# Pre-service Teachers' Reflection on Reflective thinking in Teacher Education: A Study in Babylon

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رأي معلمو ما قبل الخدمة حول التفكير التأملي في تعليم المعلم: دراسة في بابل

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الملخص

يعد التفكير التأملي اساسي في تحليل، وحل المشاكل المعقدة وكذلك في التحديات التي يواجهها المعلمين في عملهم. يتطلب من اساتذة المعلمين ان يعطوا اهمية خاصة الى كيفية تشكّل خبرات التعلم التي تعزز قدراتهم و يتميز المعلم ذو التفكير الناقد . تتناول هذه الدراسة عمل بحثي قام بدراسة 51 معلم ما قبل الخدمة اخذةً في الاعتبار مدى ادراكهم فيما يتعلق بآرائهم بعد اكمال برنامجهم التعليمي ذو الاربع السنوات. اغلبية المعلمون اشاروا الى اهمية طرح آرائهم كفعالية لتطوير ادائهم التدريسي واكتشاف مكامن القوة والضعف واعطاء مقاييس خاصة بتحديث التعليم. ان التركيز على استخدام التفكير التأملي كان بالأساس يتعلق بمهام التدريس فقط. كما بينت اجاباتهم الى انهم يرغبون بمشاركة تفكيرهم مع اخرين وضمن مجاميع واعتبار الكتابة حول التفكير الناقد هو ذو فائدة اكثر بقليل من الوسط. كما بينوا رأيهم التأملي والعميق حول المواضيع المحددة والمسماة اكثر من تلك غير المسماة او المحددة. واستخلصت الدراسة جملة تطبيقات لمخططي المنهج، واساتذة المعلمين فضلاً عن معلمي قبل الخدمة أنفسهم .

الكلمات المفتاحية: التفكير التأملي، معلمو قبل الخدمة، تعليم المعلم

#### **Abstract**

Reflective thinking is essential to identifying, analyzing, and solving the complex problems and challenges teachers face in their profession. Teacher educators need to pay particular attention to the way they construct learning experiences to foster the capabilities and attributes that distinguish reflective teachers (Larrivee,2010). This study reports a research work that examined 51 pre-service teachers regarding their perception about reflection after they completed their four years programme. Majority of pre-service teachers reported reflection as an important activity in improving their teaching performance, discovering their strengths and weakness, providing measures for innovation in education. The focus of use reflection was mainly related to teaching tasks only. The responses also indicated that they want to reflect with others and in groups and considered writing about the reflection as little more than moderately useful. They reflect on assigned themes more than on unassigned themes. The study has implications for curriculum planners, teacher educators, and pre-service teachers themselves too.

**Keywords:** Reflection, Pre-service teachers, Teacher education **Introduction** 

We learn by experiences that allow us to absorb and help in better performance in future. Reflection is thinking for an extensive period by linking current experiences to earlier ones in order to promote a more elaborate and organized mental schema. The thinking involves looking for commonalities, differences, and interrelations beyond their superficial elements and meanings. The goal is to develop higher order thinking skills. Many educators consider Dewey the modern day originator of the concept of reflection, although he drew on the ideas of earlier educators, such as Aristotle, Palato, and Confucius. He thought of reflection as a form of problem solving that chained several ideas together by linking such idea with its predecessor in order to resolve an issue. The importance of reflection in education has been undeniable, with Dewey (1933) defining it as a unusual

form of thinking: Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends, constitutes reflective thought. Reflective action is constructed with impulsive and routine actions. Impulsive action is based on trial and error, drawing on biological/instinctive principles, while routine is "based largely on authority and tradition..... Undertaken in a passive, largely unthinking way" (Griffiths, 2000:539). We should learn to frame and reframe complex or ambiguous problems, test out various interpretations, and then modify our actions consequently.

# **Reflection in Teacher Education Programmes**

Reflection is essentially a component of activities undertaken by all. Even before the pre-service teachers enter into the teacher education programme they already have some knowledge about it. They behind them a long "apprenticeship of observation" after spending years in classrooms observing teachers' activities (Lortie,1975). They develop preconceived ideas of what teaching is through having watched others do it. They therefore bring with them ideas and images about what teaching and learning is all about, and what characterizes effective and less effective teachers. They may aspire to imbibe in them qualities of them who they perceived as good teachers and do away with characteristics that they might have perceived bad teachers have. These ideas ,however, have been acquired through experience as students, not as teachers. (As citied in Embarking on the Teaching Journey: Pre-service Teachers Reflecting upon Themselves as Future Teacher, Lyngsnes, 2012).

However, in terms of teaching, a reflective teacher is one, who critically examines his practices, comes up with some ideas as to how to improve her/his performance to enhance students' learning, and puts those ideas into practice ,what Schon (1983) calls the cycle of appreciation ,action, and reappreciation. Reflection is generally recognized as an important part of effective teaching because it assists teachers in becoming more aware of their views, subject these views to critical analysis and, if possible, restructure them (Korthagan,2001). Moreover, 21<sup>st</sup> century skills also require a person to be flexible in learning, unlearning and relearning as the situation warrants.

Hatton and Smith( 1995) observed students undertaking a Bachelor Education degree are required to complete several activities designed to encourage reelection. The activities included peer interviews in "critical friend" dyads and written reports where they reflected upon the factors that had influenced their thinking and action. Their research indicated that engaging with another person in a way that encourages talking with, questioning or confronting, helped the reflective process by placing the learner in a safe environment in which self-revelation can take place, ideas and beliefs by holding them up for scrutiny in the the company of a peer with whom they are willing to take such risks. The General Curriculum Framework for Teacher Education in Iraq (Hereafter GCFTE,2005) has also mandated reflection as a compulsory activity in teacher preparation. Teacher education programmes should strive to prepare teachers to be critical thinkers and reflective practitioners. As teacher educators, therefore, we should ourselves be conscious concept of how we use the concept of reflection, what kind of exercises students are presented with and how we work. In pre-service teacher education programmes, some important social and artefactual tools( e.g. journals, seminars, and discussions) may be employed to enhance pre-service teachers' use of reflection.

The General Curriculum Framework for Teacher Education (2009) emphasizes on teacher as a reflective practitioner. It suggests reflective practice as the central aim of teacher education. Pedagogical knowledge has to constantly undergo adaptation to meet the needs of diverse contexts through critical reflection by the teacher on his/her practices. Teacher education needs to build capacities in the teacher to construct knowledge, to deal with different contexts and to develop the abilities to discern and judge in moments of uncertainty and fluidity, characteristic of teaching-learning environment. Teacher education, it may be seen, is a reflective undertaking that also issues forth in pedagogical prescriptions for carrying out teaching at the ground level. Being a meta- activity, it deals in showing how things are done at school and classroom levels, explaining the 'reason why' of things and the basic theory and principles behind classroom practices (GCFTE, 2009). Teacher education

programmes need to prepare pre-service teachers as reflective practitioners, so that their actions are not based on impulse but are well thought out, critically analyze and enhance their capacities. Teacher education programmes should operate on the basis of the notion that reflection is a critically important characteristic of a professional teacher and that promoting reflection is vital to pre-service teachers' professional learning. GCFTE (2009) looks at reflective practice as the central aim of teacher education. Due emphasize should be given to develop reflective teachers with positive attitudes, values and perspective, along with skills for the craft of teaching. It also points at the major drawbacks of the current model pf practice teaching where there is no opportunity for teachers to examine their own biases and beliefs and reflect on their own experiences as part of classroom discourse and enquiry.

The term "reflection" and "reflective practitioner" are now commonly used in teacher education. These goals and ideals about reflection and reflective approaches to teaching become apparent in a plethora of exercises, essays, papers, etc. given to students. There is ,however, often taken- forgranted, unproblematic usage of the term "reflection" and, ironically, it has come to be used in many cases both uncritically and unreflectively (Griffith, 2000). This is a major challenge for teacher education that often seems to fall short when it comes to help students develop and elaborate their experiences and preconceptions. Teacher education programmes at all levels (primary ,secondary) should provide opening for the preservice teachers for understanding themselves, their peers, and students, develop responsiveness, ability for self-scrutinizing and reflection. Curriculum should be designed in such a manner that the pre-service teachers get content

knowledge and develop professional capacities in pedagogy, observation, various teaching methodologies and reflective inquiry. Besides this, it should offer numerous occasions to carefully watch and connect with peer learners and learn to work in groups also. It should also provide freedom to initiate a profound understanding of association amid knowledge, learner, learning and methods of teaching. The most efficient way of doing this is to have a connection between theory as well as practice.

If teaching is considered as a profession, then we have to prepare our candidates in such a manner that they are able to handle the situations in life not only based on their experience alone, but also with theory background provided in the course that justifies rationale of a particular action. Thus, there is a need to explore reflection of pre-service teachers in teacher education programme as central aim of teacher education programme is to prepare reflective practitioners.

#### The Study

The teacher education programme of a Government University in Iraq (Babylon University) aims at promoting reflective practitioners. The University has two affiliated faculties that run teacher education programme as per curriculum provided by it. The teacher education programme at primary level offered by the University under this study is for four years. They consist of different subjects pedagogy and practical (school experience), psychological and linguistic contents. The last semester of the teachers' preparation, the duration of School Experience Programme (SEP) is forty-five working days. During the SEP the student-teachers are required to prepare at least twenty-five lessons for the pedagogical course. Following objectives given by the University, specifically require their reflection as important areas to be achieved through their programme.

- To make the pre-service teachers (Student-teacher) understand how children learn and develop, how they differ in their approaches to learning, and create learning opportunities that benefit diverse learners and learning contexts.
- To develop the skills of the pre-service teachers to plan learning experiences in and outside the classroom that are based on learner's existing proficiency, interests, experiences and knowledge, and enable them to understand how students come to view, develop, learn and make sense of subject matter contained in the curriculum.

To provide pre-service teachers self-identity as a "teacher" through school based learning
experiences and reflective practices that continually evaluate the effects of their choices and
actions.

The researcher attempted to explore whether the pre-service teacher education programme promotes reflection and prepares pre-service teachers to be reflective practitioners.

# **Research Questions**

The following research question is guided the study:

Do pre-service teachers undergoing teacher education programme in the Government Universities undertake reflection and perceive it as a useful activity in improving their performance?

#### **Objectives of the Study**

- To study the perception of pre-service teachers undergoing teacher education programme in Government Universities, in general, Babylon University, in particular.
- To study the use and perceived usefulness of reflection by the pre-service teachers undergoing teacher education programme in Babylon University in their performance of tasks.

## Sample/ Participants

- The sample for this study was incidental where the respondents were students of College of Basic Education/ English Department at Babylon University where the researcher is employed as faculty member. Though the sample was incidental, small and not true representative of the population but the researcher thought its utility in terms of exploring the perception of the stakeholders which the teacher education programme aims at preparing them as reflective practitioners. Some of the advantages of this kind of data are their richness, relevance and availability (Silverman, 2001).
- The researcher distributed the questionnaire to pre-service teachers and asked to fill in the responses. From the entire 100 distributed questionnaire, only 51 returned by them which were considered for the study.

#### **Instrument**

The tool was developed based on many studies on reflection. It included both close-ended and open-ended questions to get an insight about pre-service teachers' perception about reflection. The researcher selected the following types of items to be included in the questionnaire:

- p Demographic information
- **\mu** Items related to reflection and reflective practice
- **a** Items about the usefulness of reflective process in improving performance.

The items for the study were adapted from the following research studies:

- Reflective practice: The teacher in the mirror by Rayford.C, January,2010
- Embarking on the Teaching Journey: Pre-service Teachers Reflecting upon Themselves as Future Teachers by Lyngsnes, K.M. April, 2012
- Practicing Critical Reflection in Teacher Education: Case Study of three Namibian Teacher Development Programmes by P. Hertha et al.December,2003
- A modified version of the Reflective Attitude Survey by Young,1989

The tool contained Likert items with a five point scale, for the responses on items related to usefulness of reflective process in improving their performance, time duration of the activities ,their liking/preference for reflection related activities. The rating range from being Extremely useful, Very useful, Moderately, Useful, Not very useful, Not at all useful. Scoring was planned on a 5 point rating scale and the highest 5 point is given to extremely useful and one being given to the least favorable. In addition, it had open ended questions related to reflection, its use and modalities as per them, its relation to their performance, etc.

# Findings and Discussion Demographic Details /Sample Description

The sample for the study was in the age group 21 to 35 years. There were 14 males and 37 females. Maximum respondents 46(90%) were in the age group 21-24 years. Three respondents (5.88%) were in the age 24-27 years. Two respondents (3.9%) were above 30 years. Majority of the respondents taught classes where the class size was between 30-45 students. Very few i.e. only 5 preservice teachers (9.8%) were allotted classes where the class size was between 1-30 students

The first research objective was:

To study the perception of pre-service teachers undergoing teacher education programme in Universities about reflection.

**Table 1:** The pre-service teachers were asked to define, elaborate reflection. The major categories of responses are:-

	Pre-service Teachers' Responses	
Coding Categories	No.	%
Evaluation of self, students, content and instructional practices	30	0
Improvement in teaching	7	14
A process of teaching	7	14
A mirror to observe the changes in behavior	5	10
Provide measures for innovations in education	2	4

The above table indicates that 60% i.e., most of pre-service teachers knew about reflection, it can be used for evaluation of self, students and instructional practices. Only 14% of them feel that it will help in the improvement in teaching and in the process of teaching. The response to an open ended question was interesting as 60% of the teachers did not restrict reflection to teaching only but included some elements of content, innovation etc.

Though the findings somewhat show that pre-service teachers are considering reflection as per the objectives given by the College of Basic Education, however, they have very shallow understanding of reflection as no one has commented about understanding the process of children's learning and development, creation of learning opportunities for diverse learners as the University, in general, the College, in particular, intend them to be aware of.

Some of the responses are as follows:-

- 'Reflection is looking back on teaching and instruction in order to make changes'
- 'Reflection has made me realize what teaching is all about. It provides a fresh eye and deeper understanding of teaching process. It helps to identify own strengths and weaknesses'.
- 'Reflection is a process of teaching students with own views and philosophy'.

**Table 2:** The pre-service teachers were asked to mention about what they understand by reflective practice. The following responses were reported by them.

	Pre-service teachers' Responses	
Coding Categories	No.	%
Develop and improve teaching skills	19	38
Self –evaluation	15	30
Learning about teaching skills	3	6
Micro-teaching	2	4
Not attempted	14	27

From the above table, we find that on being asked about reflective practices, only 38% consider it in terms of developing and improving teaching skills, 30% of the pre-service teachers understand it as a self-evaluation technique. 4% linked it with micro teaching whereas 27% did not attempt this question which indicates that they have not understood the term or it has not being explained to them according to the curriculum. There were no holistic responses indicating reflection to be more than teaching, required in all the activities they undertake or with considering the situations/learning environments in

and outside the schools. The pre-service teachers perceived that reflection was relevant, guided them in planning instructions by them.

Many of the pre-service teachers noted a change in the personal qualities that they were able to bring into their teaching. Some commented on feeling more enthusiastic about their teaching and some had used it though for self- evaluation. There is a response regards improving and learning teaching skills and self- evaluation. They have not mentioned about self-improvement, so they review reflection mostly in context of teaching only. Their answers mirror both confidence and strength. The findings indicate behavioristic orientation about teaching and learning.

**Table 3:** The pre-service teachers were asked about how they like to reflect (the mode and process of reflection)

Pre-service Teachers' Res		chers' Responses
Statements	Mean	SD
Reflecting alone	3.823	0.931
Reflecting with another person	3.901	0.640
Reflecting with a group about teaching	4. 098	0.943
Reflecting in writing	3.725	0.776
Reflecting about your own teaching	4.078	0.770
Reflecting about peers' teaching	3.529	0.702
Reflecting about an assigned theme	3.901	0.830
Reflecting with no assigned theme	2.941	0.759

The highest mean score is on the item reflecting with a group about teaching (4.098) and SD of 0.943 which shows no match deviation from the mean score, followed by reflecting about your own teaching with a mean and SD of 4.078 and 0.770 respectively. It may be because of pre-service teachers mostly reflect on their effectiveness in teaching, followed by reflection about their own teaching. The like to reflect with other person more than being alone, but SD being more for reflecting alone, there is heterogeneity in the reflective practice of individuals. The indulge in reflection about their peers' teaching the least, may be because they want to learn more from their own experiences rather than from their peers. The sample pre-service teachers tend to reflect more on an assigned theme rather than on unassigned theme. This implies if they are supposed and asked to reflect, they do it more rather than doing it on their own without any assigned theme.

The Second research objective was:

To study the use and perceived usefulness of reflection by the pre-service teachers undergoing teacher education programme in Babylon University in their performance of tasks.

**Table 4:** The pre-service teachers were asked how reflection has improved their performance; the snapshots which came are mentioned as below:-

_	Pre-service Teachers' Responses	
Coding Categories	No.	%
Evaluate our teaching	21	42
Improvement in presentation skills	12	23
Planning for delivering lessons	7	14
Develop innovative ideas in teaching	5	10
Better interaction between students and teachers	3	6
Increase confidence	3	6

The table above indicates the change in the personal traits that they were able to bring into their teaching. 6% student teachers were able to have a better interaction in the classes between the students and themselves. Some commented on feeling more enthusiastic about their job, developing innovative ideas while others mentioned feeling more confident as a teacher. The following are some of the responses of pre-service teachers:

- 'I think it's very useful. It helped me in the first week when I had no confidence and I didn't know what I was doing.'
- 'It really helped me with presentation skills-how to improve my blackboard work, when and how to ask questions.'
- Writing the reflections gave me confidence in what I was doing.'
- 'One usually concentrates on the negative things and one doesn't think about the positive things. The reflective journals force you to reflect on what you've done.'

These statements were usually related to teaching only. The pre-service teachers did not pay much attention to their own and their students learning.

**Table 5:** The usefulness of the 'reflective' process in helping to accomplish their tasks by the preservice teachers is mentioned in the table underneath.

	Pre-service Teachers' Responses		
Statements	Mean	SD	
Helping you describe what happened during teaching practice	4.156	0.612	
Gaining new ideas about teaching	4.490	0.612	
Helping you label and categorize what happened during teaching experience.	3.941	0.834	
Discovering strengths and weaknesses as a teacher	4.411	0.697	
Encouraging you to evaluate your teaching	4.509	0.612	
Encouraging better planning in your teaching	4.490	0.703	
Improving you teaching	4.568	0.574	

In the category about the usefulness of reflective practice, improving teaching was identified with the highest mean score of 4.5 and SD of 0.574. The pre-service teachers considered reflection to be most useful for teaching followed by encouragement to evaluate the teaching with SD of 0.612. Not much heterogeneity is observed. It was interesting to note that pre-service teachers considered reflection as a useful for discovering their strengths and weaknesses as teachers with SD of 0.697 (meaning not much heterogeneity of responses) which indicated that they considered teachers role more than very helpful in discovering strengths and weaknesses (mean score 4.4). Also, student teachers perceived reflection encouraged better planning in their teaching (mean score 4.4). However, helping you label and categorize what happened during a teaching experience did get only a moderate response but open ended responses did not indicate use of reflection in analyzing impact of teaching from students' point of view or learning environment point of view.

**Table 6:** The pre-service teachers were asked about the modalities of reflection

	Pre-service Teachers' Responses	
Statements	Mean	SD
Reflecting with a group about teaching experiences	3.921	0.716
Reflecting on an assigned theme	3.725	0.723
Reflecting with no assigned theme	2.901	0.806
Reflecting about your own teaching	4.274	0.873
Reflecting about another person's teaching	3.862	0.848
Reflecting alone	3.686	1.208
Reflecting with others	3.941	0.903

In the category pre-service teachers felt reflecting about their own teaching was very useful (mean score 4.2). Perhaps they want their peers to reflect with them on their teaching, so that they may improve it. The other areas with high mean scores were (a) reflecting about others (3.94) and (b) reflecting with a group about teaching experiences (3.92). The above table indicates that maximum number of pre-service teachers feel that reflection helps in improving their own teaching ,but they like their peers and supervisors, monitors, etc. also to help them. Pre-service teachers consider reflecting with others more useful than heterogeneity of responses is also more in case of reflecting alone (SD 1.208). They also consider reflecting about other persons teaching be their teachers, peers or school

teachers or their own teachers during schooling also useful as mean is 3.862. However, there is quite heterogeneity in their responses with SD being 0.848 near about difference of near about one level/point.

# **Conclusion and Implications**

There is a huge potential for expanding reflection in teacher education. However, conditions may be limited. The tacit nature of teachers' knowledge and the focus on pre-service teachers as performers rather than learners are constraining influences. Also, there seems to be an implicit division of labour between schools and universities as sites for teacher training and teacher education (Stephens et al., 2004). In order for reflection to meet its full potential in teacher education, an important issue to be worked out in partnership enterprises concerns the learning of the teacher educators in schools and university, to make monitors more aware of the theoretical underpinnings of their work, and to make university teachers more aware of the embodiment of theoretical concepts in the practices of teaching. Overall the pre-service teachers considered reflection as an important activity and almost everybody was able to articulate its meaning in some form. The concern is that their conception about reflection seems to be very shallow and does not reflect what University intends them to be / use after pursuing the programme of teacher education. The findings have very interesting implications listed as follows:

- As pre-service teachers are not aware of the concept and process of reflection as it has been emphasized in GCFTE (2009). Something concrete in transaction of curriculum is required, so that pre-service teachers develop the understanding of process of reflection. The need to be rigorous attempts is useful for promoting reflection at teacher education institutes and further percolating it down to school level.
- As findings suggest that pre-service teachers like to/ perceive it useful to reflect with other persons and with a group about teaching, there is scope in teacher education curriculum to have more activities requiring reflection in a group. They reflect quite a lot alone too, but not on assigned themes there may be opportunities in the curriculum that reflection becomes an inevitable part of their life and they are enabled to foster refelction in their students too. Since it may not be required from them to reflect about their peers, they do not do it much. They may be asked to reflect rather than just observing and writing a report/ filling a rubric about peer teaching.

This is substantiated as the current concerns of teacher education by the National Curriculum Framework (2005) also:

Teacher education programmes provide little scope for student-teachers to reflect on their experiences ....

There is no opportunity for teachers to examine their own biases and beliefs and reflect on their own experiences as part of classroom discourse and enquiry.

- The colleges and the departments should conduct orientation for pre-service teachers, so that they are prepared for reflection. The teacher education process is to be organized as a holistic preparatory programme focusing on reflection not only during SEP, but also as a regular feature and comparing all activities of programme. Reflection is not to be limited to teaching alone; it should be part of their every activity.
- As the student-teachers consider reflection as important activity, there should be more situations created for them to reflect in theory and practical aspects.
- In fostering reflection among pre-service teachers, teacher educators must teach reflection, not simply assign reflection. From prior experience, student-teachers cannot appreciate the multifaceted and multi-layered nature of teaching as they have developed a rather incomplete and distorted perspective towards teaching. But, at the same time, the knowledge collected from prior experience in school as a potential source to be drawn upon throughout teacher education.

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A Modified Version of the Reflective Attitude Survey by Young,1989 Which best describes your school setting? Rural Urban Suburban Other Which best describes the size of your teaching staff at your school? 1-20 21-40 41-60 61-80 Which best describes your class size? 21-25 26-30 31-35 Over 35 What is your gender? Female Male

Which best describes your age group? 21-30 31-40 41-50

Please read and answer the following statements concerning reflective attitudes and practices. For the purpose of this survey, reflection is defined as a process in which the teacher thinks about his/her instructional practices.

**1-** How do you define reflection? **2-** What is reflective practice? What is your purpose for reflective practice? 3- How much do you like teachers to do the following activities? Click on the response below the statement (choose one). 1. Reflecting alone Strongly Like Like Neutral Dislike Strongly Dislike 2. Reflecting with another person Strongly Like Like Neutral Dislike Strongly Dislike 3. Reflect with a group about teaching Strongly Like Like Neutral Dislike Strongly Dislike 4. Reflecting in writing Strongly Like Like Neutral Dislike Strongly Dislike 5. Reflecting about their own teaching Strongly Like Like Neutral Dislike Strongly Dislike 6. Reflecting about others' teaching Strongly Like Like Dislike Strongly Dislike 7. Reflecting about an assigned theme Neutral Strongly Like Like Dislike Strongly Dislike 8. Reflecting with no assigned theme Strongly Like Like Dislike Neutral Strongly Dislike 4- How has reflection improved teacher performance? What is your purpose for engaging in using reflective practice? on the response below the statement (choose one).

5- How useful is the "reflective" process in helping you accomplish each of the following tasks? Click

#### 1. Helping you describe what happened during a teaching experience

Moderately Useful Not Very Useful Extremely Useful Very Useful Not at all Useful

2. Gaining new ideas about teaching

Extremely Useful Very Useful Moderately Useful Not Very Useful Not at all Useful

3. Helping you label and categorize what happened during a teaching experience

Extremely Useful Very Useful Moderately Useful Not Very Useful Not at all Useful

4. Discovering strengths and weaknesses as a teacher

Extremely Useful Very Useful Moderately Useful Not Very Useful Not at all Useful

5. Encouraging you to evaluate your teaching

Extremely Useful Very Useful Moderately Useful Not Very Useful Not at all Useful

6. Encouraging better planning in your teaching

Extremely Useful Very Useful Moderately Useful Not Very Useful Not at all Useful

7. Improving your teaching

Extremely Useful Very Useful Moderately Useful Not Very Useful Not at all Useful

**6-** How **useful** is each of the following activities in improving your teaching performance? Click on the response below the statement (choose one).

### 1. Reflecting with a group about teaching experiences

Extremely Useful Very Useful Moderately Useful Not Very Useful Not at all Useful

# 2. Reflecting on an assigned theme

Extremely Useful	Very Useful	Moderately Useful	Not Very Useful	Not at all Useful
3. Reflecting with no assigned theme				
Extremely Useful	Very Useful	Moderately Useful	Not Very Useful	Not at all Useful
4. Reflecting about your own teaching				
Extremely Useful	Very Useful	Moderately Useful	Not Very Useful	Not at all Useful
5. Reflecting about another person's teaching				
Extremely Useful	Very Useful	Moderately Useful	Not Very Useful	Not at all Useful
6. Reflecting alone	)			
Extremely Useful	Very Useful	Moderately Useful	Not Very Useful	Not at all Useful
7. Reflecting with others				
Extremely Useful	Very Useful	Moderately Useful	Not Very Useful	Not at all Useful