Educators' Perspectives: Survey on the 2009 CEC Advanced Content Standards

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Educators who pursue an advanced degree or certification in special education must learn and master the Advanced Content Standards as set forth by the Council for Exceptional Children. These six content standards were validated by the CEC to guide educators through the process of assuming an advanced role in special education teaching or administration. The standards pertain to the knowledge and skills across six categories: Leadership and Policy, Program Development and Organization, Research and Inquiry, Individual and Program Evaluation, Professional Development and Ethical Practice, and Collaboration. Moreover, these standards are used in the evaluation of advanced preparation programs in a partnership process with the National Council for the Accreditation of Teachers Education (NCATE) (CEC, 2009). Therefore, these standards are a vital part of advanced teacher training. Universities need to thoroughly prepare their students to understand and apply the principles within each of the Advanced Content Standards.

Literature Review

In order to further focus the research questions as well as the subsequent survey questions (see Appendix A), the researchers conducted a literature review with search parameters related to special education teachers' practices and their knowledge and application of their professional standards. The researchers also included a review

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of standards in relation to rural and urban education, teaching students with high and low incidence disabilities, and teacher training. From this review, the researchers determined that there were three facets of effective training for special education teachers and administrators: knowledge of the professional standards, the implementation or practice of that knowledge, and the ethical decisions that professionals make in regard to implementing those standards.

Rural and Urban Education

One variable that might interfere with the results of this survey was the setting at which teachers were working or had previously taught. It was very important to study or rule out the impact of such variable on participants' responses, specifically because the demographic and financial differences exist between rural and urban school districts. When classifying a school district as rural, the class size, level of isolation, and the amount of district resources are typically taken into consideration. This becomes more complicated when school districts consolidate to share resources as enrollments and class sizes increase. The National Center for Education Statistics (NCER, 2007) indicated that rural schools constituted a third of the public school districts and served a fifth of all public school students. The Midwest has a high percent of rural school district compared to other regions of the country; therefore, these issues faced by rural school districts are germane to universities preparing teachers who will serve in rural school districts.

Declining enrollment in rural schools leads to a shrinking budget, which has been found to reduce the number and variety of classes offered to students, as well as provide fewer opportunities for professional development for teachers (Reeves, 2003). As for the financial characteristics, districts in rural areas are at a distinct disadvantage financially (Reeves, 2003). To further compound the issue, federal funding programs have traditionally given priority status to school districts with a large number of low-income residents; urban schools have been found to have higher rates of poverty that their rural counterparts (NCER, 2007) so rural schools often do not qualify for the same level of federal support as urban schools. Moreover, many services typically need to be maintained regardless of the size of a school district, such as: staff, transportation, food service, etc.

These services were found to be cost prohibitive in a small school (Reeves, 2003). According to Collins (2009), schools in rural settings faced many challenges related to the shortage of qualified personnel and a shortage in resources, including resources for professional development. Teachers in rural settings were paid less than their suburban and urban counterparts; "even after adjusting for geographic cost differences" (NCER, 2007, p. vi). As a result of the limited resources, school districts frequently have hired less qualified teachers in rural areas because of the short supply (Berry, Petrin, Gravelle, & Farmer, 2011). From this portion of the literature review, the researchers questioned if there would be a difference in teachers' self-ratings on the survey based on the setting in which they taught.

Experience and Professional Development

Another variable that might influence the results of this survey was the participants' level of professional development. It was very important to study the impact of this variable on participants' responses, as the issue of teachers' quality was one that received significant attention from educators, administrators and policy makers (Ingersoll, 2007). Educators who were engaged in advocacy activities of individuals with special needs were also highly experienced and well established professionals/teachers (Rock, Geiger, & Hood, 1992). Training was a key factor in preparing highly effective teachers (Billingsley, 2004). Further, participation in professional development activities helped teachers reduce their stress level in addition to feeling more satisfied with their jobs. Such participation ultimately contributed to teacher retention (Billingsley, 2004; Gersten, Keating, Yovanoff, & Harniss, 2001). It is therefore vital that teacher preparation programs provide teachers with effective training in the initial and advanced content standards.

One dominant theme across the literature, especially in the face of a shortage of qualified teachers, was the need for ongoing professional development support and programs (Darling-Hammond, 2001; Rude & Brewer, 2003). That theme included educating/training teachers to use: effective instructional strategies, methods and materials in academic curricula areas, cognitive behavior instruction, and behavior management strategies (Maroney, 2000), many of those are embedded in the CEC Standards, 2009. Mentors and professional

development are two options taken by school districts to support new special education teachers in their new settings and roles. Both of these options require the resources of time and money, release time from responsibilities or reimbursement for personal time spent. As previously noted, not every district has access to these resources that would be beneficial in increasing a new teacher's success in meeting the standards.

The purpose of this study was to investigate CEC members' practices, knowledge, and ethics as described by the Council for Exceptional Children's six advanced content standards (CEC standards 6th edition, 2009). The researchers designed the survey to study the following questions:

1. To what extent did participants agree that they possessed the knowledge, practices, and skills addressed in the CEC advanced content standards?
2. Is there a difference in the ratings between teachers working in rural settings in comparison to teachers working in urban settings?
3. Is there a relationship between the amount of teachers' experiences and their responses to the survey questions?
4. Is there a relationship between the number of educational conferences attended by teachers and their responses to the survey questions?

To that end, a survey of 24 questions was developed with four statements pertaining to each of the six standards.

Method

In order to create the survey tool, the researchers devised multiple questions related to each of the six 2009 CEC Advanced Content Standards; this resulted in 45–50 potential research questions. There was concern that participants would not finish the survey if it would take longer than 20–30 minutes to complete; therefore, the researchers pared the number of questions down to 24, or four questions per standard. See Appendix A (on page 35).

Using the central themes of knowledge, practice, and ethics; the researchers balanced the number of questions for each theme across the six advanced standards. Each standard had at least one question related to each theme, with a fourth question that was

similar in content to another question in that standard, but related to a different theme. For example, within the standard area of Programming for students, the researchers devised two similar questions:

1. I believe that special education programs should include a range of settings and services.
2. I contribute effectively in decisions about students' educational placements and related services.

The first question regarding a teacher's attitude toward special education programming was related to the ethics theme. The second question also deals with special education programming, but prompts the participant to rate personal efficacy which was categorized as a part of the practice theme.

The built in redundancies across the survey questions allowed for the researchers to evaluate the reliability of the survey tool using split-half reliability. Two of the researchers independently split the questions into a part A and a part B prior to the distribution of the survey. A comparison of the question distributions showed 100% agreement between the researchers in the division of the questions. The survey results contained 12 questions in each half and two questions from each of the six advanced standards. In addition, the survey contained an equal distribution of knowledge questions across each half. Part A contained five questions with the ethics theme and three questions with the practice theme; whereas part B contained three ethics questions and five questions related to professional practice. Participants were provided with a 5-point Likert scale (the spectrum ranged strongly agree to strongly disagree) for their responses, with the option of omitting any of the questions on the survey.

Before distribution of the survey, the tool was sent to five special education professionals to review the content of the questions. These professionals were selected based on their knowledge and experience in working with the CEC Advanced Content Standards. Feedback was obtained from each reviewer to ensure question clarity and content validity. Minor revisions were made to three of the questions to increase question clarity based on feedback from two of the reviewers. No further revisions were determined necessary; the questions were considered by the reviewers to be aligned with the standards.

The web-based survey was distributed nationally and internationally electronically via email by the Council for Exceptional Children to randomly selected members. The researchers also shared the link for the survey with principals and special education teachers within their region. The survey was self-administered by participants.

Results

The participants' years of teaching experience were varied: 8.5% of participants had 1-5 years of experience, 17% had 6-10 years of experience, 12% had 11-15 years of experience, 21% had 16-20 years of experience, 11% had 21-25 years of experience, and 30.5% had 26 or more years of experience. Only 5% currently teach on a provisional special education teacher's license. Participants with a Bachelor's degree constituted 16% of the sample, 60% of respondents had a Master's degree, and 24% had a Doctorate degree.

Research Question 1

To what extent did participants agree that they possessed the knowledge, practices, and skills addressed in the CEC advanced content standards?

Participants' overall agreement with the 24 statements associated with the CEC Advanced Content Standards 2009 ranged from 4.30–4.67 which correspond to "agree-strongly agree" on a Likert scale used for the survey. The mean of all responses was 4.49. ANOVA with repeated measures with a Greenhouse-Geisser correction, revealed that the mean scores for knowledge, practice, and beliefs were statistically significantly different ($F(1.892, 155.118) = 11.056$, $p<0.0005$).The partial Eta squared was .119. The effect size was small d=.196

Research Question 2

Is there a difference in the ratings between teachers working in rural settings in comparison to teachers working in urban settings?

Responses from participants who self-reported that they taught in urban or rural settings were compared across each of the six areas of the content standards. A t score was used to compare the mean responses of the two groups. The differences were found to be not significant with $p<.05$ for the pilot of this survey; in fact in the area of Professional Development and Ethical Practice there was the responses were found to be similar. Specific results are provided in

Table 1 below.

Table 1

Comparison of Urban and Rural Teachers' Responses

Standard	Urband Mean; SD	Rural Mean; SD	t score
Leadership Policy	4.64; .39	4.58; .42	.54
Program Development and Organization	4.67; .34	4.69; .40	.76
Research and Inquiry	4.43; .53	4.30; .55	.39
Student and Program Evaluation	4.37; .54	4.10; .75	.08
Professional Development and Ethical Practice	4.43; .57	4.42; .50	.97
Collaboration	4.55; .50	4.45; .52	.09

Research Question 3

Is there a relationship between the amount of teachers' experiences and their responses to the survey questions?

A Spearman's rank-order correlation yielded no significant correlation between teachers' experiences and responses to the CEC Advanced Content Standards, 2009.

Research Question 4

Is there a relationship between the number of educational conferences attended by teachers and their responses to the survey questions?

A Spearman's rank-order correlation was run to determine the relationship between the number of conferences attended and responses to the CEC Advanced Content Standards, 2009. There was a moderate, positive correlation between the number of conferences attended and the Student and Program Evaluation standard, which was statistically significant ($rs(81)=.307$, $p=.05$). There was a moderate, positive correlation between the number of conference attended and responses related to the Collaboration standard, which was statistically significant ($rs(81)=.344$, $p=.01$). Specific results are provided in Table 2.

Table 2

Relationship between the Amount of Teachers' Conference Attendance and their Responses to the Survey Questions.

Variables	1	2	3	4	5	6	7
1. Attendance of Educational Conferences	-						
2. Leadership Policy	.212	-					
3. Program Development and Organization	.290**	.656**	-				
4. Research and Inquiry	.241*	.772	.680**	-			
5. Students and Program Evaluation	.307**	.732**	.567**	.634**	-		
6. Professional Development and Ethical Practice	.251*	.519**	.580**	.451**	.524**	-	
7. Collaboration	.344*	.550**	.647**	.616**	.590**	.468**	-

Note. ** Correlation significant at the 0.01 level (2-tailed) * Correlation significant at the 0.05 level (2-tailed).

Discussion

Participants were asked to self-report statements that corresponded to the knowledge, practice, and beliefs related to the Students and Program Evaluation standard. There were moderate-sized significant correlations between participants' self-reporting on statements corresponding to Collaboration and Student and Program Evaluation standards in comparison to the number of conferences attended. A higher degree of agreement on the Likert scale was associated with higher number of conferences attended. Collaboration was one form of professional development. Sharing one's experiences, perspectives, and points of view with professionals who share similar goals was part of a reciprocal learning process. Attending and/or presenting at a conference provided the opportunity for sharing one's experiences in addition to learning about the experiences of colleagues. Attending and/or presenting at conferences is also con-

sidered a method to advance one's career and meet the expectations of promotions and/or tenure. The fact that only 5% of participants in this study currently teach on a provisional special education teacher's license, coupled with the fact that 24% have a Doctorate degree may have contributed to this significant correlation.

Educational conferences provided teachers with the opportunity for professional development and networking. Conference attendance is selected as a quantitative measure of professional development and collaborative opportunities since research shows a variety of benefits gained from these activities (Van Garderen, Hanuscin, Lee, & Kohn, 2012; Bryant, Linan-Thompson, Ugel, Hamff, & Hougen, 2001). As the number of special education students served in the general education classroom has increased the need for professional development of both general education and special education teachers also increased, specifically in the knowledge and practice of instructional strategies and assessments for the unique needs of students with disabilities (Van Garderen et al., 2012; Nougaret, Scruggs, & Mastropieri, 2005). Educational conferences and other forms of teacher development encouraged teachers to stay current with evidence-based practice.

Participants' levels of agreement with the statements related to the CEC Advanced Content Standards ranged from *agree* to *strongly agree*. This study did not investigate evidence of practice; instead, it solicited participants' self-reporting on statements that can be classified into three domains: knowledge, practice, and beliefs. The means of sustaining effective instructional practices and minimizing the gap between theory and practice have been the center of debate among researchers. Although some may argue that changing practitioners' beliefs comes prior to practice, others argue that the change follows practice as the success or failure of a practice alters or shapes practitioners' beliefs (Gersten & Domino, 2001; Gusky, 1986; Smylie, 1988). In either situation, the researchers examined the existence and extent of gaps among the three domains entailed in the survey's statements. The mean scores for knowledge, practice, and beliefs were statistically significantly different. Statements corresponding to "practice" domain had the highest mean followed by the "belief" domain, and lastly the "knowledge" domain. However, although the ANOVA

showed that the means were significantly different, the effect size was small d=.196, meaning that generalization of the significant differences among the means was invalidated by the small effect size.

Limitations

One limitation of this study was the small sample size (N=83). Increasing the sample size decreases the sampling error and hence would strengthen this study with a possibility of revealing a much larger effect size than the one obtained. In addition, like any other self-reported study, the results were limited to participants' perceptions, which could be subjective and hence inaccurate. Along with entertaining teachers' opinion of their own knowledge, practice, and belief, it was also important to empirically investigate these domains.

In conclusion, the researchers developed a quality survey for the study of teachers' practices, knowledge, and ethics as described by the Council for Exceptional Children's Advanced Content Standards (CEC Standards, 6th Edition, 2009). The survey disclosed the degree to which participants were knowledgeable practitioners in advocating for students with special needs as envisioned by the CEC standards. The split half reliability test proved the survey tool to be reliable. The survey tool was found to have construct and content validity by the survey review panel prior to electronic distribution to participants. Participants' overall agreement with the statements related to the CEC 2009 Advanced Content Standards fell between "agree-strongly agree" on a Likert scale used for the survey. The researchers believe that expanding this initial pilot study by increasing the number of participants is needed to further understand special educators' current status and training needs. Such knowledge should inform the practice and policy of higher education, local education associations, and area administrators.

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Appendix A

Survey: *Investigating teachers' practices, knowledge, and ethics as described by the Council for Exceptional Children's six advanced content standards (CEC standards 6th edition, 2009)*

	Stongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
I am aware of research-based practices that support students with exceptional learning needs.					
I believe that students with exceptional learning needs can be taught to achieve their full potential.					
I believe that special education programs should include a range of settings and services.					
I encourage colleagues to attend professional development related to instructional practices and behavior management strategies.					
I am aware of different intervention techniques to support students at all levels of instruction.					

I strive to stay current on instructional techniques and behavioral strategies.					
I make data-based instructional decisions for each student.					
I follow legal guidelines related to the selection and administration of non-biased formal assessment tools.					
My classroom reflects the minorities and a cultural diversity similar to the neighborhood community.					
I provide families with information pertaining to the rights of individuals with disabilities.					
I understand how to build consensus and resolve conflict.					
I possess the knowledge necessary for effective collaboration and consultation.					
I promote high expectations for individuals with exceptional learning needs.					

I advocate for appropriate resources for students with exceptional learning needs.					
I contribute effectively in decisions about students' educational placements and related services.					
I stay current with knowledge regarding instructional techniques in different learning environments.					
I understand special education research methods.					
My knowledge of research and evidence-based practices informs my instruction.					
I have knowledge of the theories that govern educational assessment.					
I use current assessment methods and tools to evaluate students with exceptional learning needs.					

I believe the least restrictive environment supports individualized special education services.					
I understand my responsibilities related to ethical and professional practice.					
I believe I have the responsibility to involve families in the collaborative process.					
I collaborate with general education teachers, parents, and administrators effectively.					