Grading Students with Significant Disabilities in Inclusive Settings: Teacher Perspectives

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Abstract

The present study describes teacher (K-12) opinions and practices related to grading and providing modified instruction, assignments, and assessments for students with low-incidence disabilities in inclusive settings. One hundred and thirty nine teachers working in K-12 inclusive schools in Arizona and California completed an on-line survey regarding modifications to the general education curriculum and grading practices. Findings of this study include: (a) general and special education teachers use different practices and have different preferences for grading students with disabilities; (b) General and special educators also reported differences in their level of comfort and training for grading, with special educators feeling more prepared to grade students with disabilities; (c) Elementary teachers were more likely to accept modified work than secondary teachers; and (d) Secondary teachers. Implications and recommendations based on these findings are reported.

Recent decades have witnessed a significant increase in the number of children with disabilities being educated in general education, or inclusive, settings (Katsiyannis, Conderman, & Franks, 1995; Kochanek & Buka, 1999). In fact by 2004, 50% of all students with disabilities were reported to spend 80% or more of their school day in general education classes (U.S. Department of Education, 2005). Furthermore, UNESCO and the Salamanca Conference affirmed the rights of all students to be educated in an inclusive setting (UNESCO, 2009). In short, the placement of students with disabilities in general education is based on empirical, philosophical, and legal grounding.

While evidence supports inclusive practices, challenges in the implementation of inclusive education remains for students with significant disabilities. For our purposes here, significant disabilities are those low-incidence disabilities such as autism, cerebral palsy, and severe intellectual disabilities. We consider low-incidence disabilities to be those that occur in less than 2% of the school population, with students requiring significant supports to meet their educational needs. Both special and general education teachers are often unsure of how to manage the needs and supports of diverse students in general education settings (Carter & Hughes, 2006; Dymond, Rengzaglia, & Chun, 2008). Yet students with disabilities are to access and participate in the general education curriculum (Individuals with Disabilities Education Improvement Act, 2004; No Child Left Behind Act, 2001) as well as receive a specially designed education program planned to address their unique needs (Education for All Handicapped Children Act, PL 94-142, 1975).

Thus, teachers and students are under the direction of two education processes: the general education curriculum and its associated local and state assessment procedures, and the Individual Education Program (IEP). The IEP is required to specify the goals, services, and specially designed instruction for students with disabilities to enable them to attain maximum success in all areas of identified need. To obtain access to both processes, students receiving special education often have

adaptations made to the general education curriculum to allow access and participation in the core curriculum regardless of ability level (Browder & Spooner, 2006; Downing, 2008).

Adaptations can take many forms, including individualizing learning goals, teaching, and supports (Giangreco, 2007; Janney & Snell, 2006; Lee et al., 2006). Adaptations for students with significant disabilities typically alter the product or assessment document, necessitating different grading procedures from other students in the class. For example, an eighth grade history assessment on the causes of the civil war may contain vocabulary and concepts that are not accessible to a student with significant disabilities. This student may take a modified version of the test, with different and/or fewer questions or different output modalities.

In addition to curricular adaptations, grading adaptations are also permissible and often necessary (Bursuck, Munk, & Olson, 1999). In the above example, teachers grading the adapted assessment would most likely be unable to use a standard rubric to grade the adapted test, and would likely need to adjust questions, acceptable answers, and the weights given to correct responses. Therefore, while grading adaptations are permissible as part of the IEP, teachers are often unsure of how to report student grades on report cards as the student's disability significantly impacts his or her ability to demonstrate grade-level progress (Ring & Reetz, 2002).

Adapted curriculum and adapted grading will often go hand in hand, as it is necessary to have a different grading scheme for students who complete adapted materials. Likewise, it is important to ensure that both general and special education teachers understand the purpose of the adaptations and that the provision of appropriate materials and instruction are in place for students with disabilities. Without appropriate materials and instruction, student grades cannot be seen as a fair and accurate representation of what the student has learned. In short, the availability of an appropriate curriculum with meaningful adaptations and supports is essential to meaningful grading of students with significant disabilities. Research into adaptations and grading of students with disabilities has focused on students

with mild disabilities, such as learning disabilities. As a result, parents and teachers of students with low-incidence disabilities have little information on how to provide adaptations to class work, tests, and grades.

The purpose of this survey study is to expand the literature on grading practices for students with significant disabilities. Specifically, this study sought to determine the practices and preferences held by teachers of modified grading procedures for students with significant disabilities who were included in general education settings. The following research questions were addressed in the present study: (1) What are the beliefs, knowledge, and practices of teachers with regard to how to grade students with significant disabilities in inclusive settings? Do these beliefs, knowledge, and practices differ depending on type of educator (special or general) and level of teaching (elementary or secondary)? (2) What are the beliefs, knowledge, and practices of teachers with regard to modifying instruction for students with significant disabilities in inclusive settings? Do these beliefs, knowledge, and practices differ depending on type of educator (special or general) and level of teaching (elementary or secondary)? (2) What are the beliefs, knowledge, and practices of teachers with regard to modifying instruction for students with significant disabilities in inclusive settings? Do these beliefs, knowledge, and practices differ depending on type of educator (special or general) and level of teaching (elementary or secondary)? (2) What are

Method

Participants

An on-line, anonymous survey was constructed based on the existing literature on grading practices and sent to 270 teachers in seven school districts who practice inclusive education for students with significant disabilities in California (3 districts) and Arizona (4 districts). School districts were representative of urban, suburban, and rural areas as determined by city population densities, as shown in Table 1. Schools that practice inclusive education within the school district were emailed the surveys. Schools were determined to practice inclusive education based on input from a teacher contact known to at least one of the authors. The teacher contact was either a current or completed graduate student in special education from an accredited university that teaches and promotes inclusive practices. Upon input from the special education teacher contact, the schools were visited by the first two authors to

determine that in fact students with significant disabilities participated in general education for at least 80% of the school day. Two hundred and seventy teachers were sent the email survey, with a total of 139 teachers responding, yielding a response rate of 51%. A total of 117 general and 22 special education teachers completed the survey (84% and 16%, respectively).

<<Insert Table 1 Here>>

Procedure

The survey was developed based on a review of the grading and adaptations literature for students with significant disabilities. A total of 22 items were included on the survey instrument, including five demographic questions, ten questions related to grading practices and beliefs, and seven questions related to modifications practices and beliefs. The internal consistency of the survey instrument was determined using a split-halves method, and a correlation of 0.89 was determined, indicating adequate consistency of the survey. Prior to administering the survey, it was pilot tested with four teachers: one 8th grade English teacher, one 7th grade history teacher, one elementary school special education teacher and one middle school special education teacher. These teachers provided their input regarding the utility and ease of understanding the survey questions. The survey was available for teachers to complete on-line for approximately two months (4/29/09-7/1/09). We stopped collecting surveys on July 1 as no teacher had attempted the survey for three weeks, likely because the teachers were on summer break and not checking their emails.

Demographic Information. The demographic information collected had two primary purposes: to determine the subject and grade levels taught by the teacher participants, and to determine years of teaching experience and years of teaching specifically in inclusive settings.

Grading Information. A review of the literature was completed to determine literature-based grading practices and teacher beliefs for students with disabilities in inclusive settings. The following five grading options (Silva et al., 2005), were included in the survey instrument:

1. Progress towards meeting IEP goals and objectives: Teachers assign grades based on mastery of IEP goals and objectives, rather than progress on state standards.

2. *Improvement over past performance*: teachers assign grades based on how well they determine the student is improving over past performance.

3. Performance on prioritized, modified work: Teachers assign a grade for a student based on accuracy of completing modified assignments and assessments.

4. *Improvement in student learning process (rather than product):* Teachers assign a grade based on student demonstration of learning to complete a task, rather than the quality or quantity of the final product.

5. A system of modified weights and scales: Teachers assign grades based on a modified system of assigning grades, so that, for example, only 50% accuracy is required to earn an A whereas other students would require 90% accuracy to earn an A grade.

Teachers described their grading practices and beliefs related to each of these five grading schemes. Using these schemes as referents, teachers were asked to determine which grading option they believed was most and least fair, and which were the most and least informative to other teachers and parents. Teachers were also permitted to enter a description of an "other" practice if they felt it was more fair, appropriate, or informative. Additionally, teachers reported on their current level of knowledge related to grading students with significant disabilities, their beliefs about the value of these assigned grades, and their grading practices using a forced-choice Likert scale with options strongly agree, agree, disagree, strongly disagree, and don't know/not applicable. In addition to ranking preferences, teachers were asked to complete an open-ended response describing their current grading practices for students with significant disabilities. Lastly, teachers were asked to report their grading preferences for Pass/Fail or letter grading, the average grade students with significant disabilities receive

in their courses, and whether or not they assign grades primarily based on state standards or IEP goals and objectives.

Modification Information. Practices for modifying student instruction, assignments, and assessments were also collected. Teachers answered forced choice Likert questions related to how well modifications align with state standards, how often students with significant disabilities complete modified work, and the person who is primarily responsible for creating the modified work. Further, teachers reported who they thought should be primarily responsible for creating the modified work. Teachers also completed an open-ended question regarding their thoughts or concerns on modified instruction, assignments, and assessments.

Additionally, teachers reported their preferences for the following types of modified work:

- 1. Alternate or parallel assignments and assessments: students complete a different assignment or assessment than their peers in the general education class.
- 2. *Alternate instruction:* students receive instruction using modified materials such as modified text books or worksheets.
- 3. *Students demonstrate knowledge in alternate form:* Students are permitted to demonstrate what they have learned in a different form, such as by drawing pictures, making collages, or dictating their answers to a scribe.
- 4. *Shortened assignments:* Students complete the same work as their peers, but complete less quantity of work.
- 5. *Extended time:* Students receive additional time to complete the same assignments and assessments as their peers
- 6. *Classroom aides:* An adult teacher assistant (e.g. paraeducator) assists the student in completing their assignments and keeping the student on-task

- 7. *Peer tutors:* Peer tutors assist the student in completing their assignments and keeping the student on-task
- 8. *Student exemptions:* Students receive non-penalized exemptions from completing entire assignments, assessments, or portions of those assignments and assessments.

Data Analysis

The data generated from the on-line survey were analyzed using both quantitative and qualitative analyses. Descriptive statistics were utilized to describe the demographic information of the survey participants and the basic results of the survey instrument. Independent-samples t-tests were used to describe how different groups of teacher participants (e.g. special and general education, or elementary and secondary teachers) responded to survey questions. Statistically significant results are reported.

All comments submitted by the teacher respondents were copied verbatim into a single word document and then coded for themes by four independent coders. Inter-rater reliability for coding and identifying themes had a kappa of .86. A qualitative data analysis procedure was employed that involves highlighting and organizing themes based on grounded theory techniques (Attride-Stirling, 2001; Corbin & Strauss, 1990).

Results

Demographic Information

A total of 139 teachers responded to the on-line, anonymous survey. Teachers representative of Kindergarten through 12th grade completed the survey, as depicted in Table 2. Elementary school teachers and secondary teachers (those teachers at middle, junior high, and high schools) were surveyed. Further, teachers representing multiple, single, and special education subjects completed the survey. As depicted in Table 3, general education (GE) and special education (SE) teachers had similar years of teaching experience, although SE teachers had slightly more experience in inclusive settings than their GE counterparts. Elementary school (ELEM) teachers had slightly more years of teaching experience and teaching experience in inclusive settings on average when compared to secondary (SEC) teachers.

<<Insert Table 2 here>>

In addition to describing subject matter, grade level, and years of teaching experience, teachers reported whether or not they had received professional development of any form for inclusive education. Special education teachers were much more likely to report receiving inclusive professional development. However, less than two thirds of general education teachers received this preparation, with secondary teachers slightly more likely to have received professional development than elementary teachers. Those teachers who did receive professional development for inclusive education were asked to describe that preparation.

Fifty-eight respondents (42%) provided information about their professional development for inclusive education, as depicted in Table 3. Most teachers received their preparation for inclusive education either in their teacher preparation courses or through in-service presentations and staff development opportunities in their schools or school districts.

<<Insert Table 3 here>>

Grading Results

Independent-samples t-tests were conducted to describe the grading and modification practices of elementary and secondary teachers and special and general education teachers. There were significant differences on a number of variables. As depicted in Table 4, ELEM teachers in this sample believed that the most fair and appropriate grading for students with disabilities is based on improvement over past performance, whereas SEC teachers believed grades based on their performance on prioritized tasks was most fair and appropriate. However, ELEM teachers believed that performance on prioritized tasks was most informative and SEC teachers believe that improvement over past performance was the most informative type of grading. There were no other significant differences between ELEM and SEC teachers in their beliefs and knowledge regarding grading practices.

<<Insert Table 4 here>>

Analysis of the responses of special education and general education teachers reveals additional significant differences between the grading beliefs and knowledge of these groups of teachers. As shown in Table 6, GE teachers reported having less knowledge on how to grade students than SE teachers. SE teachers further report they collaborate more than GE teachers and have a better understanding of how the grade assigned by them contributes to the student's grade promotion, graduation, and college admission. GE teachers report that they rarely use specialized rubrics to grade the unique assignments of students with disabilities, while SE teachers report that they usually use these kinds of rubrics. GE teachers report that they rarely grade students based primarily on effort, while SE teachers report that they usually grade students with disabilities based on the effort they put forth. Lastly, SE teachers appear to understand how students are progressing on their IEP goals in the context of inclusive settings better than do GE teachers.

As part of the survey instrument, respondents had the opportunity to respond with "other" and provide open-ended responses to seven of the ten questions about their beliefs related to grading and one open-ended question in which respondents were asked to describe how they grade students with disabilities in their classes. Ninety-eight teachers (71%) provided written responses to these questions, which were qualitatively analyzed into seven themes, as depicted in Table 5. Of these 98 teachers, 59% of respondents reported on how they currently grade students with disabilities, with most teachers reporting they assign grades based on student effort or participation. Another 7% of respondents indicated how they would prefer to grade students if given the choice, with most teachers reporting they would prefer to assign grades based on anecdotal reports. Despite teaching students in inclusive schools for a number of years, 10% of the respondents indicated that they were unsure of how to grade students with disabilities (6%) or that they did not differentiate grading practices for those students with and without disabilities (4%). Seven percent of teachers also described their frustrations or discomfort with current grading practices, even though this was unsolicited in the survey.

<<Insert Table 5 here>>

Modifications Results

Teachers were also asked to report their knowledge and beliefs regarding modifications practices for students with significant disabilities in inclusive settings. A number of statistically significant differences between ELEM and SEC teachers and SE and GE teachers were noted in the surveys. As depicted in Table 4, SEC teachers were more likely to report using specific modifications in their classes than ELEM teachers, including the use of alternate or parallel assignments, alternate instruction, peer tutors, and allowing students to demonstrate their knowledge in alternate forms. ELEM teachers, however, reported using modifications in their classes more frequently than SEC teachers and agreed that the modified work reflected concepts or standards presented in their class more strongly than SEC teachers. Differences between GE and SE teachers were also found, as illustrated in Table 6. Overall, SE teachers were more likely to agree that students with disabilities have modifications in place, and that specific modifications were in use than GE teachers in nearly every modification category. SE teachers also believed that they made more modifications than GE teachers. GE teachers were more likely to report that SE teachers should make modifications, and SE teachers were more likely to report that SE teachers or paraprofessionals should make modifications.

<<Insert Table 6 here>>

Respondents were provided an opportunity to describe "other" modifications practices they use in two survey questions, and two additional survey items were open-ended questions for teachers to respond to. Ninety-three teachers provided written responses to these questions (67%), which were qualitatively analyzed into 10 themes, as depicted in Table 7. The most common type of modification was reducing the length of assignments, with 33% of respondents describing this kind of modification. Nearly a third, or 27%, reported developing alternative assignments as a modification.

<<Insert Table 7 here>>

Lastly, teachers were provided an opportunity to express any of their thoughts or concerns about modifications of student work in inclusive settings in an open-ended format. Sixty-one teachers responded to this question, with responses coded into 10 themes, as depicted in Table 8. Most teachers, 44%, reported feeling that they lacked time, resources, or knowledge to adequately create modifications for students with disabilities in inclusive settings. A quarter of the teachers also reported believing that student success was paramount and that modifications enabled students to be successful in inclusive settings.

<<Insert Table 8 here>>

Limitations

The present study described teacher beliefs, practices and knowledge for grading and modifying assignments and assessments for students with significant disabilities. At present, research into grading and modifications has focused primarily on students with learning disabilities and this study extends our knowledge to grading and modifications practices for students with more significant disabilities. However, a number of factors limit the generalizability of the findings reported here. First, the survey was delivered in a two-month time frame by e-mail. It is possible that we would have achieved a higher response rate had we collected surveys for longer than two months. Additionally, it is possible that we would have obtained a richer dialogue about teacher practices, knowledge, and beliefs had we used an in-person (e.g. focus group format) rather than an on-line format. Secondly, School E received nearly half of the surveys sent. School E was larger in population that the other schools surveyed, but as a result, School E is likely over-represented in the sample of our study. Lastly, this survey research represents a relatively small sample size (139 teachers) in a relatively small geographic area of the United States (California and Arizona). As a result, the findings must be interpreted with caution.

Discussion

Differences between General and Special Education Teachers

The present study found differences between general and special education teacher along a number of variables. Of interest, general and special education teachers report using different practices for grading students with disabilities. However, these two groups of teachers are presumably referring to the same students. It is possible that SE teachers over-estimate how often the modifications they have created are implemented and how frequently they collaborate with GE teachers. It is also possible that SE teachers and GE teachers are using different language, in that SE teachers consider simple and general adaptations (such as providing a computer for written assignments) to be modification whereas GE teachers consider only more detailed, specific adaptations (such as alternate assignments) to be modifications. These results appear to suggest that SE teachers believe that inclusive education practices, such as adaptations and collaboration, are being implemented to a larger extent than GE teachers. Quality inclusive education occurs when students have appropriate supports and services in place and good collaboration among the professionals supporting their education (Downing, 2008; Jorgensen, Schuh, & Nisbet, 2006).

A lack of shared knowledge between GE and SE teachers was also apparent in the survey responses. SE teachers reported a stronger understanding of how to assign grades to students with disabilities, how the grade assigned contributes to student promotion and graduation, and how students are progressing on their IEP goals compared to GE teachers. It is possible that this difference in knowledge can be attributed to the teacher preparation programs of SE and GE teachers, whereby SE teachers by definition have preparation in special education and also were significantly more likely to have inclusive education professional development (93.8%) than GE teachers (57%).

There also appears to be a lack of collaboration occurring between GE and SE teachers to share their knowledge of the curriculum and how to provide grading and modifications to students receiving special education services. Several teachers noted this as a specific concern, and wished for more opportunities

to hear from the SE teacher about IEP goals, modifications, and expectations. Further, research indicates the benefits of collaboration between GE and SE teachers to promote access to the curriculum (Browder, Spooner, Wakeman, Trela, & Baker, 2006; Dymond et al., 2008). The results of this study suggest that inclusive education practices for students with disabilities would be strengthened by increased collaboration between GE and SE teachers. Further research is warranted to demonstrate the effectiveness of collaboration strategies and how readily the ideas generated in collaborative sessions are implemented in the daily practices of teachers.

Differences between Elementary and Secondary Teachers

Additional differences between the beliefs and practices of elementary and secondary teachers were noted in the survey responses. ELEM teachers appeared to use modifications more readily than SEC teachers, and were more interested in assigning grades based on overall improvement. SEC teachers, on the other hand, reported using modifications to a lesser degree and preferred to grade students based on their ability to learn important skills. Given the weight grades carry in secondary schools in terms of determining graduation, college, and career opportunities, it is not surprising that SEC teachers were more interested in having grades closely tied with learning specific skills.

Given the differences in grading and modifications practices between elementary and secondary schools, it is possible that students and families experience a sense of shock in terms of the different expectations related to grading and modifications as students exit elementary and enter secondary schools. This may promote further anxiety and confusion for students and families who are already experiencing anxiety about moving from primary to secondary schools (Jindal-Snape & Miller, 2008). Additional research focused on understanding how differences in expectations between elementary and secondary schools affect student and family stress and anxiety warrant additional research attention.

In addition to differences in values related to grading and modifications between elementary and secondary schools, it appears from comments made by teachers that some elementary teachers are not

planning and preparing for the students to enter secondary schools and later adult life. For example, some elementary teachers reported that they had not given a great deal of thought to how the student would be graded and the implications of grades in later school years. Current federal special education law (IDEA 2004) requires that transition planning begin by age 16. Many professionals and parents agree, however, that this planning should begin well in advance of the legal minimum. It is unclear from the current study if and how well teachers are preparing for post-secondary transition in their grading and modification practices, much less when parents and students are informed of post-secondary transition issues such as housing, employment, guardianship, and education issues. Research is needed to determine when and how families and students are best provided with this information and how grading and modification practices impact post-secondary opportunities for students with significant disabilities.

Concerns on Practices Reported

In addition to documenting differences in teacher beliefs and practices based on subject matter or grade level taught, a number of findings related to practices of teachers in general are noteworthy. First, the types of modifications employed by teachers are troubling. Teachers reported using shortened or reduced quantity of assignments as their most common type of modification. It is unlikely that simply reducing the quantity of assignments is an appropriate modification for students with significant disabilities; rather, providing materials and information at the instructional level of the student would seem more suitable. Likewise, the provision of paraprofessionals and one-to-one instruction was deemed an important facilitator of inclusion by many teachers, while peer tutors and co-teaching were rarely reported. It is unclear from the present study how well paraprofessionals, and teachers, develop modifications for students and if peer tutors or co-teaching would improve the modifications available to students with significant disabilities. Further research is necessary to determine the quality of modifications provided to students with significant disabilities in inclusive settings.

An additional concern is related to the apparent disagreements or miscommunication regarding responsibilities for grading and making modifications for students with disabilities. The survey results appear to illustrate that teacher's place primary responsibility on the other; that is, SE teachers assume the GE teacher is responsible, and vice versa. There were also a small percentage of teachers who, despite working in inclusive schools, believe that only SE teachers should teach children with disabilities. It appears from the results of this survey that teachers working in inclusive schools may benefit from a clear delineation of roles and responsibilities of SE teachers, GE teachers, and paraprofessionals regarding the development, teaching, and grading of modified student work. Research describing the outcomes of role clarification on the implementation of modifications and student grading would be useful.

Lastly, several teachers reported concerns about fairness and equity related to grading and modification practices, including how both teachers and students perceive these practices. Bursuck and colleagues (1999) noted that teachers are more likely to implement grading adaptations if they perceive that other students find these adaptations to be fair and acceptable. It is possible that teachers in this survey sample used simple, general adaptations (e.g. reduced quantity, extra time) because they did not believe that other students would find more intensive, specific modifications (e.g. texts books rewritten with pictures) to be acceptable and fair. It is also possible that teachers are facing a different grading climate today, with the strict requirements for meeting standards in No Child Left Behind (NCLB), which has made the issue of fairness and equity significantly different than those teachers in Bursuck's pre-NCLB climate. When asked what type of grading system seemed fair and appropriate, teachers in this sample agreed that grading based on improvement and prioritized, modified work was most fair. The finding that they did not necessarily implement opportunities for students to be graded in this manner (rather, they largely implemented simple, general modifications) warrants further investigation.

Recommendations for Practice. Analysis of the results of this survey indicate that the teachers surveyed do not all engage in best practices related to inclusive education for students with significant disabilities. This is not to imply, however, that the soundness of inclusive education is in question. Rather, the inclusive education practices of teachers in this survey can be strengthened. It appears from our results that teachers are in overall agreement related to the ideological aspects of inclusive education. That is, most teachers reported believing that they could effectively teach all students and believed that modified instruction, assignments, assessment and grading were acceptable. The disconnect appears related to bridging this belief to practice. A number of teachers reported that they lacked the time and resources for collaboration and effective inclusive practices, although they very much craved the ability to engage in these professional practices.

A number of strategies to promote collaboration exist, including co-teaching to allow teachers to share minute-by-minute knowledge, block scheduling (particularly in secondary schools) to allow teachers to combine subject areas and engage in cross-discipline teaching, joint professional development rather than segregated learning opportunities, planned team meetings during early release or late start days, and planning for teachers to share common preparation periods (Wallace, Anderson, & Bartholomay, 2002). All of these suggestions require administrative support, but the benefits of collaboration on teacher ability and student performance will likely be deemed worthy of the time or effort necessary to plan for collaborative opportunities.

Less time intensive methods of collaboration include the use student participation or inclusion plans, which describe the goals for the class, the goals for the student with disabilities, how the student with disability will participate in class activities, and what supports will be provided (Downing, 2008). IEP goal matrices, in which the time and activity each IEP goal are addressed in the context of the entire school day (Downing, 2008) is another tool that can be useful in depicting when and how IEP goals are addressed and for GE teachers to understand the IEP goals of their students. Finally, tools such as

student information profiles (Downing, 2008) can be used to describe the services, IEP goals, learning characteristics, and supports and accommodations of students receiving special education services in general education settings. These tools are available on-line (e.g. www.circleofinclusion.org). Furthermore, changing practices such as ensuring that SE teachers are part of curriculum adoption committees and receive professional development together with GE teachers can help reduce barriers to inclusion and create opportunities for dialogue and joint learning. Additional research is warranted to describe what types of collaboration teachers prefer and what types of collaboration administrators deem most feasible and successful given shrinking education budgets. Further, research regarding the incorporation of research-based practices into daily school routines is needed.

The results of the present survey also suggest a struggle related to defining what is fair for students with disabilities. Most teachers would likely agree that fair does not mean that all students have the same instruction or materials, and as illustrated in the survey results, teachers are willing to make accommodations and modifications to enable each student to demonstrate their learning. However, this philosophical approach to appreciating and respecting diversity of learning does not work well when school systems place a value on transcripts and single letter grades. Further, the implications of these grades may mean different things to a student with significant disabilities. It is important, then, for IEP teams to specify exactly how a student will be graded and what that grade means to the promotion, graduation, and post-secondary education options of a student with significant disabilities. Individual grading plans are useful tools in terms of describing what standards are being addressed, the IEP goals targeted during instruction, the instructional materials used, and the types of assessments given (Jorgensen et al., 2006). These types of tools may provide additional information for teachers across the grade span to better understand how to grade students and how the grade provided affects grade promotion, graduation, and post-secondary education.

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Table 1

School demographic information

School	State	Setting	Per Pupil Expend- iture	Per Capita Income	Percent Free and Reduced Lunch	Number of Schools Mailed Surveys	Number of Teachers Mailed Surveys	Percent Responded
А	AZ	S	\$5965	\$35,173	13.70	1	21	49
В	AZ	R	\$8127	\$19,455	59.90	2	24	44
С	AZ	R	\$9574	\$10,479	92.40	1	31	53
D	AZ	S	\$5829	\$17,518	50.30	1	7	86
Е	CA	U	\$8284	\$22,937	15.29	8	110	48
F	CA	U	\$8125	\$15,245	53.31	1	38	37
G	CA	S	\$8163	\$26,811	33.60	1	39	50

R = Rural; S = Suburban; U = Urban

Table 2

Description of Participants Teaching Experience

Participant	Percent of Respondents	Mean Years Teaching	Mean Years Teaching in Inclusive Setting	Percent Received Professional Development for Inclusion
Elementary Teacher	34.3	15-19	10-14	61.4%
Secondary Teacher	65.7	10-14	5-9	65%
Special Education Teacher	8.4	15-19	10-14	93.8%
General Education Teacher	91.6	15-19	5-9	57%

Table 3

Teacher Professional Development for Inclusive Education

Theme	Exemplar Quote(s)	Percent of
		Total
		Comments
College Courses / Credential Courses	Credential courses introduced the concept.	30%
In-Service / Staff Development	On-Site Special Education Teacher Presentations	28%
Conference / Workshop	I think one afternoon workshop	14%
Not Related to Inclusion	Autism workshops County office Ed	14%
Non-Specific	Some training on how to include sped students into the regular program and how to read an IEP	10%
Parent	Mostly as a parent of a special needs child, not as a teacher.	2%
No Training	I understand that it means to include physically or mentally handicapped students in your class to teach them. I just know the meaning of the term and have not really been trained.	2%

Table 4

Elementary & Secondary Teachers

	Elementary	Secondary		g: : "
Variable	Mean	Mean	F	Significance
GRADING:				
Have questions about grading ^a	2.86	3.05	.297	.348
Grade like other students ^a	3.42	3.37	1.611	.737
Modified grades count ^a	2.66	2.93	1.026	.247
Knowledge of how to grade ^b	2.61	2.70	.305	.653
Comfort level grading ^a	2.43	2.57	.092	.504
Worry how others perceive grade ^a	3.07	3.03	1.143	.860
Collaborate to assign grade ^a	2.21	2.44	.350	.349
Know how grading developed ^a	2.83	2.77	.081	.811
Know how grade contributes ^a	2.88	2.51	.540	.128
Use rubrics to assign grade ^c	2.63	2.83	.000	.427
Grade reflects effort ^c	2.26	2.47	4.421	.355
Understand how progressing on IEP ^a	1.91	1.95	6.029	.808
Comfortable talking to parents ^a	1.91	2.08	.002	.342
Preferred type of grading ^d	1.91	1.68	.747	.143
Estimated current GPA	3.89	3.02	7.608	.480
Most Fair & Appropriate ^f	2.25	2.90	2.778	.017**
Least Fair & Appropriate ^f	4.58	4.35	2.120	.440
Most Informative ^f	1.98	2.43	1.007	.076*
Least Informative ^f	4.59	4.23	3.960	.243

MODIFICATIONS

Modifications reflect subject ^a	1.70	2.15	2.753	.009*
Alternate/Parallel Assignments ^a	2.19	2.65	8.693	.023**
Alternate Instruction ^a	2.16	2.62	8.353	.026**
Alternate Form of Knowledge ^a	2.28	2.70	1.417	.065*
Shortened Assignments ^a	2.14	2.32	1.988	.408
Extended Time ^a	2.16	2.13	.447	.902
Classroom Aides ^a	2.27	2.22	.986	.834
Peer Tutors ^a	2.36	2.93	.291	.009**
Exemptions from Assignments ^a	2.63	2.73	.087	.650
Students have Modified Work ^c	2.12	2.17	.506	.795
SE Teacher makes modifications ^c	2.67	2.88	4.605	.343
Paraeducator makes modifications ^c	2.95	2.87	7.588	.720
GE Teacher makes Modifications ^c	2.29	2.64	8.210	.124
Who should make modifications ^g	2.39	2.30	.002	.669
% of Time Use Modified Work ^e	5.07	4.49	.689	.097*

*Significant at p<.10; **Significant at p<.05

^{*a*} 1=Strongly Agree, 2 = Agree, 3 = Disagree, 4 = Strongly Disagree 5 = Don't Know/Not Applicable

^b 1 = No knowledge, 2 = Limited Knowledge, 3 = Average Knowledge, 4 = Above Average Knowledge, 5 = I'm an expert

^c 1 = Always, 2 = Usually, 3 = Rarely, 4 = Never, 5 = Don't Know/Not Applicable

^d 1 = Pass/Fail Grading, 2 = Letter Grading

 $^{\circ}1 = 0\%$ of time, 2 = 1-20%, 3 = 11-40%, 4 = 41-60%, 5 = 61-80%, 6 = 81-99%, 7 = 100% of the time

 $^{f}1 =$ Progress towards meeting IEP goals and objectives, 2 = Improvement over past performance, 3 = performance on prioritized, modified work, 4 = How well student is learning to complete a task, 5 = A system of modified weights and scales

 $^{g}1 = GE$ teacher, 2 = SE teacher, 3 = Paraeducator

Table 5

Grading Beliefs and Practices Qualitative Themes

Theme	Exemplar Quotes	Percent of
Thomas		Respondents
Non-specific comment about grading practices or beliefs	Depends on the individual student and the recommendation of the SPED teacher	12%
grading practices of benefs	Differentiated curriculum is a given!	
Uncomfortable or concerned with current grading practices	Modified grades should count, but not be weighed the same. Otherwise, a student who receives a modified "C" would appear to have all the skills associated with an unmodified grade. The grades I post are changed by the sped teacher later. I do not agree with that! I'd grade differently if the grades meant something for promotion, graduation, college.	7%
Unsure of how to grade	We don't have a grading system for students with disabilities	6%
Teacher does not assign a grade to the student	At third grade, grades are not given SPED teachers usually give those grades to us as a teacher.	5%
No grading differences	I grade the student as an average student.	4%
Teacher assigns grades using:		
Effort/Participation	I grade them on the work they produce and the effort/amount of time they spend working on assignments	18%
		13%
IEP Goals	I use the IEP goals to help with "grading" students	
Collaboration	I frequently conference with the special education teachers about the grades I'm giving and my rationale	10%
State Standards	A notation is made on the level of progress that is being made on that standard	7%
Modified system	I give modified assignments but they cover the same content areas.	7%

Behavior	I also grade them on their ability to behave appropriately in the general education setting. Part of their grade is the number of "stars" or points they earn for behavior in each class.	2%
Work Production	Quality and quantity is relevant in a language course and must count as part of the student's grade	1%
Progress or Improvement	Academic or behavioral improvement	1%
<i>Teacher prefers to grade using</i> Anecdotal Reports	I'd rather see some kind of descriptive narrative, explaining what work was done, how work has been adapted, what a student has done with the new information, new knowledge	3%
Alternate Assessment	Rubric grading based on personal goals	1%
State Standards	Standards based—1, 2, 3. 3 means the standard has been achieved, 2 is on its way, 1 below grade level	1 %
Note Modifications	[I prefer] letter grading, but with a comment that says "grade achieved with modifications and support"	1%
Course Content	[This] depends on the class; for a gifted class or high achieving class, some of these choices are inappropriate	0.5%
Learning Process	Improvement over past performance is important	0.5%

Table 6

	GE Teacher	SE Teacher		a: :¢
Variable	Mean	Mean	F	Significance
GRADING:				
Have questions about grading ^a	3.06	2.69	.266	.168
Grade like other students ^a	3.43	3.25	.611	.353
Modified grades count ^a	2.78	3.14	.025	.291
Knowledge of how to grade ^b	2.46	3.50	.021	.000**
Comfort level grading ^a	2.56	2.31	1.305	.394
Worry how others perceive grade ^a	3.09	2.80	.019	.342
Collaborate to assign grade ^a	2.43	1.94	9.786	.032**
Know how grading developed ^a	2.87	2.47	5.504	.131
Know how grade contributes ^a	2.80	2.06	15.319	.001**
Use rubrics to assign grade ^c	2.87	2.09	3.866	.049**
Grade reflects effort ^c	2.45	1.90	5.571	.023**
Understand how progressing on IEP ^a	2.20	1.56	.018	.070*
Comfortable talking to parents ^a	2.06	1.75	.252	.094
Preferred type of grading ^d	1.71	2.00	2.913	.161
Estimated current GPA	3.94	3.06	6.069	.115
Most Fair & Appropriate ^f	2.60	3.00	1.626	.263
Least Fair & Appropriate ^f	4.40	4.58	.315	.690
Most Informative ^f	2.22	2.50	.084	.429
Least Informative ^f	4.39	4.17	1.144	.684

General (GE) & Special Education (SE) Teachers

MODIFICATIONS

Modifications reflect subject ^a	1.97	1.94	.341	.889
Alternate/Parallel Assignments ^a	2.52	2.13	5.999	.051*
Alternate Instruction ^a	2.51	2.06	13.484	.008**
Alternate Form of Knowledge ^a	2.61	2.06	16.284	.002**
Shortened Assignments ^a	2.30	1.94	8.131	.034**
Extended Time ^a	2.14	2.19	.601	.862
Classroom Aides ^a	2.33	1.75	13.994	.004**
Peer Tutors ^a	2.80	2.13	7.067	.026**
Exemptions from Assignments ^a	2.78	2.25	5.097	.032**
Students have Modified Work °	2.19	1.88	3.397	.068*
SE Teacher makes modifications ^c	2.92	2.06	.738	.004**
Paraeducator makes modifications ^c	2.96	2.50	3.228	.129
GE Teacher makes Modifications ^c	2.45	2.88	2.227	.139
Who should make modifications ^g	2.20	2.88	11.089	.072*
% of Time Use Modified Work ^e	4.73	4.94	8.716	.668

*Significant at p<.10; **Significant at p<.05

^{*a*} 1=Strongly Agree, 2 = Agree, 3 = Disagree, 4 = Strongly Disagree 5 = Don't Know/Not Applicable

^b 1 = No knowledge, 2 = Limited Knowledge, 3 = Average Knowledge, 4 = Above Average Knowledge, 5 = I'm an expert

^c 1 = Always, 2 = Usually, 3 = Rarely, 4 = Never, 5 = Don't Know/Not Applicable

^d 1 = Pass/Fail Grading, 2 = Letter Grading

^e 1 =0% of time, 2 = 1-20%, 3 = 11-40%, 4 = 41-60%, 5 = 61-80%, 6 = 81-99%, 7 = 100% of the time

 $^{f}1 =$ Progress towards meeting IEP goals and objectives, 2 = Improvement over past performance, 3 = performance on prioritized, modified work, 4 = How well student is learning to complete a task, 5 = A system of modified weights and scales

 $^{g} 1 = GE$ teacher, 2 = SE teacher, 3 = Paraeducator

Table 7

Qualitative description of modifications provided by teachers

Theme	Exemplar Quote	Percent of Total
Shorten/reduce	It might be shortened (10 comprehension questions rather	Comments 33%
assignment	than 20) The assignment may require fewer pieces or less detail.	5570
Different or altered assignment	Reading an alternative curriculum at instructional level A science test—matching images with terms—sun, moon, stars	27%
Non-Specific	Almost all assignments have latitude for being completed on different levels with different abilities Make up of the class	10%
Modification used is direct instruction	They also may be pulled to the back table to have one on one time with me. Most modified work is completed with a paraeducator adapting the assignment with the full inclusion student.	8%
Complete work elsewhere / No modifications are made	Students rarely do modified work in my class. They do it in the special education class.	8%
More Time only	Extended time	5%
Alternative Materials Used	Used rubber stamps or word processors	4%
Limited Information on how to modify	The amount of time they are in class is minimal	3%
Alternate Assessments or Rubrics	Alternate rubric is developed to match [the modified assignment] and still keep the bar high.	2%

Table 8

Thoughts or concerns about modified work for students with disabilities

Theme	Exemplar Quote	Percent of Total Comments
Lack of time, resources, or knowledge on how to provide modifications	Can be very time consuming and is sometimes difficult to maintain regular contact with the resource teacher and paraeducator. Things can get hectic. Sometimes I don't know how other general ed teachers are dealing with the same students with disabilities.	44%
Students Successful	I really think that most of students with disabilities need to have modified work. This helps them get work done on time and at their own level	25%
Content, activity, or personnel specific	This is hard because I teach math, and math is a building block to other math conceptsso it's important that students understand the concepts being taught.	8%
Learn content / Look like others	My biggest concern is that they won't learn the actual content I feel that the work should resemble the work others are doing is an important factor	6%
Collaboration	I think the special ed teacher needs to sit down with the classroom teacher at the beginning of each year to specify the IEP goals for the student and the expectations for the use of the paraeducator in the classroom	3%
No thoughts or concerns / Have not considered	None Since I teach 3 rd grade I haven't given much thought to how students might be graded in secondary schools and how that might affect college entrance, honors programs, etc.	4%
Non-Specific	I think this has to be considered on a case by case basis Not so much about the work but the availability of the paraeducator to be at the parent/teacher conference. Since my student has a full time para I would feel more comfortable having the para speak to how the student is doing on IEP and/or state standards—it is the paraeducator that works with the child the most—so he/she should be able to talk	4%

Qualifications	Qualified teachers should teach children with disabilities	3%
Fairness	My prime concern is the anger other teachers have about these children earning credits. I also hear from students in this school how it is not fair for some to use notes on tests. Differences in who's the case manager of particular studentssome students get different conditionsThere isn't a consistent set of rules across the board for students	3%