Measure for University Students’ Attitude Towards Peer Assessment

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Abstract: This study is conducted to develop a valid and reliable measure to understand the university students’ attitudes towards peer assessment. 174 university students, who are candidate teachers, from Primary School Education and Turkish Language Teaching departments joined the study. 38% of the participants of the study was male and 62% was female students. Gathered data was analyzed by using various statistical methods and it was found out that measure has got enough reliability and validity level. Measure consists of one dimensioned 4 sub factors. The internal consistency coefficient for the reliability of the measure was found out as $\alpha = 0.73$.

Keywords: Candidate teachers · peer · peer assessment

INTRODUCTION

In a society, ready for information age, topics such as; new services, qualified labor, human force, high life quality, development for democracy and competition power which are directly related to education, has been current issues and will always be so. It should not be underestimated that education has an important role in solving the problems being faced in information age. It occurs as obligatory to facilitate the conditions to grow individuals having ability to adapt to new conditions easily, equipped with kinds of skills, having intellectual background, having ability to reach the resources of the knowledge, being keen to learn and to assess themselves and their peers. To correct the mistakes of the students, to maximize their motivation, to know them and take advantage of them, to assist them to develop themselves by considering the feedbacks of their peers, to have information about how the lessons are studied at school, to grow leaders who care the intellectual richness are among the aims of the education institutions. Also the students should join the process for the decisions about themselves. There are different ways for the students to join the decision process. One of those ways is peer assessment method.

Not long ago, using peer assessment as an alternative evaluation method changed the role of evaluation in a positive way. However, peer assessment was put forward to improve the student-student communication and the student-teacher communication; it may also be suitable for making the students to understand the ideas of their peers while their learning experiences [1-3]. In peer assessment, people being able to reach and use the knowledge, having creative thinking ability and being able to produce knowledge are needed, not the people who memorize the knowledge [4].

Identifications and Features of peer and peer assessment: Peer contains the individuals who are at the same level of education and expertise, sharing the same hierarchical position at an organization and having any formal domination on each others [5].

According to Ward [6], peer assessment is a process in which team members assess every team member and do individual grades using the collected information. Peer assessment facilitates the team members to assess not only themselves but also the other team members. Peer assessment provides the data to be used in individual grading for team works [6].

Peer assessment is not only a scoring process but also a learning process in which people improve their skills. People may feel the necessity of evaluating others’ achievements in school or in work life. While peer assessment supply improvement in this kind of skills, it may also increase self-confidence. Results of the evaluation may be considered as a part of self-evaluation, which helps to improve self-evaluation skills. Dialogs with peer groups help to improve internal communication.

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abilities. Students get feedback from other students not just from their teachers. Students have an idea on determining the criterion and the skills which consists the bases of evaluation with peer assessment [7].

Peer assessment has a close relation with the concept of learning. Peer assessment contains focusing on the importance of lifelong learning, the information of cognition, the responsibilities of the students in learning and the professional expertise. To be lifelong learners, the students should give the answers of the questions; what I know, what I need to know and what I should do to get informed [8]. In addition, peer assessment contributes to the cognitive and over cognitive understandings, improving the social and transferrable skills of the students [9]. In addition to peer assessment, giving internet assistance to the students helps the students to improve themselves about time and locality [10].

Peer assessment, emphasizes the skills/abilities, encourages the participation, helps concentration on learning, is a reference, increases the perfection, gives feedback, increases the attainment to lesson, teaches having responsibility, improves the ability of criticizing, encourages collaborative learning instead of competitive learning, increases the active participation to lesson, increases the responsibility and willing of doing homeworks, makes people understand the importance of interaction within the members of a group, decreases the number of the people who do not carry out the responsibilities in a group [7].

- Although peer assessment has many advantages as mentioned above, it also has some disadvantages. Many educators emphasize that university students approach peer assessment with a hostile manner. Peer assessment may affect the academic self-confidence and inter personal relations in a negative way. The key factor is whether the point that students give is valid or not [8]. Who manages the peer assessment and gives the feedback decreases the student participations. Students are aware of talking about their friends’ behaviors /works will damage the relation between each other and they do not want to come face to face with each other [5].

Peer assessment, which is an alternative assessment method, is not a prevalent evaluation method in Turkey yet. Since one of the duties of the school managements is to grow the quality of teaching and learning, what the students think about their peers and how they assess their peers can not be underestimated. This study serves this aim by improving the measure for university students’ attitude towards peer assessment.

MATERIALS AND METHODS

Research Model and Working Group: In this study, it was aimed to examine the university students peer assessment experiences and their attitudes towards peer assessment and build a valid and reliable measure to examine the university students’ attitudes. In this study, general scanning model was determined as a research model by the descriptions of data gathered in 2006-2007 education year and cases.

The participants are 174 teacher candidate students in total from the Primary School Education and Turkish Language Teaching Departments in Mehmet Akif Ersoy University. The male students constitute the 38 percent and the female students constitute the 62 percent of the participants.

Developing and Conducting the Pre-test Form and Validity of the Measure: While developing a valid and reliable measure to understand the university students’ attitudes towards peer assessment first a literature review was conducted, then the measure entitled “University Students’ Perceptions of and Attitudes Toward (Online) Peer Assessment” which was developed by Wen, Meichun; Tsai, Chin-Chung in 2006 [11] was translated and adapted to Turkish with the prior permission of the authors. 35 items placed in pre-test form. The answer form was organized in 5 point Likert type, from 1= totally agree to 5= totally disagree. The test form was conducted to the work group mentioned above in the fall term of 2006-2007 education year and the statistical analyses about reliability and validity of the measure were done on this data.

Data Analyses: In order to understand the validity of Measure for University Students’ Attitude towards Peer Assessment (MUSAPA), three validity analyze methods were conducted, content validity, construct validity and internal criterion based validity analyses. In proving the distinguishing abilities of each item in the measure, the measure-item correlations method was used. Besides these methods, validity method based on internal criterion was used. On the other hand, to understand the reliability of the measure, Cronbach Alpha point was calculated.

RESULTS AND DISCUSSION

The experts views from the validity methods mentioned above do not need any statistical analysis but each item should be based upon the experts’ views in order to understand whether they really measure the studied qualification or not. Besides the items that all
experts consider as valid are thought to be suitable to use were included to pre-test form [12].

Because of this reason, each item of the measure was checked by lecturers from different fields. According to the views of lecturers, 35 items were included to pre-test form and one of the items adapted to Turkish was removed.

After the study that was based on the views of experts, the construct validity analysis was completed, which was to identify the dimensions of the qualifications being intended to measure. To understand the construct validity, the factor analysis was completed [13]. The concept construct was defined as factor in social sciences [13].

In this study, as mentioned above, a measure consisting of 35 items was used. The validity and reliability analyses were calculated on SPSS 12.0 packet program. After factor analysis, items 5, 15, 16, 19, 21, 25, 27 and 28 were removed since their factor loading values were lower than 0.30. After removing the items, another factor analysis was conducted on the same sample and it was noticed that factor loadings were grouped in for different groups.

As seen in Figure 1, Eigenvalues of the factors are 22.345 for the first factor, 6.455 for the second factor, 6.134 for the third factor and 5.260 for the fourth factor. Since the eigenvalues of the first factor is very high and other three factors' eigenvalues do not differ from each other so
Table 3: The results of the t-test applied for estimating the criterion group validity of the Measure for University Students' Attitude towards Peer Assessment

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>X</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up group</td>
<td>47</td>
<td>103.5957</td>
<td>6.78765</td>
<td>16.972</td>
<td>0.000</td>
</tr>
<tr>
<td>Subgroup</td>
<td>47</td>
<td>82.0851</td>
<td>5.42470</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

P< 0.05

much, the measure could be considered that it measures only one component [14].

The first factor explains 59.628 percent of the total variance, the second factor explains the 17.448 percent of the total variance, the third factor explains the 12.822 percent of the total variance and the fourth factor explains the 10.101 percent of the total variance. 27 items in the measure have got enough factor loading values in the first factor. In Table 2, the factor analysis results are given.

Another validity used for improving the validity of Measure for University Students' Attitude towards Peer Assessment is internal criterion based validity [14]. Internal criterion based validity is to be able to distinguish the ones to be measured and the ones not to be measured in the Measure. So, it’s tested by t-test if there is any significant difference between the higher group of 27% and the lower group of 27% by ranging measure points of the individuals from the highest to the lowest. It improves the internal criterion based validity of the Measure if the result is significant [14].

The findings to improve internal criterion based validity of the Measure for University Students' Attitude towards Peer Assessment are given in Table 3.

The validity of the Measure for University Students' Attitude towards Peer Assessment was also improved by the internal criterion based validity. The measure points of the participants were ranged from the highest to the lowest and it’s tested by “independent sample test” if there is any significant difference between the higher group of 27% and the lower group of 27%. The average of the measure points is 103.5957 and the standard deviation is 6.78765 belonging to the 47 candidate teacher students contained up group of the 174 people work group and the average of the measure points is 82.0851 and the standard deviation is 5.42470 belonging to the 47 candidate teacher students contained subgroup of the 174 people work group. When we look at the X of the up group and subgroup it’s seen that the arithmetical average point of up group (X =103.5957) is higher than the arithmetical average point of subgroup (X=82.0851).

According to the result of the applied t-test, the difference of the average measure points of the up group and the subgroup is significant, since freedom degree is 92 and significance degree is 0.000 (t(92) = 16.972 P< 0.05). According to the gained data it can be claimed that the measure has the internal criterion based validity.

According to Özdamar’s [15] classification of internal consistency coefficients, the evaluations of the Cronbach Alpha coefficient values may be classified as;

- 0.00 ≤ α < 0.40 measure is not reliable.
- 0.40 ≤ α < 0.60 measure has got a low reliability value.
- 0.60 ≤ α < 0.80 measure is considerably reliable.
- 0.80 ≤ α < 1.00 measure is very reliable.

In this study, internal consistency was evaluated only by analyzing the Cronbach Alpha. And according to the students responses, it was estimated as considerably reliable (α= 0.73).

CONCLUSIONS

In this study, it’s tried to improve a valid and reliable Measure for University Students' Attitude towards Peer Assessment by adapting to Turkish. For that, necessary literature research has done and the first form of the measure has been created including 36 items by the gathered data from the literature research and the researchers who had first created the measure. While adapting into Turkish, the form was reorganized with 35 items according to experts’ views. Prepared form has been applied to 174 university students, who are candidate
teachers, from Primary School Education and Turkish Language Teaching departments in full term of 2006-2007 education year. After the completion of the factor analysis, 7 items which had factor loading value lower than 0.30 were removed from the measure. According to the analyses, it was seen that the measure had only one dimension (factor). In addition to these analyses, items were also analyzed to understand the measure-item correlation and the findings showed high correlation values. And Cronbach Alpha value was estimated as 0.73 which showed that it was reliable.

"Measure for University Students Attitude towards Peer Assessment" is a valid and reliable measure which has only one dimension (factor). Using this kind of measurement tool:

- May facilitate to raise the quality in teaching and education.
- May facilitate to grow up the student oriented atmospheres.
- May facilitate the students to understand the atmosphere of the competition.
- Supports the growth of qualified and competitive persons.
- Feedback to students on their works may be given.
- May split the responsibility of the lecturers in assessment with the students.
- May facilitate the students to get feedback from the other sources except the lecturers or themselves.
- May facilitate the students to see the other similar works.

REFERENCES