Research Note

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Initial Use of the Perceptions of Assessment Tasks Inventory (PATI) in English Secondary Schools

As in most aspects of school life, students hold clear views on how they are assessed. Do assessments tasks connect with the learning activities of the classroom? Do the tasks relate to real-life situations? Despite these types of questions, few studies have ascertained systematically students' perceptions of assessment tasks. This article reports the results of a preliminary English study of students' perceptions of assessment tasks. In particular, this article introduces the Perceptions of Assessment Tasks Inventory (PATI: Dorman & Knightley, 2006) and uses data collected with it to group and describe students who hold similar views on assessment tasks.

According to the OECD (2005), assessment is integral to the education process, with formative assessment shown to promote high student performance, equity in outcomes, and learning-to-learn skills. Assessment is also crucial to informing teachers about their work. Importantly, assessment that is genuinely integrated with teaching and learning enhances classroom teaching (Shepard, 2000). Despite these pronouncements, much school-based assessment remains rooted in an *assessment of learning* rather than an *assessment for learning* paradigm, an issue that has concerned the Assessment Reform Group (2002) in the United Kingdom.

Assessment is often used by teachers and educational authorities to indicate the perceived quality of teaching. There is a belief that if the assessment process is improved, then the resultant learning will improve (Black & Wiliam, 1998). Historically, teachers have received substantial levels of supportive educational advice on assessment practices (Harlen, 1998). By contrast, ideologically-driven politicians and educational bureaucrats have politicized assessment with many Western countries implementing widespread standardized testing procedures. In schools in the UK and Australia today, benchmarking, testing, and reporting to authorities assume great importance.

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Against this backdrop, the reality for students is one of almost complete exclusion from assessment deliberations. Little contemporary evidence exists to support the view that students are genuinely involved in decision-making about their assessment tasks. Yet the interest and importance placed on assessment tasks by students are important in explaining their motivation to accomplish these tasks (Brookhart & Bronowicz, 2003; McMillan, 2000). There has been a substantial amount of research into types of assessment, but little research into students' perceptions of assessment (Black & Wiliam, 1998; Crooks, 1988). This article reports an initial probe into students' perceptions of assessment tasks.

Research Design

The aim of this study was to identify relatively homogeneous groups of students based on their perceptions of assessment tasks. A sample of 658 (314 male, 344 female) students from grades 9 and 10 science classes in 11 schools in Essex, England responded to the Perceptions of Assessment Tasks Inventory (PATI). Details on the PATI's development are reported in Dorman and Knightley (2006). It consists of five 7-item scales assessing Congruence with Planned Learning, Authenticity, Student Consultation, Transparency, and Diversity. Each item employs a 4-point Likert response format. Table 1 shows descriptive information and data for these scales based on the Essex sample.

Table 1
Descriptive Information for Five PATI scales

Scale	Scale Description	Sample Item	M	SD	Cronbach α
Congruence with planned learning	The extent to which assessment tasks align with the goals, objectives and activities of the learning program.	My science tests are a fair indicator of what my class is trying to learn.	22.15	2.67	.73
Authenticity	The extent to which assessment tasks feature real life situations that are relevant to the learner.	I am asked to apply my learning to real life situations.	21.16	2.92	.75
Student Consultation	The extent to which students are consulted and informed about the forms of assessment tasks being employed.	I am asked about the types of assessment I would like to have in science.	21.25	3.12	.74
Transparency	The extent to which the purposes and forms of assessment tasks are well-defined and clear to the learner.	I know what is needed to successfully accomplish a science assessment task.	22.90	3.39	.85
Diversity	The extent to which all students have an equal chance at completing assessment tasks.	I complete assessment tasks at my own speed.	19.63	3.24	.63

Scale internal consistency reliabilities (Cronbach coefficient α) were satisfactory. Scale means indicated a moderate ceiling effect.

Hierarchical cluster analysis was performed on the data. This analysis was designed to establish clusters of respondents based on their perceptions of assessment tasks. To verify that the selected cluster solution separated the cluster groups, a multivariate analysis of variance (MANOVA) was performed on the data using the five PATI scales as dependent variables and cluster membership as the grouping variable.

Results

Dendograms based on hierarchical cluster analysis suggested a four-cluster solution. These four homogeneous groups (Clusters A, B, C, and D) contained 151, 167, 187, 153 respondents respectively. Figure 1 shows cluster mean scores for each scale. Cluster D students had the most positive perceptions of assessment tasks. On average, these 153 students scored higher than other students on all five PATI scales. By contrast, Cluster B students held the lowest perceptions on all five scales. Clusters A and C scores were between Clusters D and B on all five scales. However, Cluster A scored higher than Cluster C on all scales except Diversity.

A MANOVA was performed on the data using the five PATI scales as dependent variables and cluster membership as the grouping variable. This MANOVA was significant with Wilks' lambda of 0.13 [$F(15, 1{,}795)=112.56$ ($p<.001$)]. Univariate F tests for the effect of cluster grouping on each PATI scale yielded the following results: Congruence with Planned Learning, $F(3, 654)=103.52$ ($p<.001$); Authenticity, $F(3, 654)=140.01$ ($p<.001$); Student Consultation, $F(3, 654)=219.07$ ($p<.001$); Transparency, $F(3, 654)=306.49$ ($p<.001$) and
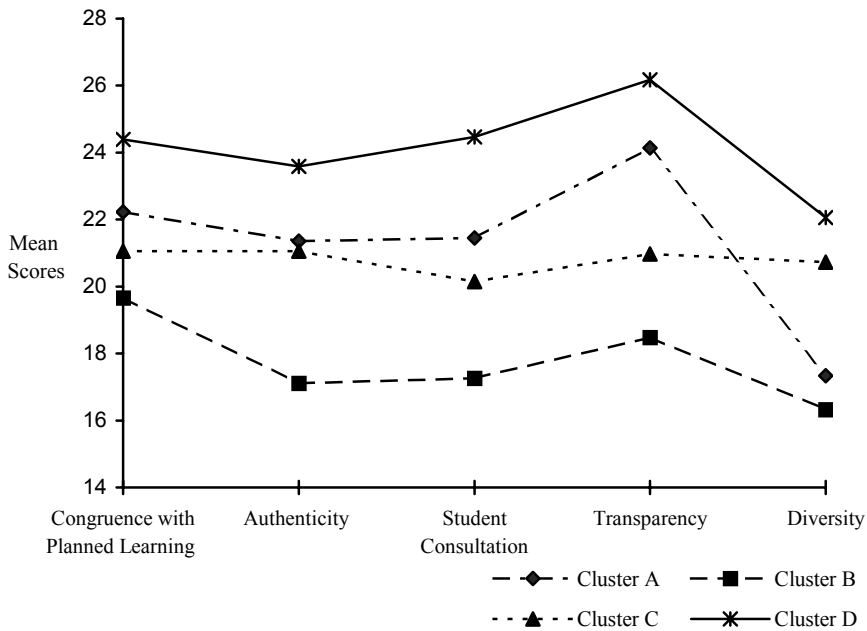

Figure 1. Mean scores for four clusters of students for five PATI scales.

Diversity, $F(3, 654)=158.37$ ($p<.001$). These analyses confirmed these four distinct clusters.

To establish whether there were any particular characteristics (male/female; grade 9, grade 10) of the students who held positive perceptions of assessment tasks, it was necessary to focus on Cluster D membership. Cluster D consisted of 73 boys (30 grade 9, 43 grade 10) and 80 girls (35 grade 9, 45 grade 10). These proportions were consistent with the full sample of 314 boys (139 grade 9, 157 grade 10) and 344 girls (138 grade 9, 192 grade 10). A chi square test indicated no statistically significant difference between the observed proportions for Cluster D and expected proportions based on the full sample: χ^2 (3, $n=153$)$=1.24$ ($p=.75$).

Concluding Remarks

This article reports the initial use of the Perceptions of Assessment Tasks Inventory with English secondary school science students. This research is currently being extended to a cross-national study involving Australian schools. One direction for further research is to use the results of cluster analyses to identify students who hold very positive or very negative perceptions of assessment tasks. Intensive case-study research with these students could facilitate a greater understanding of the reasons underlying students' perceptions of assessment tasks. Another possible research area would be to study links between perceptions of the classroom psychosocial environment and assessment tasks. Research with the PATI should be conducted in other curriculum areas with other grade levels and in other countries.

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