Motivation and Assessment:

The Impact of Choice on Motivation in Classroom Assessments

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Introduction

Our research examined the role of assessment on student’s motivation. Furthermore, does choice of assessment affect student’s motivation to complete the assessment task? Students selected from several forms of assessment, including traditional paper-based tests and assessments utilizing modern technology.

Students tend to learn more and enjoy assessments when they are project or performance based rather than traditional paper-and-pencil based assessments. Often, when faced with a pencil and paper test, students will use rote memorization to pass the assessment. After the assessment, the material is rarely retained in a meaningful manner, due to the lack of relevancy to real life experiences. This results in less transfer of the material to other experiences. Without motivation, student engagement in meaningful learning is decreased, preventing them from carrying the information past the classroom.

Career and Technical Educators (CTE) must find ways to motivate students to complete tasks and transfer knowledge to real-world experiences. Furthermore, educators must assist in preparing students for the Standards of Learning (SOL) tests completed each year. Educators are now forced to “teach to the test,” which often results in lack of motivation by the students as well as the teachers. The discovery of how to make learning meaningful and motivate students to achieve success will help make education more enjoyable and strengthen the educational experience. By giving students choices and allowing them to play a role in their assessment, educators may be able to increase motivation to learn the content.

Context

This action research project was conducted at two locations: Pulaski County High School Agricultural Education Department, Pulaski County, Virginia and Chantilly High School Marketing Department in Fairfax County, Virginia.

Pulaski County High School is located in Dublin, Virginia with approximately 1500 hundred students. It is the sole high school for Pulaski County. The agricultural education department consists of four teachers, who teach general agriculture, horticulture, small animals, small engines and welding, and equine science. Every freshman is required to enroll in at least one Career and Technical Education course.

Chantilly High School is located in Fairfax County, Virginia with approximately 2,800 students. The marketing education program offers classes in Introduction to Marketing, Hospitality Management 1 and 2, Fashion Marketing 1 and 2, Marketing 1, Advanced Marketing, Sports and Entertainment Marketing, and Advanced Sports and Entertainment Marketing.
This research was conducted during the 2009-2010 school year in the Introduction to Marketing class at Chantilly High School and in Horticulture/Greenhouse Plant Production and Management at Pulaski High School. Class size was 30 and 20 students respectively.

**Literature Review**

Assessments are a necessary practice in the classroom. Typically, the teacher dictates assessments. Types of traditional assessment include paper-based assessments, such as multiple choice, true/false, and short answer. These types of evaluations provide little motivation for the student, which often results in rote memorization of the material to achieve the desired results on the test (Segers, Nijhuis, & Gijselaers, 2006). In addition, standardized tests required under No Child Left Behind do not motivate students and teachers (Stiggins, 1999). Studies have shown that meaningful learning does not occur; however schools continued to test students on the ability to memorize facts (Dopplet, 2003).

However, some researchers showed that multiple choice exams can be just as effective in providing students with meaningful learning, if used correctly (Struyven, Dochy, Janssens, Schelfhout, & Gielen, 2006). The type of assessment that an instructor employs requires careful consideration (Struyven et al., 2006). Teachers must exercise good practice in assessment of student performance, utilizing those that match the purpose of the assessment and the intended outcome of instruction (Struyven et al., 2006).

Furthermore, students cannot transfer skills to life after high school (Dopplet, 2003). In order for this to occur, assessment task should involve processes that go beyond recognizing and recalling information and allow students to utilize a wide range of cognitive processes, thus providing increased transfer of knowledge (Mayer, 2002). Reorganization and recall have a place in assessment, but higher-level thinking must be incorporated into assessment for increased transfer (Mayer, 2002). When students are engaged in higher-level cognitive processes, such as projects and performance based assessments, they are more likely to demonstrate a through understanding, integration, and application of the context knowledge (Nijhuis, J, et al., 2006).

How can teachers use assessment to motivate students to learn the material in a more meaningful way? Researchers showed that some students react positively to free choice on assessments, allowing for less structure by the teacher and more student directed methods (Stefanou, 2003). These researchers showed that a mastery climate, when students are interested in increasing their competencies and believe in the effects of effort, is fostered by tasks that involve variety, novelty, diversity, and interest (Stefanou, 2003). Tests should be meaningful and therefore hold justification for student engagement (Stefanou, 2003). Brookhart and Durkin (2003) also showed that performance based assessment are linked with mastery and performance goals, thus allowing the student to employ several sources of motivation at one time. Students enjoy having control over the process and/or product of an assessment (Stefanou, 2003). This encourages students to develop and use self-management as well as self-monitoring their skills and utilizing effective learning strategies (Stefanou, 2003).
Students engaged in active learning play a dynamic role in constructing their own knowledge (Dopplet, 2003). Piaget used the analogy that students are like a scientist, searching for meaning rather than accepting the world for what it is (Dopplet, 2003). Teachers may give student centered assessments, which allows students to free untapped motivation, resulting in greater academic success (Stiggins, 1999). Furthermore, these assessments encourage students to learn from their mistakes during the development process (Stiggins, 1999). One way to utilize student-centered assessment is by using authentic projects (Dopplet, 2002). Projects give students self-esteem and personal responsibility, which boosts their self-image and motivates them to succeed (Dopplet, 2003).

When teachers integrate projects into their curriculum, a student can satisfy their need for creativity (Peterson, & Harrison, 2005; Doppelt, 2002). Creativity can be fostered through challenges, various resources, the educational environment, atmosphere, and technology (Peterson, & Harrison, 2005). Student achievement can be improved through the integration of technology in the classroom, which helps them to overcome cognitive and effective difficulties (Doppelt, 2002; Dopplet, 2003). Students can utilize written materials, video materials, computer files, drawings, models, and pictures to help question, analyze, synthesize, problem solve, and create new ideas for new projects (Doppelt, 2002). Moreover, effective performance evaluations allow students to feel ownership of the task and feel that tasks are clearly important and worthwhile (Brookhart & Durkin, 2003). Additionally, when students are assessed using student-involved methods, there has been a positive correlation with improved standardized test scores (Stiggins, 1999).

Research Methods and Procedure

After teaching the first unit, students initially took a traditional paper and pencil assessment on March 9, 2010 in the “Introduction to Marketing” class at Chantilly High School and March 14, 2010 in the “Greenhouse Production Management and Management/Horticultural Science” class at Pulaski County High School. This examination included multiple choice, true and false, and short answer questions. Students were allowed to submit two questions for possible use on the exam.

Following the second unit, students chose from three options. These options included PowerPoint with a presentation, a video demonstrating the topics covered, and Electronic scrapbook with a presentation. Students assisted in the design of the rubrics for each assessment, including some input on topics covered and the weight of each task that needed to be completed. The teachers provided appropriate assistance in using technologies. Students completed these assessments on March 23, 2010 in the marketing class and on March 29, 2010 in the agriculture class.

Students completed a questionnaire after the first and second assessment. The questionnaires were submitted anonymously. This prevented students from feeling that they were being judged or assessed by the instructor.
The questionnaire included the following questions:

- A Likert Scale rating motivation from one to five with five being the highest
- How motivated were you to complete this assessment?
- How well do you think you did on this assessment?
- What motivated you to take this assessment?
- Do you think you can apply the material you’ve learned during this assessment to future tasks?
- If you could change something about this assessment, what would it be?
- Overall, how much did you enjoy this assessment?

Data analysis for the second assessment included frequency of assessment choices as well as mean, standard deviation, and range of scores for likert-type questions. In addition, theme analysis of open-ended questions was implemented. Quantitative statistics were used to determine which assessment the students chose more frequently. In addition, general statistics were used to determine the level of motivation, as indicated by the Likert scale. One downfall of this research is that it was conducted over several units reducing the effectiveness of the data.

**Results**

An analysis of the data showed that there was a clear distinction between the first assessment and the second assessment. The results of questionnaire rating scale are shown in Table 1.1. On a scale of 1-5, with 1 as the lowest and 5 as the highest, the mean of the first questionnaire was 2.255 out of 5. The mode was determined to be 2 out of 5. Students showed very little motivation to complete the assessment. However, on the second assessment, where students were given a choice, the mean was 4.346 out of 5. The mode of this assessment was determined to be 4.

**Table 1.1- Questionnaire Rating**

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<th>Traditional Assessment</th>
<th>Choice-Based Assessment</th>
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<tr>
<td>Mode</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Mean</td>
<td>2.255</td>
<td>4.346</td>
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After coding the initial questionnaires, we found that student responses centered on dissatisfaction with the test, grades, and lack of motivation and enjoyment for taking the test. Students often cited that they did not like taking the test, which provided them with little motivation to study and prepare for the assessment. Secondly, when asked about motivation, students often cited grades as the most motivating factor for taking the assessment. Grades seemed to be a large motivational factor. After taking the assessment, students often thought they did poorly. Additionally, over 50% of the students did not see any relevance to the future, as indicated by the questionnaire. When asked if they could change anything about the
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assessment, most answers focused on not giving assessments in the future. They did, however, appreciate being able to submit two questions for possible use on the exam.

The coding for the second assessment showed much more motivation from students, more excitement and enjoyment, and their dissatisfaction with presentations. Students enjoyed being able to choose their form of assessment format, which enhanced overall motivation and enjoyment for the activity. On this assessment, most students indicated that they believed they did very well on the assessment. Furthermore, over 80% of the students felt that they could apply this information to other situations and teach other people. When asked what the students would change, many responses again included not giving assessments at all, just as before. This, however, was not a common response. Many students indicated that they would prefer that the assessments were completed in groups.

Secondly, we analyzed the preference of students for the various choices provided. Students overwhelmingly chose PowerPoint, as shown in Figure 1.1. PowerPoint was chosen 3 out of 4 times, followed by the electronic scrapbooking software, and lastly by video.

![Figure 1.1: Students Assessment Preference](image)

**Conclusion**

Students reacted positively to choice on assessment. The increase in the mean and mode on the second questionnaire indicated a positive impact on student motivation. Furthermore, student’s felt that they were better able to predict their performance on the assessment when they were allowed to choose compared to the traditional pencil and paper based assessment. If an instructor wants to increase motivation in students, the incorporation of project-based assessments can help accomplish this task. Much of the current research examined backs up this conclusion.

Researchers showed that technology enhances student learning (Doppelt, 2002; Dopplet, 2003). However, this action research project found that students predominately choose PowerPoint over the other technologies offered. We believe this resulted from
student’s comfort levels with PowerPoint, since it utilized in other courses. Students chose the technology they felt most comfortable with, compared with newer technologies such as videos and Electronic scrapbooks.

In addition, students felt like they did their projects well and learned more through the project based assessment. However, on the paper and pencil-based assessments, students were not motivated to study and only studied to take the test, without considering the use of this knowledge in the future. This shows that students only learn enough to pass the assessment and often engaged in rote memorization. However, meaningful learning was facilitated through the project-based assessments, as indicated by the increase in motivation. Therefore, we suggest that teachers utilize more project-based assessments and provide students with the opportunity to choose assessment types.

Although, it is unrealistic to say that every assessment should be project based, due to the time and preparation needed, projects based assessments show effectiveness in motivating students. This research concentrates on Career and Technical Education classes, but it has application in many other classes. Students often learn more and enjoy project based assessments compared to paper and pencil based assessments. Students, as found, are more likely to apply the information they learned through project-based assessments than paper and pencil based assessments using multiple choice, true/false, and short answer. However, the assessment type is a decision that the instructor should make based on their intended end result and time constraints.
References


