Parents' and teachers' perceptions of standards-based and traditional report cards

Gerry M. Swan · Thomas R. Guskey · Lee Ann Jung

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Abstract The purpose of this study was to determine parents' and teachers' perceptions of standards-based and traditional report cards. Participants included 115 parents/guardians of students from a single, midsize school district that had implemented a standards-based report card. During the first two marking periods, all parents/guardians received both a traditional report card in which teachers assigned a single overall grade for each subject and a standards-based report card that included marks for individual standards within subjects. After midyear, parents were asked to complete a survey that asked which form they preferred and the reasons for their preference. Three hundred and eighty three teachers from two nearby midsize school districts considering the adoption of the same standards-based report card completed a similar survey. Parents overwhelmingly preferred the standards-based form. The teachers considering the adoption of a standards based report card were positive overall, but significantly less than the parents who had received them.

Keywords Reporting student achievement · Grading · Communication

1 Introduction

Largely as a result of the No Child Left Behind legislation (U.S. Congress 2001), departments of education in the USA have developed large-scale accountably assessment programs to measure students' levels of proficiency. Accompanying their assessment programs, nearly all states have developed common *school report cards*, based on state standards, for disseminating information to the public about school quality (Deslandes et al. 2009; Dingerson 2001). Yet in every state, schools have been left

G. M. Swan (🖂)

Curriculum and Instruction, University of Kentucky, Lexington, KY, USA e-mail: gerry.swan@uky.edu

T. R. Guskey Educational Psychology, University of Kentucky, Lexington, KY, USA

on their own to develop standards-based student report cards to communicate information about the achievement and performance of individual students to parents, guardians, and others.

As schools move forward in their efforts to develop standards-based report cards, many face resistance on the part of both parents and teachers accustomed to more traditional reporting procedures (e.g., single percentage or letter grade per course report). Little is known, however, about the reactions of parents who have the opportunity to experience *both* traditional and standards-based report cards. Those provided that opportunity should be able to offer unique insights into the value of each type of reporting. In addition, little is known about the attitudes and beliefs of teachers facing the prospects of implementing a standards-based report card, what advantages they see, and what concerns they have.

This paper describes an exploratory study designed to gather information on parents' and teachers' perspectives on standards-based reporting. For two marking periods, each covering 9 weeks of the school year, parents in a midsize school district in a south-eastern state received both a traditional report card and a standards-based report card. On the traditional report card, teachers assigned a single overall percentage and letter grade for each subject. On the standards-based report card, teachers included marks for individual standards within each subject or course. Information also was gathered from teachers from two nearby, midsize school districts considering the adoption of the same standards-based report card. These teachers had not yet used the standards-based report card but knew their district was considering implementation.

2 Theoretical framework

Grades have long been identified by those in the measurement community as prime examples of unreliable measurement (Brookhart 1993; Stiggins et al. 1989). What one teacher considers in determining students' grades may differ greatly from the criteria used by another teacher (Cizek et al. 1996; McMillan et al. 1999). Even in schools where established grading policies offer guidelines for assigning grades, significant variation remains in the grading practices of individual teachers (Brookhart 1994; McMillan 2001).

This variation in grading has been brought to light in investigations of the discrepancy between students' grades and their performance on state accountability assessments (see Brennan et al. 2001; Conley 2000). Setting aside issues related to the arguable inadequacy and invalidity of state assessment results, such measures generally focus exclusively on academic or cognitive skills. When teachers assign grades, however, they generally combine achievement evidence with other sources of information related to students' behaviors, attitudes, work habits, attitudes, study skills, and effort. The result is a "hodgepodge grade" (Brookhart 1991; Cross and Frary 1996) that is impossible to interpret and rarely presents a true picture of students' academic proficiency (Guskey 2002).

Standards-based approaches to grading and reporting help remedy this problem for two reasons. First, they require teachers to base grades or marks on explicit learning criteria derived from the articulated standards. The resulting *standards-based grades* are considered fairer and more equitable by students and teachers alike (Kovas 1993). Second, they compel teachers to distinguish *product, process*, and *progress* criteria (Guskey 2006). Product criteria reflect students' academic achievement and performance (Friedman 1998; O'Connor 2002). They focus on what students know and are able to do at a particular point in time. Process criteria reflect how students reached their current level of proficiency or achievement. These criteria typically relate to students' work habits, class behaviors, or effort. Progress criteria are based on how much students gain from their learning experiences or how much improvement has been made. Other names for progress criteria include *learning gain, value-added learning*, and *education-al growth*. By providing separate grades or marks for product, process, and progress criteria, standards-based reporting clarifies the meaning of grades and offers a more accurate and informative depiction of students' performance in school.

For the past 5 years, all K-12 educators in Kentucky have focused instruction on the same standards for student learning, referred to as the Core Content Elements and Academic Expectations. These elements are currently being revised to align with the Common Core State Standards Initiative of the Council of Chief State School Officers (CCSSO) and the National Governors Association Center for Best Practices (2010, see http://www.corestandards.org/the-standards) In addition, all school districts in Kentucky take part in the same Commonwealth Accountability Testing System (CATS), which is also currently under revision. This system includes the Kentucky with severe to profound disabilities, the ACT, PLAN, and nonacademic components. Furthermore, all educators in this state receive the same reports of CATS results and are expected to use those results in similar ways.

Despite these many common requirements, each school in the state must develop its own student report card for communicating students' learning progress to parents, guardians, and others, based on those shared standards for student learning. This places a tremendous burden on school personnel responsible for reporting and report cards. Although these educators would like to align their reporting procedures with the standards and assessments that guide instructional programs, they typically lack the time and resources to do so. As a result, most schools systems persist in using reporting forms that are poorly aligned, inadequate, and ineffective. Those few schools that take up the task of revising their report card generally lack expertise in the development of effective and efficient standards-based reporting forms (see Stiggins 1993, 2008; Brookhart and Nitko 2008). As a result, they invariably encounter significant content, design, and implementation problems.

To help educators address this reporting dilemma, an initiative was launched in Kentucky to develop a common, statewide, standards-based student report card for reporting on the learning progress of individual students at all grade levels (K-12) in all schools. The project brought together educators from several diverse school districts in the state that had been working independently to develop an effective and efficient standards-based report card. Led by a team of researchers with expertise in grading and reporting practices, these educators worked together during an extended summer workshop to create two standards-based reporting forms: one for the elementary level, grades K-5, and another for the middle and high school levels, grades 6–12.

These report cards reduced the long lists of student learning standards typically outlined in the curriculum documents to a much smaller number (four to six) of clear and precisely worded reporting standards expressed in parent-friendly language. The number of standards used in reporting was reduced because previously gathered interview data had shown that most parents could make sense of up to six standards within a subject area, but more than six tended to overwhelm parents with too much information that they did not know how to use (see Guskey and Bailey 2001). In most cases, these reporting standards were derived from the strands or domains under which curriculum standards are grouped in the Common Core State Standards for language arts and mathematics and by national organizations such as the National Academy of Science and the National Council for the Social Studies. Thus, minor changes in curriculum standards would not necessitate subsequent revision in the report cards.

In addition, these report cards included specific grades or marks for product (achievement), process, and progress learning criteria. They also included sections for teacher, parent, and student comments. Sample standards-based report cards for the secondary and elementary levels are shown in Figs. 1 and 2.



Student: Chris Lipup Reporting Period: 3

Standard Marks 4 Exemplary 3 Proficient 2 Progressing Struggling 1 N/A Not Assessed * Based on modified standard(s). See Progress Report

Process Marks		
++	Consistently	
+	Moderately	
-	Rarely	
N/A	Not Assessed	

Grade 2 Language Arts - Ms. Bausch



Reading	4	
Writing	3	ļ
Speaking	2	
Listening	3	Ľ
Language	4	H

Process Goals		
reparation	+	
articipation	++	
omework	+	
ooperation	+	
espect	++	

Description / Comments:

Students have been very busy during the 3rd reporting period working on the following topics: consonants, vowels, and their corresponding sounds; identifying syllables in words; stressed and unstressed syllables; closed syllables, vocabulary development; compound words, antonyms; homophones; synonyms, multiple meaning words; idioms; comprehension skills; main ideas and supporting details; fluency; and reading strategies such as sequencing, cause and effect, and facts and opinions. We also worked on how to answer open-response questions

Chris is improving with the articulation difficulties that we recently observed. We are coordinating efforts with the speech therapist to continue the progress we've made into the next marking period.

Grade 2 Mathematics - Mr. Reedy

-	Operations and Algebraic Thinking	3	Process Goals	
	Number and Operations – Base Ten	3	Preparation	-
18	Number and Operations – Fractions	2	Participation	++
	Measurement and Data	2	Homework	-
1	Geometry	N/A	Cooperation	++
	Mathematical Practices	3	Respect	+

Description / Comments:

Over the past nine weeks students have been learning about measurement, probability, and data analysis. They explored their world with the concepts of measurement and used tools and units to measure objects in the classroom and at home. They learned that probability can be fun by using Skittles candies to predict the chance of an event. We also learned about numbers on a spinner and how to describe probability using words such as "impossible," "likely," and "not likely." Students learned when and why to use different types of graphs. They created graphs for specific situations and learned that graphs must have titles, labels, x-axis, y-axis, and scale. We even made a classroom grid to identify ordered pairs.

Chris has had a pretty successful marking period, although homework and preparation continue to be issues. Most of the problems Chris is experiencing with measurement and fractions stem from not practicing enough to build a level of fluency. We will begin the next reporting period with supervised study to see if we can help Chris develop better out-of-class study habits.

Fig. 1 Example of an elementary report from the standards-based report pilot



Student: T. Neduts

Achievement Grades Standard Marks			Process Marks		
A	Exemplary	4	Exemplary	++	Consistently
В	Proficient	3	Proficient	+	Moderately
С	Progressing	2	Progressing		Rarely
D	Struggling	1	Struggling	N/A	Not Assessed
U	Unsatisfactory	N/A	Not Assessed		
•	Based on modified standar	d(s) See th	he Progress Report		

Reporting Period: 1 Algebra I – Mathematics 200: Mr. Parker



Academic Achievement	С		
Operations with real numbers	4	Process Goals	
Linear equations and inequalities	3	Participation	++
Relations and functions	2	Homework	
Polynomials	2	Cooperation	++
Quadratic, cubic, and radical equations	1	Punctuality	+
Mathematical reasoning and problem solving	2		

Description / Comments:

This reporting period we studied probability, statistics, and the beginning units of Algebra I. We completed units on solving one-variable equations and applying onevariable equations to real world situations. Our next major unit of study will be linear functions. We included the following mathematics standards: measures of central tendency, choosing appropriate graphs, interpreting graphs, misleading statistics, polygons, lines and angles. We will conclude the geometry unit at the beginning of the next quarter. Taylor needs to work on focus and attention during class.

Taylor also had several low assessment scores but chose not to retake them. With improved attention and retaking low assessments, I am sure Taylor's grades will improve rapidly.

Biology I - Science 205: Mrs. Krall



Academic Achievement	A	Process Cools	
Basis of scientific inquiry	4	Dest in the	
Physical, chemical and cellular basis of life	3	Participation	+
Continuity of life and the changes of organisms over time	2	Homework	++
Unity and diversity of life	3	Cooperation	+
Ecological relationships among organisms	4	Punctuality	

Description / Comments:

During this quarter we worked on the chemistry foundations for understanding biology. This included the following standards: properties of matter, the Periodic Table, chemical bonding, and balancing chemical equations

Taylor has done an outstanding job this reporting period. Independent work was very thorough and extremely well done. Taylor grasps ideas very quickly and sometimes moves on without understanding it thoroughly. I was very happy to see Taylor break that habit and really keep on top of the material.

Physical Education - Team Sports 200: Mrs. Sandidge



Academic Achievement	В
Demonstrates competency in motor skills and movement patterns	2
Demonstrates understanding of movement concepts, principles, strategies, and tactics	3
Engages regularly in physical activity	2
Achieves and maintains a health-enhancing level of physical fitness	2
Exhibits responsible personal and social behavior that respects self and others	3
Values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction	3

Process Goals		
articipation	++	
łomework		
Cooperation	+	
unctuality	+	

Description / Comments:

In this reporting period students were introduced to the basic skills and techniques of basketball. They practices dribbling, passing, shooting, footwork, rebounding, defense, and combining individual offensive and defensive techniques into play patterns.

Taylor excelled in footwork and defensive positioning, and felt much more comfortable playing defense. Offense was more of a struggle for Taylor, mostly because of lack of confidence in individual ball handling skills. We will revisit basketball in the next reporting period. I have given Taylor a set of drills to help develop basic scoring moves that should help enhance that offensive confidence.

Fig. 2 Example of the secondary report from the standards-based report pilot

3 Methods

An important question when introducing any new process or tool is, how will it be perceived by the people implementing it and receiving it? The purpose of this study is to try and answer that question in relation to standards-based reporting devices. The participants, survey methods, and analysis used in this study are described in the following section.

3.1 Participants

Following the summer workshop, educators from the districts involved returned to their schools and encouraged other teachers to pilot the new report card during the next school year. Of the schools involved in the pilot, we selected one school to participate in an exploratory study to determine the reactions of parents to the new reporting form. The school was a combined middle and elementary school and had teams of teachers from the third through sixth grade all using the standards-based reporting method. There were 24 teachers, approximately 50 % of the staff, who were involved in the standards-based report card pilot, which was greater than any of the other schools that had participated in the summer workshop.

The parents/guardians of the students who received a standards-based report card were surveyed as to their opinion of the standards-based report card. There were 235 households that received standards-based report cards during the pilot.

Teachers from two nearby, midsize school districts (approximately 8,000 student enrollment) considering implementation of the same standards-based report cards were asked to complete a survey that paralleled the survey used with the teachers participating in the standards-based report card pilot and the parents/guardians receiving them. To differentiate between the teachers who participated in the standards-based report card pilot, these teachers will be referred to as *considering* teachers.

3.2 Survey procedures

The parents/guardians of all students in the classrooms of the teachers who volunteered to use the new standards-based reporting form received two report cards during the first two 9-week marking periods of the school year: the new standards-based form and the traditional form previously used in the school. The traditional report card offered a single percentage for each subject in the students' programs. A letter accompanying the report cards explained the purpose of the two forms and encouraged parents to discuss the advantages and shortcomings of the standards-based report card.

The survey asked parents/guardians to compare the traditional report card to the new standards-based report card with respect to (1) the amount of information offered, (2) the quality of information provided, (3) the clarity of information included, and (4) the ease in understanding the information presented. Responses were recorded on a four-point scale indicating "much less," "less," "more," and "much more." The survey also included space for parents to offer written comments.

The participating teachers were also asked to fill out the survey. The participating teacher survey also included an additional item asking about the time it takes to complete the standards-based report card compared to the traditional report card.

The considering teacher survey included links for the teachers to review two standards-based report cards: one for the elementary level (grades K-5) and another for the secondary level (grades 6–12). These forms, displayed in Figs. 1 and 2, are quite similar to the forms used in the district engaged in implementation. After reviewing the forms, the survey asked the considering teachers to respond to the same four rating scale items included in the parent survey. It was distributed electronically through email to all teachers in both districts that were considering making the transition to standards-based reporting.

3.3 Analysis

Cronbach's alpha was performed to examine the internal reliability of the items and determine if any of them should be discarded. t tests and effect size were used to compare the survey responses of the parents receiving the new report cards with the responses of both the participating teachers and considering teacher. To further illustrate the response patterns within and between parents and considering teachers, percent distributions for the each item were constructed for the considering teachers and parents.

The parent responses were further explored by looking at the comments of dissatisfied parents. Dissatisfaction was determined by selecting responses for which two or more items were marked "much less" or "less.". The comments were categorized and reviewed for patterns.

4 Results and discussion

In addition to the surveys completed by the 24 teachers using the standards-based report card, the parent/guardian survey was sent to a total of 253 households and yielded 115 usable responses, with a response rate of 45 %. Because parents/guardians were guaranteed anonymity in their responses, no identifying demographic data regarding the child or family were included in the survey. As a result, it was not possible to determine if responders were in any way systematically different from those who chose not to respond. Because of the anonymity, we were unable to disaggregate responses by factors such as school level, grade level, or teacher. Similarly, the considering teacher survey was sent to 651 teachers in the two, nearby school districts. Three hundred and eighty-three teachers completed and returned the survey, yielding a response rate of 59 %. Like the parent/guardian survey, teachers also were guaranteed anonymity in their responses, and no identifying teaching assignment or demographic data were included in the survey. Therefore, it was not possible to determine if respond.

A Cronbach's alpha test was used for internal reliability of the items on the questionnaire. The four items used across the participating teachers, considering teachers, and parents were found to be highly reliable (α =0.88). The overall α decreased when any of the items were removed from the calculation, so all items were used in the analysis.

4.1 Positive reactions from participating teachers and parents

In comparing the responses of the parents to the participating teachers that had used the new reporting format, we see that both groups feel similar in their perceptions of the standards-based reporting method. Table 1 shows the means and standard deviations for the two groups. None of the differences for each of the four items were statistically significant. The participating teachers commented that standards-based reports provided more information and better-quality information that was clearer and easy to understand. They also reported that the standards-based reporting process was more time consuming, but that the value added was worth the additional time. One teacher

Aggregate scores for items on teacher perception sur	vey
	Participating teac

	Participating teachers $n=24$ mean (SD)	Parents n=115 mean (SD)
The amount of information offered	3.50 (0.51)	3.42 (0.60)
The quality of information provided	3.42 (0.50)	3.33 (0.56)
The clarity of the information included	3.33 (0.48)	3.29 (0.62)
The ease of understanding the information presented	3.25 (0.53)	3.29 (0.64)
The time it takes to complete the reporting process	3.08 (0.65)	N/A

indicated that it took them approximately 2–3 h to complete the reports, but that they felt that it was a reasonable amount to ask from teachers. The increased time is not surprising as these classrooms were moving from providing a single composite score to providing several scores in addition to narratives. A district wanting to make the move to standards-based report cards would have to consider this additional effort, but given the positive response for both the participating teachers and parents who received the reports, there seems to be a clear benefit to the transition.

4.2 Considering teachers' reactions are more reserved than parents'

It is not a surprising finding that the teachers who voluntarily chose to implement the standards-based report cards would think that it was a better approach. They probably would not have agreed to participate if they did not think that it was going to add value to what they do. What we were less certain of was if teachers in districts considering adoption of the standards-based report cards but without implementation experience would hold similar views. Table 2 shows the means and standard deviations of considering teachers' and parents' responses to the survey questions. The response frequencies to the four items are provided in Table 3 to further clarify these differences. In Table 3, the column headings refer to the percentage of recorded responses on the four-point scale. Both considering teachers and parents agree that the standard-based report cards offer more information and better-quality information than the traditional report card. But overall, parents were significantly more positive and more consistent in

Questionnaire items	Considering teachers $(n=383)$ mean (SD)	Parents $(n=115)$ mean (SD)	D
1. The amount of information offered	3.16 (0.81)	3.42 (0.60)	0.32*
2. The quality of information provided	3.09 (0.74)	3.33 (0.56)	0.32*
3. The clarity of the information included	2.89 (0.80)	3.29 (0.62)	0.5*
4. The ease of understanding the information presented	2.71 (0.86)	3.29 (0.64)	0.67*
5. How fairly it represents a student	3.04 (0.72)	N/A	N/A

Table 2 Considering teachers' and parents' item means, standard deviations, and effect sizes

*p < .01 (differences in distributions are significantly different via t test)

Table 1

Questionnaire items		1 (%)	2 (%)	3 (%)	4 (%)
1.	Teachers: The amount of information offered	5.3	10.2	47.9	36.6
	Parents: The amount of information offered	5.2	0.9	46.1	47.8
2.	Teachers: The quality of information provided	3.2	13.7	54.2	29.0
	Parents: The quality of information provided	4.3	0.9	56.5	38.3
3.	Teachers: The clarity of the information included	4.6	23.8	49.3	22.2
	Parents: The clarity of the information included	6.9	0.9	54.8	37.4
4.	Teachers: The ease of understanding the information	8.8	29.4	44.1	17.6
	Parents: The ease of understanding the information	1.7	6.1	54.8	37.4
5.	Teachers: How fairly it represents a student.	2.7	15.4	56.8	25.1

Table 3 Response summary for considering teachers (n=383) and parents (n=115)

their responses regarding the standards-based report cards than were teachers. The most interesting was the difference in the items that asked about the clarity of information (item 3) and the ease of understanding the information presented (item 4). Ironically, parents, the recipients of the report card information, considered the information in the standards-based report cards easier to understand than did teachers, the providers of that information. An effect of 0.67 is considered a medium to large difference according to Cohen (1988), while 0.5 would be considered a medium-sized difference. This shows that teachers may underestimate parents' ability to make sense of the more detailed information included in the standards-based report cards. The responses were recorded on a four-point scale indicating "much less," "less," "more," and "much more."

4.3 Parents may have conflicting ideas of the purpose of grading

While the overall response of the parents was positive, we wanted to see if there were any specific insights that could be gleaned from the survey. In delving into the parent perceptions, we decided to define dissatisfaction as a survey response in which two or more items receiving a "less" or "much less" rating. Of the eight respondents that met this criterion, four mentioned wanting more teacher comments. Three provided no written comments offering insight to their dissatisfaction. One parent in the group of eight made the following comment, "Not sure what term exemplary, etc. means in terms of where they should be and the rest of the class. I know what a 97 means." This statement was particularly interesting and prompted a review of all the comments. The parent surveys included 47 written comments, 32 of which made a mention of specific characteristics of the report. The remaining 15 comments were general statements of approval. Of particular interest were the 13 parents who asked that the percentage grade be kept.

Example 2: "Would still like to see a # on grade (like 97,98) not just A, B, C, etc."

Example 3: "We must see the number beside the letter. If we only receive the letter grade, we will be calling the school to get the numbers every nine weeks."

These parents appear to have greater confidence with numerical percentages achieved from averaging scores across a wide array of achievement indicators than they do in letter grades. Interestingly, in every case where parents gave an example of the numerical grade, it was above 90 %. While we cannot make a judgment about this representing a general pattern, it does raise an interesting question for future inquiry: Do parents of high-achieving students favor the percentage grades recorded on the traditional report cards to single-digit, numerical marks used to show students' levels of proficiency on specific standard? Regardless of whether these parents were of students who traditionally received high percentage grades, they do seem to want teachers to finely discriminate among learners, making note of any differences in students' performance.

5 Summary

Standards-based report cards represent a significant change from the traditional report cards used in most schools today. Instead of recording a single grade for each subject area or course, standards-based reporting requires that teachers report grades or marks for each of the identified learning domains and process indicators in each subject area or course. Assuming that a primary purpose of report cards is to communicate student performance to parents, it is important to look at whether the additional information offered by a standards-based report card is of value. To the degree that parents and teachers who responded to these surveys accurately represent the larger population of parents and teachers, these results are quite encouraging. They show that while parents who have experienced standards-based report cards appear to be more positive in their perceptions of such reporting devices than are teachers who have not yet engaged in implementation, the vast majority of both parents and teachers recognize the advantages of standards-based reporting. This should provide added confidence for school leaders considering this change.

Because we were unable to determine if the parents and teachers who responded to the surveys were similar to those who chose not to respond, these results must be interpreted cautiously. Nevertheless, knowing that those who chose to respond were overwhelmingly positive in their perspectives toward the standards-based report cards used or being considered for adoption should provide incentive for broader-based implementation.

Educators in schools throughout the USA struggle today in their efforts to align the procedures they use to report on the learning progress of individual students with the standards-based approaches already in place for planning instruction and assessing student learning. Given that all schools within a state are working with the same standards, it seems both inefficient and ineffective for each school to have to develop its own standards-based report card. Although the content and format of the reporting form clearly make a difference, what has been learned through this investigation might inform similar efforts in other school districts and states, guiding all to the development and use of better, more efficient reporting forms for students at all levels of education.

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