, engaging students in a pre-student teaching field experience throughout their teacher education program in collaboration with the school system seems a realistic method of developing teacher competencies. The following recommendations might be utilized to enhance the program effectiveness in improving the quality of its outcomes:

1. Treatment Kit along with EDCI 419 Course, which requires ongoing inquiry and reflection, should be integrated into the pre-service teacher education curriculum.
2. Philosophical questions and educational issues raised during the teacher education coursework should be readdressed during the field experience to foster pre-service teacher reflection and inquiry-based learning.
3. University supervisors and staff should train student teachers to develop reflective practitioner skills through inquiry-based learning to promote student teachers awareness of their beliefs that are directly relevant to teaching practice in the classroom.
4. Developing reflection and inquiry-based learning should become an integral part of the entire pre-service teacher education program.
5. Further research into the ways pre-service teachers develop a clearer awareness of their education philosophies is needed to engage them in a higher sense of personal and professional growth and development.

While there is evidence to support the correlation between beliefs and instructional practices, Toh (2000); Breen, Hird, Milton, Oliver and Thwaite (2001); Fives (2003); Carr (2004); Northcote (2009); Khader, (2012) contend that the important question remains how teachers' philosophical beliefs and conceptions ultimately transfer into their teaching practice? Extensive support for the enhancement of student teacher inquiry and reflective skills to develop an integrated philosophy of education, however, is also needed to understand better the process of such development and ways to enhance its occurrence.



Although current research efforts have attempted to better understand the pre-service teachers' educational philosophy, however, the focus should be more on helping the pre-service teachers to be more aware of their own philosophical beliefs and understand how their own beliefs can influence and guide their learning while they are in the teacher education program (Richardson, 1996; Crisp, 1996). Researchers should also provide evidence that certain philosophical beliefs are related to desirable student outcomes. Such research efforts would certainly support them to learn how to teach in their process of becoming effective educators in schools (Warfield., Wood, and Lehman, 2006; Erkilic, 2008).

In conclusion, research on teacher belief, attitudes and values raises issues that, to date, have been ignored or minimally acknowledged (Bredo, 2002). Therefore, future research should focus on the process of how students' teachers examine, reflect, evaluate and potentially articulate a clearer philosophy of education. Empirical studies that address issues such as how teachers' beliefs and practices evolve over time, the nature of teaching, which still represents a critical gap in our pedagogical and content knowledge, should be conducted to design programs that promote pre-service teachers ability to articulate a philosophy of education and consciously transfer it into their teaching practice.

Philosophy of education is central to the practice of teaching. In this regard, Kagan (1990) has suggested that, "as we learn more about teacher belief, we are likely to come closer to understanding how effective teachers are made" (p. 85). I believe that her observation remains timely two decades later and the research reported here is contributed to this line of argument.

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