2019

Community College Faculty's Attitudes and Self-Efficacy with Literacy Instruction in the Disciplines

Kristen H. Gregory
East Carolina University

Linda Bol
Old Dominion University

Thomas Bean
Old Dominion University

Tony Perez
Old Dominion University

Original Publication Citation

Gregory, K. H., Bol, L., Bean, T., & Perez, T. (2019). Community college faculty's attitudes and self-efficacy with literacy instruction in the disciplines. *Journal of Behavioral & Social Sciences*, *6*(1), 14-28.

Journal of Behavioral and Social Sciences
2019, Vol. 6, 14–28 ISSN: 2375-8899

Community College Faculty's Attitudes and Self-Efficacy with Literacy Instruction in the Disciplines

Kristen H. Gregory
East Carolina University

Linda Bol
Old Dominion University

Thomas Bean
Old Dominion University

Tony Perez
Old Dominion University

Many community college students are entering college-level courses underprepared for the literacy skills required to be successful. Faculty are considered experts in their disciplines, yet are often not trained in pedagogy and literacy instruction (Furco & Moely, 2012; Moje, 2008; Tsui, 2002). We developed a questionnaire to measure faculty's (n = 231) perceptions of their role, level of self-efficacy, and classroom practice in regard to discipline-specific literacy instruction. We analyzed data using exploratory factor analysis, t-tests, and analysis of variance. The findings show that faculty have marginally positive perceptions and self-efficacy regarding incorporating discipline-specific literacy instruction in their courses. Faculty with K-12 teaching experience held significantly higher role perceptions and self-efficacy than those without K-12 experience. Further, only humanities and STEM faculty held significantly different role perceptions and self-efficacy with humanities faculty scoring significantly higher in both areas. The findings contribute a valid scale to the literacy field, provide insight for faculty development programs, and indicate areas for future research.

Large numbers of high school graduates are entering higher education underprepared for the coursework they are about to encounter. Nationally, approximately 20% of all first-year undergraduates in higher education enroll in at least one developmental course; this statistic increases to 24% when specific to community college students (National Center for Educational Statistics, 2013a). However, the state of being underprepared academically for college level coursework does not only apply to developmental education students. Many students who test into college-level courses are entering college with inadequate reading, writing, and critical thinking skills to successfully navigate discipline-specific higher education coursework (Duff, 2010; Hyland, 2006; Lea & Street, 1998; Tsui, 2002). As such, college faculty are challenged to meet the multiple needs of their students while still maintaining high expectations within their discipline-specific courses.

Across educational levels, faculty are often solely credentialed in their discipline and have limited, if any, coursework in pedagogy and literacy instruction (Fang & Coatoam, 2013; Furco

Kristen H. Gregory, Ph.D., is Assistant Professor of Elementary Education at East Carolina University in Greenville, North Carolina.

Linda Bol, Ph.D., is Professor of Educational Psychology and Program Evaluation at Old Dominion University in Norfolk, Virginia.

Thomas Bean, Ph.D., is Professor of Literacy/Reading at Old Dominion University in Norfolk, Virginia.

Tony Perez, Ph.D., is Assistant Professor of Educational Psychology at Old Dominion University in Norfolk, Virginia.

Correspondence regarding this article should be sent to gregorykr18@ecu.edu.

& Moely, 2012; Moje, 2008; Thibodeau, 2008; Tsui, 2002). Further, college faculty often do not have the pedagogical background to integrate literacy instruction into their curriculum (Furco & Moely, 2012; Hammer & Green, 2011; Moje, 2008; Thibodeau, 2008; Tsui, 2002), unlike many high school content area teachers who are both literacy and content practitioners (Cantrell, Burns, & Callaway, 2008; Sturtevant & Linek, 2003). This paradox presents a challenge for college faculty when they are faced with students who struggle with reading, writing, and critical thinking skills. Therefore, they often rely on developmental and English coursework, as well as academic support centers, to provide students with targeted literacy support. While students gain general literacy strategies in these venues, this practice is being questioned as it does not provide students with the discipline-specific literacy experiences necessary to succeed in higher education coursework (Lea & Street, 1998; Wingate, 2006). Instead, researchers suggest that college faculty integrate context- and discipline-specific literacy instruction into the content courses (Heller, 2010; Wingate & Tribble, 2012).

Literacy Instruction in the Disciplines

While some high-school content-area teachers view themselves as both literacy and content-area teachers (Cantrell et al., 2008; Sturtevant & Linek, 2003), college faculty often do not feel it is their role to teach reading and writing skills within their college classroom (Bailey, 2010; Gregory & Colclough, 2018; Haggis, 2006; Tsui, 2002) and exhibit resistance to this practice (Bean, Gregory, & Dunkerly-Bean, 2018). Developing students' reading, writing, and critical thinking skills takes a collaborative effort by all faculty, not just English faculty, as it is rare for sufficient development to occur in one class during one semester. Therefore, it is beneficial for all faculty to know how to promote and support content-specific literacy and critical thinking skills within their discipline courses (Tsui, 2002) and to build disciplinary literacy instructional programs (Moje, 2008).

Over the past decade, this phenomenon has been increasingly addressed with adolescent learners in secondary schools. There has been a push for secondary educators to move away from solely content-area literacy instruction and shift toward a disciplinary literacy approach to help students develop discipline-specific literacy skills (Fang & Coatoam, 2013; Gillis, 2014; Hynd-Shanahan, 2013; Moje, 2008; Shanahan & Shanahan, 2008, 2012). Disciplinary literacy is described by Shanahan and Shanahan (2012) as, "an emphasis on the knowledge and abilities possessed by those who create, communicate, and use knowledge within the disciplines" (p. 8). Through disciplinary literacy instruction, students, "engage in practices that will help them solve specific problems with disciplinary texts" (Hynd-Shanahan, 2013, p. 94). Further, students navigate the texts of the disciplines as they learn the specific reading, writing, and critical thinking skills specific to that discipline (Dunkerly-Bean & Bean, 2016; Moje, 2015). Rather than applying general literacy strategies to the disciplines, as in content-area literacy, disciplinary literacy pedagogical decisions are guided by the discipline itself (Hynd-Shanahan, 2013). Providing opportunities for students to engage, elicit/engineer, examine, and evaluate multiple literacy contexts allows faculty to keep a central focus on inquiry within their disciplinary literacy instruction (Moje, 2015).

While most of the work published has been supportive of this shift toward disciplinary literacy in secondary schools, Heller (2010), in his response to Moje's (2008) initial call for change, challenged the approach at the secondary level. He argued that disciplinary literacy instruction targets skills necessary for university and professional settings and should be left to higher education (Heller, 2010). Interestingly, though, the bulk of the research has focused on secondary schools, leaving a limited research base at the postsecondary level on disciplinary literacy. However, these are the instructors who often have limited literacy and education training and might not even consider incorporating discipline-specific literacy into the classroom. If they do consider this concept, they may feel that it is not their role, or they may not have the time, knowledge, or confidence to incorporate disciplinary literacy within their courses.

Tsui (2002) conducted one of the few studies on this phenomenon at the college level—a case study on four higher education institutions. Classroom observations and interviews were conducted over a seven-month period in 1996-1997. The results of this study indicated that

some college faculty did not believe it was their role to teach reading and writing skills within their college classroom (Tsui, 2002). However, this study did not expand upon the faculty's self-efficacy with incorporating discipline-specific literacy into their instruction. It also did not explore what literacy practices, if any, the faculty actually incorporated into their content instruction. Understanding faculty's perceived role, self-efficacy, and classroom practices inform professional development personnel as they develop and provide offerings to support faculty in the areas of literacy instruction within the disciplines.

Theoretical Framework: Social Cognitive Theory

Social cognitive theory (Bandura, 1986) serves as the framework for the present study. Social cognitive theory "contends that individuals act based on their thoughts, goals, beliefs, and values" (Schunk, Meece, & Pintrich, 2014); thus, both learning and performance are influenced by one's level of motivation. One key construct of social cognitive theory is self-efficacy, or one's perceived ability to learn or perform a specific task (Bandura, 1993, 1997). More specifically, instructional self-efficacy refers to an instructor's perceived ability to teach students and help them learn the content (Schunk, 2012). In the present study, instructional self-efficacy encompasses an instructor's perceived ability to integrate literacy instruction into the discipline's curriculum and help students to learn discipline-specific literacy skills.

Bandura (1977) contended that one's level of self-efficacy was a stronger factor of one's learning and performance than one's actual abilities. Further, he argued that individuals with low self-efficacy were less likely to persist when the task at hand became challenging (Bandura, 1977). Thus, an educator who felt that he or she was incapable of succeeding at integrating literacy instruction into the discipline even though he or she knew of teaching strategies that could be successful in this area would be less likely to persist or even integrate literacy at all when the lesson became challenging (Tschannen-Moran & Johnson, 2011).

Research on higher education faculty's attitudes and self-efficacy with literacy instruction has been impeded by the lack of a valid measure. While there are several scales that measure certain aspects of this phenomenon, there is not one that measures it in its entirety. Chang, Lin, and Song (2011) developed a Faculty Teaching Self-Efficacy Scale (FTSES); however, this scale covers general aspects of instruction rather than a literacy-focused approach. Scales that measure aspects of elementary and secondary teachers' self-efficacy with literacy instruction do exist, such as the Reading Teaching Efficacy Instrument (RTEI) developed by Szabo and Mokhtari (2004), and the Teachers' Sense of Efficacy for Literacy Instruction (TSELI) and Teacher Sense of Efficacy Scale (TSES) both developed by Tschannen-Moran and Johnson (2011). The RTEI focused solely on reading instruction and held several psychometric issues (Tschannen-Moran & Woolfolk Hoy, 2001). The TSELI and TSES both address reading and writing, but they are exclusive to elementary and secondary school teachers. There is, at present, no tested scale that specifically measures higher education faculty's attitudes, self-efficacy and practices related to literacy instruction in the disciplines.

Indeed, there is a gap in the research when the focus is shifted to higher education, specifically in the community college setting. The present study was designed to address this gap, and thus investigated the following research questions: (1) To what extent can we measure community college faculty's attitudes and self-efficacy with literacy instruction in a reliable and valid way? (2) What are community college faculty's attitudes toward incorporating literacy instruction in their content courses? (3) What are community college faculty's levels of self-efficacy in regard to incorporating literacy instruction in their content courses? (4) To what extent do community college faculty's attitudes and self-efficacy with literacy instruction differ by employment status, K-12 experience, and discipline taught?

The present study contributes to the field of postsecondary literacy research in several ways. First, we provide a valid and reliable instrument for use by researchers, faculty, and administration in higher education. Second, the results of the current study provide insight to the field of research on the attitudes and self-efficacy of faculty in regard to literacy instruction at the postsecondary level. Finally, both the scale and the

findings of the present study will guide professional development providers in their design of workshops and programs that incorporate strategies and theory to aid higher education faculty in developing their instructional self-efficacy in order to subsequently impact their pedagogy and practice.

Method

Research Design

We employed a descriptive, comparative research design in the present study. We investigated community college faculty's perceptions of their role as a literacy educator and their self-efficacy with incorporating literacy instruction in their course instruction. Findings by construct and scale were compared as a function of employment status, K-12 teaching experience, and discipline taught.

Participants and Context

Approximately 2,200 full and part-time faculty from three large, mid-Atlantic multi-campus community colleges were invited to participate in the present study during the Summer 2016 term. These three institutions employ approximately 600 full-time and 1,600 part-time faculty. The full-time faculty across these three institutions were 49% male (43% Caucasian and 6% minority) and 51% female (40% Caucasian and 11% minority). These statistics are comparable to the data for higher education faculty across the country (National Center for Education Statistics, 2013b). The three community colleges serve approximately 60,000 students per year. The student body is approximately 42% full-time and 58% part-time; 40% college transfer and 50% career/technical; 39% male and 61% female; 42% Caucasian, 44% African American and 14% other minorities; and 60% on financial aid. The colleges are part of a 23-college mid-Atlantic state community college system and offer two-year transferrable degrees, professional certifications, career and technical education, dual enrollment, and developmental studies.

Of the 2,200 invited faculty, 11% (n = 231) completed the survey. We used such strategies as pre-survey contacts, personalized contacts, increased chances of winning incentives, alternate wording for each contact, and follow up contacts in an effort to increase response rates (Cook, Heath, & Thompson, 2000; Kaplowitz, Hadlock, & Levine, 2004; Sauermann & Roach, 2013). While we expected a 25-30% response rate (Kaplowitz et al., 2004) to meet the desired subject to item ratio of 10:1 (Costello & Osborne, 2005), we considered the timing of the study (Summer term) and the large number of part-time faculty to be contributing causes to a lower-than-expected response rate.

Measure

Relying on research on higher education faculty self-efficacy, secondary education literacy teacher self-efficacy, secondary content teacher self-efficacy, and scale development, we developed a questionnaire to measure college faculty's self-efficacy in implementing discipline-specific literacy instruction in their courses. The scale, Faculty Attitudes & Self-Efficacy with Discipline-Specific Literacy Instruction (FASEDSLI), was developed using a theoretical

Table 1

Theoretical Blueprint for the Original Scale: Faculty Attitudes & Self-Efficacy with Discipline-Specific Literacy Instruction (FASEDSLI)

	Role Perception	Self-Efficacy	Practice	Total
Reading*	5	6	5	16
Writing**	5	6	5	16
Critical Thinking***	5	6	5	16
Total	15	18	15	48

** Disciplinary vocabulary, comprehension of disciplinary texts*

***Discipline-specific writing tasks, communicating the discipline*

****Reasoning, application, source analysis, proofs*

blueprint (see Table 1) and included three subscales. The constructs for the three subscales were faculty's perceptions of their role as a literacy educator, faculty's self-efficacy for incorporating literacy into their course instruction, and faculty's practice of incorporating literacy instruction into their discipline courses. We analyzed the construct for each subscale in terms of three components of literacy: reading (e.g., disciplinary vocabulary, comprehension of disciplinary texts), writing (e.g., discipline-specific writing tasks, communicating the discipline), and critical thinking (e.g., reasoning, application, source analysis, proofs). Between five and six questions were developed for each construct and literacy component, totaling 48 items. We included both positively and negatively-worded items.

The questions covered a variety of aspects of literacy with the aim of participants self-reporting the extent to which literacy played a role in their instruction. For example, to address role perception and reading, one question asked: "Part of my role as a discipline faculty is to include instruction on how to better comprehend the texts used by professionals in the field." To address self-efficacy and writing, another question asked, "I am capable of successfully supporting students with writing discipline-specific papers or reports similar to works published in the field." Finally, to address practice and critical thinking, another question asked: "I incorporate lessons which help students analyze sources in a manner specific to the field." These examples, as well as the remainder of the questions, address literacy within the context of the discipline.

The following demographic information was collected from the participants: gender, K-12 teaching experience, higher education teaching experience, employment status (full-time or part-time), level of education, education degree area of study, and discipline(s) taught. This information was collected in order to describe the sample, compare it to the larger population, and thereby investigate external validity. Additionally, this data collection allowed us to identify possible differences based on demographic characteristics.

The FASEDSLI questionnaire included three item types. The demographic questions consisted of close-ended, checklist items (e.g., gender). The role perception, self-efficacy, and practice subscales included both Likert-scale and open-ended questions. The Likert-scale had six response options: *Completely Disagree* (1), *Mostly Disagree* (2), *Slightly Disagree* (3), *Slightly Agree* (4), *Mostly Agree* (5), and *Completely Agree* (6). We chose not to include a central option reflecting a neutral position, as supported by extant research (Garland, 1991; Kalton, Roberts, & Holt, 1980; Krosnick et al., 2002). Removing the neutral option in effect forces the participants to use cognitive effort to identify their position on a topic (Garland, 1991). Additionally, six response options allowed for more variance in responses with the intent of enhancing the validity of the scale. The open-ended questions (e.g., What else can you tell me about your beliefs about your role as a literacy educator?) allowed the participants to provide any additional experiences or thoughts regarding the use of literacy instruction in their courses.

Data Collection

We collected data from community college faculty via an online questionnaire during the Summer 2016 academic term. The faculty were invited to participate in the web-based survey via an email invitation and were asked to complete the survey within a two-week time period. Directions were provided both in the email and at the beginning of the online survey explaining the purpose of the study, how the results would be used, and how the study would benefit faculty and students. After two weeks, a follow-up email was sent to all faculty thanking those who had participated and inviting those who had not yet completed the survey to do so. Faculty who completed the survey had the option to be entered into a drawing for one of four $25 Amazon gift cards.

Data Analyses

We conducted an exploratory factor analysis using principal axis factoring using oblique rotation on the original survey items. This method allowed us to refine the scale to include only questions which reliably measured the constructs they were intended to measure. After checking reliability and validity of the full scale and subscales, descriptive statistics were used to address the second and third research

Table 2
Participant Demographics

Characteristic	*n**	Valid %
Gender		
Male	80	35.9
Female	143	64.1
Employment Status		
Full-time	93	41.5
Part-time	131	58.5
Discipline Taught		
Business	20	9.3
Humanities	64	29.8
Social Sciences	28	13.0
STEM	57	26.5
Health	12	5.6
Career Technical	7	3.3
Other	27	12.6
K-12 Experience		
Yes	87	39.9
No	131	60.1
Higher Education Experience		
1-10 years	122	56.0
11-20 years	49	22.5
21+ years	47	21.6

n: total number of participants who responded; forced response was not utilized*

questions. For the final research question, *t*-tests were used to compare results by employment status and K-12 teaching experience, and analysis of variance was conducted to compare responses by discipline taught. Using the constructs as a priori codes, we analyzed and manually coded the data from the open-ended questions in order to triangulate the data for the second, third, and fourth research question.

Results

A total of 231 community college faculty (see Table 2) participated in the present study. The faculty taught in a variety of disciplines, with over half in humanities or STEM (Science, Technology, Engineering and Mathematics) departments. The majority of the faculty surveyed were part-time, were female, had never taught at the K-12 level, and had taught for ten years or fewer in higher education. The results of the current study are organized by research question, beginning with the psychometric characteristics of the measurement.

To what extent can we measure community college faculty's attitudes and self-efficacy with literacy instruction in a reliable and valid way?

The validity of the questionnaire was enhanced in several ways. The development of the FASEDSLI scale was guided by past measures and research in the field. During the initial development of the questionnaire, we checked for content validity through a theoretical blueprint (see Table 1). Organizing the survey items by construct helped ensure that each construct was sufficiently represented.

Second, we conducted a principal axis factor analysis on the rating scale responses with oblique rotation. This analysis informed the refinement of the measurement so that it only included those items with a coherent factor

Table 3

Summary of Exploratory Factor Analysis Results of the Refined Scale: Faculty Attitudes & Self-Efficacy with Discipline-Specific Literacy Instruction (FASEDSLI)

Item Text	1	2	3
Q4. It is important for me to include discipline-specific writing instruction in order for students to successfully complete course assignments.	.76		
Q5. Part of my role as a discipline faculty is to include discipline-specific organizational strategy instruction to help my students write in a manner similar to experts in the field.	.70		
Q6. Discipline faculty should provide opportunities for students to develop their discipline-specific writing ability.	.70		
Q7. It is important for me to include discipline-specific source analysis instruction and practice in order for students to successfully complete course assignments.	.60		
Q3. Part of my role as a discipline faculty is to include instruction on how to better comprehend the texts used by professionals in the field.	.56		
Q1. It is important for me to include discipline-specific reading instruction in order for students to successfully complete course assignments.	.50		
Q9. Discipline faculty should provide opportunities for students to apply the disciplinary knowledge in ways that mirror activities in the field.	.50		
Q8. Discipline faculty should provide opportunities for students to develop their reasoning skills in a manner similar to experts in the field.	.44		
Q2. Part of my role as a discipline faculty is to include discipline-specific vocabulary instruction to help my students succeed in my course.	.43		
Q19. I understand the critical thinking skills students need in order to be successful in my discipline.		.87	
Q14. I have completed professional development activities to develop my understanding of the role writing plays in my discipline.		.83	
Q21. I am confident in my ability to teach students how to apply their knowledge of the discipline to the assignments and field.		.80	
Q20. I am capable of teaching students how to analyze sources pertinent to the discipline.		.75	
Q18. I have completed professional development activities to develop my understanding of the role critical thinking plays in my discipline.		.69	
Q10. I have completed professional development activities to develop my understanding of the role reading plays in my discipline.		.59	
Q16. I am capable of successfully supporting students with writing discipline-specific papers or reports similar to works published in the field.		.58	
Q15. I understand the writing skills students need in order to be successful in my discipline.		.57	
Q11. I understand the reading skills students need in order to be successful in my discipline.		.51	
Q13. I am capable of successfully providing discipline-specific comprehension support for students who struggle with reading in my courses.		.43	
Q12. I am confident in my ability to include discipline-specific vocabulary instruction in order for the students in my courses to succeed.		.41	
Q17. I am capable of successfully providing discipline-specific writing support for students who struggle with reading in my courses.		.35	
Q28. I incorporate lessons which support students in their development of critical thinking and reasoning.			.77
Q30. When students struggle with applying discipline-specific knowledge of the field, I provide additional support.			.68
Q22. I incorporate lessons which support students in their development of discipline-specific vocabulary.			.66
Q23. I incorporate lessons which help students develop their understanding of the course texts.			.60
Q29. I incorporate lessons which help students analyze sources in a manner specific to the field.			.60
Q27. When students struggle with discipline-specific writing skills, I provide additional support.			.58
Q24. When students struggle with discipline-specific reading skills, I provide additional support.			.46
Q26. I incorporate lessons which help students develop their ability to write in a manner similar to experts in the field.			.40
Q25. I incorporate lessons which support students in their development of discipline-specific writing and organization of ideas.			.36
Eigenvalue	10.14	2.66	2.19
Percentage of variance explained	33.79	8.88	7.29

Note: Item loadings below .35 are not shown. 1 = Factor 1/Perceptions of Role as Literacy Educator; 2 = Factor 2/Self-Efficacy with Literacy Instruction; 3 = Factor 3/Literacy Instruction Practices

structure. Due to a sample size of 231, we followed MacCallum, Widaman, Zhang, and Hong's (1999) recommendation and identified .50 as the target communality score. Thus, eighteen items with either low communalities (less than .50) or low item-total correlation

scores that negatively impacted the survey's total Cronbach's alpha score were removed, leaving a total of 30 items that shared adequate common variance with other items. The items removed focused mainly on faculty's perceived ability to support struggling students, faculty's expectations of incoming students' skill levels, and the role of outside resources for struggling students. This revision is logical in that these topics cover issues outside college-level instruction. The Kaiser-Meyer-Olkin measure (KMO = .888) verified the sample size ($n = 231$) as strong for the analysis (Hutcheson & Sofroniou, 1999). Bartlet's test of Sphericity was significant (x^2 (435) = 3788.885, $p < .001$), further supporting the sampling adequacy.

In order to determine the initial factor structure, we used the following criteria: eigenvalues greater than 1.0, scree plot analysis, factor structure clarity and coherence, and interpretability of factors. Three factors held eigenvalues greater than 1.0, explaining 49.96% of the variance. The scree plot showed inflexions that could justify between two and three factors. When the 30 items were loaded on the three-factor model (see Table 3), the items were clustered in line with the following three a priori constructs being measured: faculty's perceptions of their role as a literacy educator, faculty's self-efficacy in regard to incorporating literacy instruction in their courses, and faculty's practice of literacy activities and instruction in their courses. The items did not hold scores of .30 or higher on the other two factors, concluding that there were no cross-loading issues.

Both the first factor (role perception) and second factor (self-efficacy) had fairly strong correlations ($r = .46$, $r = .40$) with the third factor (practice), which seems logical given that faculty who value literacy education as part of their role and/or are confident in their abilities will more likely put this into practice in their classroom. Interestingly, self-efficacy was not strongly correlated to role perception ($r = .28$), which might support that one's self-efficacy is not dependent upon one's role perception. As the full scale was not intended to be unidimensional, this result was not concerning. Thus, with some refinement of the original questionnaire, the factor analysis empirically verified the a priori constructs developed.

Third, we triangulated the findings from the scaled items and open-ended items to confirm consistency across the data. Finally, the results from this analysis provided insight about the specific questions within the scale. As such, some questions were revised or removed.

We confirmed that the FASEDSLI scale had high reliability by calculating Cronbach's alpha for each construct (see Table 4). When broken down by construct, the reliability increased with the reduction of items. Faculty's perceptions of their role to incorporate reading, writing, and critical thinking into their content courses was measured by nine items with a reliability of $\alpha = .825$, an improvement of the reliability from the full 15 items ($\alpha = .718$). Faculty's self-efficacy to incorporate these literacy components into their courses was originally measured by 18 items with a reliability of $\alpha = .526$. The refined 12-item subscale had an increased reliability of $\alpha = .839$. Finally, the reliability of the third construct, practice, originally had 15 items with a low reliability ($\alpha = .351$). The

Table 4
Summary of Scale Reliability

	Original Scale		Refined Scale	
	Items	α	Items	α
Perceptions of Role as Literacy Educator	15	0.718	9	0.825
Self-efficacy with Literacy Instruction	18	0.526	12	0.839
Literacy Practices within Instruction	15	0.351	9	0.884
Full Scale	48	0.715	30	0.922

Table 5
Faculty Role Perceptions (n=231)

Construct	*M*	*SE*
Role Perception	5.05	.053
Reading	5.09	.053
Writing	4.91	.057
Critical Thinking	5.23	.043

reliability increased when the six items were removed, leaving a strong reliability for the nine items, α = .884. The overall scale's reliability increased from α = .715 to α = .922 when the eighteen items were removed.

What are community college faculty's attitudes toward incorporating literacy instruction in their content courses?

As shown in Table 5, on average, faculty (n = 231) mostly agreed that part of their role as a faculty member was to include literacy instruction specific to their discipline (M = 5.05, SE = .053). The participant responses to open-ended questions reflected this result. Some faculty agreed with the notion articulated by a culinary arts faculty member when he stated: "Industry-specific literacy is extremely important and can only be taught by industry trained faculty." On the other extreme, some faculty agreed with the opposite, as stated by a chemistry faculty member when she stated: "My role as a COLLEGE educator in STEM is to teach them STEM, not literacy" (emphasis in original).

More specifically, faculty mostly agreed that their role was to incorporate literacy instruction that included reading (M = 5.09, SE = .053), writing (M = 4.91, SE = .057), and critical thinking (M = 5.23, SE = .043). Faculty generally perceived that teaching critical thinking was more in line with their role than reading and writing. Faculty addressed this mindset in the open-ended questions, as noted by a psychology faculty member when she wrote: "If I do not model and encourage critical literacy in my class, who will? I want my students to be changed personally and practically in my class, and literacy education is an essential step in that direction." This statement suggests that critical thinking outcomes were specifically aligned with the content of their courses and were required in order to better understand the content. Additionally, several faculty noted that students should come prepared with the reading and writing skills to succeed in their course, but they identified critical thinking as an area that students should expect to strengthen in higher education coursework.

What are community college faculty's levels of self-efficacy in regard to incorporating literacy instruction in their content courses?

On average, faculty (n = 231) held fair levels of self-efficacy (M = 4.87, SE = .054) regarding their ability to include literacy instruction specific to their discipline (see Table 6). However, they identified specific factors that impeded their self-efficacy. Several professors identified time as a factor, as noted by a biology professor when he stated: "I am confident in my abilities to teach these skills, but I am

Table 6
Faculty Self-Efficacy (n=231)

Construct	*M*	*SE*
Self-Efficacy	4.87	.054
Reading	4.76	.051
Writing	4.77	.050
Critical Thinking	5.10	.042

not confident in my ability to find time to include the teaching of these skills." Additionally, several faculty members discussed the student's lack of basic skills, as represented by a psychology professor when he wrote: "I think I would have good self-efficacy to help students who already had strong basic skills, but I would struggle to help those with low foundational skills." Faculty generally acknowledged the need for collaboration and additional training to increase their level of knowledge and self-efficacy.

More specifically, faculty held fair levels of self-efficacy regarding incorporating reading (M = 4.76, SE = .051), writing (M = 4.77, SE = .050), and critical thinking (M = 5.10, SE = .042) instruction. Again, faculty scored critical thinking higher than reading and writing. When triangulated with the open-ended responses, faculty validated that they had more experience teaching critical thinking than reading and writing, and thus, felt more secure in their ability to incorporate critical thinking into their instruction. Several noted that their self-efficacy increased over time with critical thinking as they tried different techniques, collaborated with colleagues, and attended professional development workshops, as represented by an English professor when she stated: "I feel confident of and capable in my abilities, but it is always beneficial to access professional development opportunities in order to analyze ongoing data, gain new insight, and discover and adapt new and successful classroom practices through collaboration."

To what extent do community college faculty's attitudes and self-efficacy with literacy instruction differ by employment status, K-12 experience, and discipline taught?

We used *t*-tests in order to determine whether there were differences in faculty's perceptions and self-efficacy regarding incorporating discipline-specific literacy instruction into their course content based on employment status (see Table 7). On average, full-time faculty (M = 5.03, SE = .598) held slightly lower perceptions of their role as a literacy educator than part-time faculty (M = 5.10, SE = .669); however, this difference, -.072, BCa 95% CI [-0.243, 0.099], was not significant $t(222)$ = -.829. p = .408. On average, full-time faculty (M = 4.79, SE = .588) also held slightly lower, yet non-significant ($t[222]$ = -1.581, p = .115), self-efficacy with incorporating literacy instruction into their courses than part-time faculty (M = 4.94, SE = .667). Thus, there were no significant differences between full-time and part-time faculty in terms of role perception or self-efficacy with integrating literacy instruction into their content courses. However, it is interesting to note that, while not significant, part-time faculty held slightly higher levels of role perception and self-efficacy despite their part-time status. Further investigation would be necessary to determine the intricacies of these differences.

We used *t*-tests in order to determine whether there were differences in faculty's perceptions and self-efficacy regarding incorporating discipline-specific literacy instruction into their course content based on whether or not they had any experience teaching in K-12 (see Table 8). On average, faculty without K-12 teaching experience (M = 5.00, SE = .666) held significantly lower ($t[216]$ = -2.074, p = .039; -.185, BCa 95% CI [-0.360, -0.914]) perceptions of their role as a literacy educator than faculty with K-12 teaching experience (M = 5.19, SE = .610). On average, faculty without any K-12 teaching experience (M = 4.74, SE = .666) held significantly lower levels of self-efficacy with incorporating literacy instruction

Table 7
Summary of t-test Results by Employment Status

	Full-Time		Part-Time		
	M	*SD*	*M*	*SD*	*p*
Role Perception	5.03	.598	5.10	.669	.408
Self-Efficacy	4.79	.588	4.94	.667	.115

Table 8
Summary of t-test Results by K-12 Experience

	No K-12 Experience		K-12 Experience		
	M	*SD*	*M*	*SD*	*p*
Role Perception	5.00	.666	5.19	.610	.039
Self-Efficacy	4.74	.638	5.09	.601	.000

Table 9
Summary of ANOVA Results of Role Perception by Discipline Taught

	SS	*df*	M^2	*F*	*p*
Between Groups	10.717	6	1.786	4.604	.000
Within Groups	80.688	208	.388		
Total	91.405	214			

Table 10
Summary of ANOVA Results of Self-Efficacy by Discipline Taught

	SS	*df*	M^2	*F*	*p*
Between Groups	10.177	6	1.696	4.389	.000
Within Groups	80.387	208	.386		
Total	90.564	214			

into their courses than faculty with K-12 teaching experience (M = 5.09, SE = .601). This difference, -.357, BCa 95% CI [-0.527, -0.187], was significant $t(216)$ = -4.140, p < .001. These results are logical in that K-12 teachers typically completed education degrees, have more experience with literacy instruction, and have more opportunities for collaboration with literacy faculty (e.g., reading specialists).

We conducted a one-way ANOVA in order to determine whether there were differences in faculty's role perceptions incorporating discipline-specific literacy instruction into their course content based on the discipline taught (see Table 9). In terms of faculty's perception of their role as a literacy educator, there was a significant difference among the seven discipline groups, $F(6,208)$ = 4.604, p < .001. The Bonferroni post-hoc test showed that there was only a significant difference between humanities and STEM faculty's perceptions, (M = .463, SE = .113, p < .001), with humanities faculty's perceptions scoring significantly higher.

We conducted a one-way ANOVA in order to determine whether there were differences in faculty's level of self-efficacy with incorporating discipline-specific literacy instruction into their course content based on the discipline taught (see Table 10). In regard to faculty's level of self-efficacy with incorporating discipline specific literacy education into their course content, there was a significant difference among the seven discipline groups, $F(6,208)$ = 4.389, p < .001. The Bonferroni post-hoc test showed that there was only a significant difference between humanities and STEM faculty's self-efficacy (M = .531, SE = .113, p < .001), with humanities faculty's levels of self-efficacy scoring significantly higher.

While further investigation is necessary to understand the intricacies of these differences more fully, we can deduce several points from the data. First, the content covered in many humanities courses typically includes specific literacy outcomes. For example, it is generally perceived that the role of English composition

and literature professors is to teach writing and reading strategies. This idea was supported by the open-ended responses when an English professor representatively stated: "I see my position as a composition teacher as a gatekeeper to all the disciplines. In order to turn out better writers, I must introduce them to a variety of modes of writing as well as style manuals." The faculty responses from the STEM field were split. Some held a clear perception that literacy education was not their role, as expressed by a physics professor: "My job is to teach skills and knowledge related to physics, not English." Others were conflicted in that they knew it was necessary but just did not have the time or skillset, as shared by a biology professor: "I do try to incorporate activities that help [students] practice literacy skills but am not able to spend very much time teaching the actual skills due to the amount of content I need to cover." In the end, faculty repeatedly stated that their course outcomes were the priority over discipline-specific literacy instruction.

Discussion

The present study contributes to the field of literacy research in several ways. First, we provide the FASEDSLI scale as a valid and reliable instrument for use by researchers, faculty, and administration. Previously published scales (see Chang et al, 2001; Szabo & Mokhtari, 2004; Tschannen-Moran & Johnson, 2011; Tschannen-Moran & Woolfolk Hoy, 2001) addressed components of the phenomenon studied (e.g., discipline-specific literacy instruction, self-efficacy, or higher education faculty), but none of the scales included all three components. Using exploratory factor analysis, we tested and refined the scale and determined that this scale was valid and reliable.

Second, the results of the current study fill a gap in extant research by providing some insight into the attitudes and self-efficacy of faculty in regard to higher education literacy instruction. The community college faculty surveyed in the present study had, on average, marginal perceptions of both their role as literacy educators and their levels of self-efficacy in terms of integrating literacy instruction into their content courses. Further, there were clear instances of resistance by faculty to fulfilling the role of a literacy educator as indicated by the open-ended responses. If faculty are to respond to the call of Heller (2010) and Wingate and Tribble (2012) to incorporate discipline-specific literacy instruction into their college-level courses, their role perceptions and levels of self-efficacy will need to strengthen. College faculty would benefit from opportunities for professional development and collaboration with literacy-trained colleagues to strengthen their knowledge of literacy, teaching strategies, and ultimately their self-efficacy. Additionally, while mandates to change may be unlikely to impact faculty's role perceptions and practices (Bean et al., 2018), policies governing faculty uptake of disciplinary literacy practices warrant exploration.

Finally, both the FASEDSLI scale and the findings of the present study can guide professional development providers in their development of workshops and programs that incorporate strategies and theory to aid faculty in developing their instructional self-efficacy related to integrating literacy into the disciplines. For example, professional learning communities would allow faculty to collaboratively explore this concept and navigate how to efficiently and effectively incorporate literacy instruction in their courses. As faculty professional development programs provide training for faculty to build their knowledge of literacy, literacy instruction, and content-specific literacy, this revised questionnaire can be used to measure the impact such programs have on faculty's attitudes and self-efficacy.

Limitations and Future Research

There were several limitations of the present study. First, in our attempt to increase sample size, all faculty at three community colleges were invited to complete the survey. Our sample was comparable to the population of higher education faculty across the nation; however, we recognized that using convenience sampling instead of random sampling may have had an impact on the representativeness of the results. Second, despite our persistent efforts, our sample size was smaller than we desired. A larger sample size would have allowed us to make broader generalizations to the field and increase the power of the results. Third, there was the chance that participants responded in ways that would be socially and professionally desirable. The first author had a professional relationship with some faculty members at each of the three institutions. While there was no indication that

this occurred, there was the chance that this relationship could have had an impact on their participation as well as their responses.

The present study informs professional development initiatives within community college faculty development programs. In light of these findings, faculty professional development personnel can develop programming to strengthen faculty's self-efficacy with all three constructs, but specifically with reading and writing. For example, reading comprehension monitoring is viewed as a metacognitive activity (Hacker, 1997) and could be used as a way to gauge writing and critical thinking skills. By educating faculty on the importance of teaching content-specific reading and writing skills, in addition to critical thinking skills, professional development providers can help to build faculty's perceptions and levels of self-efficacy in all three areas.

Professional learning communities are another example where research-based strategies and theory could be used to promote faculty's role as a literacy educator within their discipline, effective instructional practices as they relate to discipline-specific literacy, and self-efficacy as it relates to literacy instruction, all of which are common practices in such communities (Wenger, 1998). In higher education, collaborative development between disciplinary specialists, literacy educators, librarians, and student support center staff has shown to broaden everyone's knowledge about the role literacy instruction can play within the content courses (Bergman, 2014; Jacobs, 2005). Jacobs (2005) stressed the importance of creating spaces for such collaboration so that all stakeholders can work together on neutral ground while sharing the leadership and responsibility for increasing student success. In a professional learning community, the various stakeholders can work together to determine how to embed literacy instruction into the curriculum and provide the faculty adequate training and resources in order to effectively make this curricular change.

The field would benefit from further research on this topic. Exploring faculty's attitudes and self-efficacy across larger samples of community college faculty, as well as four-year faculty, would continue to shed light on this phenomenon. Examining the characteristics of the institutions to determine if they impacted faculty's attitudes and self-efficacy would inform administrators as they develop programs and support faculty. Further, expanding the current study to compare two-year and four-year faculty would further aid professional development personnel in providing support for faculty. Each of these examples would add to the research base at the postsecondary level on disciplinary literacy and would support faculty and administrators to meet Heller's (2010) call for higher education faculty to incorporate discipline-specific literacy instruction in their coursework.

References

Bailey, R. (2010). The role and efficacy of generic learning and study support: What is the experience and perspective of academic staff? *Journal of Learning Development in Higher Education, 2*, 1-14.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1993). Perceived self-efficiacy in cognitive development and functioning. *Educational Psychologist, 28*, 117-148.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York, NY: Freeman.

Bean, T., Gregory, K., & Dunkerly-Bean, J. (2018). Disciplinary literacy. In R. Flippo & T. W. Bean (Eds.), *Handbook of college reading and study strategy research* (3rd ed., pp. 89-97). New York, NY: Routledge.

Bergman, L. (2014). The research circle as a resource in challenging academics' perceptions of how to support students' literacy development in higher education. *Canadian Journal of Action Research, 15*, 3-20.

Cantrell, S. C., Burns, L. D., & Callaway, P. (2008). Middle- and high-school content area teachers' perceptions about literacy teaching and learning. *Literacy Research and Instruction, 48*, 76-94.

Chang, T-S., Lin, H-H., & Song, M-M. (2011). University faculty members' perceptions of their teaching efficacy. *Innovations in Education and Teaching International, 48*, 49-60.

Cook, C., Heath, F., & Thompson, R. L. (2000). A meta-analysis of response rates in web- or internet-based surveys. *Educational and Psychological Measurement, 60*, 821-836.

Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation, 10*, 1-9.

Duff, P. (2010). Language socialization into academic discourse communities. *Annual Review of Applied Linguistics, 30*, 169-192.

Dunkerly-Bean, J., & Bean, T. W. (2016). Missing the savior for the connaissance: Disciplinary and content literacy as regimes of truth. *Journal of Literacy Research, 48*, 448-475.

Fang, Z., & Coatoam, S. (2013). Disciplinary literacy: What you want to know about it. *Journal of Adolescent & Adult Literacy, 56*, 627-632.

Furco, A., & Moely, B. E. (2012). Using learning communities to build faculty support for pedagogical innovation: A multi-campus study. *Journal of Higher Education, 83*, 128-153.

Garland, R. (1991). The mid-point on a rating scale: Is it desirable? *Marketing Bulletin, 2*, 66-70.

Gillis, V. (2014). Disciplinary literacy: Adapt, not adopt. *Journal of Adolescent & Adult Literacy, 57*, 614-623.

Gregory, K. H., & Colclough, M. N. (2018). Community college discipline faculty perceptions of role as literacy educators. *Inquiry: The Journal of the Virginia Community College System, 21*, 1-15.

Haggis, T. (2006). Pedagogies for diversity: Retaining critical challenge amidst fears of 'dumbing down'. *Studies in Higher Education, 31*, 521-535.

Hacker, D. J. (1997). Comprehension monitoring of written discourse across early-to-middle adolescence. *Reading and Writing, 9*, 207-240.

Hammer, S. J., & Green, W. (2011). Critical thinking in a first year management unit: The relationship between disciplinary learning, academic literacy and learning progression. *Higher Education Research & Development, 30*, 303-315.

Heller, R. (2010). In praise of amateurism: A friendly critique of Moje's "Call for Change" in secondary literacy. *Journal of Adolescent & Adult Literacy, 54*, 267-273.

Hutcheson, G., & Sofroniou, N. (1999). *The multivariate social scientist.* London, UK: Sage.

Hyland, K. (2006). *English for academic purposes.* New York, NY: Routledge.

Hynd-Shanahan, C. (2013). What does it take? The challenge of disciplinary literacy. *Journal of Adolescent & Adult Literacy, 57*, 93-98.

Jacobs, C. (2005). On being an insider on the outside: New spaces for integrating academic literacies. *Teaching in Higher Education, 10*, 475-487.

Kalton, G. G., Roberts, J., & Holt, D. D. (1980). The effects of offering a middle response option with opinion questions. *Journal of the Royal Statistical Society. Series D (The Statistician), 29*, 65-78.

Kaplowitz, M. D., Hadlock, T. D., & Levine, R. (2004). A comparison of web and mail survey response rates. *Public Opinion Quarterly, 68*, 94-101.

Krosnick, J. A., Holbrook, A. L., Berent, M. K., Carson, R. T., Hanemann, W., Kopp, R. J., & … Conaway, M. (2002). The impact of 'no opinion' response options on data quality: Non-attitude reduction or an invitation to satisfice? *Public Opinion Quarterly, 66*, 371-403.

Lea, M., & Street, B. (1998). Student writing in higher education: An academic literacies approach. *Studies in Higher Education, 23*, 157-172.

MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. *Psychological Methods, 4*, 84-99.

Moje, E. B. (2008). Foregrounding the disciplines in secondary literacy teaching and learning: A call for change. *Journal of Adolescent & Adult Literacy, 52*, 96-107.

Moje, E. B. (2015). Doing and teaching disciplinary literacy with adolescent learners: A social and cultural enterprise. *Harvard Educational Review, 85*, 254-278.

National Center for Education Statistics. (2013a). *First-year undergraduate remedial coursetaking: 1999-2000, 2003-04, 2007-08.* Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. Retrieved from https://nces.ed.gov/pubs2013/2013013.pdf.

National Center for Education Statistics. (2013b). *Fast Facts: Race/ethnicity of college faculty.* Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. Retrieved from https://nces.ed.gov/fastfacts/display.asp?id=61

Sauermann, H., & Roach, M. (2013). Increasing web survey response rates in innovation research: An experimental study of static and dynamic contact design features. *Research Policy, 42*, 273-286.

Schunk, D. (2012). *Learning theories: An educational perspective* (6th ed.). Boston, MA: Pearson.

Schunk, D. H., Meece, J. L., & Pintrich, P. R. (2014). *Motivation in education: Theory, research and applications* (4th ed.). Upper Saddle River, NJ: Merrill Prentice Hall.

Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content-area literacy. *Harvard Educational Review, 78*, 40-59.

Shanahan, T., & Shanahan, C. (2012). What is disciplinary literacy and why does it matter? *Topics in Language Disorders, 32*, 7-18.

Sturtevant, E. G., & Linek, W. M. (2003). The instructional beliefs and decisions of middle and secondary teachers who successfully blend literacy and content. *Reading Research and Instruction, 43*, 74-90.

Szabo, S., & Mokhtari, K. (2004). Developing a reading teaching efficacy instrument for teacher candidates: A validation study. *Action in Teacher Education, 26*, 59-72.

Tschannen-Moran, M., & Johnson, D. (2011). Exploring literacy teachers' self-efficacy beliefs: Potential sources at play. *Teaching and Teacher Education, 27*, 751-761.

Tschannen-Moran, M., & Woolfork Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*, 783-805.

Thibodeau, G. M. (2008). A content literacy collaborative study group: High school teachers take charge of their professional learning. *Journal of Adolescent & Adult Literacy, 52*, 54-64.

Tsui, L. (2002). Fostering critical thinking through effective pedagogy. *Journal of Higher Education, 73*, 740-763.

Wenger, E. (1998). *Communities of practice.* New York, NY: Cambridge University Press.

Wingate, U. (2006). Doing away with 'study skills'. *Teaching in Higher Education, 11*, 457-469.

Wingate, U., & Tribble, C. (2012). The best of both worlds? Towards an English for academic purposes/academic literacies writing pedagogy. *Studies in Higher Education, 37*, 481-495.