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Perceptions of Prospective Teachers about Peer Assessment as a Tool for Reflective Practices

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ARTICLE DETAILS	ABSTRACT			
History	Peer assessment is a collaborative learning method that assists students to			
Revised format: May 2019	have a control of their learning and involve them in reflective process.			
Available Online: June2019	This study focuses on exploring the perceptions of prospective teachers			
	about use of peer assessment as a reflective tool in classrooms of teacher			
Peer Assessment, Reflective	education programs. This study was quantitative in nature and used			
Practices, Feedback, Teacher	descriptive research design. All prospective teachers enrolled in the			
Education Programs.	bachelor programs of teacher education programs (i.e., BS and B.Ed. Hon.			
	Elementary) of public sector universities of Pakistan served as population			
JEL Classification:	of the study. Using multistage purposive sampling technique, a sample of			
A20, I21	1374 prospective teachers was selected. For seeking prospective teachers'			
	opinion, a questionnaire comprising 17 items on a five-point Likert scale,			
	was developed. Questionnaire was validated by experts. Reliability of			
	questionnaire was ensured with Cronbach alpha value of 0.79. For data			
	analysis, both descriptive and inferential statistics were used. From			
	analysis of data, it was found that prospective teachers perceive that they			
	are sometimes equipped with necessary skills for involving in peer			
	assessment and occasionally their teachers provide them necessary tools to			
	carry out peer assessment for the reflective learning. It was also found that			
	majority of students agree that peer assessment helps them in identifying			
	their weaknesses and strengths more effectively. While prospective			
	teachers reported that peer assessment is an activity that takes a lot of time			
	and it carries biasness with its procedure. It is, however, recommended			
	that peer assessment might be an important component of classroom			
	teaching and learning practices. It is further recommended that promotion			
	of peer assessment in classrooms may be used as a tool for creation of			
	reflective teaching and learning environment.			
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1. Introduction

In the field of assessment, the focus of the literature has changed from the reliability and validity of teacher and student marking (Davies, 2009; Falchikov & Goldfinch, 2000) to student learning (Wiliam, 2011) since the last few

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decades. Use of formative assessments is considered as one of the most productive process for addressing student learning and improving teaching process in classrooms. Assessment for learning, is most largely coined term in the literature of assessment. In this context, literature reports many tools for assessment for learning. Peer assessment, when used for reflection, is also considered as a tool for assessment for learning. It has been noted that peer assessment can motivate the learners not only to focus on their learning but also to consider the ways they get engage with learning process of their peers and in return get benefitted from the discussion of relevant content (McGarrigle, 2013). Peer assessment is, therefore, becoming increasingly widespread in higher education as educators seek to diversify assessment methods and engage students in the assessment process (Bloxham & Boyd, 2007). Peer assessment is thus defined a process and an arrangement in which individuals consider amount, level, value, worth, quality, success of products, or outcomes of learning of peers of similar status (Topping, 1998).

The literature directs such approach to get fit well within social constructivist approach. To assist students in such a co-construction of knowledge, research suggests involving students in the peer assessment and use criteria that is discussed and negotiated with the researcher/teacher (Topping, 2009). This is also evident that peer assessment facilitates learning by guiding students to talk with each other about their work and share their experience (McGarrigle, 2013). Peer assessment provides an opportunity for the learners to reflect on their own learning as well as on the learning of their peers. Swaffield (2011, p. 443) argued that "sharing criteria with learners enables them to develop a clear sense of what they are aiming at", which coupled with "self and peer assessment helps students learn not only the matter in hand but also to develop metacognition".

Peer assessment is an alternative assessment method that benefits the students by engaging them in reflective practice through a process of provision of prompt feedback. It is commonly quoted that peer assessment helps learners in increasing the awareness of the quality of their work, self reflection and on their performance as peer evaluators and in development of lifelong learning skills (Egodawatte, 2010; Falchikov, 1996; Gielen, 2007; Langan & Wheater, 2003). Literature also reports the benefits experienced by students participating in a formative feedback approach, including making criteria explicit to students, providing them with the opportunity to participate in a non evaluative feedback session, reviewing the work of their peers and reflecting on their approach to assignment (Cartney, 2010; Cho & McArthur, 2010). One of the advantages of this approach is that when less confident students are involved in peer assessment and freely/fairly assign grades improves their feedback provision mechanism without indulging themselves in the associated concerns regarding competition or rivalry (Wood & Kurzel, 2008).

Because of its characteristics and benefits for the learners, it is also discussed under the umbrella of student centered approach. Literature supporting this, presents its potential benefits in a way to allow students to actively participate in the assessment process. It provides an opportunity to the students to think more deeply and develop important cognitive skills such as teamwork, critical thinking, decision-making, self-monitoring and regulation, problem solving, get inspiration from their peers' work, collaborate, criticize constructively, suggest improvements, reflect and make sensible judgments (Sluijsmans, Dochy & Moerkerke, 1998; Sung et al., 2005). Peer assessment is, thus, also known as an effective reflective tool to develop reflective practices in classrooms.

Peer assessment is also beneficial in the sense that the control and responsibility are given back to learners (Siow, 2018). In Pakistan, traditional assessment is commonly used method to assess learning and skills of learners in majority of classrooms. There is greater focus on the summative assessment than formative assessment. Assessment data is, therefore, used to make decisions for classroom promotions rather than for learning. With educational reforms, integrated assessment methods are being addressed as a need at tertiary level. As a result of this, the induction of newly designed teacher education programs, formative assessments along with reflection are kept as an integral part of classroom teaching. The present research, therefore, aims to explore the role of peer assessment as reflective tool.

2. Review of Literature

Learning and process of learning that how humans learn and how teacher can infer the learning of an individual in a classroom is the most frequently asked question in the literature since long. Assessment procedures and research in the field is facilitating the understanding of question that how can we utilize the results of assessment. This concept is known as assessment for learning. It is also known as formative assessment procedures. Formative assessment is a continuous form of assessment that is carried out as an integrated form of assessment in teaching learning practices. Peer assessment is also categorized as formative assessment procedure. It is defined as a process that

provides students with opportunities to reflect upon their own understandings, build on prior knowledge, generate inferences, integrate ideas, repair misunderstandings and communicate their understandings (Roscoe & Chi, 2007). Thus, peer assessment can have a variety of benefits for students, such as improved conceptual understanding, communication skills and self-assessment skills (Black, Harrison & Lee, 2003; Falchikov, 2005).

Peer assessment procedures involve analysis of peer work. In the literature, it is evident that peer analysis provides an opportunity for students to make judgments about the quality of a work, to give constructive criticism, to assign a grade, or to generate feedback. Through peer assessment, therefore, a sense of distanced objectivity is developed during practical analytic experience that helps individuals in application of concepts in their own work (Black, Harrison & Lee, 2003). Sadler (1989) quoted that students are exposed to a variety of examples, while involving in peer analysis and it, in return, helps them in quality learning. Peer assessment helps in strengthening the analytical, evaluative and critical abilities of individuals by encouraging them to involve in self-assessment. In this way, peer assessment supports both reflection and the reflective practices in classrooms.

Role of peer assessment and its benefits in individual development is noted by many authors in literature. Kollar and Fischer (2010) contend that peer assessment is "an important component" of "a more participatory culture of learning aiding the design of learning environments", as well as being, "fundamentally a collaborative activity that occurs between at least two peers" (p. 344- 345). Facilitating students to partake in some form of assessment interaction encourages some control over their own learning and alters the balance of power, where, as it is noted that, peer interaction of any form engages students in development of their own learning, both cognitively and emotionally (Vickerman, 2009). Bloxham and Boyd (2007) stated that benefits for students participating in peer assessment include: helps them to understand the academic standards of the module, understand assessment criteria and how they are applied to students' work, understand alternative approaches to academic tasks, developing their ability to make judgments and justify their point of view, develops their ability to give constructive feedback to the peers and prepares them for self regulated learning by building their capacity to monitor their own progress rather than rely on a third party to do it (p. 62).

Bloxham and West (2004) also found that peer assessment helped students learn, developed their critical thinking skills and enhanced students' understanding of assessment standards. Likewise, Kearney (2013) contends that educators should design such assessments that involve and engage students and that build essential skills such as "critical thinking and autonomous learning", whilst also inspiring 'innovation and creativity (p. 876).

Along with many advantages, however, literature also points out concerns about some aspects of peer assessment approach. Around the limitations and risks of peer assessment, several important issues have been raised by the students and academia in higher education institutions (Kaufman & Schunn, 2011; Patton, 2012; Vickerman, 2009). Accuracy and validity of feedback from peers is the point of concern in literature of peer assessments and formative assessment. It is noted that students tend to over-mark, particularly if process takes place in small established groups and/or if the identities of assessor and assesse are known (Vickerman, 2009). Furthermore, students are hesitant to take responsibility in peer assessment. In Patton's qualitative study on undergraduate, students shared experiences of peer assessment, and noted that some students prefer facilitators to take responsibility for assessment as they do not consider that their peers have the necessary 'expertise' required to grade their work. Patton (2012) also noted that epistemological expertise of facilitators and professors invests them with legitimacy and authority to assess student work - when this expertise is absent, students are less likely to take on board critiques of their work.

Likewise, studies also found that students perceive peer assessment process as inconsistent and unfair (Foley, 2013; Kaufman & Schunn, 2011). It is also observed that judging the written work of students from across many disciplines is, in itself, a complicated task for facilitators, and more complicated situation for first year students alone. Students have also reported feelings of anxiety while grading their peers when lacking experience in conducting peer assessment (Brown, Rust & Gibbs, 1994).

Despite some of its disadvantages, it is noted that peer assessment develops several skills among students that includes a wide range of cognitive, behavioral, and transferable skills. These soft or transferable skills include: communication, critical thinking, reflective thinking, collaboration, teamwork, self-management, and awareness (Reinholz 2016; Suñol et al. 2016; Wu, Chanda, & Willison, 2014). Peer assessment is known for providing opportunity to act as assessor, evaluator and manage learning during the process. Peer assessment enable individuals to be independent and lifelong learners (Boud & Soler, 2016; Carless, 2013). For this reason, the higher

education institutes consider the development of individuals in such a way that they can take responsibility of their own learning and development and act as reflective practitioners.

3. Objectives

Main objective of this study was to explore the perceptions of prospective teachers about the role of peer assessment as a reflective tool in classrooms of teacher education programs. This study further investigated the difference between perceptions of male and female prospective teachers and difference between perceptions of prospective teachers enrolled in BS Education program and B.Ed. (Hons.) Elementary program.

4. Methodology

This study was descriptive and quantitative in nature. Accessible population of the study was all prospective teachers enrolled in regular and accredited bachelor teacher education programs of public sector universities. Multistage purposive sampling technique was used to select a sample size of 1374 prospective teachers from 21 public sector universities, from six administrative units i.e. ICT area, Punjab, Sindh, Balochistan, Khyber Pakhtunkhwa, and Gilgit Baltistan. Teacher education departments offering regular and accredited bachelor's degree programs were selected purposively. Intact group (census) of prospective teachers from available semesters are selected for data collection. An instrument i.e., perceptions of peer assessment as a reflective tool (PPAR) was developed by the researchers. The instrument was developed on a five-point Likert scale and comprised 17 statements. Instrument was validated by taking experts' opinions. Cronbach alpha value was found to be .79. The data were analyzed by using descriptive and inferential statistics, with the help of SPSS version 22.

5. Data Analysis

Data were analyzed using both descriptive and inferential statistics i.e., the mean, the standard deviation and an independent sample t-test. Independent sample t-test was applied to explore the significant difference among independent samples. To examine the perceptions of prospective teachers about the role of peer assessment as a tool for reflective practices in classrooms of Teacher Education Programs of Pakistan, values of mean and standard deviations were calculated, and results are presented in Table 1.

Sr. No	Themes	N	Mean	SD		
1	Necessary skills for peer assessment	1374	3.3	1.3		
2	Clarity in procedure of peer assessment	1374	2.5	1.4		
3	Tools are available for peer assessment	1374	2.5	1.4		
4	Lot of responsibility for student	1374	4.1	1.0		
5	Overall	1374	3.1	1.2		

Table 1: Necessary skills, procedures and tools for peer assessment practice

Table 1 represents that the mean values of two statements fall between 2.0 and 2.5. It shows that the prospective teachers have less clarity in procedures of peer assessment during teaching and learning in classrooms and tools for peer assessment are occasionally provided in classrooms. Furthermore, table 1 reflects that mean value of one statement lies between 3 to 3.5 and it shows that prospective teachers are sometimes equipped with necessary skills for peer assessment. It is also reported by prospective teachers that often peer assessment address lot of responsibility for students. Overall, mean score represents that prospective teachers sometimes are provided with necessary skills, procedures and tools for peer assessment as reflective practice tool in classroom teaching learning practices, but with some concerns. Values of standard deviation comparatively show moderate level of consensus among students. It can be therefore concluded that prospective teachers need to be trained in necessary skills, procedures and tools for peer assessment practice.

Sr. No.	Themes	Ν	Mean	SD.
1	Assists me to master the reflective skills	1374	3.3	1.3
2	Analyze my strengths and weaknesses	1374	3.4	0.9
3	Effective tool for critical thinking	1374	3.5	1.1
4	Needed for constructive learning	1374	3.3	1.3
5	Motivates students for healthy competition	1374	4.1	1.1
	Overall	1374	3.6	1.1

Table 2: Effective role of peer assessment to support reflective practice

Review of Economics and Development Studies

The above table 2 represents that the mean values of four statements lie between 3.0 and 3.5. It shows that the prospective teachers sometimes use peer assessment as a reflective tool to seek assistance to master reflective skills and they reported that peer assessment is sometimes needed for constructive learning. Moreover, prospective teachers reported that use of peer assessment sometimes provide opportunity to analyze their own strengths and weaknesses and sometimes it is an effective tool for critical thinking. Table 2 also indicates that peer assessment motivates the students more often for healthy competitions. Overall mean score reflects that less often there is an effective role of peer assessment to support reflective practices in classrooms.

Sr. No.	Themes	Ν	Mean	SD.
1	Peer assessment provides prompt feedback	1374	3.9	1.08
2	Feedback assist in self assessment	1374	3.5	1.4
3	Feedback supports reflection	1374	3.6	1.2
4	Prompt feedback from peers regulate learning	1374	2.7	1.3
	Overall	1374	3.4	1.2

Table 3: Peer	assessment as	s feedback	tool to	support	reflective	practice
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The above table represents that the mean value of one statement is 2.7. It shows that occasionally feedback regulates learning of prospective teachers. Mean values of three statements lie between 3.5 and 4.0 that shows less often use of peer assessment to support reflection and in providing prompt feedback. It is also reflected that less often peer assessment assist in self assessment. The overall mean score (3.4) shows the prospective teachers perceive that the use of prompt feedback in peer assessment sometimes supports reflective practices in classrooms.

Sr. No.	Themes	Ν	Mean	SD.
1	Peer assessment is more subjective	1374	3.8	0.9
2	Peers are more demanding	1374	3.4	1.2
3	It is a biased procedure	1374	2.9	1.4
4	It wastes time	1374	3.0	1.5
	Over All	1374	3.3	1.3

Table 4 represents that the mean values of two statements lie between 2.5 and 3.0 that shows that peer assessment is occasionally a biased procedure and sometimes it wastes time of prospective teachers. Furthermore, mean value of one statement is 3.4 and it indicates that the peers are more demanding in a peer assessment task and prospective teachers also responded that less often peer assessment is more subjective in nature. Overall mean score of 3.3 represents that prospective teachers sometimes consider peer assessment as a less effective reflective tool in the classroom teaching learning practices. Inferential statistics i.e. independent sample t-test was also applied. Table 5 represents the independent sample t test (Gender) followed by interpretation of the test.

Table 5: Independent sample t-test (by gender)

Participants	Ν	Mean	df	Sig.	Cohen's d
Female prospective teachers	121	52.53	1372	.000	.30
Male prospective teachers	353	55.20			

The results of table 5 presents that the significant value (p-value) for the role of peer assessment is 0.00 i.e., P<0.05. It shows that there is a statistically significant difference between perceptions of female and male prospective teachers about the role of peer assessment as reflective practice tool in classrooms. Table further reflects that male prospective teachers perceive that the role of peer assessment as a reflective tool is higher than that of female prospective teachers. The effect size was found .30 that shows the medium effect size between the two means.

Table 6: Independent sample t-test (by program)

Participants	Ν	Mean	DF	Sig.	Cohen's d
Prospective teachers (BS. Education)	371	53.75	1372	.122	.08
Prospective teachers B. Ed. (Hons.)	1003	53.01			

The results of table 6 indicate that the significant value (p-value) for the role of peer assessment is 0.12 i.e., is P>0.05. It indicated that there is statistically no significant difference between the perceptions prospective teachers enrolled in BS and B. Ed. (Hons.) elementary program. Table reflects that there is no difference between the perceptions of prospective teachers enrolled in BS. Education and B.Ed. (Honors) Elementary programs about the role of peer assessment as a reflective tool. Table further reflects that Cohen's d effect size is .08 and it is depicting that there is very small effect between the two means.

6. Discussion and Conclusions

This research study intended to explore the perceptions of prospective teachers about the role of peer assessment as reflective tool. The results of the study are generally, in line with the theory and findings from the previous researches. The study concluded that peer assessment assign lot of responsibility to the students in classroom and it assist the students in developing their critical and reflective skills. Findings are in line with the findings of the study conducted by Adachi, Tai and Dowson (2018), which found that peer assessment makes students responsible for assessing their peers. It was also revealed that peer assessment promotes concept of prompt feedback that helps students in developing their reflective abilities and reflective learning. The findings of the study are in line with the findings of the study conducted by Stegmann et al. (2012) which found that academics recognize that participation in peer assessment and giving feedback may benefit the provider of feedback more than recipient. Peer assessment encourages students to be the part of healthy competition.

Furthermore, this research study concluded that peer assessment less often acts as an effective tool for critical thinking and reflective tool in teaching and learning. The study also concluded that occasionally peer assessment is a biased procedure and sometimes it is a time waste activity as perceived by prospective teachers. This study concluded that there is a significant difference the perceptions of male and female prospective teachers for role of peer assessment as reflective tool. The finding is in line with the study conducted by Ahmed and Molen (2010) that showed a significant difference in number of male and female students who show comfort in involvement in peer assessment procedures. It was also found that there is no significant difference between the perceptions of prospective teachers enrolled in BS Education and B.Ed. (Honors) elementary program. It was also revealed that peer assessment is time waste and biased activity as perceived by prospective teachers. This is in line with the findings of the study conducted by Adachi, Tai, and Dawson (2018), which concluded the time constraints and reliability of student judgment skills. The study recommends that clarity in carrying out peer assessment for reflection might be provided and prospective teachers may be made acquainted and equipped by providing necessary information, strategies and tools for use of peer assessment. Policies regarding assessment might be altered to include peer assessment as an important component of our traditional assessment procedures.

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