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PEER EVALUATIONS OF TEACHER CANDIDATES WITHIN THE SCOPE OF RESEARCHER TEACHER ACTIVITIES¹

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ABSTRACT

Assessment in higher education, especially for candidate teachers is very crucial, especially when we take into consideration that the candidate teachers are to use assessment instruments through their own teaching processes. Therefore, the aim of this study is to identify the tendencies of candidate teachers regarding peer assessment. Illustrative Case Study model is used to be informed about the study group related to the selected categories of their evaluations on their peer assessments. Data was collected via forms consisting of 10 items prepared by researchers. The items in the form collected under 4 categories; "sharing opinions and support", "leadership and contributing", "sharing duties", and "taking initiative and undertaking". Descriptive analysis was used to analyze data provided by forms. Results show that the participants are generally inclined to work in groups. For the categories identified, participants gave high scores for supporting and sharing opinions in group work. Although in terms of leadership skills the participants did not give high points for their peers, in terms of the category of the sharing opinions they gave the highest scores for their peers. Moreover, the participants thought they their peers' leadership skills were not good enough however in terms of sharing opinions they were successful.

Keywords: Peer assessment, candidate teachers, researcher teacher, sharing opinions, contribution

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INTRODUCTION

Assessment in higher education, especially for candidate teachers is very crucial, especially when we take into consideration that the students in education faculties are to use assessment instruments through their own teaching process. Assessment not only frames how the students learn but also provides indications for institutions in their decision making processes, so it is very vital and effective on all teaching and learning activities (Boud, 2007). When teachers/instructors allow students assess themselves and their peers, so when they stop controlling all of the processes, that is share their power with students, especially in higher education the professional judgement of both instructors and students increase. In this way, assessment turns into a process that is done with students (Bozkurt, 2020; Brew, 1999).

Peer assessment is set of activities and processes in which people assess and make judgment on their peers' work by using criteria and so have opportunity to give feedback to them (Reinholz, 2015; Van Den Berg, Admiraal, & Pilot, 2006). It is a form of evaluation that enhance learning opportunities besides its functioning as assessment type (Bunch, Aguirre, & Tellez, 2009; van Gennip, Segers, and Tillema, 2009). Peer assessment is "an arrangement for learners to consider and specify the level, value, or quality of a product or performance of other equal status learners" (Topping, 2009, p.20). This type of assessment can be used by itself or as a complement to other types of assessments; so that gives an opportunity for it to be used in broad areas (Gielen, Dochy & Onghena, 2010; Li et al., 2020; van Zundert et al., 2010). Peer assessment can be summative, formative, or both and can be provided in an affirmative, corrective, or suggestive way, and improves quality if received fairly. So, it can be said that useful feedback requires the good comprehension of the assessment goals and criteria, and the skills needed to judge the relationship of the specific performance to these goals (Topping, 2010). Through formative assessment participants can help each other to identify their works' strengths, weaknesses, and the parts needed to be focused for remedial action, supporting to develop metacognitive skills of assessor and of the assessed for future performance (van Gennip et al., 2009). However, through, summative assessment gives feedback often when it is too late to take action for the work under assessment, but it may be beneficial for the quality of future tasks (Topping, 2010). The use of peer assessment and its benefits in higher education has been supported by many academics (Tiew, 2010). In this study, peer assessment has been used and its effect has been tested on a different level, across disciplines, and with varying tasks and activities. Peer assessment can change the attitudes of learners in better way; they feel more relaxed when they are assessed by their peers (Hakim & Zammi, 2020). Through peer assessment, both students' work develops and assessor's own works' quality also improves by putting effort for the quality of the work. Moreover, it is also beneficial for students to develop their ability to assess not only their peers but also themselves. Peer assessment is a social process in which one of the essential components is giving and taking from each other (Sluijsmans & Prins, 2006; van Genip et al., 2009). So that kind of process is reciprocal between assessor and the assessed learner (Cabello, & Topping, 2020). Therefore, it can be said that peer assessment is as a kind of cooperative learning, so that interaction and communication skills of learners improve when they assess and provide feedback to each other (Falchikov, 2005; Topping, 2009; Van Den Berg et al., 2006). Besides,

in the process of peer assessment, students detect problems and offer solutions by giving feedback to the student whose work is being assessed, so their' higher level thinking, metacognitive skills, negotiation skills also improve. In the process they also improve their skills to criticize a work and accept it when it is made toward her/himself (Chetcuti & Cutajar, 2014; Nicol, Thomson & Breslin, 2014; Topping, 2009; Van Den Berg et al., 2006). Figure 1 shows the organizational features of peer assessment in education:

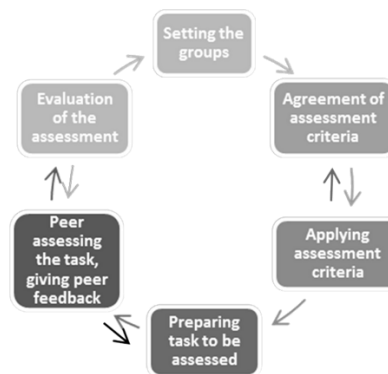


Figure 1: Typical PA implementation in education (Cabello&Topping, 2020)

According to many studies group activities such as team-teaching create better learning environment for candidate teachers by fostering collaboration and bringing different ideas together, and paired candidate teachers learned more from each other than single ones (Baker & Milner, 2006; Carpenter, Crawford & Walden, 2007; Cozza, 2010; Dee, 2012; Gardiner & Robinson, 2010; Goodnough et al., 2009; Muraswski, 2005; Ploessl et al. 2010; Stairs, 2010; Ünveren & Namlı Altıntaş, 2019) because it provides candidate teachers with skills that are very important in their professional life (Sluijsmans & Prins, 2006). Additionally, teaching candidate teachers to make assessment is one of essential objectives/aims of teacher education process (Yılmaz, 2017); and peer assessment can be used to effectively to assess teamwork (Matthew, 2004). In this context, in the project called “I want to be researcher teacher”, peer assessment process was very crucial and played important role. In the process of the process, participants (candidate teachers) were informed about peer assessment and practical studies were realized after group works. Thus, candidate teachers found opportunities to assess themselves and improve their skills on it. The project was carried out for 7 days (1-7th October 2023) through online platforms, to improve skills in prospective teachers; such as; *to learn through experiences, to learn to acquire new skills, to learn in a group, learn to think* etc. These outcomes realized based on an “Implementation process”, as follows:

1. Designing an activity related to Toulmin's argumentation model
2. Researcher teacher mind map design
3. Designing activities for lifelong learning
4. Designing lesson plan

At the end of these group activities the participants were asked to evaluate their peers for their performances during the project. Thus, the scope of this study consists of the results of candidate teachers' evaluation of each other; analyzing and evaluating peer evaluation results. In this context, the research questions of this study are:

1. What is the average score of your peers' ability to share their thoughts and support each other?
2. What is the average leadership score of your peers?
3. What is the average score of your peers' task sharing?
4. What is the average score of your peers' ability to take initiative and complete responsibility?

METHOD

The model of this research is Illustrative Case Study. This is a descriptive model. In other words, an Illustrative Case Study is a model that a researcher uses to inform about a community, group, or program (Davey, 1990). In this study, this method was used to inform about the study group related to the selected categories of their evaluations on their peer assessments.

Data Collection

Data was collected via Google Forms consisting of 10 items. Forms were created by researchers. The items in the form collected under 4 categories; "sharing opinions and support", "leadership and contributing", "sharing duties", and "Taking Initiative and undertaking". The form contains 5 questions that rated between 1-6. The researchers asked the students to fill out their forms at the end of the day. After that, they talked about their answers with the researchers.

The following questions were asked to the participants via Google Form.

He/ she completed the tasks set in group work.

He/ she easily shared his thoughts in group work

He/ she also served as a leader in group work, taking the initiative when necessary.

He /she worked carefully and meticulously.

He/ she worked harmoniously with other members in group work.

He/she developed consistent and logical solutions for solving problems within the group.

He/ she worked by developing positive relationships with other members in group work.

As can be seen, the main purpose of the questions is to understand the evaluations of the participants within the group. The harmony of the participants with each other within the group, their initiative taking, and their problem solving are arranged in a way that reflects the main objectives of this study.

Data Analyses

Descriptive statistics were used to analyze the data provided by the forms. First, the scores given by the participants for each category were totaled, and these scores were statistically compared. Frequencies were determined for each category, and mean scores were calculated. These mean scores were considered as an evaluation of how successful team members were in achieving the designated skills in a group work setting. To test the validity of the data collection tool (forms), expert opinions were sought, and necessary adjustments were made.

Study Group

Table 1. Study group participating in peer evaluation

University	Department	N	%
Başkent University	Primary School Teaching	9	22,5
Suleyman Demirel University and Van Yüzüncü Yıl University	Social Studies Teaching	8	20,0
Adnan Menderes University	Foreign Language Teaching	8	20,0
Adnan Menderes University	Science Teaching	8	20,0
Afyon Kocatepe University	Math Teaching	7	17,5

The research used a criterion sample. Accordingly, the candidates who applied to the project were selected by determining the following conditions:

1. Those with the highest general grade point average
2. Those with a reasonable reason to participate in the trainings in the project
3. The number of quotas allocated for each department. (A different number of students were accepted for each department.)

Study data is in the 2023-2024 academic year; It was collected from education faculty students of Başkent University, Afyon Kocatepe University, Suleyman Demirel University, Adnan Menderes University and Van Yuzuncu Yil University, who participated in the study voluntarily. According to the table 1, there are various departments in this study. The students in the department of primary School teaching (9) consist the majority of the participants. The other departments of the participants are Social Studies Teaching, Foreign Language Teaching, and Science Teaching (8), and Math Teaching (7). In addition, women (36) consist the majority of the participants. Only 4 of them consist the male participants of the study. 3rd graders consist the majority of the participants (60%). Only 3 of them (7.5%) consist the 2nd graders of the participants in the study.

FINDINGS

In this section, it was presented that codes and categories and they were shown as tables. In these categories, sharing opinions and supporting each other, leadership, and contributing, sharing duties, taking initiative, and undertaking. In those tables, there are mean, standard deviation, minimum, and maximum values.

Sharing opinion and support each other

Table 2. The comparison of participants' points average related to the category of sharing opinions and supporting each other.

	Mean	Std. Deviation	Min.	Max.
Sharing opinion	5,7250	,71567	2,00	6,00
Supporting each other	5,3750	1,12518	2,00	6,00

According to Table 2, participants gave higher points than the average for the category of sharing opinions and supporting each other. Moreover, between the two categories, there are no big differences. It can be said participants supported each other in the process and they are inclined to share opinions to be able to contribute to the quality of the work that they work on.

Leadership and Contributing

Table 3. The comparison of participants' points average related to the category of leadership skills

	Mean	Std. Deviation	Min.	Max.
Leadership	5,0000	1,19829	1,00	6,00
Contributing	5,3250	1,02250	2,00	6,00
Finding a Solution	5,5250	,90547	2,00	6,00

According to Table 3, participants gave higher points than the average for the category of leadership skills categories. However, participants rated leadership skills lower than contributing and finding solutions. This can be interpreted as participants don't find their peers' leadership skills sufficient.

Sharing duties

Table 4. The comparison of participants' points average related to the category of sharing duties

	Mean	Std. Deviation	Min.	Max.
Coordination	5,5000	,96077	2,00	6,00
Communication	5,6750	,76418	2,00	6,00

According to table 4, participants gave higher points than the average for the category of sharing duties. Between the two categories, there are no big differences.

Taking Initiative and undertaking**Table 5.** The comparison of participants' points average related to the category of taking initiative and undertaking

	Mean	Std. Deviation	Min.	Max.
Completing tasks	5,5500	,93233	2,00	6,00
Active participating	5,3750	1,10215	2,00	6,00
Assiduous	5,3750	1,14774	2,00	6,00

According to table 5, participants gave higher points than the average for the category of taking initiative and undertaking. Between three categories, there are no big differences. However, the categories; the averages of active participating and assiduous lower than completing tasks categories. It can be said participants took much more care for completing tasks than active participating and being assiduous.

CONCLUSION AND DISCUSSION

In this study, the data gathered from the candidate teachers' assessment of each other in group works is presented. The average values appear to be high in the scoring from 1 to 6 for each category. This suggests that the participants are generally inclined to work in groups. For the categories identified, participants gave high scores for supporting and sharing opinions in group work. Although in terms of leadership skills the participants did not give high points for their peers, in terms of the category of the sharing opinions they gave the highest scores for their peers.

Additionally, participants gave equal points for the categories of active participation, supporting each other, and being assiduous. Some categories do not have so big differences in subcategories; this case can be seen in the subcategories of coordination and communication. Besides, these categories complete each other and these results show that they were aware of the attributes of these categories that completing each other. Summarily participants thought they their peers' leadership skills were not good enough however in terms of sharing opinions they were successful. According to the results of analysis of peer assessment about leadership skills, it can be suggested that opportunities and learning environment to develop leadership skills for candidate teachers should be provided more.

Teaching 21st century skills is being adopted in the process of training teachers. These skills are crucial for adapting rapidly to the changing age and developments. For instance, problem-solving, communication, and leadership are the skills that the importance is given to them increasing day by day. In this sense, these skills are integral to lifelong learning. In this study, preservice teachers scored and evaluated each other on these skills. When the scores are examined, it is seen that leadership skill has the lowest score. According to many recent researches, teachers' leadership skills are very crucial in many ways for example in guiding students and being a role model for them (Taşkaya, 2012; Koşar & Ayvalı, 2021). Moreover, if the teaching profession meets expectations, teachers spare time to develop leadership skills (Ekici, 2018; Zülfiyade, 2020).

In the classroom, teachers frequently face unexpected situations that require quick and thoughtful responses. Whether it's adapting lesson plans to meet diverse student needs, addressing behavioural issues, or finding ways to engage students in learning, the ability to solve problems efficiently is vital. Moreover, problem-solving is not just a skill but a mindset that encourages continuous learning and improvement, allowing teachers to reflect on their practices and make necessary adjustments. For students, problem-solving skills foster resilience and adaptability, enabling them to approach challenges with confidence. Teachers who model effective problem-solving demonstrate the process of thinking through a problem, considering various solutions, and implementing the best course of action.

In light of these studies, the responses provided by the prospective teachers using the data collection tool were categorized into problem solving, leadership, communication, and collaboration. These categories helped to better understand the peer assessment process in the study."

When the average scores were evaluated in general, it was observed that candidate teachers gave quite high scores to each other. In this case, this situation suggests that they may not have provided objective answers.. Concerning peer evaluation, it is observed that teachers or candidate teachers have doubts about whether the evaluations are objective or not. In some cases, they stated that their friends gave them low scores on purpose or took their friends' feelings into consideration when scoring (Bozkurt & Demir, 2012; Şahin & Kalyon, 2018). Thus, the principle of objectivity, which is an important part of assessment and evaluation peer review may lead to a violation of objectivity.. Leadership skills largely emerge through group work. For example; a research project at Sarakhunwittaya School focusing on teachers' participation in enhancing students' leadership skills through participatory action research. The outcomes revealed progressive improvements in both teachers' and students' leadership skills, emphasizing the importance of collaborative work (Yuntasilo and Sutheejariyawattana, 2023). A similar study at Noensangawittaya School, utilizing participatory action research to improve students' leadership skills. The findings indicate increased activities and achievements in students' leadership skills, promoting democratic and participatory principles in development (Kundaeng and Dhammabhissamai, 2022).

Leeming (2024) claim that group membership changes significantly and have a great impact on leadership stability, and students with high leadership roles show increased engagement in tasks. That study focuses on emergent leadership within groups and examines how group dynamics influence the stability of leaders. Jin, Jiang, Gu, and Chen (2022) focus on collaborative works. The findings indicate that peers influence learners' behavioral, cognitive, social, and emotional engagement. Throughout the semester, the nature of peer effects evolves, shifting from behavioral to cognitive and social engagement. Metacognitive knowledge, familiarity with group members, and leadership play crucial roles in shaping learner engagement. The study provides valuable insights for researchers and teachers regarding students' peer influence on the learning process in collaborative tasks.

The other skill under discussion is communication. In this study, preservice teachers evaluated each other with a high score on communication. Besides, communication is important both in group works and in peer assessment. When examining the literature, we can say that preservice teachers' communication skills were partially sufficient (Alaca, Nas, & Kirman-Bilgin, 2020).

Communication skills affect teamwork skills because when there is a problem, they should solve it together or complete a project together. According to Kirman-Bilgin and Şenel-Çoruhlu (2022), preservice teachers were not adequate to the extent targeted by teacher education programmes. . Communication skill is an important part of the teaching profession, so the skill is related to every branch. For instance, there is a research on Turkish and math teachers concluded as the ages of Turkish and Mathematics teacher candidates increase, their communication skills also increase (Beyaz, Alıncak & Ataş, 2022).

The study involves third- and fourth-year Social Studies Teaching students at several universities, revealing that pre-service social studies teachers exhibit "high" communication skills but "moderate" social intelligence (Uygu & Arıbaş, 2020). Another study focuses on Turkish language pre-service teachers, employing a descriptive survey model with 218 participants. Findings indicate proficiency in behavioral, cognitive, and emotional communication skills, with significant differences based on gender and class levels. Additionally, a qualitative study explores the perceptions of preservice social studies teachers about communication using metaphors. Results reveal 36 valid metaphors across 7 categories, emphasizing communication as a requirement with the metaphor of water sustaining life as the most repeated (Kana, 2015; Turhan & Arcan, 2021). Moreover, preservice teachers' critical thinking skills develop on evaluating their peers that enable them improve in lesson planning and in their actual teaching performance (Ratminingsih et al., 2017) as concluded in our study, too. While they reflect on their own and their peer's processes, they make evaluations based on some criteria that develops their critical thinking skills.

Various challenges and doubts are expressed regarding the objectivity of peer assessment. These challenges include concerns that subjective judgments may influence the evaluation process, and that students' emotional or personal connections might affect how they assess each other (Özdemir & Erdem, 2017; Tüinkler, 2019). This situation carries the risk of violating the principle of objectivity, which is fundamental in measurement and evaluation. The violation of the objectivity principle can reduce the reliability and validity of assessment results, thereby endangering the fair and equitable evaluation of students. In this study, no precautions were taken to control objectivity due to the limitations of the research. In this study, due to certain limitations of the research, no special precautions were taken to ensure or control objectivity. Due to the nature of the research, no methodological tools or procedures were used to preserve objectivity.

The challenges related to the objectivity of peer assessment can be overcome, and the quality of peer assessment can be increased by developing clear criteria that are relevant to learning outcomes or tasks (Mumpuni, et al., 2022). For example, evaluation criteria should be clearly defined, and students should be encouraged to use a rubric and support self-evaluation after peer assessment. In this way, the benefits of using

peer assessment can be maximized, and potential biases can be minimized. Additionally, peer influence on behavioral, cognitive, social, and emotional engagement in collaborative tasks is explored, with metacognitive knowledge and familiarity with group members playing crucial roles.

In this study, communication skills were assessed in preservice teachers, revealing high scores but potential bias due to online evaluation. When the connection between communication skills and teamwork is discussed, research indicates insufficient teamwork skills in preservice teachers. Precautions can be taken to strengthen collaboration in team efforts, such as determining and sharing goals or distributing roles and responsibilities among team members. As a result, communication between team members will be stronger, and they will work harder to achieve the goal."

ETHICAL TEXT

In this article, journal writing rules, publishing principles, research and publication ethics rules, and journal ethics rules have been followed. Responsibility for any violations that may arise regarding the article belongs to the authors. It was deemed appropriate by Süleyman Demirel University through the document number E-4593371-604.01.02-509132 on the date of 07/06/2023.

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