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**The Relationship Between
Students' Perceptions of the
Classroom Assessment Tasks and
Academic Achievement**

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The Relationship Between Students' Perceptions of the Classroom Assessment Tasks and Academic Achievement

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Abstract

Of increasing interest to educators is the effect of classroom assessment on student achievement. This study aimed at investigating the relationship between students' perceptions of their classroom assessment tasks and academic achievement. Participants were 383 students randomly selected from the second cycle of the basic education grades at Muscat public schools in Oman. The study employed a descriptive correlational research design. Students' perceptions of the assessment tasks were measured using Dorman and Knightley's (2006) Perceptions of Assessment Tasks Inventory (PATI). Academic achievement was operationally defined as the overall grade obtained by the student in their current class at the end of the semester. Results showed that students tended to hold positive perceptions of their classroom assessment tasks in terms of congruence with planned learning, authenticity, student consultation, transparency, and diversity. A standard multiple regression analysis revealed that congruence with planned learning, student consultation, and transparency contributed significantly to the variance explained in the students' academic achievement. Authenticity and diversity were not associated with academic achievement. Implications for instruction and assessment as well as recommendations for future research were discussed.

Keywords: Assessment Tasks; Assessment Environment; Classroom Assessment; Students' Perceptions; Educational Assessment; Academic Achievement

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Introduction

Classroom assessment refers to the process used in the classroom by the teacher to obtain information about students' performances on assessment tasks (Gronlund, 2006). The classroom assessment tasks are typically created by the teacher. Educators have long recognized that the assessment tasks used in the classroom communicate important messages to students about the value, importance, and usefulness of the tasks (Black & Wiliam, 1998; Linnenbrink & Pintrich, 2001, 2002; McMillan & Workman, 1998). The characteristics of the assessment tasks as perceived by students are central to the understanding of student academic achievement (Alkharusi, 2008, 2010, 2011; Dorman, Fisher, & Waldrip, 2006; Watering, Gijbels, Dochy, & Rijt, 2008). Hence, students' perceptions of the assessment tasks should deserve recognition and investigation.

Of increasing interest to educational assessment community is the effect of classroom assessment on academic achievement. In this regard, Brookhart (1997) developed a theoretical framework for the role of classroom assessment in student achievement. In this framework, classroom assessment environment refers to the overall sense or meaning that students make out of the various aspects of the classroom assessment tasks. Brookhart and her colleagues pointed out that each classroom has its own "assessment 'character' or environment" perceived by the students and springs from the teacher's assessment practices (Brookhart, 2004, p. 444; Brookhart & Bronowicz, 2003). Brookhart (1997) postulated that students' perceptions of the classroom assessment tasks may influence their academic achievement. A number of studies have tested Brookhart's (1997) framework of classroom assessment and achievement (e.g., Alkharusi, 2011; Brookhart, 1995; Brookhart & DeVoge, 1999; Brookhart & Bronowicz, 2003; Rodriguez, 2004). However, research on which particular characteristics of the classroom assessment tasks as perceived by students would be most relevant to maximizing student academic achievement is still limited. This study attempted to fill this gap by examining the relationship between students' perceptions of the classroom assessment tasks and academic achievement.

Research has shown that classroom assessment tasks can be evaluated from students' perspectives along a variety of dimensions. For example, based on a sample of 658 science students in English secondary schools, Dorman and Knightley (2006) developed a 35-item inventory measuring students' perceptions of the assessment tasks along five dimensions: congruence with planned learning, authenticity, student consultation, transparency, and diversity. Congruence with planned learning refers to the extent to which students perceive the assessment tasks align with the subject's learning objectives and activities. Authenticity refers to the extent to which students perceive the assessment tasks are related to their everyday living. Student consultation refers to the extent to which students are involved and consulted in the assessment process. Transparency refers to the extent to which students are clearly informed about the purposes and forms of the assessment. Diversity

refers to the extent to which students perceive that they can complete the assessment tasks at their own speed.

Dorman et al. (2006) provided evidence that assessment tasks with low degrees of congruence with planned learning, authenticity, and transparency could have a detrimental effect on the confidence of students in successfully performing academic tasks. In their study of upper secondary Bruneian students' perceptions of assessment tasks, Dhindsa, Omar, and Waldrip (2007) found that although students perceived that their classroom assessment tasks aligned with what they learned in the classes and had transparency, there were low levels of student consultation, authenticity, and diversity. Both Dorman et al. (2006) and Dhindsa et al. (2007) called for more research identifying perceived characteristics of the assessment tasks supportive of a classroom environment that is conducive to increased student learning. In response to this call, the current study aims at examining the link between classroom assessment and academic achievement.

Purpose of the Study and Research Questions

This study aimed at investigating the relationship between students' perceptions of their classroom assessment tasks and academic achievement. The study was expected to illustrate which perceptions of the assessment tasks would be most relevant to improving students' academic achievement. Hence, the study was guided by the following research questions:

1. How do students perceive their classroom assessment tasks?
2. How much of the variance in academic achievement can be explained by students' perceptions of the classroom assessment tasks?

Methods

Participants and Procedures

The participants in this study were 383 Omani students (240 females and 143 males) randomly selected from the second cycle of the basic education grades at Muscat public schools in Oman. Their ages ranged from 12 to 17 years with an average of 15 and a standard deviation of 1.23. Permission was requested from Ministry of Education and school principals to collect data from the students during a regular scheduled class meeting in Spring 2012. The students were informed that a study about their perceptions of the classroom assessment tasks is being conducted. They were informed that they were not obligated to participate in the study, and if they wished to participate, their responses would remain anonymous and confidential. They were also told that participation in the study would not influence their grades or relations with the teacher in any way.

Students who wished to participate were asked to respond to a self-report questionnaire, which will be described in a later section of this study. It

contained two main sections about basic information in terms of gender, age, and self-reported overall grade obtained at the end of the Fall 2011 semester, and perceptions of the assessment tasks. The questionnaire was administered by the assistant researchers during a scheduled class meeting. The administration took about one class period, and was preceded by a brief set of instructions about how to complete the questionnaire.

Instrument

The instrument used was a self-report questionnaire with two main sections: Basic information and perceptions of assessment tasks. The questionnaire items were subjected to a content validation process done by a panel of seven experts in the areas of educational measurement and psychology from Sultan Qaboos University and Ministry of Education. They were asked to judge the clarity of wording and appropriateness of each item for the use with the targeted participants and its relevance to the construct being measured. Their feedback was used for refinement of the items. Internal consistency reliability was established using Cronbach's alpha. Following is a description of the two sections.

Basic information. The basic information of the questionnaire covered gender, age, and self-reported overall grade obtained in the current class at the end of the Fall 2011 semester.

Perceptions of assessment. This section of the questionnaire included 35 items from Dorman and Knightley's (2006) Perceptions of Assessment Tasks Inventory (PATI). The items measure students' perceptions of assessment tasks in terms of congruence with planned learning (7 items; $\alpha = .73$; e.g., "I am assessed on what the teacher has taught me"), authenticity (7 items; $\alpha = .75$; e.g., "My assessment tasks in this class are meaningful"), student consultation (7 items; $\alpha = .74$; e.g., "I am asked about the types of assessment I would like to have in this class"), transparency (7 items; $\alpha = .85$; e.g., "I am told in advance when I am being assessed"), and diversity (7 items; $\alpha = .63$; e.g., "I am given a choice of assessment tasks"). Responses were obtained on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Alkharusi (in press) tested the validity and reliability the PATI for use with Omani students. As reported by Alkharusi (in press), internal consistency coefficients for the measures of congruence with planned learning, authenticity, student consultation, transparency, and diversity were .71, .72, .65, .66, and .63 as indicated by Cronbach's alpha, respectively. The score reliabilities of the current sample seem comparable to those reported by Dorman and Knightley (2006) and Alkharusi (in press). Specifically, internal consistency coefficients in this study for the measures of congruence with planned learning, authenticity, student consultation, transparency, and diversity were .71, .72, .66, .76, and .73 as indicated by Cronbach's alpha, respectively. Each measure was constructed by averaging its corresponding items.

Data Analysis

In relation to the aforementioned purpose of the study, the following statistical procedures were employed:

1. Means and standard deviations were computed to examine students' perceptions of the assessment tasks.
2. Pearson-product moment correlation coefficients were computed to examine bivariate relationships between student's perceptions of the assessment tasks and grades.
3. A standard multiple regression analysis was conducted to examine the collective relationship between students' perceptions of the assessment tasks and academic achievement.

Results

Descriptive Statistics

Table 1 presents the means and standard deviations of the students' perceptions of the assessment tasks. As shown in Table 1, the subscales' means were above the scale midpoint. These results indicated that overall students tended to hold on average positive perceptions of their classroom assessment tasks in terms of congruence with planned learning, authenticity, student consultation, transparency, and diversity.

Bivariate Relationships

Table 2 present the bivariate correlations between perceptions of the assessment tasks and students' grades. As shown in Table 2, there were statistically significant positive relationships between students' grades and perceptions of the assessment tasks in terms of congruence with planned learning (.33), authenticity (.21), and transparency (.28). However, students' grades were not correlated significantly with perceptions of the assessment tasks in terms of student consultation and diversity. Perceptions of the assessments correlated positively and significantly with each other with correlation coefficients ranging between .47 and .69.

Regression Analysis

Table 3 summarizes results of the regression analysis of academic achievement on perceptions of the assessment tasks. Results showed that the multiple $R^2 = .21$ (adjusted $R^2 = .20$) was statistically significant, $F(5,377) = 19.731$, $p < .001$, indicating that perceptions of the assessment tasks explained 21% of the variance in students' academic achievement. Congruence with planned learning ($\beta = .31$, $p < .001$) and transparency ($\beta = .29$, $p < .001$) were positively related to academic achievement. Student consultation was negatively related to academic achievement ($\beta = -.37$, $p < .001$). However, authenticity and diversity were not related to academic achievement after accounting for other perceived characteristics of the assessment tasks.

Discussion

Classroom assessment is a continual activity for teachers to enhance the quality of instruction and student learning (Brookhart, 1999). Past research has established a theory of the role of classroom assessment in student academic achievement (Alkharusi, 2011; Brookhart, 1995; Brookhart & DeVoge, 1999; Brookhart & Bronowicz, 2003; Rodriguez, 2004). This theory was based on students' perceptions of their classroom assessment environment which is typically created by the teacher through his or her classroom assessment practices (Brookhart, Walsh, & Zientarski, 2006). Both the theory and past research pointed to a conclusion that classroom assessment environment could contribute to student achievement. The present study extended previous research by identifying what perceptions of the classroom assessment tasks might relate in meaningful ways with student academic achievement.

The findings support the importance of the classroom assessment environment for student academic achievement. Specifically, the findings revealed that congruence with planned learning, student consultation, and transparency in the assessment process contributed significantly to the variance explained in student academic achievement. It was not surprising that congruence with planned learning and transparency associated positively with student academic achievement. Based on the assessment theory, the more students perceived that the assessment tasks are matched and related to the goals and objectives of the classroom instruction, the more effort they would expend that would then lead to increased success (Brookhart, 1997; McMillan & Workman, 1998). Also, when students were informed clearly about the purpose of the assessment tasks and the nature of the scoring criteria, they would be able to connect the requirements of the assessment to specific effort they can take to demonstrate a high level of academic achievement (Cauley & McMillan, 2010; McMillan & Workman, 1998).

Stiggins and Chappuis (2005) noted that involving students in the classroom assessment process helps students develop a sense of confidence which enhances their academic achievement. In the present study, although student consultation had no significant bivariate relationship with academic achievement, it had a negative relationship when it was included in the regression model. Also, although authenticity in assessment had a positive bivariate relationship with academic achievement, it did not correlate with the outcome when it was included in the regression model. There are two possible explanations for these findings. First, the relationships of student consultation and authenticity to academic achievement might be mediated by other psychological and contextual factors. Future research might consider the mediating effects of student motivational orientations and classroom variables on the relationship between student perceptions of the assessment tasks and academic achievement. Second, suppression might have occurred in the regression model. Specifically, authenticity served as a suppressor variable in the model because its presence enhanced the effect of student consultation on

the academic achievement. When authenticity was removed from the model, the regression weight of the student consultation decreased.

Based on the constructivist view of assessment and learning, authenticity and student consultation are essential elements for fostering student learning. When the assessment tasks are viewed as meaningful and related to student everyday life, students are likely to be involved in decision-making about their assessment and share responsibility for their learning (Dhindsa et al., 2007). However, the negative regression weight of the student consultation implies the need for more investigation on the ways used by the teachers in consulting students on the assessment.

The current findings were limited by the specific sample of students who were selected from Muscat educational governorate. Generalizability will be enhanced when selecting participants from all educational governorates in the country. However, the study has ecological validity because it presented findings related to the real classroom assessment, which has become the normal practice carried out by the students' usual teachers without imposing any artificial experimental conditions. The lack of causality as a result of the correlation analysis of this study does not prevent from informing improved classroom assessment practice. The present study provided evidence that for effective learning to occur, assessment tasks should be matched with the instructional objectives and should be clearly defined to the students in terms of purposes, forms, and scoring criteria. Also, the study supports the importance of considering students' perceptions of their classroom assessment tasks for understanding student achievement-related outcomes. However, both student and teacher reports of the classroom assessment context are informative. Future research utilizing classroom observations and interviews with both students and teachers may help clarify these issues.

References

- Alkharusi, H. (2008). 'Effects of classroom assessment practices on student's achievement goals.' *Educational Assessment*, 13: 243-266.
- Alkharusi, H. (2010). 'A multilevel linear model of teachers' assessment practices and students' perceptions of the classroom assessment environment.' *Procedia Social and Behavioral Sciences*, 5: 5-11.
- Alkharusi, H. (2011). 'Development and datametric properties of a scale measuring students' perceptions of the classroom assessment environment.' *International Journal of Instruction* 4: 105-120.
- Alkhrausi, H. (in press). 'Canonical correlational models of Students' perceptions of assessment tasks motivational orientations and learning strategies.' *International Journal of Instruction*.
- Black, P., & Wiliam, D. (1998). 'Inside the black box: Raising standards through classroom assessment.' *Phi Delta Kappan*, 80: 139 – 148.
- Brookhart, S. M. (1995). 'Effects of the classroom assessment environment on achievement in mathematics and science.' (ERIC Document Reproduction Service No. ED382637)

- Brookhart, S. M. (1997). 'A theoretical framework for the role of classroom assessment in motivating student effort and achievement.' *Applied Measurement in Education*, 10: 161 – 180.
- Brookhart, S. M. (1999). *The art and science of classroom assessment: The missing part of pedagogy*. ASHE-ERIC Higher Education Report (Vol. 27, No. 1). Washington, DC: The George Washington University, Graduate School of Education and Human Development.
- Brookhart, S. M. (2004). 'Classroom assessment: Tensions and intersections in theory and practice.' *Teachers College Record*, 106: 429 – 458.
- Brookhart, S. M., & Bronowicz, D. L. (2003). 'I don't like writing. It makes my fingers hurt': Students talk about their classroom assessment.' *Assessment in Education: Principles, Policy & Practice*, 10: 221 – 242.
- Brookhart, S. M., & DeVoge, J. G. (1999). 'Testing a theory about the role of classroom assessment in student motivation and achievement.' *Applied Measurement in Education*, 12: 409 – 425.
- Brookhart, S. M., Walsh, J. M., & Zientarski, W. A. (2006). 'The dynamics of motivation and effort for classroom assessment in middle school science and social studies.' *Applied Measurement in Education*, 19: 151-184.
- Cauley, K. M., & McMillan, J. H. (2010). 'Formative assessment techniques to support student motivation and achievement.' *The Clearing House*, 83: 1 – 6.
- Dhindsa, H. S., Omar, K., & Waldrip, B. (2007). 'Upper secondary Bruneian science students' perceptions of assessment.' *International Journal of Science Education*, 29: 1261 – 1280.
- Dorman, J. P., Fisher, D. L., & Waldrip, B. G. (2006). 'Classroom environment, students' perceptions of assessment, academic efficacy and attitude to science: A lisrel analysis.' In D. Fisher & M. S. Khine (Eds.), *Contemporary approaches to research on learning environment: Worldviews* (pp. 1 – 28). Australia: World Scientific Publishing.
- Dorman, J. P., & Knightley, W. M. (2006). 'Development and validation of an instrument to assess secondary school students' perceptions of assessment tasks.' *Educational Studies*, 32: 47 – 58.
- Gronlund, N. E. (2006). *Assessment of student achievement* (8th ed.). Boston: Pearson.
- Linnenbrink, E. A., & Pintrich, P. R. (2001). 'Multiple goals, multiple contexts: The dynamic interplay between personal goals and contextual goal stresses.' In S. Volet & S. Jarvela (Eds.), *Motivation in learning contexts* (pp. 251 – 270). Amsterdam: Pergamon.
- Linnenbrink, E. A., & Pintrich, P. R. (2002). 'Motivation as an enabler for academic success.' *School Psychology Review*, 31: 313 – 327.
- McMillan, J. H., & Workman, D. J. (1998). '*Classroom assessment and grading practices: A review of the literature.*' (ERIC Document Reproduction Service No. ED453263)
- Rodriguez, M. C. (2004). 'The role of classroom assessment in student performance on TIMSS.' *Applied Measurement in Education*, 17: 1 – 24.
- Stiggins, R., & Chappuis, J. (2005). 'Using student-involved classroom assessment to close achievement gaps.' *Theory Into Practice*, 44: 11 – 18.
- Watering, G., Gijbels, D., Dochy, F., & Rijt, J. (2008). 'Students' assessment preferences, perceptions of assessment and their relationships to study results.' *Higher Education*, 56: 645 – 658.

Table 1. Means and Standard Deviations of the Perceptions of the Assessment Tasks (N = 383)

Variable	M	SD
Congruence with planned learning	3.84	.66
Authenticity	3.78	.66
Student consultation	3.48	.67
Transparency	3.96	.64
Diversity	3.44	.73

Table 2. Intercorrelations Between Perceptions of the Assessment Tasks and Grades (N = 383)

Variable	2	3	4	5	6
1. Congruence with planned learning	.69**	.47**	.66**	.53**	.33**
2. Authenticity		.50**	.59**	.60**	.21**
3. Student consultation			.58**	.62**	-.06
4. Transparency				.48**	.28**
5. Diversity					.06
6. Grades					-

** $p < .01$.

Table 3. Summary of Standard Regression Analysis of Academic Achievement on Perceptions of the Assessment Tasks (N= 383)

Variable	B	SE B	β	t
Congruence with planned learning	.59	.14	.31	4.32***
Authenticity	.06	.13	.03	.42
Student consultation	-.71	.12	-.37	-5.76***
Transparency	.56	.14	.29	4.17***
Diversity	-.04	.11	-.02	-.33
R^2			.21	
F			19.731	

*** $p < .001$