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The views of teacher candidates about the use of a scoring rubric for the evaluation of their products in the course of instructional technologies and material development

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Abstract

The purpose of this study is to determine the views of teacher candidates about the use of a scoring rubric for the evaluation of their products in the course of Instructional Technologies and Material Development (ITMD). The participants of the study included twelve teacher candidates who had taken the course of ITMD in the Department of Computer Education and Instructional Technologies at the Faculty of Education at Anadolu University. The findings were grouped under three themes as the views of the teacher candidates about the evaluation of their performance in the course of ITMD, the views of the teacher candidates about the evaluation methods they preferred for the evaluation of their products in the course of ITMD and about the reasons for their preference, and the views of the teacher candidates about the use of a scoring rubric for the evaluation of their products in the course of ITMD.

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1. Introduction

Societies that develop their technologies with the use of information have an important place in the world. Alkan (1987) defines technology as a bridge between science and application. In order for societies to build this bridge, in other words, in order for them to develop their technologies, they should do their best to give good education to individuals in educational institutions. For this purpose, in the first place, teachers should be trained well.

Since individuals have different characteristics, they also have different learning styles. Therefore, it is the teacher's responsibility to help students' learning. In order to help all students' learning, the teacher should use

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different materials with the help of technology. Hence, it is important for the teacher to use instructional technologies effectively. Today, teachers should have the necessary skills of both using the technology effectively and teaching how to use technology for learning (Tutkun & Koç, 2001). Therefore, the fact that all teachers know about technology and use it in their classes will certainly increase the quality of teaching (Gündüz & Odabaşı, 2003). One of the courses in teacher training programs that informs teacher candidates about the use of technology in teaching is the course of Instructional Technologies and Material Development (ITMD). In 1998, the Council of Higher Education (YÖK) included the course of ITMD into all teacher training programs (Council of Higher Education [YÖK], 1998) – depending on the World Bank National Education Development Project. The content of the course of ITMD was determined as follows (YÖK, 2003):

The features of various instructional technologies; the place and use of these instructional technologies in the teaching process; the development of instructional materials (work sheets, transparencies, video records, computer-based course materials, etc.) with the help of instructional technologies and the evaluation of materials of different qualities.

“New Programs for Education Faculties” were put into practice in the academic year of 2006–2007 (YÖK, 2007a). Within the scope of this program, the name of the course of Instructional Technologies and Material Development in the Department of Computer Education and Instructional Technologies was changed as Educational Material Design and Use, and the content of the course was determined as follows (YÖK, 2007b):

Instructional analysis, classification of the goals, goal analysis, learner analysis, content planning, planning of exercises and feedback, planning of evaluation, two-dimensional visual teaching tools, traditional instructional technologies, modern instructional technologies, procedure for choosing educational materials, principles for designing and developing materials, design elements, administration of course material development, the development of field-related materials, the development of audio, visual, and of audio-visual materials, instructional material use in class.

The course of ITMD given as a compulsory course in Education Faculties is an important course which helps teacher candidates know about new technologies and use of these technologies effectively and which integrates these technologies into educational programs (Kabakçı & Tanyeri, 2006). After teacher candidates take the course of ITMD, they are expected to know about the features of various instructional technologies and to acquire the ability to use these technologies. In addition, at the end of this course, they are also supposed to acquire the ability to develop new instructional materials and to evaluate the existing materials (Gündüz & Odabaşı, 2003).

The field-related materials developed for the course of ITMD are considered as student products. It could be stated that the use of alternative assessment techniques would be a better approach in this evaluation process. The reason is that alternative assessment approaches to the evaluation of student products reveal more valid and reliable results. For the evaluation of student performances, certain evaluation tools like observation forms, peer-evaluation forms and scoring rubrics are used.

1.1. Scoring rubrics

While evaluating performance, which is defined as the way a student presents what he/ she can do using his/her knowledge (Sezer, 2006), appropriate evaluation tools should be used. One of these tools is a scoring rubric.

A scoring rubric provides a list of criteria's and helps grade the quality from bad to good for each criterion (Andrade, 1997). According to Sezer (2006), a scoring rubric enables the grader to evaluate student performance by considering the different aspects of that performance. In other words, a scoring rubric is a scoring system that aims determining the proficiency level of the performance of a student (Bahar, 2006).

A scoring rubric has three features such as focusing on the evaluation of the pre-determined goal, using a grading interval to rate performance, and demonstrating certain characteristics of performance according to pre-determined standards (Picket & Dodge, 2007). A scoring rubric is frequently used by teachers and students in evaluating performance since it is a user-friendly tool which increases student performance by taking teacher expectations into consideration; which enables students to behave more carefully while judging their own works and others' works; and which decreases the time a teacher spends on evaluating the works of students (Andrade, 1997).

In the course of ITMD, teacher candidates bring out a product in line with the goals of the course. It is believed that the use of a scoring rubric for the evaluation of the products of the teacher candidates will be advantageous. For this reason, in this study, a scoring rubric was used to evaluate the products of the teacher candidates in the course of ITMD, and the views of the teacher candidates about this type of evaluation were determined.

2. Purpose

The purpose of this study is to determine the views of the participants about the use of a scoring rubric for the evaluation of their products. The participants of the study were 12 teacher candidates who had taken the course of ITMD in the Department of Computer Education and Instructional Technologies in the Faculty of Education at Anadolu University in the academic year of 2007-2008. In line with this overall purpose, the sub-purposes of this study are:

What are the views of the teacher candidates about the;

1. evaluation of their performance in the course of ITMD?
2. evaluation methods they preferred for the evaluation of their products in the course of ITMD and about the reasons for their preference?
3. use of a scoring rubric for the evaluation of their products in the course of ITMD?

3. Method

The study designed on the basis of qualitative research processes, semi-structured interviews were used to collect the research data. For this purpose, a semi-structured interview form was developed by the researchers and four field experts were consulted regarding the validity of the interview form developed. In line with the views of the experts, the interview form was finalized for application.

The participants of the study included twelve students who had taken the course of ITMD in the Department of Computer Education and Instructional Technologies in the Faculty of Education at Anadolu University in the academic year of 2007-2008. Seven of the participants were male students, and five of them were female students. The interviews were audio-recorded and held with the participants separately in the place and at the time determined by each participant. The data collected were analyzed through inductive analysis technique.

For the reliability of the data, two field experts who were knowledgeable about qualitative research processes were consulted. The markings by the researchers and by the experts were compared, and with the use of the formula of agreement / (disagreement + agreement)*100 (Miles & Huberman, 1994), the reliability of the study was calculated as 86%. Since this value exceeded 80%, the study was concluded as reliable. The data were also supported with the raw data obtained from the interviews, and the findings of the study were obtained.

4. Findings and Discussion

The analysis of the research data revealed under three main themes as;

1. The views of the teacher candidates about the evaluation of their performance in the course of ITMD,
2. The views of the teacher candidates about the evaluation methods they preferred for the evaluation of their products in the course of ITMD and about the reasons for their preference,
3. The views of the teacher candidates about the use of a scoring rubric for the evaluation of their products in the course of ITMD.

4.1. The views of the teacher candidates about the evaluation of their performance in the course of ITMD

Although the teacher candidates in the Department of Computer Education and Instructional Technologies had different views about the evaluation of their performance in the course of ITMD, ten of the students reported that the evaluation of performance in the course should be carried out through the evaluation of the process and projects. Regarding this point, Kerem said, "...I believe, a project should certainly be prepared in the process of the development of a material", while Aylin expressed her view saying that "...if there'll be a product, I think it is necessary to evaluate this process."

Five of the students stated that multiple-choice tests should be used for the evaluation of performance in the course of ITMD, while four of them reported just the opposite. Regarding this point, Cem stated that "...it was something that measured our cognitive side. That is, the first mid-term exam, the second mid-term exam. A multiple-choice test was used here, and yes, I certainly agree that a multiple-choice test should be used", while Aylin

reported that *“instead of traditional exams, I think performance assessment as an alternative assessment technique is more important, because an exam is a thing that students take just after one-night study”*.

One of the teacher candidates supported the view that teacher candidates should all be evaluated individually for their performance in the course of ITMD. Esra, a teacher candidate, stated that *“...well, I am not the same as them, I think. I don’t believe it is fair, because they are more knowledgeable, if I compare myself with them...”*.

According to the constructivism theory, students should be evaluated through alternative assessment approaches. Hence, it was an important point made by the teacher candidates that for the evaluation of their products in the course of ITMD, the process they go through and the projects they prepare should be evaluated.

4.2. The views of the teacher candidates about the evaluation methods they preferred for the evaluation of their products in the course of ITMD and about the reasons for their preference

When the views of the teacher candidates about the evaluation methods they preferred for the evaluation of their products in the course of ITMD and about the reasons for their preference were examined, the teacher candidates stated that the appropriate evaluation methods were the scoring rubric (8) and project assessment (4). The reasons for preferring these methods were reported as receiving feedback (5), knowing the evaluation criteria in advance (3) and adding student views into the criteria (2).

Kerem, a teacher candidate who considered it necessary to evaluate student products with the use of a scoring rubric, stated his view saying that *“It is the chart, or that kind. If a chart is prepared for courses, like font styles, coloring, and if divided into certain items, it will be a very good way of evaluation. Also, there should be a complete evaluation at the end of the course”*. Halit, who thought that project evaluation should be used to evaluate the products of teacher candidates, stated *“I believe a project should be prepared and then the product should be evaluated. During this project evaluation, we already evaluate all the works of a student”*.

Halit, one of the teacher candidates, reported his reason for preferring the scoring rubric and project evaluation as receiving feedback. As mentioned above, Halit stated that during the project evaluation, they already evaluated all the works of a student. Therefore, he added that *“... the mistakes can also provide data for our future studies”*. Kerem, who mentioned his reason for preferring the scoring rubric and project evaluation as knowing the evaluation criteria in advance, reported that *“because you don’t always know who does what. You may miss out certain things however careful you are, so there should be certain rules. There should be items, but are there any? When you evaluate according to items, you don’t miss anything”*. Another teacher candidate Mustafa, who stated his reason for preferring the scoring rubric and project evaluation as adding student views into the criteria, reported that *“for example, we determined the criteria ourselves by discussing them in class. That was really good, because everybody suggested something. Everybody talked about what they could do. It was really better to do so and to know the criteria beforehand.”*

All the teacher candidates stated that their products should be evaluated through alternative assessment approaches. They reported their reasons for suggesting alternative assessment as receiving feedback, knowing the evaluation criteria in advance, and adding student views into the criteria. Therefore, the teacher candidates could be said to emphasize the necessity to include students into the evaluation process.

4.3. The views of the teacher candidates about the use of a scoring rubric for the evaluation of their products in the course of ITMD

Although the teacher candidates had different views about the use of a scoring rubric for the evaluation of their products in the course of ITMD, nine of the teacher candidates reported that the evaluation criteria should be clear. Regarding this point, Aylin stated that *“well, if the criteria are clear, you know what you’ll do or won’t do. That is, you know everything is clear. You are also aware what you won’t do”*, while Demet, another teacher candidate, reported that *“...so we saw what criteria we’ll use, and we tried to do our homework accordingly. When we know the criteria, we can produce better works. Well, you have the criteria in hand. When we prepare something according to these criteria, we can do better.”*

Ahmet, one of the three teacher candidates who pointed out that the teacher and the students should determine the evaluation criteria together for the use of a scoring rubric in the evaluation of products in the course of ITMD, stated that *“...we set the evaluation criteria. We all discussed these criteria together. There were certain things that we*

wanted to add or change. We did this through discussions. That's, as I said, that's what should be done in all educational settings or in most courses....”

Emel, a candidate teacher who emphasized that the student can predict his/her own score with the help of a scoring rubric, reported that “... students will be able to guess their scores roughly with the help of the evaluation criteria in their hand....”

The teacher candidates reported their views about the use of a scoring rubric for the evaluation of their products in the course of ITMD stating that teacher candidates will prepare their products better if they know the evaluation criteria in advance, that they will prepare the evaluation criteria together with the teacher, and that knowing the evaluation criteria in advance will help students predict their scores. In this respect, it could be stated that involvement of students into the evaluation process will help students evaluate themselves and increase their motivation in the course.

5. Conclusion and Suggestions

In this study which aimed at determining the views of teacher candidates about the use of a scoring rubric, an alternative assessment approach, for the evaluation of the products of teacher candidates in the course of ITMD, all the teacher candidates agreed that it would be better to use a scoring rubric. In this respect, in line with the constructivism theory, the teacher candidates emphasized the importance of the evaluation methods which focus on the process and which increase student participation. In addition, the teacher candidates reported their reasons for the use of the evaluation methods as receiving feedback, knowing the evaluation criteria in advance, and adding student views into the criteria. The teacher candidates also reported their views about the use of a scoring rubric for the evaluation of their products in the course of ITMD stating that knowing the evaluation criteria in advance will help students prepare their products accordingly, that students will prepare the evaluation criteria together with the teacher, and that knowing the criteria in advance will help students predict their scores. In this respect, it could be stated that the teacher candidates believed the participation of students in the evaluation process will help students evaluate themselves and increase their interest in the course.

Depending on the findings of the present study, the following suggestions could be put forward: (1) Alternative evaluation approaches could also be applied to the evaluation of student products in other courses besides ITMD. (2) In addition to the involvement of the students in the evaluation process, peer-evaluation can also be used while determining the criteria of a scoring rubric. (3) Quantitative research could be conducted regarding the evaluation of student products.

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