

# **Effect of Reflective Teaching Practices on the Performance of Prospective Teachers**

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#### **ABSTRACT**

The present research aims to examine the effect of reflective teaching practices on prospective teachers' performance. Reflective teaching practice helps teachers to plan, implement and improve their performance by rethinking about their strengths and weaknesses. An experimental study within an action research was conducted by the researchers. All prospective teachers of sixth semester in a women university's teacher education program were the population of the study. From total 40 students, 20 students were taken as experimental group and the rest of 20 students were taken as the control group. During the action research, a cyclic process of producing a module, training teachers for the reflective practices and then observing them during their practicum for replication of reflective practice was done by the researchers. The researchers used a set of tests and a rubric for assessing prospective teachers' performance before, during and after their training as well as their teaching practice. Finally, the module was modified with the help of findings. It was found that the training had improved the skills and performance of teachers during training as they revised and modified their teaching strategies through reflective practice. However, they were not able to practice all of the reflective skills in their practicum. The training module was revised in the light of findings and microteaching strategies were further improved. The study has implications for teacher training programs to include reflective practice training modules as part of their course work for refining their practicum.

**KEYWORDS:** Reflective practices, performance, prospective teachers, teaching practice

### INTRODUCTION AND BACKGROUND

Reflective teaching practice is one of the important processes in teacher education. It stimulates teachers and students to develop various skills like decision-making, metacognition and logical thinking (Goodley,2018). The pioneers of reflective practices, Dewey(2001), previously in 1916, defined reflection as a complete systematic process of decision making to solve a given problem whereas, Cruickshank et al.(1995), Jay & Johnson (2002), Pollard (2002), Pollard & Tann (1995), Posnanski (2002), Tang (2002), Wilson & Jan (1993) identified that reflective thinking involves taking a systematic & thoughtful action through consistent self-inquiry where teachers thoroughly review their classroom experience through a complete cyclic procedure towards high quality standards of learning & teaching methodology.

Atherson (2005) argues that reflective practitioner invigorates the classroom by making it interesting, challenging and motivating for pupils.Reflective teaching practice is a valuable approach in advanced teaching where teachers use their perceptions and experience to evaluate their teaching progress. They observe themselves, criticize their teaching practices & admit other's criticism with open-heart. It makes teachersself-evaluators for their own teaching practices.

Reflection as a notion, in educational perspective, has its derivation from the philosophy of Dewey(1933), a significant 20<sup>th</sup> century educationist who distinguished between a 'daily' action determined by practice, authority and habit and 'reflective' action which includes a readiness to participate in continuous self-review and professional development (Harrison& Denton, Lee, 2011).

According to Dewey (1938) as quoted by (Grant and Zeichner, 1984), reflection is the performance of an individual where one actively and consistently involves in contemplation related experience and practice to make it more meaningful and successful. Eryama (2007) explained the concept of 'reflection' as a special connotation which should not be taken as a typical dictionary word which means simple thinking or deliberation. Richards (1990) states reflection as a process or an activity in which an event is recalled, considered, &assessed, generally for a larger purpose. Reflective practice is a latest and advanced method for teacher's training where all teachers can assess themselves before class using their intuitions &reflective skills. They also criticize on their



teaching during and after class with the help of their colleagues and students and then accept criticism as a positive feedback. Its helps teachers to enhance their teaching performance effectively.

Reflective teaching practices also provide prospective teachers with power to overcome their academic issues, teaching methodologies and subject content that was delivered in the classroom (Rarieya, 2005).

The major aim of any 'Teacher Education Program' is to explore the gaps in theory and practice. In the past centuries, planning and presenting the lessons were taken as the basic skills for prospective teachers. But in the modern era, the teaching activities are more complex, refined, goal oriented and competitive. Different disciplines need specific strategies to teach. Therefore, a teacher's task has become manifold with respect to using diverse instructional techniques, maintaining class room environment, developing and administering assessment tools, integrating technology and capturing students' interest (Khanam, 2015). Only reflective teachers are able to refine and modify their practices for improved learning. They are able to accommodate diverse learning styles of students and contribute in quality teaching learning process (Afghani, Ferdeowsi, 2015). Akbari (2008) stated that reflective practice is distinct by way of pacing back & following one's owns thoughts/actions, that occur in a routine. In the area of teacher education, this concept is new in teaching methodology and it has gradually changed the traditional teacher training theory.

A study by Azeem (2011)in Pakistan, reported that in most of the teacher education institutions, novice teachers were not properly trained about their first classroomexperience. Most of the teachers were unaware of reflective teaching practices and they did not know how to reflect on their methodology before during and after conducting a lesson. Even the subject, 'reflective practice' suggested by HEC for teacher education programs was not taught in many universities of the country.

Therefore, a comprehensive reflective teachers' training programme is needed to sensitize prospective teachers about latest standards of teaching and assessing their own performance as per national and international benchmarks to match the objectives and outcomes consistently and efficiently. Prospective teachers should be able to sort out the gaps in achieving the objectives and identify whether they have met the goals of equality and equity in classroom practices or not. Teaching is anart, that requires both feeling&thinkingfor those who can reflectively feel&thinkabout their classroom activities in a more worthwhilemanner and to make it more effective. So, there is a need for good reflective teachers to explore ways to listen and to assimilate their passion & judgement about their methodology (Zeicher & Liston, 2014).

## **Related Literature**

## **Defining reflective teaching practice**

Reflective teaching is defined as looking backfor teacher's own teaching. It includes thinking and rethinking about one's performance before, during and after class activities. Instructors have to reflect about the problems of students which are likely to happen during achievement of targeted goals. Teachers have to ponder about the teaching strategies they will need to consider in delivering the expected lesson. (Artzt, Curcio, Gural, Thomas, 2015).

## The development of reflective practice

While human beings have reflected on their actions for as long as we know, a further detail we find inKolb's writings and thenin Lewin (1957)who led to the formalization of the process of reflective practices. In 1957, Lewin and a number of colleagues worked on the development of training approaches forguidance and organized a dynamic group for the Connecticut State Interracial Commission. Group discussion was encouraged among the participants and the staff and records of the meetings were kept and later discussed by the staff without the involvement of the participants. However, the participants were concerned that they were not involved with this discussion and approached Lewin requesting permission to be involved. It was observed that a remark made by an observer was challenged by the participant whose views differ from the observers as per following reflection:

"Lewin, felt that it had been a valuable contribution rather than an intrusion, enthusiastically agreed to their return. The next night at least half of the 50 or 60 participants were there as a result of the grapevine reporting of the activity by the three delegates. The evening session from then on became the significant learning experience of the day, with focus on actual behavioral events and with active dialogue about difference of interpretation and observation of the events by those who participated" (Lippit, Kolb, 1984:p9)

Kolb (1984:p9) stated that studies proved that learning is at toppriority in academic environment where criticism is involved in analysis of actual and the expected action. To put it rather less academically, the pupilis freed to reflect about events/situations that occur in order to make their logic.



Previously, Dewey (1938) had also developed the stance that reflective thinking is active and persistent thinking based on logic that originates from the ground reality. It also contains a sensible & intended action to modify the existing practice on the basis of learned experience.

### Reflection in Action & Reflection-on-Action

A famous social scientist Schon (1983)differentiates between what he termed Reflection-in Action & Reflection-on Actionin order to investigate how people use their experience to analyze their practices. He elaborated that iterative approach of considering the chain of actions during an activity for consistent improvement is reflectionin action and thinking about overall outcome of the activity in a logical way is reflection-on action.

## **Reviewing self-practice**

The word reflection is suggestive of a number of mirror images of our actions, peaceful pondering about our experiences and making our past an asset for our future, thinking meaningfully about past periods, and thememoriesthat come inour mind and become a learning experience. In education and training, the term is often used specifically to indicate an essential stage in the learning process where a difficult and deliberate process of thinking and inferring a situation is undertaken in order to arrive at a deeper understanding of event and our position there( Khanam ,2015).

Kramer (2018) found positive effect of reflective practice on teachers' professional development.

Therefore, novice prospective teachers need a repetitive process of planning, acting and reflecting to improve teaching strategies. Collaborative reflection also helps students to minutely analyze their practice with multiple angles and find collective solutions. It is a collective learning process with manifold opportunities of correction and improvement (Foong et al,2018).

In experiential practices, learning from doing is basic principle of gaining concept, but doing is different from learning because by doing individual can more effectively involve in reflective process and the deliberation & consciousness occur as an important act (Hunt,2005). Hunt reviews the nature of unspoken, tacit knowledge, where practitioners 'just know' even though it cannot be described or written about and considers the dangers of not defining and bounding practice.

Reflective practice, in its gist is not just a set of practical practice neither a clearly recognizable group of academic skills but has slightly a critical aspect. Reflective practitioners go beyond mere ability of having readiness and willing to criticize their own practices, but they think for reasoning of their actions and evaluate their processes and outcomes. They strive for perfection and consistent improvement. A reflective practitioner may involve in thoughts like:

- Anoptimistic experience
- An event when her involvements seemed to have made anactual difference to someone's knowledge
- Anadverse experience where things have gone badly incorrect
- Asituation which she thinks hard to control
- Something inconsequentialnevertheless which made her think, what's going on here?

Continuous Professional Development (CPD) containsanorganized maintenance, enhancement and maturity of knowledge, skills and personal abilities necessary for execution of professional and practical responsibilities in proficient working life. Self- review is an essential element of CPD. Benson (1987) recommends that maintaining and developing professional competences and sharing expertise is important in (CPD) process. He proposed reflective practices as essential component of CPD for in service teachers also. Benson suggested that such reflection and reviews involve attentiveness, perseverance and hard work. Benson advisees a process of ongoing recording of action for a group observation as microteaching process is conducted. This would allow participants/practitioners to observe individual and group performance to become good reflective experts by developing dialogue among themselves to illuminate feelings, appraise practice, express moods, increase a deeper consciousness and then improve themselves (Beard, Wilson ,2007).

Identifying the current need of reflective teaching in the teaching programme of a women university, the action research in hand has been designed to help out prospective women teachers to think about their teaching pedagogies and their personal skills like reading, writing, speaking and critical thinking in a reflective manner and to use these skills during their teaching practice at the community schools.

### **Objective of Research**

The objectives of the study were to:



- Develop a module for prospective teachers' reflective teaching practice
- Train group of prospective teachers through reflective teaching practices
- Observe the prospective teachers during training and during classroom teaching practice for the use of reflective teaching practices
- Determine the effect of reflective practices on the performance of prospective teachers.

### Research hypotheses

- Ho 1= There is no significant difference in the performance of experimental groups taught through reflective teaching practices and control group taught through conventional teaching practices after training (through researcher's constructed module).
- Ho 2=There is no significant difference in the performance of experimental and control group prospective teachers during teaching practice.

### Research methodology

An action research was conducted by the researchers to improve teaching practice strategies of prospective teachers enrolled in a women university teacher training program. During the action research, a cyclic process of producing a module, training teachers for the reflective practices and then observing them during their training and teaching practice for reflective practice for refining the module was executed by the researchers.

#### Phase I

The researchers prepared a one and a half month's, (30 credit hours) training module after extensive review of literature about reflective practices. The module was consisted of following personal and pedagogical reflective skill activities:

- Reflective reading, writing & listening skills
- Reflective and evaluative lesson planning and presentation
- Critical and creative thinking skills
- Classroom management &
- Self-reflection

#### Phase II

An experimental study was designed for the phase II of this action research. Forty prospective teachers of an intact group at a women university were distributed in two equal randomly selected groups. Twenty prospective teachers of experimental group were trained through reflective teaching module and the rest of 20 prospective teachers were taught through traditional (already ongoing) method. Several sessions of microteaching as per students' pedagogical interest were conducted for reflective practices. In addition, there were sessions of reflective reading, writing and communication. Cumulatively, there were six reflective skills which were observed and measured through a set of post-tests after the training.

### **Phase III**

In phase III, all of the prospective teachers (experimental and control) were sent for their teaching practice in the schools. The researchers observed them through a self- constructed rubric three times during their teaching practice session of one and a half month. Out of 20, 15 participants of experimental group were available for observation during teaching practice. Therefore, 15 participants from controlgroup were observed parallelly.

The prospective teachers were observed for incorporating reflective practices in their lesson planning, presentation, assessment, class management and for assigning extended work. Cumulatively, 3 observations were made during classroom teaching. The control group of 15 prospective teachers were teaching through conventional method.

#### Instrumentation and data collection

The data were collected during on campus training and during the field teaching practice of prospective teachers through researchers made instruments. A post test having six types of reflective skills related to teaching including; reflective reading, writing and listening skills, critical thinking skills, content knowledge and classroom management was administered to all participants those who were trained and those who were taught through conventional methods.

The other instrument was a rubric measuring 16 indicators of reflective teaching practice. The rubric had 4 levels; Level 4: completely fulfilling the compliance condition, Level 3: completes the compliance condition to a large extent, Level 2: partially fulfilling the compliance condition and needs improvement, Level 1: fulfills no compliance condition. Thus, the score obtained was from 1-4. The rubric held detail of reflective actions under each level.



Both of the instruments were validated trough expert opinion. The split half reliability of the rubric was  $\alpha = .913$ .

#### **RESULTS**

A set of post-tests, constructed by the researchers, comprising assessment of reflecting reading, writing and listening skills, critical thinking, content related knowledge and classroom management was administered after training to the 20 experimental and 20 control group participants. Each segment (skill) held 10 marks. Following are the detailedscores obtained by the two groups.

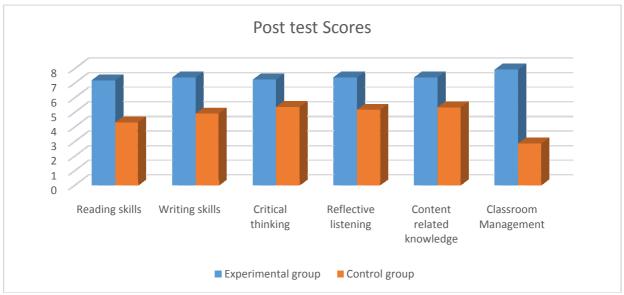
**Table 1:** Cumulative mean score of experimental and control group in post test of reflective practice training.

|                   | Groups        | N  | Mean | Std. Deviation |
|-------------------|---------------|----|------|----------------|
| Reading skill     | Experimental  | 20 | 7.17 | .76            |
|                   | group         |    |      |                |
|                   | Control group | 20 | 4.29 | 2.05           |
| Writing skills    | Experimental  | 20 | 7.36 | .57            |
|                   | group         |    |      |                |
|                   | Control group | 20 | 4.88 | 1.06           |
| Critical thinking | Experimental  | 20 | 7.22 | .57            |
|                   | group         |    |      |                |
|                   | Control group | 20 | 5.35 | .92            |
| Reflective        | Experimental  | 20 | 7.37 | .61            |
| listening         | group         |    |      |                |
|                   | Control group | 20 | 5.15 | .99            |
| Content related   | Experimental  | 20 | 7.37 | .43            |
| knowledge         | group         |    |      |                |
|                   | Control group | 20 | 5.32 | .94            |
| Classroom         | Experimental  | 20 | 7.90 | .76            |
| management        | group         |    |      |                |
|                   | Control group | 20 | 2.84 | 1.71           |

The table above shows that the participants of experimental group scored higher with (M = 7.17, SD=.76) as compared to students of control group (M = 4.29, SD=2.05) in reflective reading skills. Likewise, they scored higher in reflective writing skills with (M =7.36, SD=.57) as compared to control group with mean (M=4.88, SD=1.06). The experimental group performed better with mean (M=7.22, SD=.57) and (M=7.37, SD=.61) in critical thinking and reflective listening respectively. While control group performed (M= 5.35, SD=.92) and (M= 5.15, SD=.99) in the same variables. The experimental group obtained (M=7.37, SD=.61) as compared to control group in the content related test who got (M=7.37, SD=.43) as compared to control group with (M=5.32, SD=.99). Moreover, the experimental participants scored higher on reflective classroom management strategies with (M=7.90, SD=.76) as compared to students who were not trained for reflective management with (M=2.84, SD=1.71).

Below is the graph presenting improvement of experimental group's reflective teaching skills after training.





Graph No.1: Graphical representation of posttest mean score of experimental and control groups

The graph above shows maximum improvement of experimental group in skills of classroom management and least improvement in critical thinking as compared to the control group. All other skills were improved approximately with the same ratio.

Table No. 2: T-test for comparison of post-test of experimental and control groups after training session

| Levene's Test for Equality of Variances |  |     |        |      |      |        |                 |                    |
|---|--|-----|--------|------|------|--------|-----------------|--------------------|
|   |  |     | F      | Sig. | t    | df     | Sig. (2-tailed) | Mean<br>Difference |
| Reading skill                           | Equal variances                          |     | 11.959 | .001 | 5.87 | 38     | .000            | 2.88               |
|   | assumed<br>Equal<br>variances            | not |        |      | 5.87 | 24.159 | .000            | 2.88               |
| Writing skills                          | assumed<br>Equal<br>variances            |     | 5.670  | .022 | 9.18 | 38     | .000            | 2.48               |
|   | assumed<br>Equal<br>variances            | not |        |      | 9.18 | 29.115 | .000            | 2.48               |
| Critical<br>thinking                    | assumed<br>Equal<br>variances            |     | 4.371  | .043 | 7.68 | 38     | .000            | 1.87               |
|   | assumed<br>Equal<br>variances            | not |        |      | 7.68 | 31.758 | .000            | 1.87               |
| Reflective listening                    | assumed<br>Equal<br>variances            |     | 3.871  | .056 | 8.48 | 38     | .000            | 2.22               |
|   | assumed<br>Equal<br>variances            | not |        |      | 8.48 | 31.584 | .000            | 2.22               |
| Content related knowledge               | assumed<br>Equal<br>variances<br>assumed |     | 8.107  | .007 | 8.84 | 38     | .000            | 2.05               |



|                         | Equal                                 |        |      | 8.84   | 26.677 | .000 | 2.05 |  |
|-------------------------|---------------------------------------|--------|------|--------|--------|------|------|--|
| Classroom<br>management | variances not assumed Equal variances | 12.355 | .001 | 12.03  | 38     | .000 | 5.06 |  |
|                         | assumed Equal variances not assumed   |        |      | 12.031 | 26.291 | .000 | 5.06 |  |

For identifying the significance of the difference in the performance of experimental and control groups, an independent sample t-test was run. It was found that there was a significant difference, with t(38)=5.87, p =.001<0.05 in the reading skills of experimental and control group scores. The experimental group also performed significantly better than control group in reflective writing with t(38)=9.18, p =.022<0.05. Both groups were found significantly different at their performance on critical thinking test with t(38)=7.68, p=.043<0.05. There was no significant difference in reflective listening skills in both experimental and control group with t(38)=8.48, p= .056> 0.050. However, there was found significant difference in the content related knowledge and classroom management skills of experimental group with t(38)=8.84, p=.007<0.05 and t=12.03, p=.001<0.05 respectively. The results declare that the first hypothesis, 'There is no significant difference in the performance of experimental groups taught through reflective teaching practices and control group taught through conventional teaching practices after training (through researcher's constructed module) is rejected.

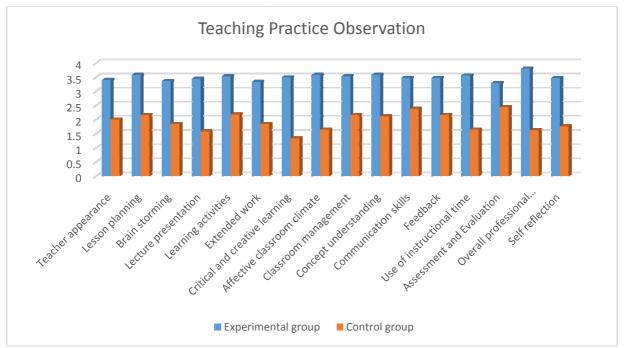
Table No.3: Mean score of three observations of 15 experimental and 15 control group participants

| <b>Group Statistics</b> |               |            |      |                |            |
|-------------------------|---------------|------------|------|----------------|------------|
|                         | Group         | No of      | Mean | Std. Deviation | Std. Error |
|                         |               | observatio |      |                | Mean       |
|                         |               | ns         |      |                |            |
| Teacher                 | experimental  | 45         | 3.40 | .539           | .080       |
| Appearance              | group         |            |      |                |            |
|                         | control group | 45         | 2.00 | .826           | .123       |
| lesson planning         | experimental  | 45         | 3.58 | .543           | .081       |
|                         | group         |            |      |                |            |
|                         | control group | 45         | 2.16 | .928           | .138       |
| brainstorming           | experimental  | 45         | 3.36 | .830           | .124       |
|                         | group         |            |      |                |            |
|                         | control group | 45         | 1.84 | .737           | .110       |
| lecture                 | experimental  | 45         | 3.44 | .546           | .081       |
| presentation            | group         |            |      |                |            |
|                         | control group | 45         | 1.58 | .657           | .098       |
| learning                | experimental  | 45         | 3.53 | .625           | .093       |
| activities              | group         |            |      |                |            |
|                         | control group | 45         | 2.18 | .716           | .107       |
| extended work           | experimental  | 45         | 3.33 | 1.066          | .159       |
|                         | group         |            |      |                |            |
|                         | control group | 45         | 1.84 | .673           | .100       |
| critical &              | experimental  | 45         | 3.49 | .549           | .082       |
| creative learning       | group         |            |      |                |            |
| C                       | control group | 45         | 1.33 | .640           | .095       |
| Affective               | experimental  | 45         | 3.58 | .657           | .098       |
| classroom               | group         |            |      |                |            |
| climate                 | control group | 45         | 1.64 | .773           | .115       |
| classroom               | experimental  | 45         | 3.53 | .548           | .082       |
| management              | group         |            |      |                |            |
| C                       | control group | 45         | 2.16 | .638           | .095       |
| concept                 | experimental  | 45         | 3.58 | .543           | .081       |
| understanding           | group         |            |      |                |            |
| 3                       | control group | 45         | 2.11 | .682           | .102       |
| communication           | experimental  | 45         | 3.47 | .548           | .082       |
| skills                  | group         |            |      |                |            |
| -                       | control group | 45         | 2.38 | .747           | .111       |
|                         |               |            |      |                |            |



| feedback        | experimental  | 45  | 3.47 | .661 | .098 |  |
|-----------------|---------------|-----|------|------|------|--|
| rodouon         | group         | 1.5 | 3.17 | .001 | .070 |  |
|                 | control group | 45  | 2.16 | .520 | .078 |  |
| use of          | experimental  | 45  | 3.56 | .624 | .093 |  |
| instructional   | group         |     |      |      |      |  |
| time            | control group | 45  | 1.64 | .679 | .101 |  |
| Assessment and  | experimental  | 45  | 3.29 | .549 | .082 |  |
| evaluation      | group         |     |      |      |      |  |
|                 | control group | 45  | 2.44 | .785 | .117 |  |
| overall         | experimental  | 45  | 3.80 | .457 | .068 |  |
| professional    | group         |     |      |      |      |  |
| development of  | control group | 45  | 1.62 | .777 | .116 |  |
| teacher         |               |     |      |      |      |  |
| self-reflection | experimental  | 45  | 3.47 | .625 | .093 |  |
|                 | group         |     |      |      |      |  |
|                 | control group | 45  | 1.76 | .570 | .085 |  |

Table No. 3 above presents the results of three consecutive observations made by the researchers of 15 experimental and 15 control group prospective teachers. It shows that meanscores for all reflective practice indicators for experimental group are higher than the control group. The mean score for teacher's appearance, lesson planning and brain storming with M=3.40, 3.58 and 3.36 were higher as compared to control group with mean, M = 2.00, 2.16 & 1.84 respectively. The students from experimental group presented better lectures with M=3.44, while students from control group obtained M=1.58. The experimental group assigned better extended work with M=3.33 as compared to teachers of control group with M=1.88. Likewise, teachers from experimental group performed well in critical thinking, creating affective classroom climate and classroom management with M= 3.49, 3.58 and 3.53 vs control group with M=1.33, 1.64 and 2.16 respectively. The trained prospective teachers had better concept with M= 3.58 while control group showed M=2.11. The experimental group reflected more in communicational skills, feedback and use of instructional time with mean M=3.47 vs M=2.38, M=3.47 vs M=2.16 and M=3.56 vs M=1.64 of control group. Finally, the experimental group had greater mean in assessment and evaluation, overall professional performance and self-reflection with M= 3.29 vs M=2.44, M=3.80 vs M=1.62 and M=3.47 vs M=1.76 of control group.



Graph No. 2: Mean score on the rubrics of reflective teaching practice performance

The graph above reveals that the experimental group performed well in teaching practice as compared to the control group. The performance was measured on a rubric having four levels from 1-4. The fourth level was assigned to the full compliance of the reflective practices. The maximum reflective practice was exhibited in overall professional performance while the least practice was shown in the use of assessment and evaluation.



Rest of the skills were applied to the third level approximately. Most of the participants could not achieve the highest level of reflective performance. On the other hand, most of the prospective teachers in the control group could not achieve even the third level of performance.

Table No. 4: T-test for the difference in teaching practice performance of experimental and control group.

| Table No. 4: 1-te           | est for the difference              | ference in teaching practice performance of experimental and control group.  Levene's Test for Equality of Variances |      |        |        |                 |                    |  |  |
|-----------------------------|-------------------------------------|--|------|--------|--------|-----------------|--------------------|--|--|
|                             |                                     | F  | Sig. | t t    | df     | Sig. (2-tailed) | Mean<br>Difference |  |  |
| Teacher                     | Equal variances                     | 4.506  | .037 | 9.522  | 88     | .000            | 1.400              |  |  |
| Appearance                  | assumed Equal variances not assumed |  |      | 9.522  | 75.764 | .000            | 1.400              |  |  |
| Lesson planning             | Equal variances assumed             | 25.831   | .000 | 8.871  | 88     | .000            | 1.422              |  |  |
|                             | Equal variances not assumed         |  |      | 8.871  | 70.964 | .000            | 1.422              |  |  |
| Brainstorming               | Equal variances assumed             | 2.748  | .101 | 9.131  | 88     | .000            | 1.511              |  |  |
|                             | Equal variances not assumed         |  |      | 9.131  | 86.791 | .000            | 1.511              |  |  |
| Lecture presentation        | Equal variances assumed             | 2.398  | .125 | 14.663 | 88     | .000            | 1.867              |  |  |
| presentation                | Equal variances not assumed         |  |      | 14.663 | 85.154 | .000            | 1.867              |  |  |
| Learning activities         | Equal variances assumed             | .210   | .648 | 9.564  | 88     | .000            | 1.356              |  |  |
| activities                  | Equal variances                     |  |      | 9.564  | 86.420 | .000            | 1.356              |  |  |
| Extended work               | not assumed<br>Equal variances      | 9.094  | .003 | 7.924  | 88     | .000            | 1.489              |  |  |
|                             | assumed Equal variances not assumed |  |      | 7.924  | 74.247 | .000            | 1.489              |  |  |
| Critical &                  | Equal variances assumed             | .272   | .603 | 17.160 | 88     | .000            | 2.156              |  |  |
| creative learning           | Equal variances not assumed         |  |      | 17.160 | 86.008 | .000            | 2.156              |  |  |
| Affective classroom climate | Equal variances assumed             | 2.090  | .152 | 12.783 | 88     | .000            | 1.933              |  |  |
| Classiconi Chinate          | Equal variances not assumed         |  |      | 12.783 | 85.752 | .000            | 1.933              |  |  |
| classroom                   | Equal variances                     | .773   | .382 | 10.991 | 88     | .000            | 1.378              |  |  |
| managment                   | assumed Equal variances             |  |      | 10.991 | 86.027 | .000            | 1.378              |  |  |
| concept                     | not assumed<br>Equal variances      | .009   | .923 | 11.289 | 88     | .000            | 1.467              |  |  |
| understanding               | assumed Equal variances             |  |      | 11.289 | 83.817 | .000            | 1.467              |  |  |
| communication               | not assumed<br>Equal variances      | 4.110  | .046 | 7.883  | 88     | .000            | 1.089              |  |  |
| skills                      | assumed<br>Equal variances          |  |      | 7.883  | 80.682 | .000            | 1.089              |  |  |
| feedback                    | not assumed Equal variances         | 10.421   | .002 | 10.460 | 88     | .000            | 1.311              |  |  |
|                             | assumed<br>Equal variances          |  |      | 10.460 | 83.421 | .000            | 1.311              |  |  |
| use of                      | not assumed<br>Equal variances      | .087   | .769 | 13.901 | 88     | .000            | 1.911              |  |  |



| instructional time       | assumed Equal variances not assumed |        |      | 13.901 | 87.361 | .000 | 1.911 |
|--------------------------|-------------------------------------|--------|------|--------|--------|------|-------|
| Assessment and evalution | Equal variances assumed             | 7.171  | .009 | 5.915  | 88     | .000 | .844  |
|                          | Equal variances not assumed         |        |      | 5.915  | 78.707 | .000 | .844  |
| overall professional     | Equal variances assumed             | 27.671 | .000 | 16.201 | 88     | .000 | 2.178 |
| development of teacher   | Equal variances not assumed         |        |      | 16.201 | 71.202 | .000 | 2.178 |
| self-reflection          | Equal variances assumed             | 2.758  | .100 | 13.564 | 88     | .000 | 1.711 |
|                          | Equal variances not assumed         |        |      | 13.564 | 87.267 | .000 | 1.711 |

An independent t-test was calculated to find the statistical significance of above differences between experimental and control group. The difference in teacher's appearance and lesson planning was found significant with t (88)=9.52, p=.037< 0.05 and t (88)=8.87, p=.000<0.05 respectively. There was a significant difference in communicational skills, mechanism of feedback and assessment strategies of experimental group with the control group with t(88)=7.80, p=.046<0.05, t(88)=10.46, p=.002<0.05 and t(88)=5.91, p=.009<0.05 respectively. The performance of trained and untrained prospective teachers was significantly different in assigning extended work with t(88)=7.92, p=,003<0.05. The overall professional performance of trained teachers was also significantly different from untrained teachers with t(88)=16.20, p=.000<0.05.

However, no significant difference was found in the performance of experimental and control group in reflective brainstorming, lecture presentation and conducting learning activities with t(88)=9.13, p=.10>.05, t(88)=14.66, p=.124>0.05 and t(88)=9.56, p=.648>0.05 respectively. There was no significant difference in critical thinking skills, creating affective classroom climate and classroom management of trained and untrained teachers with t(88)=17.16, p=.603>0.05, t(88)=12.78, p=.152 and t(88)=10.99, p=.382>0.05 respectively. Moreover, there was found no significant difference in experimental and control group teachers in concept clarity, self-reflection and using instructional time with t(88)=11.28, p=.923>0.05, t(88)=13.564, p=.10>0.05 and t(88)=13.90. p=.769>0.05. The second hypothesis, 'There is no significant difference in the teaching performance of students trained for reflective practice and those who were not trained for reflective practice' was partially accepted as per above findings.

## DISCUSSION AND CONCLUSION

The research aimed to identify the impact of reflective teaching practices on the teaching performance of prospective teachers. A training module was prepared by the researchers for one-and-a-half-month training (30 credit hours) by the researchers. The intact group of 40 BS Education students were distributed in two equal groups of experimental and control group. The experimental group was trained with the help of module with several microteaching sessions. A post test was conducted in the end of training of both groups. All prospective teachers went to different schools for teaching practice. The researchers recorded three observations of 15 available students from each group. The findings revealed that after training, there was a substantial difference in the performance of trained and untrained teachers for reflective skills. The experimental group however, when worked in the field, was not able to practice all of the taught skills in their classroom better than the control group as per expectations. There was a significant difference in teacher's appearance, lesson planning as described by (Mclaughin, 2016) communicational skills, mechanism of feedback (Mckeachie, Syinicki, 2011) and assessment strategies of experimental group as compared to the control group. The present study has supported the notion of these previous researches that reflective thinking improves quality of teaching skills. The performance of trained and untrained prospective teachers was also significantly different in assigning extended work as predicted by (Zakhareusi, 2018) and overall professional performance as observed by (Huang's,2008,Kavoshian et al.,2016).

However, no significant difference was found in the performance of experimental and control group in brainstorming, lecture presentation and conducting learning activities There was no significant difference found in critical thinking skills of both groups, as contrary to (Rao,2007)who mentioned that reflective practice helps teachers in thinking critically. Likewise, there was no significant difference in creating affective classroom climate and classroom management of trained and untrained teachers. Moreover, there was found no significant difference in experimental and control group teachers in concept clarityin contrast of (McGee&Fraser,2005),



findings, self-reflection (Boud,2007: Singh,2008) findings and using instructional time (Tomalis, 2015 & Meador, 2017) study. These previous researchers found that reflective teachers improved their performance after reflective thinking training. It was concluded that the prospective teachers performed much better in reflective teaching practices after training but while working in the field, where they had improved several skills like communicational skills, lesson planning and assessment strategies, they could not implement reflective practice in developing critical thinking, concept clarity, using instructional time and self-reflection. The researchers modified the module in the light of findings and added more microteaching activities for effective practicun reflective practices to the prospective teachers' students in the above mentioned skills.

However, the classroom observations revealed that trained teachers kept writing regular reflective journals in which they recorded their experiences on daily basis. They could solve the problems of students and guide them in acompetent way. Trained group of reflective teachers were more able to resolve their student's classroom problems more confidently. On the basis of the present study, it can be concluded that reflective teaching practice helps teachers to develop their teaching and learning skills. Reflective teaching practices should be the integral component of professional development of teachers. It is recommended by the researchers that the reflective teacher training needs to be focused on the deliverance of reflective skills to the classroom which could be possible through metacognitive microteaching sessions and prospective teacher's self-reflection practices. The study suggests longer training sessions with diverse group of prospective teachers to generalize the advantages of reflective skills.

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