"I Feel Fairly Confident…": Investigating Literacy Candidates' Self Confidence through an On-Line Standards-Based Survey

Sharryn Larsen Walker
Central Washington University

Janet Finke
Central Washington University

Carol Butterfield
Central Washington University

Judy Backlund
Central Washington University

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This article presents the perceived self-confidence of teacher education candidates who were pursing certification in elementary education or elementary education with an endorsement in reading. Using the state standards toward a reading endorsement as the basis for the statements, each candidate completed an on-line common core survey stating her/his confidence in teaching to the standard. To further support her/his selfrating, these candidates also added comments for each of the six common core standard areas. Results indicated that those pursing an endorsement in reading viewed themselves as more confident than those who were not. Additionally, the data provided strengths and weaknesses about the literacy program at this university. Based on these findings, further analysis of the data is warranted.

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Abstract

This article presents the perceived self-confidence of teacher education candidates who were pursing certification in elementary education or elementary education with an endorsement in reading. Using the state standards toward a reading endorsement as the basis for the statements, each candidate completed an on-line common core survey stating her/his confidence in teaching to the standard. To further support her/his self-rating, these candidates also added comments for each of the six common core standard areas. Results indicated that those pursing an endorsement in reading viewed themselves as more confident than those who were not. Additionally, the data provided strengths and weaknesses about the literacy program at this university. Based on these findings, further analysis of the data is warranted.

The literacy program faculty at a regional university in the Pacific Northwest has been involved in collecting and analyzing evidence to document teacher candidate growth based on State Professional Standards in the field of Reading. Current research in the field of education provides some information about collecting evidence and documenting the impact of programs on pre-service teachers. Everhart and Hogarty (2009) believe there is a need for "teacher education programs to sharpen their focus on what constitutes good practice so that beginning teachers will be prepared for the politics and culture of the induction year in a host of school contexts" (p. 400). Fallon (2006) reports that teacher educators need to move toward using data rather than anecdotal records to make policy decisions. Using data to inform teacher educators about teacher preparation programs provide opportunities for improving programs, and in turn, better preparing beginning teachers.

Measuring Program Effectiveness

Researchers have considered what should be measured as well as indicators for program effectiveness. Wineburg claimed that many teacher education institutions "expended a great deal of energy and resources on data collection, but had no clear sense of what should be measured, how the data collection should be done, or what real purpose the data served" (as cited in Ludlow, et al., 2008, p. 321). However, there seems to be agreement that teacher education programs need to develop ways to measure the effectiveness of programs in order to meet the demands of accrediting agencies. Currently, surveying teacher candidates is a form of data collection used at many institutions.

Surveys

Chai, Khine, and Teo (2009) reported survey data that explored the significance of pre-service teacher beliefs and what influences those beliefs. They found that many beliefs were

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congruent with the culture of the pre-service teachers. This contrasted with Paulsen and Wells' (1998) study that found differences in epistemological beliefs based on major fields of study. Ludlow et al. (2008) described a series five of surveys that had been developed to investigate teacher candidate's experiences over time. The survey data were used to guide teaching practices, inform policies, and explore issues related to the curriculum and university/school relationships. The different surveys provided insight into teacher candidates' perceptions, beliefs about teaching, perceptions about preparedness, and reports of practices/teaching strategies. Survey data allowed researchers to compare self-perceptions and actual practice. In their use of entry and exit surveys, these researchers were able to track changes in teacher candidate beliefs, concepts of learning, and self-perceptions of performance. For example, Ludlow (et al., 2008) also reported that although teacher candidates generally felt well prepared, "exit surveys consistently indicated that teacher candidates felt under prepared in the multiple disciplinary areas that form the elementary school curriculum" (p. 331). Emphasis on sound psychometric properties and strong validity were emphasized.

Williams and Alawiye (2001) also surveyed student teachers' self-perceptions. Their goal was to create an "internal assessment mechanism that would provide teacher preparation program administrators information about the effectiveness of programs" (p. 114). This survey looked at teacher qualities such as teacher candidate knowledge of subject manner, teaching methods, planning ability, resources used, multicultural understanding, management, and attention to individual differences. They were also able to analyze student teacher perceptions about the strengths and weaknesses of the teacher preparation program. Williams and Alawiye (2001) determined that the teacher education program "offered to pre-service student candidates in the teacher preparation program is adequate" (p. 118) and provided insights about possible program improvements.

It is also believed that pre-service teachers need to understand their personal epistemological beliefs (Chai et al., 2009). Surveys inquiring into these belief systems provide opportunities for teacher candidates to become aware of and reflect on their beliefs, motives, and strategies and potentially create "an epistemologically conducive learning environment" (p. 296).

On-line Assessments

In addition to paper and pencil surveys, the use of on-line survey data has been examined (Amobi, 2003). Everhart and Hogarty (2009) explored the use of on-line assessment products that were being used for program assessment and accreditation purposes. They found that "online assessment products can collect and assess candidate work and performances in a formative manner" (p. 408) and provide "data that shows the strengths and weaknesses of teacher education programs" (p. 408). It is important to consider the functions of an on-line assessment system. Additionally, it is essential for the users to have an understanding of how to interpret the data in ways that are meaningful and useful for improving teacher education programs and prepare teachers for K-12 students.

Professional Standards

Teacher education programs are based on professional standards. Darling-Hammond (2006) suggested that teacher education programs should include performance assessments based on professional teaching standards. Additionally, Everhart and Hogarty (2009) emphasized that

on-line assessments provide "individual, aggregated, and disaggregated data" (p. 403) that can be aligned with professional standards. The National Council for Accreditation of Teacher Education (NCATE) calls for teacher candidates to demonstrate professional knowledge, skills, and dispositions. Teacher education programs have been working to provide accreditation agencies with clear and convincing evidence.

Rinaldo et al. (2010), in an effort to address standards related to dispositions, measured change in teacher candidate behaviors. Teacher candidates completing the 21-item survey provided evidence that they believed their own professional dispositions did change during the educational program. The findings in this study seemed "to imply that candidate beliefs are positively affected by the teacher education program offered by the college of education" (p. 50). Although this survey was based on professional dispositions standards, most of the surveys reported on in the literature are not based on professional standards and do not connect survey results to standards. Therefore, the purpose of this study was to explore teacher candidates' perceived confidence levels in the knowledge of literacy teaching based on State Professional Standards in Reading through an on-line common core survey.

Method

Setting

This study took place at a regional university located in the Pacific Northwest. The teacher education program at this university graduates approximately 300 elementary education majors each year. Each elementary education certification candidate also seeks an endorsement in another area with literacy, bilingual/TESL, and middle level math/science being among the most common.

As this teacher education program was approaching its reaccreditation process, each major and minor area aligned its assessment system with the NCATE, state, and professional standards for each degree or endorsement area. As part of the data collection within the literacy program, faculty devised a common core on-line survey to gain insight into the elementary education major candidates' and literacy/reading endorsement candidates' perceived confidence in knowledge of Reading Professional Standards. Using the six common core understandings that encompass the State Reading Endorsement Standards, a 26-item survey was developed. Each survey item aligned with a specific standard within the common core. All survey data were collected anonymously.

Participants

The participants in this study consisted of two groups. First, all candidates seeking endorsements in elementary education enrolled in their second literacy methods course completed the survey in the last week of class. Between November 2008 and June 2010, 247 elementary education majors completed the on-line survey. Twenty-three percent of these candidates indicated they were intending to acquire a minor in literacy.

The second group to take this survey included those working toward an endorsement in reading. After successfully completing the four literacy methods courses required of all elementary education majors and at least six of the eight required courses in the literacy minor, these candidates enrolled in an end-of-program practicum. They took the previously mentioned on-line common core survey during the last week of that field experience. Between November

2008 and June 2010, 80 elementary education majors working toward a reading endorsement completed the on-line survey.

A strong majority of the pre-service teachers who took both surveys were female, with approximately 85% taking courses on the main campus. The remaining 15% were enrolled in one of two branch campus sites. All of the candidates enrolled at one of the branch campus sites were working toward a minor in literacy.

Description of On-Line Common Core Survey

In order to glean the self-perceptions of the confidence levels in teaching literacy survey items were developed using the six State Common Core Standards for the Reading Endorsement as the basis for the items. The first items on the survey were background gathering, including which literacy courses had been taken in the elementary education major; whether or not the candidate was obtaining a minor in literacy; and which campus the candidate attended.

Next, the sub-headings of the six common core areas were converted into "I can" or "I know" statements. For instance, in Common Core Area 1-Foundational Knowledge, the standard "demonstrates knowledge of the major theories of language development and learning in the teaching of reading, writing, and instruction" was converted to "I can demonstrate knowledge of the major theories of language development and learning in the teaching of reading, writing, and instruction." A complete list of the statements with the accompanying means for the groups is located in Table 1.

The pre-service teachers rated themselves on each of the 26 items using a 5-point Likert scale, ranging from 1 (*not confident)* to 5 *(very confident).* On the recommendation of the assessment coordinator for the college, a five-point scale was used so as to provide "middle ground" to those who might see themselves in that position. All candidates were asked to rate themselves on each confidence statement. Following each common core area, the candidates were asked to summarize their current levels of confidence for the set of standards in a comments section. Within those comments, they were asked to cite specific examples from their coursework or fieldwork, which supported the statements made. The survey was formatted within *Qualtrics*, a survey-developing software.

Data Collection

The archival data were collected from the two previously described groups as part of a non-graded course requirement. A week before the survey was to be completed each candidate received an email stating s/he would receive a direct link to her/his own survey. The day before the survey was to be completed each candidate then received the email with the survey link. In order to increase the rate of response to the survey, the candidates met with their instructor or supervisor in a computer lab during class or seminar during the last week of the course. Candidates who were absent were reminded to complete the survey as soon as returning to class. The software system used was able to track those who completed the survey, and therefore the faculty was able to ensure that those absent had submitted their perceptions.

The survey consisted of three (3) background items, 26 confidence-level statements, and six (6) comment boxes. The software system compiled the data collected, providing means, variances, standard deviations, and total responses for each item. Table 2 presents two sets of means, one for each common core area for each of the groups.

Table 1

Mean Scores of Confidence Levels for Elementary Education Majors and Literacy Minors

Standard Statement	Elementary Education (M) n=247	Literacy Minor (M) n=80
Common Core 1-Foundational Knowledge		
1.1 I can demonstrate knowledge of the major theories of language development and learning in the teaching of reading, writing, and instruction.	3.61	3.98
1.2 I can demonstrate knowledge of the essential components of reading (phonemic awareness, phonics, fluency, vocabulary, comprehension)	4.09	4.63
1.3 I can demonstrate knowledge of various factors that affect language development and reading acquisition [e.g., cultural, environmental, linguistic, physical, and social.	3.98	4.43
1.4 I know the current state standards (GLEs) in reading, writing, and communication.	3.70	3.88
Common Core 2-Assessment, Diagnosis, and Evaluation		
2.1 I can demonstrate knowledge of selecting assessment tools to match the instructional purpose.	4.13	4.49
2.2 I can demonstrate knowledge of interpreting assessment results to inform instruction.	4.13	4.50
Common Core 3-Instructional Strategies and Curriculum Materials		
3.1 I can demonstrate knowledge of a wide-range of instructional strategies.	4.41	4.68
3.2 I can demonstrate knowledge of how to select and use a wide-range of curricular materials.	4.21	4.36
3.3 I can demonstrate knowledge of how to plan systematic explicit instruction for the essential components (phonemic awareness, phonics, vocabulary, fluency, comprehension). This includes knowledge and use of appropriate materials, explicit, personalized instruction based upon the assessed needs of the student.	4.06	4.34
3.4 I can demonstrate how to model and explicitly teach students to use word identification, word meaning, and context clues to read for meaning.	4.16	4.54
Common Core 4-Creating a Literate Environment		
4.1 I can demonstrate knowledge that students' interests, reading skills, and backgrounds are considered when using reading and writing	4.43	4.73
4.2 I can demonstrate understanding that creating a literate environment fosters interest and growth in all aspects of literacy including student choice in selection of reading materials.	4.33	4.73
4.3 I can demonstrate understanding of the research base that grounds		

practice in creating a literate environment.	3.89	4.38
4.4 I can demonstrate knowledge of the need for a variety of instructional materials and reference sources [e.g., large supply of books, technology-based information, and non-print materials representing multiple levels, broad interests, and cultural and linguistic backgrounds]	4.33	4.76
4.5 I can demonstrate knowledge of selecting and adapting a variety of print, non-print and classroom-based instructional materials for literacy, including those that are technology-based and are appropriate to the developmental needs of the student.	4.18	4.51
4.6 I can demonstrate knowledge of the various ways to use text forms and features to teach reading [e.g., conventions of written English, text structure and genres, figurative language, and textual links.	4.27	4.33
4.7 I can demonstrate the process of and purpose for modeling think-alouds and read-alouds.	4.27	4.65
Common Core 5-Professional Development		
5.1 I understand the importance of respecting socio-economic, cultural, linguistic, and ethnic diversity in the teaching process.	4.65	4.78
5.2 I understand the importance of keeping current in the field of literacy [e.g., reading professional journals and publications, data analysis and assessment, participating in professional organizations, conferences, professional book studies].	4.48	4.85
5.3 I understand the importance of collegiality through observation and discussion.	4.32	4.66
Common Core 6-Instructional Methodology		
6.1 I read and know how to apply the results of scientifically-based reading research (qualitative and quantitative) to instructional practices.	3.76	4.15
6.2 I collaborate with family members regarding students' literacy development.	3.51	4.32
6.3 I use a wide range of assessment tools and practices that range from individual and group standardized tests to individual and group informal classroom assessment strategies, including technology-based assessment tools.	3.82	4.33
6.4 I identify students with reading difficulties and identify the next step for instruction.	3.92	4.41
6.5 I can select appropriate materials and demonstrate the ability to plan and implement effective reading instruction for all learners.	4.08	4.44
6.6 I provide students with opportunities to become independent learners and to self-advocate when appropriate.	4.12	4.55

Note. Each group took the on-line survey independent of the other. It is not pre-post data.

Findings

Because the data presented here is not pre/post and the means in each group is independent of the other, care must be taken in making comparisons between groups. However,

generalizations between the groups, not statistically significant differences, may be drawn. In Common Core Area 1-Foundational Knowledge (Table 2), elementary education majors enrolled in their second literacy course indicated a mean on their confidence as 3.85 on a 5-point Likert Scale. However, those seeking an endorsement in reading that had at least six more courses in the content rated themselves with an mean of 4.16. A typical comment made by the elementary education majors about their confidence levels were similar to one made by this candidate, "I feel fairly confident, but not as confident as I would like to be." Conversely, a representative comment from one seeking a reading endorsement was, "I believe I have a fairly (good) knowledge of the foundational knowledge of the reading processes and instruction."

The trend continued within Common Core Area 2-Assessment, Diagnosis, and Evaluation in that the literacy minors rated themselves as more confident than those majoring in elementary education. Literacy minors evaluated themselves with a mean of 4.34, while the elementary education majors rated themselves with a mean of 4.16. Within this area, a candidate minoring in literacy commented, "I feel comfortable aligning my assessment up with my objectives and state standards. I believe informal assessments should be used often and should dictate instruction." An elementary education major voiced a similar insight when stating, "I have found that it is crucial to administer the assessment and use the data collected from the student as well as the student's demeanor to initiate a plan of learning."

Common Core Area 3- Instructional Strategies and Curriculum Materials indicated that again those pursuing an endorsement in reading perceived themselves as more confident. With a mean of 4.36, those minoring in literacy wrote much about their confidence in this area. For instance, one candidate wrote:

I am most confident in the area of reading strategies. I feel this is the standard that has been focused on the most in every class. Being able to put the strategies into practice during reading practicum has given me the confidence. Before my reading practicum, I felt like all I had was just a bit of strategies and I was not sure how to implement them into my instruction. I have been designing lessons to teach the reading skills that are the focus for the week. I use many of my textbooks and reference tools when planning my lessons.

The elementary education majors were similarly as vocal. While their mean was lower (4.21) in this core area, one candidate expressed a sense of doubt when writing:

In my 309 [the course number of the second literacy course taken], we were given a lot of reference regarding strategies, including using our texts and the internet. Therefore, I feel confident in this area. However, explicitly teaching students word identification, meaning, and context clues I am not sure of until I am in the field.

The notion of creating a literate environment is the basis of Common Core Area 4. The seven items within this category yielded the widest difference between the means. The elementary education majors rated themselves with a confidence level of 4.16, while the mean for the literacy minors was 4.56. One elementary education major noted that "I have used research-based strategies in my 309 class…In using think-alouds, I haven't practiced it, but I understand the benefits of using it to help the students learn to use higher thinking." A literacy minor wrote of the importance of "considering the interests and background of every student," while showing the students "my love of reading."

In Common Core Area 5-Professional Development, literacy minors (4.78) again rated themselves as more confident than elementary education majors (4.48). One literacy minor

Table 2

Means for Elementary Education Majors and Literacy Minors Each Common Core Area

Common Core Area	Elementary Education Majors (M) n=247	Literacy Minors (M) n=80
Common Core 1-Foundational Knowledge Candidates have knowledge of the foundations for reading and writing processes and instruction. (4 items)	3.85	4.16
Common Core 2-Assessment, Diagnosis, and Evaluation Candidates demonstrate knowledge of the assessment/evaluation/instruction cycle and how to use a variety of assessment tools and practices to plan and evaluate effective reading instruction. (2 items)	4.13	4.34
Common Core 3-Instructional Strategies and Curriculum Materials Candidates have knowledge of a wide-range of instructional practices, approaches, methods, and curriculum materials to support reading and writing instruction. (4 items)	4.21	4.35
Common Core 4-Creating a Literate Environment Candidates create a literate environment that fosters reading and writing by integrating foundational knowledge, use of instructional practices, approaches and methods, curriculum materials and the appropriate use of assessment. (7 items)	4.19	4.56
Common Core 5-Professional Development Candidates view professional development as career-long effort and responsibility. (3 items)	4.48	4.78
Common Core 6-Instructional Methodology Candidates demonstrate a deep understanding of the pedagogical knowledge and practice specific to the teaching of reading and writing. (6 items)	3.86	4.18

Note. Each group took the on-line survey independent of the other. It is not pre-post data.

commented that she felt more confident because of the weekly discussions about current articles from *The Reading Teacher*, a requirement in one of the courses toward the endorsement. This candidate stated that she was able to connect what was read in the articles to what was implemented in the classroom. The comments from the elementary education majors were more

general as illustrated by this comment, "I believe that teachers must be up to date in the content areas that they specialize in because teaching is a profession."

Finally, in Common Core Area 6-Instructional Methodology, the literacy minors again rated themselves higher. With a mean of 4.18 for the group, a literacy minor supported her confidence level by stating, "I learned in all my literacy courses, but feel that I mostly learned from the discussions about my practicum." In this area the mean for the elementary education majors was 3.86, while one candidate commented, "I do not have much experience with students with reading difficulties, but do feel I can create effective lessons in reading and writing."

Discussion

The purpose of this study was to investigate teacher candidates' perceived confidence levels about literacy teaching based on State Professional Reading Standards through an on-line common core survey. Two groups of participants were surveyed; those who were enrolled in their second required literacy course, and those who had taken at least an additional six literacy courses and were enrolled in a literacy practicum. The means for each of the perceived confidence levels within of the six common core areas of the State Professional Reading Standards for each group was presented. Sample comments to support those perceived confidences were also shared.

Overall, those pursuing an endorsement in reading rated themselves as more confident than those who had taken just the second of their required literacy courses within the elementary education major. This finding was expected, as it was reasonable to assume that those pursing the reading endorsement would feel more confident because they had taken more courses within the content area. Additionally, the confidence levels, coupled with the content and volume of comments made to support the numeric ratings (results in process), mirrored the content and processes of the respective course sequence to date for those taking the survey.

Although the intent of the survey was to gain an understanding of the confidence these candidates felt in the teaching of literacy, the data provided information for the faculty about the program itself. Based on the confidence levels and their accompanying comments several perceived strengths of the program were revealed. First, both groups rated themselves high in the specific items within several common core areas related to understanding students. All of these teacher candidates felt confident in considering the issues of diversity, while understanding the backgrounds and skills of the students they teach. Additionally, these teacher candidates felt confident in demonstrating their ability to use a variety of instructional strategies and materials within a strong literate environment, as evidenced by their ratings and comments within Common Core Areas 3 and 6. Finally, both groups rated themselves as confident in the notion of "teacher candidate as professional" from items within Common Core Area 5. Both supported this notion with their knowledge of the profession and the importance of collegiality in professional development. These perceived strengths can be an important reporting piece in the reaccreditation process.

Perceived strengths must be balanced with perceived weaknesses. Both groups rated themselves as low in confidence when communicating and working with parents. Their numeric ratings and comments within Common Core Areas 5 and 6 supported their notion that they had not had much experience in working with parents at this pre-service level. Another area of perceived low confidence was within Common Core Area 1, "know the state GLEs [Grade Level Expectations]." The comments supporting this confidence level suggested that the candidates felt

they needed to have the GLEs memorized as opposed to knowing where to find them. Finally, the candidates rated themselves less confident in Common Core Area 6 in their knowledge of quantitative and qualitative research knowledge.

Using the data collected from the common core survey, the faculty has discussed and made strides to address the perceived low-confidence levels of these pre-service teachers. First, opportunities to interact with parents and families have been incorporated into at least one literacy course in which the pre-service teachers host a "family reading night," as part of a service-learning component within the course. During this event, the pre-service teachers read or tell stories to small groups of families in an intimate setting. This activity has received positive comments from the pre-service teachers and family participants alike. In another course, communicating assessment data with parents is simulated in order to build teacher candidate confidence in communicating with parents.

In order to address the knowledge of the GLEs, the literacy faculty has agreed to use a common vocabulary with the pre-service candidates and make explicit that "knowledge of the GLEs does not mean that they are to be memorized." However, the teacher candidates should know where to access the GLEs and how to use them in support of their teaching. Furthermore, the faculty has worked to make explicit the terms of qualitative and quantitative research within their teaching. This has been accomplished by pointing out how the "research-based strategies" used in teaching became so and how the two types of research inform practice. As additional data is gathered from current teacher candidates through the administration of the common core on-line survey, literacy faculty will be able to assess teacher candidate growth, gain insight into the effectiveness of the literacy minor program and, as a result, work toward program improvement.

Further analysis

While the original intent of this survey was to garner the perceived confidences of two groups, the data collected has been useful in making program improvements. However, there are several ways in which this data can be further analyzed. Future data breakouts could include examining the pre/post confidence levels of those candidates pursing an endorsement in literacy, those candidates at the different branch campuses, and those by year in order to see if the changes made by faculty have addressed the perceived areas of weaknesses. Additionally, both sets of groups provided many comments in support and explanation of each of the common core areas. Qualitatively analyzing candidate comments may provide more detailed support to the means displayed. Finally, the survey may be distributed to those elementary education majors near the completion of their student teaching experience.

The use of an on-line survey with items based on the endorsement standards can be adapted for any content area. The perceived confidences provide feedback to faculty and program areas about perceived strengths and weaknesses of programs. This feedback from teacher candidates can then be used to make adjustments in courses, course requirements, and fine tune current teaching practices, as well as provide more data for the program accreditation process.

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