

NARRATIVE INQUIRY CURRICULUM: A NEW APPROACH TO THE PROFESSIONAL DEVELOPMENT OF STUDENT-TEACHERS AT FARHANGIAN UNIVERSITY

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ABSTRACT

This study was conducted to investigate the role of narrative inquiry curriculum in the professional development of student-teachers at Farhangian University of Iran. This is a quasi-experimental study including a pretest, a posttest, a control group, and an experimental group. The statistical population included the student-teachers of Farhangian University at Shahid Bahonar Campus in Hamadan. The students studying elementary education were selected as the research sample. Then the experimental and control groups were selected randomly. The experimental group was trained in narrative inquiry curriculum based on the professional development for one semester, and the control group was trained in the narrative inquiry curriculum designed by Farhangian University. Both groups were evaluated using a researcher-made tool before and after the training programs. Multivariate ANCOVA was employed to analyze the results. After conducting the training programs, the two groups were significantly different in knowledge, competence and attitude. Involving student-teachers in the narrative inquiry curriculum with the purpose of professional development can change their roles to the creators of knowledge. It can also develop their knowledge, competence and attitudes.

Keywords: narrative inquiry curriculum, narrative research, teacher professional development, student-teachers, Farhangian University

INTRODUCTION

Education is the most important factor in the development of a country. In this regard, teachers and their professional capabilities serve as the key element to enhance the quality of the education system. With the development of paradigmatic changes in teacher training nowadays, the necessary criteria for training qualified teachers have completely evolved. In the past, a teacher had to learn knowledge and skills and convey them to the next generation; however, this method does not meet the needs of our changing society now. A teacher should be equipped with the teacher-centered research methods to turn into a lifelong learner for professional development. Although research-centered methods are emphasized today for the professional development of teachers, they have not been entirley pervasive yet, and the main focus is on the transfer of knowledge, competence and attitudes. With this approach, it can never be possible to train lifelong learners.

The research results in Iran indicate that the majority of teachers are not lifelong learners. Karimi (2008) reported that elementary school teachers were not at acceptable levels in educational, teaching, scientific, behavioral, characteristics, social, intellectual, managerial, functional, moral, lifelong learning and technological competencies. Regarding the evaluation of teachers' professional competencies, Danesh Pazhouh & Farzad (2006) indicated that most of the elementary school teachers would associate the curricula with a real life less adequately and often try to convey the contents to them through inactive methods. One of the causes of this problem can be found in teacher training methods in the past when the materials were often conveyed theoretically; therefore, teachers failed to associate the learned materials with practice after taking the job. The lack of relationship between theory and practice prevents teachers from using what they learn; thus, they face many problems in practice. Darling-Hammond & Hammerness (2005) hold the belief that students often experience a dissociation and lack of relationship between what they are given as a theory in their lessons and what they practice in real classes with experienced teachers and students. The gap between theory and practice is one of the most serious problems of student-teachers. Moreover, the teaching practicum experience, serving as a bridge to fill the gap, does not fully prepare them to face the complications of full-time teaching (Grudnoff, 2011). Therefore, research and practice methods can be used to decrease this gap. To Tryggvason (2009), previous studies in Finland indicated that teacher training methods mostly faced problems in integrating theory and practice; however, recent national studies showed that research-centered studies had good results. Nowadays there is an accepted principle in Finland that teacher-training courses should supply teachers with the research-based knowledge, competencies, and methods to improve teaching and learning.



According to Miner *et al.* (2010), research-based learning develops high-level learning and creative thinking skills (as cited in Clayton & Kilbane, 2016). Narrative inquiry is one of the research-based plans intended for the professional development of teachers based on learning through thoughtful experience and practice. This type of learning emphasizes problem solving and conceptualizing by thinking in action (Dewey, 1929; as cited in Ord, 2012). It enables teachers to identify and interpret key problems in their classrooms (Meier & Henderson, 2007). The narrative approach to teacher-training was based on the idea that meaning is created through thinking, and thinking results in perception which leads to action. Regarding teaching staff, thinking can be put into new activities (Phillion, 2005, p.6). The practical theories of student-teachers are developed through action-based thinking (Abou, 2007). They observe and evaluate their experiences and thoughts by thinking; as a result, thinking can be a key element in the professional development of student-teachers.

Narrative researchers have considered various approaches to teacher training such as regarding student-teachers as teaching researchers and curricula planners (Kükner & Orr, 2016). If teachers are equipped with professional knowledge and customized practical knowledge, they will be the lesson planners at schools (Wong, 2003). The idea of teachers as lesson planners was first introduced by Connelly and Clandinin (1988). Then they proposed the idea of teachers as the creators of curricula in 1992. In this idea, teachers were supposed to create curricula along with students (as cited in Parker, Pushor, & Kitchen, 2011). The idea of teachers as curriculum developers indicates how previous situations can form or change future experiences (Connelly & Clandinin, 1988). Based on this idea, Xu (2011) introduced the idea of the curriculum of life and stated that it was based on the notion that curricula could be a practical lesson of life which can be acquired through narrative inquiry. Huber, Murphy and Clandinin (2011) proposed to ask teachers to write their autobiographies as narrative inquiries. This task, would let them experience the creation of and answer their questions thoughtfully (Kelchtermans, 2014).

With regard to the research literature, it can be stated that narrative methods have been used in the plans designed for the professional development of teachers in different countries (Roziter & Clark, 2007; as cited in Bishop, Berryman, Cavanagh, & Teddy, 2009). For instance, the findings of a study carried out by Smith (2012) indicated that narrative-based professional learning would contribute to the professional development of novice teachers. According to Le Fevre, (2011), autobiographies of student-teachers could be used as curricula to build a bridge between action and theory.

Nowadays narrative inquiry is a key component of the regular professional development plans for high school teachers in New Zealand. Teachers' narratives of high school students are used as the main source and a tool to understand how students experience school. Students' narratives enable teachers to investigate their teaching methods, beliefs, activities and their impacts on students (Bishop, Berryman, Cavanagh, & Teddy, 2009).

According to Latta & Kim (2009) the importance of narrative research in professional development can be extracted from Bruner's thinking (2002) and that of other philosophers such as Carr (2000), Dewey (1938), Ricoeur (1991), Gadamer (1964), and MacIntyre (1986). Latta & Kim (2009) concluded that narrative inquiry could create a constructive atmosphere in the classroom for the professional development and improvement of a professional learning culture. A research project conducted by Moss, Springer and Dehr (2008) investigated the relationship of professional development with professional development and thinking. In this project, the teachers were involved in writing narrative stories, and narrative inquiry provoked their thoughts in the form of teacher-centered research (McNiff, 2007). Soreide (2006) used the observation techniques to investigate five elementary school teachers and observed that they used narratives effectively to make their professional identities. As a research method, the narrative inquiry can help teachers create their knowledge. Fairbanks & LaGron (2006) evaluated the methods by which teachers created knowledge through discourse in a research group. The findings revealed that that teachers' learning and teaching through discourse on theory and action were changed to support their research efforts. To McVee (2004), teachers can use narratives as tools to express their opinions on theories, practice, and curricula.

Kelchtermans & Hamilton (2004, p. 804) believe that professional development of teachers, experience and narrative are closely related (as cited in Schlein, 2007). Rushton (2001) used narratives to enhance the self-efficiency of a student-teacher during the teaching practicum and obtained effective results. Conle (2000) used narrative inquiry as a tool for the professional development of pre-service teachers. As a consequence of this study, teachers achieved professional development before service by getting involved in the narrative inquiry. In some seminars held on teacher training in some institutes in 1980, the narrative inquiry was used as an effective tool in the curricula of students (Grumet, 1988). Teachers can acquire practical knowledge through narrative inquiry. Moreover, a kindergarten teacher gained practical knowledge on how to work in a class by using narrative inquiry (Clandinin, 1989). Connelly & Clandinin (1988) employed narrative inquiry for teacher training. According to their studies, student-teachers made their knowledge by focusing on professional actions with the help of narrative inquiry.



Given what has been discussed, the importance and role of narrative inquiry in the professional development of teachers and student-teachers are evident. However, the above-mentioned studies were all conducted outside Iran, and it is necessary to carry out such a study in Iran. The current study is aimed at investigating the role of narrative inquiry curricula in the professional development of student-teachers to draw a clear path for the professional development of teachers and student-teachers.

The findings of the above studies indicate that experience is the foundation of learning, and a student-teacher can extract meanings and concepts by thinking about his or her actions and notions. This type of learning can build a bridge between theory and action. These studies indicate that narrative inquiry can help the professional development; however, they do not specify the fundamental aspects for the professional development of teachers which includes different dimensions. Student teachers should acquire the necessary competence in teaching, methods, teaching techniques, using technology in teaching, assessment methods, etc. This study investigated the aspects of the professional development of teachers based on the model proposed by Koehler & Mishra (2009). In this model, the professional competencies of a teacher are as follows: content knowledge (it is a teacher's knowledge of teaching contents.); pedagogical knowledge (it is a teacher's profound knowledge about teaching and learning processes, approaches and methods.); pedagogical content knowledge (it is a teacher's deep knowledge of the educational methods and approaches to teaching the subjects.); technological knowledge (it is about the ways of using technology for teaching.); technological content knowledge (it is the knowledge of presenting subjects through technology.); technological-pedagogical knowledge (it is the knowledge of using technology to implement teaching methods.); technological-pedagogical content knowledge (it includes the knowledge of using technology to implement constructive teaching methods to teach the subjects).

Narrative inquiry is used in two ways: as a research method and as a tool for professional development. A course named Professional Research and Development 1 (Narrative Inquiry) has been put in the curricula of Farhangian University recently. It is meant for the professional development of student-teachers. However, a narrative inquiry has been introducing as a research technique, and it has not been designed for the professional development of teachers. Therefore, the aim of this study is to use narrative inquiry as a tool for the professional development and evaluate its role. The results of this study can be employed by the executors of the teacher professional development plan at Farhangian University to help redesign the curriculum. According to the proposed model, student-teachers make their own knowledge, competence and professional attitudes by involving in practical situations and using narrative inquiry. What distinguishes this model from other teacher professional development models is the fact that the roles of student-teachers are changed to knowledge makers through thoughtful actions in different aspects of professional development. Through this model, student-teachers will become knowledge makers. They acquire professional knowledge, competence and attitudes by applying narrative inquiry to different areas. They also achieve stable and genuine learning by establishing relationships between theory and practice. Accordingly, they aim of this study is to investigate the role of narrative inquiry in the professional development of student-teachers at Farhangian University. The primary and secondary research hypotheses are as follows.

The Main Hypothesis

The narrative inquiry curriculum has an impact on the professional development of student-teachers.

The Sub-Hypotheses

- 1. The narrative inquiry curriculum has an impact on the professional knowledge of student-teachers.
 - 1-1. The narrative inquiry curriculum has an impact on the content knowledge of student-teachers.
 - 1-2. The narrative inquiry curriculum has an impact on the pedagogical knowledge of student-teachers.
 - 1-3. The narrative inquiry curriculum has an impact on the technological knowledge of student-teachers.
- 2. The narrative inquiry curriculum has an impact on the professional competence of student-teachers.
 - 2-1. The narrative inquiry curriculum has an impact on the pedagogical content knowledge of student-teachers.
 - 2-2. The narrative inquiry curriculum has an impact on the technological-pedagogical content knowledge of student-teachers.
- 3. The narrative inquiry curriculum has an impact on the professional attitudes of student-teachers.

METHODOLOGY

This research is a quasi-experimental study including a pretest, a posttest, a control group, and an experimental group. The narrative inquiry curriculum was the independent variable, and the professional development of student-teachers was considered the dependent variable including three dimensions: knowledge, competence and attitude. The statistical population included the student-teachers of Farhangian University at Shahid Bahonar Campus in



Hamadan. The students studying the elementary education (200 individuals) were selected as the research sample. Then they were randomly divided into an experimental group with 42 participants and a control group with 40 participants.

The data collection tool was a researcher-made tool based on the teacher professional competence model designed by Koehler and Mishra (2009). This instrument included three dimensions: knowledge, competence and attitude. Knowledge has three subtests: content knowledge, pedagogical knowledge, and technological knowledge. Competence has two subtests: pedagogical content knowledge and technological-pedagogical content knowledge.

The reliability of the research tool was evaluated by experts. After the items had been reviewed by 20 experts in education sciences with teacher professional competencies, the inappropriate items were deleted, and some of them were corrected. After correction, all the experts confirmed the reliability of the items. The Cronbach's alpha was used to analyze the data after conducting the test in a group including 50 participants. Table 1 shows the results.

Table(1)

Before implementing the plan, the research tool was used to measure the knowledge, competence and attitudes of student-teachers in the two groups. Then the experimental group was trained in the narrative inquiry curriculum based on the professional development of teachers for one semester, and the control group was trained in the narrative inquiry curriculum designed by Farhangian University. The main aim of narrative inquiry curriculum based on the professional development of teachers is that student-teachers can improve their knowledge, competence and attitudes by getting involved in different projects of narrative inquiry. Student-teachers analyzed biographies, narratives of experienced teachers, narratives experienced by themselves, and narratives of other student-teachers by using various methods such as interviews. They wrote some narratives of classes by observing classes taught by teachers at schools and analyzed the narratives to extract the essential meanings. Then they obtained the necessary knowledge, competence and attitudes. Student-teachers negotiated in seminars on the findings and knowledge to link theories with actions. The control group received training in the narrative inquiry curriculum designed by Farhangian University during one semester. In this plan, the main purpose was to acquaint student-teachers with the narrative inquiry technique which they were supposed to use Teaching Practicum 1 to do the defined project accordingly. Both groups had the chance to take part in the teaching practicum classes and communicate with teachers during one semester to execute their projects. The difference between the control and experimental groups was the fact that narrative inquiry was used as a method for the professional development of student-teachers in the experimental group. However, it was regarded as a research method in the control group in which the studentteachers were supposed to become familiar with it according to the curricula approved by Farhangian University to use it in Teaching Practicum 1. Then they were expected to do the project defined in Teaching Practicum 1. In the control group, the only method was the data collection method. However, different methods were used in the experimental group. The desired analysis method in the control group was a coding technique which would confuse the students and deviate them from the goal. However, the partial coding method was not used in the experimental group in the same way as other qualitative studies. In the experimental group, the general interpretation and extraction of meanings are expected. In the control group, student-teachers move from theory towards action; however, the participants of the experimental group move from action towards theory. In the experimental group, the purpose is to turn student-teachers into knowledge makers and the creators of curricula through experience. However, the participants of the control group were expected to learn the theory first so that they can put it into action later. The training plan for the experimental group also emphasized the professional development of teachers and its dimensions. However, this was somehow neglected in the control group.

After implementing the project, the researcher-made tool was used to evaluate knowledge, competence and attitudes in both groups. The results were analyzed using the multivariate ANCOVA. The descriptive statistics (mean and standard deviation) and inferential statistics (multivariate ANCOVA) were used to analyze the research data. Given the presence of an independent variable at two levels and a dependent variable at three levels, MANCOVA was employed to analyze data. MANCOVA can control the impact of inconsistencies between groups and the impacts of pretest scores statistically. Therefore, it is more accurate than other tests (Palant, 2007; translated by Rezay, 2010).

RESULTS

The professional development of student-teachers is the main dependent variable including three other variables such as knowledge, competence and attitude. Knowledge and competence have some subtests, too. The following tables and diagrams show the mean and standard deviation in both groups on the pretest and posttest for primary and secondary variables.



Table 2

According to Table 2, there is not a significant difference between the score means on the pretest in both groups. However, there are some differences between the two groups in the score means on the posttest. Therefore, it is necessary to use ANCOVA to evaluate the significance of means.

Table3

According to Table 3, the two groups are not so different in the pretests on knowledge, competence and attitude. However, they are different in the score means of posttests. Therefore, ANCOVA was used to evaluate the significance of differences. Each of the secondary variables (knowledge and competence) had subtests. The following tables and diagrams show the score means of students on these subtests.

Table 4

According to Table 4, the two groups are not so different in the pretests of subscales including content knowledge, pedagogical knowledge, technological knowledge, pedagogical content knowledge, and technological-pedagogical content knowledge. However, there were some differences between the score means of the two groups in subscales. Therefore, MANCOVA was used to evaluate the significance of differences.

Hypothesis Testing

Given the concurrent comparison of some dependent variables between the two groups, it is necessary to use MANCOVA. However, the implementation of this method requires some conditions and assumptions which should first be investigated in data. If all the conditions and assumptions are met, then the data are analyzed.

Compliance with the Assumptions of MANCOVA

1. The Normality of Data

The Smirnov-Kolmogorov test was used to make sure of the normality of data. *Table5*:

According to Table 5, the values of K-S and significance level were (1.32, 0.06), (1.19, 0.12), (1.25, 0.09), (1.35, 0.06), (1.30, 0.07), (0.92, 0.36), (1, 0.26), (1.35, 0.06), (1.20, 0.13), (1.34, 0.06), (1.28, 0.07) and (1.25, 0.09) for content knowledge pretest, content knowledge posttest, pedagogical knowledge pretest, pedagogical knowledge pretest, pedagogical content knowledge pretest, pedagogical content knowledge pretest, technological-pedagogical content knowledge pretest, technological-pedagogical content knowledge pretest, attitude pretest, and attitude posttest, respectively. These values indicated the normality of data distribution. Therefore, the data normality condition is met.

2. Consistency of Variances with Levene's Test

The Levene's test was used to investigate the consistency of variances.

Table 6

According to Table 6, the significance level of dependent variables is P>0.05; therefore, the variances of dependent variables are not significantly different. Thus, the consistency condition of variances is confirmed.

1. The Homogeneity of Interactive Impacts

MANCOVA was used with the interaction between pretest and groups to investigate this assumption. Table 7 shows the results.

Table 7

The results of Table 6 indicate that the homogeneity condition of interactive impacts is complied with in the primary variables because the value of f is not at the significance level (P<0.05) in all interactions. Therefore, the homogeneity of interactive impacts is complied with.

Table 8

The results of Table 7 indicate that the homogeneity of interactive impacts is met in secondary variables because the value of f was not at the significance level (P < 0.05); therefore, the homogeneity of interactive impacts is complied with. Given the assumptions required for the implementation of ANCOVA, the impact of narrative inquiry



curriculum on the professional development of student-teachers was generally investigated at first. Then the research sub-hypotheses were investigated separately.

The Main Hypothesis

The narrative inquiry curriculum has an impact on the professional development of student-teachers. The results of ANCOVA can be seen in Table 9.

According to Table 9, the value of Wilks Lambda (f=269.86, sig=0.0001 and squared eta=0.91) indicates that the group had a significant impact on dependent variables. Therefore, it can be stated that the narrative inquiry curriculum had an impact on the professional development of teachers. *Sub-Hypotheses:*

- 1. The narrative inquiry curriculum has an impact on the professional knowledge of student-teachers.
 - 1-1. The narrative inquiry curriculum has an impact on the content knowledge of student-teachers.
 - 1-2. The narrative inquiry curriculum has an impact on the pedagogical knowledge of student-teachers.
 - 1-3. The narrative inquiry curriculum has an impact on the technological knowledge of student-teachers.
- 2. The narrative inquiry curriculum has an impact on the professional competence of student-teachers.
 - 2-1. The narrative inquiry curriculum has an impact on the pedagogical content knowledge of student-teachers.
 - 2-2. The narrative inquiry curriculum has an impact on the technological-pedagogical content knowledge of student-teachers.
- 3. The narrative inquiry curriculum has an impact on the professional attitudes of student-teachers.

The results of ANCOVA in the evaluation of sub-hypotheses can be seen in Table 10.

Table 10

Table 10 indicates the results of investigating the impacts of implementing the project on each subscale of the dependent variables.

Table 11

- 1. The narrative inquiry curriculum has an impact on the professional development of student-teachers. According to Table 10 (f=352.69, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the professional knowledge of student-teachers.
- 1-1. The narrative inquiry curriculum has an impact on the content knowledge of student-teachers. According to Table 11 (f=141.11, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the content knowledge of student-teachers.
- 1-2. The narrative inquiry curriculum has an impact on the pedagogical knowledge of student-teachers. According to Table 11 (f=176.38, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the pedagogical knowledge of student-teachers.
- 1-3. The narrative inquiry curriculum has an impact on the technological knowledge of student-teachers. According to Table 11 (f=171.16, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the technological knowledge of student-teachers.
- 2. The narrative inquiry curriculum has an impact on the professional competence of student-teachers. According to Table 10 (f=448.51, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the professional competence of student-teachers.
- 2-1. The narrative inquiry curriculum has an impact on the pedagogical content knowledge of student-teachers. According to Table 11 (f=300.33, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the pedagogical content knowledge of student-teachers.
- 2-2. The narrative inquiry curriculum has an impact on the technological content knowledge of student-teachers. According to Table 11 (f=287.77, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the technological content knowledge of student-teachers.
- 3. The narrative inquiry curriculum has an impact on the professional attitudes of student-teachers. According to Table 9 (f=180.48, sig=0.0001), it can be stated that the narrative inquiry curriculum increased the professional attitudes of student-teachers. Table 12



According to Table 11, the value of Wilks Lambda (f=124.03, sig=0.0001, and squared eta= 0.91) indicate that the group had a significant impact on dependent variables. It can be stated that the narrative inquiry curriculum had a positive impact on the professional knowledge, competence and attitude of student-teachers.

CONCLUSION

The aim of this study was to investigate the role of narrative inquiry curriculum in the professional development of student-teachers. The main research hypothesis was that the narrative inquiry curriculum has an impact on the professional development of teachers. Professional development included three secondary variables such as knowledge, competence and attitude. The analyses indicated that there was a significant difference between the two groups in knowledge, competence and attitude. This study does not have a background in Iran; however, foreign studies confirmed the findings.

The results of the research are consistent with those of studies conducted by Ai & Wan (2017), Byrne (2017), Taylor (2017), Kinsey & Moore (2015), Kelchtermans (2014), Lerseth (2013), Clandinin (2013), Kotsopoulos, Mueller and Buzza (2012), Smith (2012), Chan (2012), Kelchtermans (2010), Latta and Kim (2009), Ross and Chan (2008), Moss, Springer and Dehr (2008), Watson (2006), Soreide (2006), Fairbanks & LaGrone (2006), Yu (2005), McVee (2004), Schlein (2007), Rushton (2001), Conle (2000), Grumet (1988), and Clandinin (1989). All of these studies indicated that narrative inquiry helped the formation of teacher identity and the professional development of teachers in different dimensions.

To explain the research findings, it can generally be stated that involving student-teachers in the developmental activities based on narrative inquiry is an interesting task which changes the roles of student-teachers from information receivers to the creators of curricula and active knowledge makers. Through a research-centered approach, student-teachers can be involved in a type of learning which lets them think and ponder. Thinking and pondering result in perception and then action. Thinking and pondering on self-experiences and experiences of others help understand the subjects and extract meanings. Thinking is an appropriate way of solving problems. Another point is that learning is created in the narrative inquiry of society, and individuals can benefit from each other's experiences. Everyone can have a unique and valuable experience. Sharing experiences results in perception and understanding and makes the individual have another experiences. In narrative inquiry, learners are often involved in practical situations in which they can gain experiences. Involving in practical situations can lead to the better perception of theoretical concepts and establishes a relationship between action and theory. It even results in the production of theory. By getting involved in narrative inquiry, not only do students acquire knowledge and competence, but also their attitudes towards teaching, learning and learners will change for the better. The findings of this study confirm this discussion.

The narrative inquiry curriculum, which is based on the professional development, can create various conditions for student-teachers by concentrating on the goals of teacher professional development so that they can put the learned materials into action. One of the problems which unexperienced teachers face is that they cannot convey what they learned, a problem which is solved through learning based on narrative inquiry. The reason is that this method is able to fill in the gap between theory and action. In this method, student-teachers gain experience by getting involved in the action and learn the theoretical concepts better. They sometimes use theoretical concepts. Some other times, they observe and analyze others' experiences. Thinking and pondering on experiences would help them establish a relationship between theory and action. Moving form action towards theory helps student-teachers achieve the concepts and principles, a type of learning which can assist the sustainability of learning. The selfnarrative culture can be institutionalized among student-teachers in this way, and their roles are changed from the active knowledge makers to lifelong learners. In fact, learning is based on experiences in this method, and they can learn through their or others' various experiences, thinking about experiences, and extracting meanings from experiences. Here, thoughtful learning enables students to discover new meanings on the path of professional development, know themselves and be the creators of curricula. This type of learning is very sustainable and lifelong. Therefore, this approach can be used to turn students into lifelong learners who are able to solve their problems anytime. These student-teachers will then become teachers who create their own curricula. This method can be used to train teachers who are able to achieve professional development and influence others' professional development now and anytime in the future.



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