

# Measuring Cognitive and Social–Emotional Development in Faculty Preparing for Service–Learning Facilitation

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## Abstract

The ongoing proliferation of service–learning as an institutionalized pedagogy in higher education has made effective faculty development essential. This study offers a conceptual framework, based in sociocultural theory, that establishes the importance of cognitive and social–emotional development to prepare faculty for service–learning facilitation. Through a longitudinal quantitative analysis of self–reported progress, 35 faculty over seven cohorts who matriculated through a service–learning faculty development program reveal their perceived confidence and capability to facilitate service–learning courses prior to implementation. The study finds that improved cognitive and social–emotional development increases faculty members' confidence in their ability to facilitate courses. Further, the pre/posttest can act as a formative assessment to identify faculty who need further support in their development before engaging with community partners and historically marginalized populations. Ultimately, this measure provides a valuable tool in avoiding the entrenchment of damaged university–community relationships from ineffective instructor facilitation.

*Keywords: service–learning, faculty development, sociocultural theory*



Faculty are essential to the success of service–learning as a pedagogy for training and educating students. In their study on institutionalizing service–learning in higher education, Young et al. (2007) highlighted the importance of faculty champions who independently study, practice, and research service–learning pedagogy. Now, with service–learning widely used in myriad schools, programs, colleges, and universities and more faculty looking to enact the pedagogy (Darby & Newman, 2014), this study asks: How can development programs systematically prepare new waves of faculty to successfully facilitate service–learning? This has been an ongoing question in research (Chism & Szabo, 1997), but scholars still note the lack of theoretically based, evaluative evidence for the advances fac-

ulty make due to community–engaged faculty development (Welch & Plaxton–Moore, 2017). Other research has noted consistent faculty feelings of uncertainty and apprehension before beginning their service–learning courses (Cazzell et al., 2014).

Faculty development programs at institutions of higher education have been a significant method for training faculty to facilitate service–learning courses (Lewing, 2020). Most of these programs include similar features, such as seminars and training modules, mentoring, and fellowship cohorts (Welch & Plaxton–Moore, 2017). The evaluation of these programs has largely been conducted through surveys, satisfaction ratings, and qualitative responses (Chism et al., 2013; Chism & Szabo, 1997). The evaluations that have analyzed the impact of faculty development programs often do

so by investigating the service-learning course outcomes post training. For example, Kirkpatrick (1998) cited four ways of evaluating program efficacy: faculty learning and application alongside satisfaction and benefit to organizational mission. Other research highlights faculty experiences and reflections post implementation as a method of critically evaluating faculty development (Becket et al., 2012).

These evaluation methods are effective at measuring the efficacy of development programs for any range of metrics at faculty, community, student, and institutional levels (Kirkpatrick, 1998). However, they also bring their own dangers, chief among them the inability to identify faculty that are unprepared to teach a service-learning course *before* implementation. Poor community engagement practices can lead to lasting community-university relational damage (Blouin & Perry, 2009; Santiago-Ortiz, 2019). Rather than teach students the impact of justice-based work, ineffective service-learning can reinforce negative stereotypes (Tinkler et al., 2014). Incomplete work in large scale projects can solidify rifts in community-university relationships. Faculty may prioritize student learning over community needs. These problems have not been uncommon and have been documented in the literature (Blouin & Perry, 2009). In light of these potential pitfalls in implementation, this study examines faculty preparedness after the first phase of a comprehensive faculty development program. That is, before implementation, do faculty feel cognitively and socially-emotionally ready to lead a critical service-learning course that prioritizes cultural responsiveness, social justice, and community expectations?

In their systematic review of community engagement faculty development programs, Welch and Plaxton-Moore (2017) identified another need: more empirical studies that evaluate faculty development, rather than additional examples of faculty programs that are purely descriptive. They acknowledge that some of the difficulty in evaluating these trainings is in understanding *how* to evaluate adult learning, especially when many programs do not utilize learning theory to guide faculty development. This shortfall stands in contrast to the extensive literature on evaluating student outcomes of service-learning, which rely on common postsecondary academic measures (e.g., exams, projects, papers, peer evaluations)

and advancements in civic aptitude (Astin et al., 2000). Even with this recognized need for more evidence of faculty development, research points to areas of focus that could be evaluated, and in some instances have been evaluated, that have been identified through faculty experiences, service-learning literature, and some learning theories (Axtell, 2012; Blanchard et al., 2009).

Service-learning has always had a tenuous relationship with learning theory. As Giles & Eyler (1994) pointed out, research on service-learning pedagogy was not initially linked to learning development theories directly. Although some might make a case for connections to critical pedagogy (Freire, 2018) or culturally relevant teaching (Ladson-Billings, 2014), most service-learning relies on basic connections to Dewey's pragmatism (Eyler & Giles, 1994) or a few conceptual models (e.g., Lewin's change model [Schein, 1996]; Kolb, 2007).

The closest theoretical mate, Dewey's pragmatism, posits that learning occurs through reflecting, internalizing, and acting based on past experiences (Biesta & Burbules, 2003). Perhaps in this theoretical vein, the field of service-learning relies heavily on faculty experiences, reported as qualitative or descriptive findings, to grow and evolve (e.g., Lechuga et al., 2009; Melville et al., 2013; Whitt et al., 2008). However, many of these case studies do not name Dewey's (or any other) theory. In other words, researchers might infer connections to learning theories in service-learning examples, but service-learning design or research is not always intentionally *derived from or informed by* such theoretical frames. Although a lack of theory in any given case study is not inherently negative, the field of service-learning research could use a stronger theoretical connection in order to have a "systemic way of generating and organizing our knowledge" (Giles & Eyler, 1994, p. 78). Systematizing the knowledge of learning and development from service-learning through the use of theoretical frames can help us research and design more effectively for specific learning outcomes.

The breadth of case study findings based on faculty experiences of author-led courses are not without value. Faculty have, with sound methodology, reflected on and shared their learning and development in instructing students in civic engagement (Heasley & Terosky, 2020), community collaboration (O'Meara & Niehaus, 2009), course

implementation (Kretchmar, 2001), reflection (Elverson & Klawiter, 2019), pedagogy (Aralleno & Jones, 2018), and evaluation methods (Driscoll et al., 1998). Past research has done well in categorizing these processes and designing faculty development structures or models based on these studies.

The current study aims to add a quantitative analysis of *theory-laden* faculty development. We have synthesized the faculty outcomes across the literature, including faculty perspectives, data analyses, and papers presenting frameworks, into two broad categories: cognitive outcomes (e.g., service-learning fundamentals, pedagogical theory, course design) and social–emotional outcomes (reflection, collaboration, community engagement, facilitation) in hope of addressing faculty’s capability and confidence to facilitate service-learning courses. These two broad categories were consistently relevant in past research on faculty development, and they reflect the blend of social, civic, and cognitive outcomes that service-learning aims to achieve (Bringle & Hatcher, 1996). It should be noted that service-learning needs to reckon with learning theory in order to clarify purpose, objectives, and outcomes (Butin, 2003). The blending, or unity, of these two conceptual categories (cognitive and social–emotional development) is aligned with our theoretical framework, sociocultural theory.

To address these issues, this study examines the pre and post self-evaluations of health professional schools faculty who have gone through a service-learning seminar at Johns Hopkins University (SOURCE, 2020). The aim of the evaluation was to determine (1) Does the service-learning fellows seminar advance faculty’s preparedness and perceived confidence to teach a service-learning course? and (2) Can improved *cognitive development* and *social–emotional readiness* in service-learning pedagogy advance faculty confidence to enact a service-learning course?

### Theoretical and Conceptual Frameworks

Sociocultural theory, originally a psychological theory for childhood development (Vygotsky, 1978), has more recently been used to examine adult learning and development (Rosser–Mims et al., 2017). The materialist dialectics of sociocultural theory

posit that (a) psychological development stems from learning and (b) all learning is social. Further, the sociocultural view argues that cognitive learning necessarily occurs alongside and *in direct relation* to social and emotional learning (and vice versa). This emotional–intellectual connection is an indissoluble unity of human development (González Rey, 2016; Lantolf & Swain, 2019). In other words, a person cannot learn or develop cognitively without also influencing socioemotionality in some way, because development is always situated (Veresov, 2017). Individuals are always experiencing the world from a specific position, with a specific lived history, influencing any potential moment of learning and development (Veresov & Fleer, 2016). From this view, reflection, community collaboration, and civic engagement are necessary learning elements in tandem with developing the skills and cognitive knowledge to be prepared to teach (and take part in) service-learning.

Vygotsky (1987) also pointed out that development occurs because of the relationship of an individual with society (i.e., those around the individual). Learning through relationships, or as a fundamentally social practice, is the only way that leads to human development. This is what Vygotsky called learning-leading-development in a zone of proximal development (ZPD). The social process of development, then, is necessarily complex since it occurs through organized experiences of learning. Individuals will always engage in learning “a unity of multiple knowledges” (e.g., creativity, cognition, memory, social interaction, cultural interpretation, emotional responsiveness) in order to *develop capacity* (i.e., a developed psyche)—in this case, to lead service-learning courses. Vygotsky explained that this learning occurs through practice with more capable peers—in other words, working in a ZPD (Lantolf & Poehner, 2014). In the case of this study, the ZPD is enacted through the collaborative engagement between the seminar participants and the seminar leaders.

With a sociocultural perspective and the analysis and synthesis of research in faculty development for service-learning guiding our work, a conceptual model that informs the methodology and data analysis of this study (Figure 1) was developed. The Service-Learning Faculty Development Conceptual Model shows the relationship between key

### Concepts Informing Key Factors

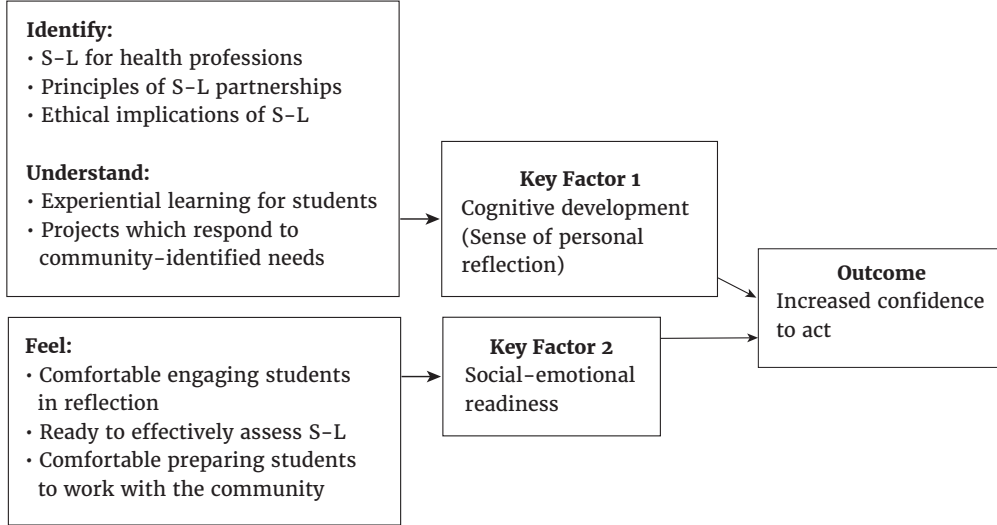


Figure 1. Service-Learning Faculty Development Conceptual Model

educational factors and the goal of building a “confidence to act” as operationalized by instructors’ perceived ability to implement and evaluate a service-learning course and integrate community partnership into professional practice. The “concepts informing key factors” are learning objectives for the faculty development program. These objectives are derived from the literature noted above. These categorizations were defined, according to a sociocultural lens, as cognitive development and social-emotional readiness. These multiple categories of learning lead to development in service-learning practice, or the capacity to practice (i.e., a person’s ZPD). This outcome is labeled “confidence to act.” The focus is on “confidence” rather than “capacity” because of the timing of the outcome and evaluation in relation to leading service-learning courses. The model accounts for development *before* faculty facilitate their service-learning courses, as a measure of readiness and preparedness. Specifically, our definition of “confidence” relates to the instructor’s *self-perception* of their ability and readiness to teach a service-learning course. Essentially, the “confidence to act” is a marker of the self-evaluation of the instructor’s *development* in service-learning design, collaboration, and practice. The goal of the seminar component of faculty development in service-learning, then, is growing instructors’ cognitive and social-emotional development so that they feel *prepared* to facilitate service-learning courses.

### Description of Fellows Program

Founded in 2012 with financial support from the university’s president, the community engagement and service-learning center for the graduate health professional schools, known as SOURCE, launched a comprehensive, interdisciplinary, yearlong, cohort-based, service-learning development program for faculty and community leaders. Each year, members of the cohort are competitively selected through an open application process. The overall goal of the program is to train faculty and community leaders together in service-learning pedagogy while also providing comprehensive course and project development support.

One of the major elements of the program is the 2.5-day summer seminar that serves as an intensive learning experience for participants. Throughout the seminar, participants get to know each other, establish ground rules for engagement with one another throughout the program, and explore essential components of service-learning. The seminar is followed by both individual and group activities to support members of the cohort. Faculty participants are matched with a dedicated faculty advisor from the service-learning center who supports them throughout the year of the program and into the future. One-on-one advising includes regular check-in meetings that offer important individualized training based on the faculty member’s needs. Faculty advisors also provide support in identifying community partners to collaborate on service-

learning courses.

Following the seminar, monthly group meetings are coordinated for the fellows. Monthly meetings alternate each month between “Mandatory Cohort Meetings” and “Optional All–Fellows Meetings.” The current year’s cohort is required to participate in the Mandatory Cohort Meetings, which are designed to fill in content gaps that were not fully addressed in the seminar or enable fellows to express an interest in or need for additional training. Additionally, participants discuss faculty’s courses and community leaders’ projects to troubleshoot and work through any identified challenges.

During the alternating months, Optional All–Fellows Meetings are open to all past and current fellows. These meetings provide opportunities for fellows to connect across cohort years, disciplines, schools, and community organizations, supporting a robust community of practice (Lave & Wenger, 1991). Meeting discussions focus on areas of development that are identified by fellows and frequently include reflective discussions. Past fellows share their successes and challenges, and program leaders facilitate conversations around social justice, critical pedagogy, and current climate and initiatives impacting community–campus partnerships.

The yearlong program concludes with a final event in which faculty and community participants share their plans for their courses and projects and discuss the impacts that the program had on them both personally and professionally. Key leaders and stakeholders are invited to attend, including potential future program participants.

### **The Seminar**

The seminar, which takes place each year in early June, is the entry point for the service–learning development program. This is faculty participants’ first opportunity to engage with fellowship leaders, community leaders, and other faculty members in their cohort. The seminar is broken into three major sections: (a) building cohort collegiality, (b) service–learning foundations, and (c) planning and reflection. Each of these sections includes times for leaders to share their past experiences, for all participants to reflect, and for discussion and socializing.

The seminar begins in the evening with a Fellows Dinner. This first “half day” part

of the seminar is intended to familiarize the new cohort with each other and the program leadership. To indicate the importance of social learning alongside cognitive advancement, this seminar event is an intentional, extended, and vital element of the program design. A multihour dinner, rather than a short “ice-breaker” before an academic session, was held to create equal time and focus as the cognitive and reflective elements of the program. During this session, fellows share what brought them to the program, their professional goals, and personal elements they are comfortable sharing. Although fellows are also introduced to the seminar agenda and an overview of SOURCE, the dinner remains largely unstructured, leaving space and time for individuals to begin building cohort relationships. The purpose of fostering collegiality is not only for group cohesion, but also to let fellows practice the collaborative relationship–building that is essential to service–learning courses (Mitchell, 2008).

The first full day of the seminar focuses primarily on service–learning foundations. These sessions are led by SOURCE faculty, senior faculty fellows, and senior community fellows (senior fellows are individuals who have previously completed the program and are highly proficient at service–learning implementation). The teaching team leads cohorts through active sessions on service–learning models and theories, curriculum and project design, critical reflection practices, methods for centering social justice, partner development, and risk management and ethical considerations. These sessions are presented in a few ways, including short presentations, discussion–based sessions, individual and collaborative activities and projects, panel discussions, and reflective writing times. Although the cognitive–based objectives are prioritized in this section, social–emotional elements were intentionally integrated into this work. For example, the critical reflection session encourages fellows to share from their past experiences and about their existing apprehensions and excitement over their upcoming courses. This session modeling is designed from sociocultural theory, relying on development as a social–emotional/cognitive unity carried out through social interaction and mediation (Veresov, 2017).

The final day of the seminar prioritizes experience, reflection, and planning. The day includes traveling to past community

project sites where the cohort hears from community leaders about the experience of service-learning from community perspectives. This review sets the tone for further exploration on how to center community goals alongside student learning. These shared experiences also explore the social-emotional challenges of conflicts in courses and how to ensure that responsibilities are met so that project deliverables are completed.

The stories that community partners and senior fellows share lead participants into thinking about their own upcoming courses. The final sessions of the seminar are dedicated primarily to working with fellows on initial planning for their courses. These sessions provide opportunities for fellows to ask questions about their courses, hear more about past examples, and start shaping course objectives. The seminar ends with a collective reflection session where fellows and seminar leaders reflect on what they have learned over the past two and a half days. This session also works as a transition into future phases of the fellowship. Fellows name elements they would like to learn more about and receive further support as a starting place for advising relationships and the upcoming monthly group meetings.

A pre/posttest is given to all fellows a few weeks before and immediately after the seminar. Fellows have 2 weeks to complete the pre/posttests. These tests are the basis for the analysis in this article.

## Methods

This study uses data collected through an online pre- and posttest (using the Qualtrics platform) from seven cohorts (2013–2020) of faculty who participated as fellows in the yearlong service-learning training program. This study was approved by the Johns Hopkins Bloomberg School of Public Health IRB (CR00000477). The pre/posttest serves to evaluate the changes from the start of the seminar (pre) to the end of the seminar (post) in the faculty fellows' cognitive development regarding service-learning pedagogy, their social-emotional readiness to facilitate a service-learning course, and their confidence to enact a service-learning course.

Forty-four ( $n = 44$ ) faculty fellows completed the development program from 2013 to 2020. Of these, 35 (80%) completed both

the pre- and posttests; these participants constitute the sample in the current analysis. Most faculty are in the schools of public health ( $n = 20$ ; 57%) or nursing ( $n = 13$ ; 37%). A range of early and midcareer faculty have participated in the development program (assistant professor/scientist,  $n = 22$ ; associate professor/scientist,  $n = 13$ ). Due to the size of the cohorts and the ability for the participants to be identified by demographic indicators (e.g., sex, race, age), these items were not collected as part of the evaluation of the program.

## Measurement

Table 1 provides the 12 pre- and posttest items, which are scored on a 5-point Likert scale (1 = *Strongly disagree*; 2 = *Disagree*; 3 = *Neutral*; 4 = *Agree*; 5 = *Strongly agree*). The table shows each item categorized under a theme derived from the Service-Learning Faculty Development Conceptual Model. These items asked participants to report perceptions about their knowledge of the service-learning center's activities, understanding of service-learning pedagogy, social-emotional readiness to lead a service-learning class, and confidence in facilitating a service-learning course.

## Analysis

A descriptive analysis and a paired  $t$ -test were conducted on each item to establish the mean scores, mean difference score, and the significance of change between the pre- and posttest for faculty in the longitudinal dataset. The first author conducted the analysis of these results using SPSS software. The coauthors reviewed the initial analysis. This analysis reveals the perceived outcomes of faculty after completing the summer seminar.

Each of the test items aligns with a learning objective for the seminar. In alignment with the Service-Learning Faculty Development Conceptual Model, the 12-item pre/posttest is categorized into composite scores that measure faculty participants' perceptions of their cognitive development regarding service-learning pedagogy (5 items), their social-emotional readiness (3 items), and their confidence to enact a service-learning course (2 items). Each of these thematic competency composites had a maximum score of 25 points. Two additional items focus on faculty fellows' knowledge of the administrative center to understand how much faculty fellows learn about our spe-

**Table 1. Pre/posttest Items by Thematic Competency****SOURCE specific**

I have an understanding about SOURCE's role with service–learning courses.

I can identify how community–identified needs have been carried out in previous SOURCE projects.

**Cognitive Development – Questions that reflect perceptions of cognitive development on service–learning concepts**

*“Define,” “identify,” and “understand” are all indicators of perceived cognitive recall/development.*

I can define service–learning in the context of the health professions.

I can identify the important principles of community–campus partnerships.

I can identify ethical implications of service–learning partnerships.

I understand how experiential learning contributes to student learning.

I understand how to design a project based on community–identified needs.

**Social–Emotional Readiness – Questions that reflect a feeling of social–emotional readiness to handle elements of service–learning**

*“Feel” and “comfortable” suggest perception of social–emotion readiness to teach S–L.*

I feel comfortable engaging students in reflection activities.

I feel that I can effectively assess students' work in service–learning.

I feel comfortable preparing students to work in the community.

**Confidence in Action – Questions that reflect a confidence to take action in leading a service–learning course**

*“I have” suggests a declarative confidence in accomplishing the following statement.*

I have the ability to effectively evaluate a service–learning course.

I have a sense of how to integrate community partnerships into my professional goals/potential research.

cific programming. These two items were designed for internal use and therefore were not included in further analysis.

The three thematic composite scores were developed using a language analysis of the 10–item test and service–learning literature that supports the need for both cognitive and social–emotional competencies to successfully enact service–learning courses. The language analysis shows that cognitive development items use words such as “define,” “identify,” and “understand” to indicate a statement on the perceived *cognitive development* on service–learning specific elements, similar to the way Bloom (1956) outlined cognitive development in his psychological theory of learning. The *social–emotional readiness* thematic competency was established through an analysis of statements that center participants' “feeling” or “comfort” level. Finally, the

language analysis revealed the *confidence* to act thematic competency through statements of ownership using the language “I have . . .”

Paired *t*–tests comparing pre– to posttest responses were used to analyze the perceived competency development of each participant in the introductory summer seminar. A multilinear regression was also conducted to analyze the correlation ( $r^2$ ) between composite scores, using a difference in scores from pre– to posttest, to determine how social–emotional readiness and cognitive development might account for variance in participants' confidence to enact a course (e.g., Figure 1).

**Results**

The descriptive results of the 10 individual Likert scale items reveal increased mean

scores between pre- and posttests across all measures (Table 2). Of note, Items 1 and 2 show the greatest increases in mean point value at a mean difference of 1.315 and 1.143. Both items focus on participants' perceived capability to define core service-learning concepts.

The final column in Table 2 shows the results of the paired *t*-test for each pre/post Likert test item. The results reveal that the increase in score, indicating improvement, between pre- and posttest is significant for every item. These data show an increase in cognitive, social-emotional, and instructor-confidence developments for faculty participants.

Mean scores, mean score difference, and the paired *t*-test analysis of the aggregate scores for cognitive development, social-

emotional readiness, and confidence to act are presented in Table 3. Each of the three themes showed statistically significant increases post seminar. First, with the largest change, participants indicated an increase in cognitive development through their self-identified improved identification and application of service-learning concepts with a 4.2 mean increase from pretest to posttest ( $p < .001$ ). In comparing pre to post responses, social-emotional readiness also had an increase in mean score of 2.333 ( $p < .001$ ). These results indicate that faculty fellows felt they were better able to facilitate the social-emotional elements of service-learning, such as engaging in experiential reflection and managing complex relationships between students and community partners. Lastly, participants reported an increase in confidence to enact a service-

**Table 2. Descriptive and *t*-Test Analysis of Test Items**

Likert scale item	Pretest mean (SD)	Posttest mean (SD)	Pre/post mean difference	t-Value
<b>Cognitive development</b>				
I can define service-learning in the context of the health professions	3.114 (.832)	4.429 (.558)	1.315	-7.828***
I can identify the important principles of community-campus partnerships	3.257 (.919)	4.400 (.695)	1.143	-5.452***
I can identify ethical implications of service-learning partnerships	3.457 (1.039)	4.371 (.646)	.914	-4.715***
I understand how experiential learning contributes to student learning	4.257 (.611)	4.657 (.539)	.400	-3.217**
I understand how to design a project based on community-identified needs	3.314 (1.182)	3.743 (.919)	.429	-2.214*
<b>Social-emotional readiness</b>				
I feel comfortable engaging students in reflection activities	3.714 (.957)	3.943 (.938)	.229	-1.756*
I feel that I can effectively assess students' work in service-learning	2.971 (1.010)	3.514 (.919)	.543	-2.741**
I feel comfortable preparing students to work in the community	3.371 (1.215)	4.000 (.939)	.629	-4.239***
<b>Confidence to act</b>				
I have the ability to effectively evaluate a service-learning course	2.514 (1.011)	3.543 (.852)	1.029	-6.179***
I have a sense of how to integrate community partnerships into my professional goals/potential research	3.629 (1.060)	4.257 (.657)	.628	-3.263**

Note. \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$



**Table 3. Descriptive and *t*-Test Analysis of Thematic Competencies**

Thematic competencies	Pretest mean (SD)	Posttest mean (SD)	Pre/post mean difference	t-Value
Cognitive development	17.4 (3.483)	21.6 (2.511)	4.2	-6.028*
Social–emotional readiness	16.762 (4.180)	19.095 (3.414)	2.333	-3.938*
Confidence to enact course	15.357 (4.420)	19.5 (2.895)	4.143	-5.720*

Note. \* $p \leq .001$

learning course by 4.143 points from pretest to posttest ( $p < .001$ ).

Figures 2 and 3 graphically represent the correlation of individual thematic competencies based on participant responses. Figure 2 is a scatterplot and the linear correlation of individuals' difference scores for cognitive development and confidence to act (adjusted  $r^2$  of .44). Similarly, Figure 3 provides scatterplot and linear correlation of social–emotional readiness and confidence to act (adjusted  $r^2$  of .297).

A multilinear regression of the difference scores on thematic competencies, where cognitive development and social–emotional readiness were predictors of a faculty

instructor's confidence to enact a service–learning course, is a statistically significant ( $p < .001$ ) prediction, with the combined effect accounting for 45% of variance ( $F = 14.9$ ;  $p < .001$ ).

### Discussion

The results of this study support the hypotheses related to the evaluation of faculty development in service–learning course facilitation. The study shows statistically significant results across all test items. Additionally, study results reveal statistically significant developments for faculty in all thematic competencies: cognitive development, social–emotional readiness,

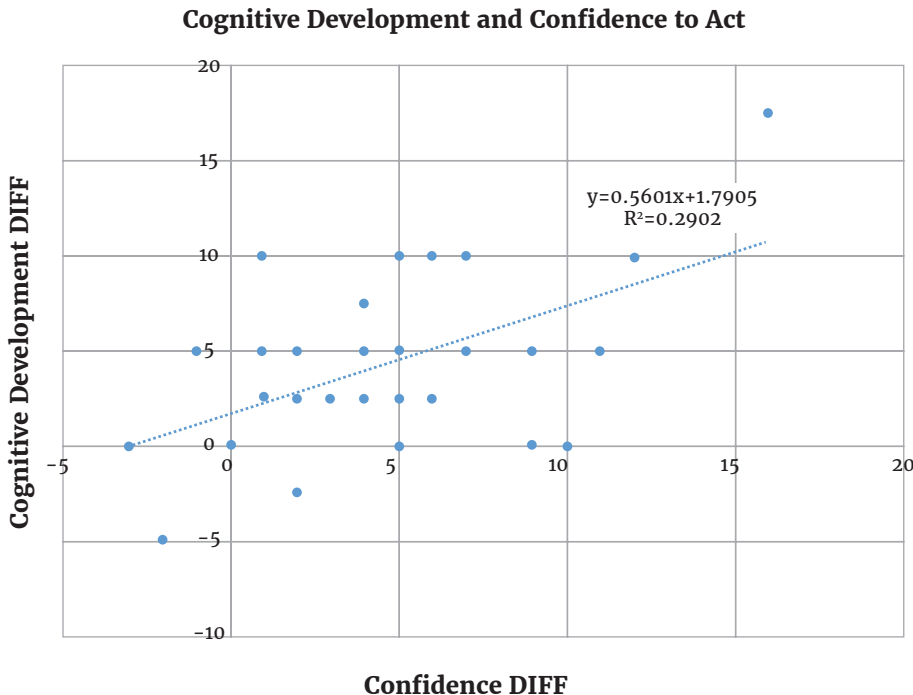


Figure 2. Correlation of Cognitive Development and Confidence to Act Thematic Competencies

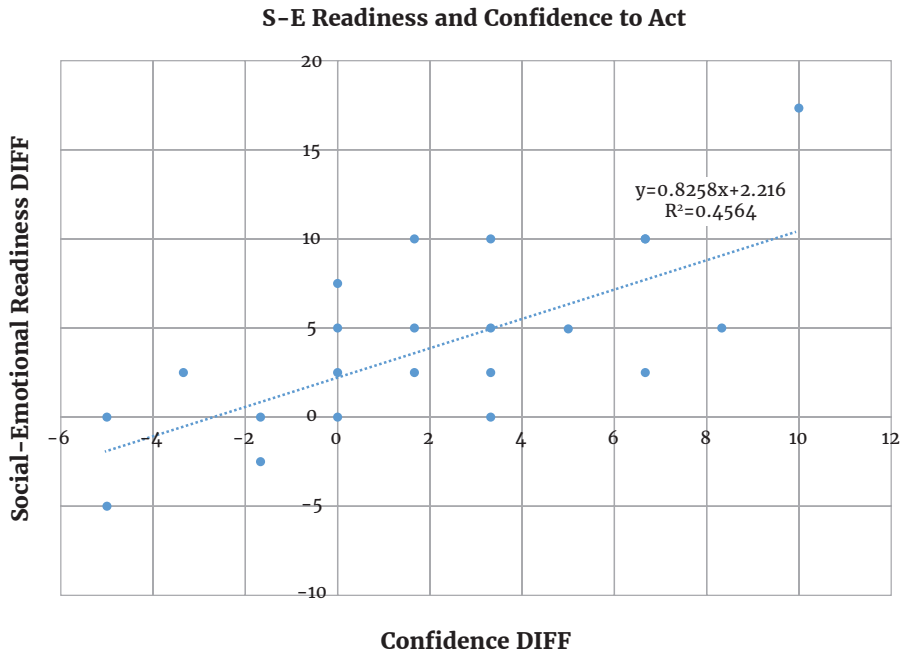


Figure 3. Correlation of Social-Emotional Readiness and Confidence to Act Thematic Competencies

and confidence to act.

To answer our first question, “Does the service-learning fellows seminar advance faculty’s preparedness and perceived confidence to teach a service-learning course?” this investigation found that responses to all pre- and posttest items, as well as the thematic competencies, were statistically significant. These results indicate that the SOURCE fellows seminar model can advance faculty cognitive development for service-learning definitions, practice, and theory. It further shows the development of improved social and emotional readiness to cope with the uncertainty, complex relationships, and critical power dynamics of service-learning pedagogy, as well as the ability to evaluate how well these processes are progressing. These social and emotional developments are particularly notable for advancing past work that has highlighted the importance of reflection, positionality, and community-building for faculty who engage in critical service-learning (Latta et al., 2018). The seminar integration of reflection, ongoing discussions on enacting justice in the course, and our insistence in integrating community from the start all have a core focus on building the social and emotional readiness of faculty fellows to prepare for a shared project and course that prioritizes critical service-learning goals (e.g., social change, authentic relationships, redistribu-

tion of power). The social-emotional learning results from faculty show the efficacy of intentional pedagogical practices that prioritize social-emotional learning and critical reflection.

In answering Question 2, “Can improved cognitive development and social-emotional readiness advance faculty confidence to enact a service-learning course?” results reveal a strong accounting for variance (adjusted  $r^2$ ) among the variables used in the multilinear regression (e.g., thematic competencies; Sink & Stroh, 2006). In other words, the advanced developments of cognitive and social-emotional competencies are likely to result in (or at least correlate to) an improved confidence in the capacity to facilitate service-learning. These results cannot confirm predictive power but reiterate the value of the pre/posttest as a formative assessment in order to implement different supports for faculty before they implement service-learning.

These findings speak more directly to the design of service-learning faculty development. If cognitive development and social-emotional readiness lead to, or at least correlate with, confidence to facilitate service-learning, then faculty development, especially faculty development prior to enacting service-learning, should have central design elements based on these

thematic competencies. The statistical results confirm quantitatively what may have been expected, since the conceptual model we posited and tested with the pre/posttest is based in the service–learning literature itself. Service–learning pedagogy stands on the idea of cognitive (i.e., academic) learning alongside experiential and reflective processes (e.g., “real world” collaboration), though research on these topics has largely been oriented toward student outcomes data.

These results can support the claim that faculty development learning objectives should align with student learning objectives in service–learning courses. Further evidence comes from the sociocultural theory concept zone of proximal development, which claims that individuals learn concepts and skills “in collaboration with more capable peers” (Vygotsky, 1978, p. 86). Enacting the same kinds of learning objectives for faculty development in service–learning affords faculty fellows an opportunity to practice and experience the same processes they use when teaching their own service–learning courses—in essence, learning to become the “more capable peers.” Designing and implementing a seminar that integrates these elements into all sessions, while being transparent and self-aware about the design with faculty fellows, means faculty took part in a learning process that engages their senses, experience, and cognition. This process can lead to confidence, where faculty can feel ready to facilitate with a sense of having participated in this kind of complex learning and development before.

This study’s results and conceptual model on faculty development in service–learning are evidence and generalizable guidance on a theory-laden pedagogical structure for faculty development for instructors who want to teach service–learning. Our findings suggest the importance of blending cognitive advancements with social and emotional development as well, for the express purpose of being prepared to teach service–learning. These findings are in alignment with our theoretical framework, sociocultural theory, which posits the necessity of multiple developments (or knowledge processes) in order to develop a person’s “personality”—in other words, to develop individuals in multiple psychological processes through learning (e.g., memory, emotion, empathy, analy-

sis; Eun, 2019). Further, these quantitative findings corroborate past research, which has largely used descriptive or qualitative methods (Welch & Plaxton–Moore, 2017, p. 138) to reach related conclusions about faculty development. Building on these earlier studies, this study contributes a clear self-evaluative assessment tool and the added reliance on sociocultural theory to ground our conceptual model in learning theory more directly.

### Applications and Limitations

The analysis in this study reveals an improved confidence to enact service–learning courses. Notably, we decided to conduct a pre/posttest for the seminar as a way of evaluating the preparedness of faculty before they began their engagement with community partners and students in facilitating a service–learning experience. Consequently, these findings are particularly relevant as a method of formative assessment. Faculty development facilitators can use the results of the pre/posttest to identify fellows who may need additional supports, education, or practice before feeling and becoming prepared to facilitate a service–learning course. This test is a useful measure for faculty who either (a) can use it as a reflective moment to confirm their confidence and capability to instruct a service–learning course or (b) can receive the additional support they need to be successful. Perhaps more importantly, the formative nature of the test can signal to the faculty development facilitators when faculty *should* begin instructing courses. If faculty are not fully socially–emotionally ready or do not have the competence and confidence to successfully facilitate, enacting a service–learning course could cause lasting damage to institution–community relationships and further negatively impact the perception of institutional actions, community engagement efforts, and other faculty conducting equitable and community-based service–learning courses (e.g., Blouin & Perry, 2009).

Even with these findings, the theoretical and conceptual frameworks that underpin them, and the application of analysis, there may be one outstanding question: why should “confidence” be an indicator for capability to facilitate a service–learning course? Perhaps a person is very confident but poorly equipped to be a capable instructor. In other words, is there not, anecdotally at least, evidence of individuals having

outsized confidence? In fact, research shows this very result in students, particularly for those who perform at average or below average levels on exams (Borracci & Arribalzaga, 2018). Edelson et al. (2019) cautioned against this very perspective, highlighting the need for humility.

Reflections were included on humility in the seminar training, specifically to advance social-emotional development. Indeed, the program highlights that a person cannot be socially or emotionally ready for service-learning without understanding their own limitations and need for collaboration for an effective course or project. As a result, some faculty, in open-ended posttest questions, have noted their “confidence to act” measures were lower than in their pretest precisely because of their prior overconfidence. Even with these negative time-bound results, there is a strong correlation to *increased* confidence for the faculty fellows. In fact, these negative open-ended responses may help confirm that the observed confidence growth is dependent upon increased preparedness, not undue overconfidence. That is, the few faculty fellows who came in overconfident were prompted to reevaluate and establish a new benchmark of confidence because of the training and reflection in the seminar. More often, faculty, in their responses, were open about their lack of knowledge or capability in pretest open-ended items, which progressed into an increased level of confidence post seminar.

Therefore, a connection between faculty fellows’ sense of *confidence* and their sense of *preparedness* might be identified. In fact, this connection is present in the seminar instruction, where it is noted that in service-learning one can only be prepared (even if not fully capable) for handling the unexpected turns that may arise in courses. Preparing faculty in the service-learning definitions and frameworks, in tandem with the social-emotional skills to engage with community partners and students in relationships that cover power dynamics, civic change, social advancement, and any number of potential conflicts, leads faculty into a kind of confidence to manage the uncertainty of a course and evaluate its progress. Confidence, in this view, is more akin to becoming “comfortable being uncomfortable,” though there is certainly room for further research here.

There are limitations to a survey that depends on Likert scale responses. The survey

design balances the ease of reproducibility and low faculty effort with useful data collection. These results do not indicate nuanced differences that would be gained from qualitative assessments such as faculty’s development in meta-analysis or practice of various service-learning pedagogies. Additionally, future work might expand the survey tool to clarify language such as “understand” into concrete applications of cognitive development. In this study, the survey stands as a guideline and benchmark that is easily completed and reproduced to provide a broad range of faculty experiences and self-perceptions prior to enacting service-learning so that a quantitative analysis might reveal generalizable results.

Finally, given the low number of faculty per yearly cohort, the results have been analyzed as a comprehensive longitudinal study, rather than trying to distinguish quantitative insights about each year the program was offered. With the uncommonly lengthy longitudinal data of the evaluation tool and program, these results may offer insight as generalizable findings. There are some limitations of the sample because the faculty fellows are, to date, entirely from health professional schools (e.g., public health, nursing, medicine). Although faculty training on pedagogy and instruction may differ across departments, most terminal degree training that faculty receive does not include direct pedagogical teaching/learning within curricula. In this way, faculty are at a “level playing field” when it comes to pedagogical training, at least when categorizing by departmental divisions.

### Future Directions

Several directions hold promise for future researchers and practitioners to continue advancing service-learning faculty development. First, researchers and practitioners should implement the conceptual model proposed in this study for faculty development, along with a method of evaluation that would test faculty members’ potential improvement in cognitive and social-emotional development. This generalized organization for service-learning faculty development may be an access point into establishing more theoretically based pedagogical instruction and implementation, through combining sociocultural research with service-learning practice.

Second, as noted above, future work can examine the relationship between faculty

members' confidence and preparedness and their facility in enacting service–learning courses, especially as that facility may improve over multiple offerings of these courses. In what ways do faculty continue to develop or need educational supports to improve their service–learning teaching? This line of questioning could have implications that tie to notions of communities of practice (Wenger, 2011), efficacy of faculty self–perceptions, and the correlation of reflective training with the efficacy of faculty self–perceptions.

Finally, this article does not speak to the full nature of what faculty development might accomplish in creating ongoing, successful service–learning courses. Future work might examine the efficacy of service–learning courses, faculty teaching,

student learning, community engagement results, and/or perspectives of faculty fellows who engaged in the conceptual model of service–learning faculty development. This, of course, is the ultimate aim of service–learning faculty development: to support effective leaders in community engagement and student learning. This work presents one stage in an ongoing process of continuing education around teaching service–learning. It also highlights a valuable structure and generalizable formative assessment *before* implementation in order to prevent damage to potentially vulnerable communities, safeguard tenuous relationships, and avoid reinforcing harmful stereotypes for students.



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## References

- Arellano, I., & Jones, S. J. (2018). Exploration of university faculty perceptions and experiences of service-learning as engaged scholarship of teaching and learning. *Journal of the Scholarship of Teaching and Learning*, 18(4), 111–129. <https://doi.org/10.14434/josotl.v18i4.23178>
- Astin, A. W., Vogelgesang, L. J., Ikeda, E. K., & Yee, J. A. (2000). How service learning affects students. *Higher Education*, 144. <https://digitalcommons.unomaha.edu/slcehighered/144>
- Axtell, S. (2012). *Creating a community-engaged scholarship (CES) faculty development program: Phase one: Program and skill mapping*. University of Minnesota Office for Public Engagement. <https://hdl.handle.net/11299/213716>
- Becket, D., Refaei, B., & Skutar, C. (2012). A faculty learning community's reflection on implementing service-learning goals. *Journal of the Scholarship of Teaching and Learning*, 12(1), 74–86. <https://scholarworks.iu.edu/journals/index.php/josotl/article/view/1977>
- Biesta, G., & Burbules, N. C. (2003). *Pragmatism and educational research*. Rowan and Littlefield.
- Blanchard, L. W., Belliard, J. C., Krichbaum, K., Waters, E., & Seifer, S. D. (2009). Models for faculty development: What does it take to be a community-engaged scholar? *Metropolitan Universities*, 20(2), 47–65. <https://journals.iupui.edu/index.php/muj/article/view/20390>
- Bloom, B. S. (1956). *Taxonomy of educational objectives: Vol. 1. Cognitive domain*. McKay.
- Blouin, D. D., & Perry, E. M. (2009). Whom does service learning really serve? Community-based organizations' perspectives on service learning. *Teaching Sociology*, 37(2), 120–135. <https://doi.org/10.1177/0092055X0903700201>
- Borracci, R. A., & Arribalzaga, E. B. (2018). The incidence of overconfidence and underconfidence effects in medical student examinations. *Journal of Surgical Education*, 75(5), 1223–1229. <https://doi.org/10.1016/j.jsurg.2018.01.015>
- Bringle, R. G., & Hatcher, J. A. (1996). Implementing service learning in higher education. *The Journal of Higher Education*, 67(2), 221–239. <https://www.jstor.org/stable/2943981>
- Butin, D. (2003). Of what use is it? Multiple conceptualizations of service learning within education. *Teachers College Record*, 105(9), 1674–1692. <https://doi.org/10.1046/j.1467-9620.2003.00305.x>
- Cazzell, M., Theriot, S., Blakey, J., & Sattler, M. (2014). Transformation of, in, and by learning in a service-learning faculty fellows program. *Journal of Service-Learning in Higher Education*, 3, 30–46. <https://journals.sfu.ca/jslhe/index.php/jslhe/article/view/44>
- Chism, N. V. N., Palmer, M. M., & Price, M. F. (2013). Investigating faculty development service-learning. In P. H. Clayton, R. G. Bringle, & J. A. Hatcher (Eds.), *Research on service-learning: Conceptual frameworks and assessment: Vol. 2A. Students and faculty* (pp. 187–214). Stylus.
- Chism, N. V. N., & Szabo, B. (1997). How faculty development programs evaluate their services. *Journal of Staff, Program, and Organizational Development*, 15(2), 55–62.
- Darby, A., & Newman, G. (2014). Applying motivation theory to faculty motivation to utilize academic service-learning pedagogy. *Journal of Higher Education Outreach and Engagement*, 18(2), 91–119. <https://openjournals.libs.uga.edu/jheoe/article/view/1116>
- Driscoll, A., Gelmon, S., Holland, B., Kerrigan, S., Spring, A., Grosvold, K., & Longley, M. J. (1998). *Assessing the impact of service-learning: A workbook of strategies and methods*. Portland State University Center for Academic Excellence.
- Edelson, S. A., Lo, K. D., Nelson, T., Stark, G., Stratton, M. T., & van Esch, C. (2019). From the shadow of overconfidence into the light of humility: Reflections on experiential learning activities gone awry. *Journal of Management Education*, 43(2), 200–211. <https://doi.org/10.1177/1052562918812169>
- Elverson, C. A., & Klawiter, R. (2019). Using guided reflection to link cultural and ser-

- vice learning in a study abroad course. *Journal of Professional Nursing*, 35(3), 181–186. <https://doi.org/10.1016/j.profnurs.2018.11.004>
- Eun, B. (2019). The zone of proximal development as an overarching concept: A framework for synthesizing Vygotsky's theories. *Educational Philosophy and Theory*, 51(1), 18–30. <https://doi.org/10.1080/00131857.2017.1421941>
- Freire, P. (2018). *Pedagogy of the oppressed*. Bloomsbury Publishing USA.
- Giles, D. E., Jr., & Eyler, J. (1994). The theoretical roots of service–learning in John Dewey: Toward a theory of service–learning. *Michigan Journal of Community Service Learning*, 1(1), 77–85. <http://hdl.handle.net/2027/spo.3239521.0001.109>
- González Rey, F. (2016). Vygotsky's concept of *perezhivanie* in *The Psychology of Art* and at the final moment of his work: Advancing his legacy. *Mind, Culture, and Activity*, 23(4), 305–314. <https://doi.org/10.1080/10749039.2016.1186196>
- Heasley, C., & Terosky, A. L. (2020). Grappling with complexity: Faculty perspectives on the influence of community engaged teaching on student learning. *Journal of Higher Education Outreach and Engagement*, 24(2), 19–36. <https://openjournals.libs.uga.edu/jheoe/article/view/2072>
- Kirkpatrick, D. L. (1998). The four levels of evaluation. In *Evaluating corporate training: Models and issues* (pp. 95–112). Springer.
- Kolb, D. A. (2007). *The Kolb learning style inventory*. Hay Resources Direct.
- Kretchmar, M. D. (2001). Service learning in a general psychology class: Description, preliminary evaluation, and recommendations. *Teaching of Psychology*, 28(1), 5–10. [https://doi.org/10.1207/S15328023TOP2801\\_02](https://doi.org/10.1207/S15328023TOP2801_02)
- Ladson–Billings, G. (2014). Culturally relevant pedagogy 2.0: a.k.a. the remix. *Harvard Educational Review*, 84(1), 74–84. <https://doi.org/10.17763/haer.84.1.p2rj131485484751>
- Lantolf, J. P., & Poehner, M. E. (2014). *Sociocultural theory and the pedagogical imperative in L2 education: Vygotskian praxis and the research/practice divide*. Routledge.
- Lantolf, J. P., & Swain, M. (2019). On the emotion–cognition dialectic: A sociocultural response to Prior. *The Modern Language Journal*, 103(2), 528–530. <https://doi.org/10.1111/modl.12574>
- Latta, M., Kruger, T. M., Payne, L., Weaver, L., & VanSickle, J. L. (2018). Approaching critical service–learning: A model for reflection on positionality and possibility. *Journal of Higher Education Outreach and Engagement*, 22(2), 31–55. <https://openjournals.libs.uga.edu/jheoe/article/view/1386>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.
- Lechuga, V. M., Clerc, L. N., & Howell, A. K. (2009). Power, privilege, and learning: Facilitating encountered situations to promote social justice. *Journal of College Student Development*, 50(2), 229–244. <https://doi.org/10.1353/csd.0.0064>
- Lewing, J. M. (2020). Partner and process: Conceptual considerations for continuous faculty development for service–learning and community engagement at supportive institutions. *International Journal of Research on Service–Learning and Community Engagement*, 8(1), Article 18785. <https://doi.org/10.37333/001c.18785>
- Melville, K., Dedrick, J., & Gish, E. (2013). Preparing students for democratic life: The re-discovery of education's civic purpose. *The Journal of General Education*, 62(4), 258–276. <https://doi.org/10.5325/jgeneeduc.62.4.0258>
- Mitchell, T. D. (2008). Traditional vs. critical service–learning: Engaging the literature to differentiate two models. *Michigan Journal of Community Service Learning*, 14(2), 50–65. <http://hdl.handle.net/2027/spo.3239521.0014.205>
- O'Meara, K., & Niehaus, E. (2009). Service–learning is . . . how faculty explain their practice. *Michigan Journal of Community Service Learning*, 16(1), 17–32. <http://hdl.handle.net/2027/spo.3239521.0016.102>
- Rosser–Mims, D., Dawson, G., & Saltiel, I. M. (2017). Vygotsky's influence on adult and higher education. In V. C. X. Wang (Ed.), *Theory and practice of adult and higher education*

- (pp. 423–438). Information Age.
- Santiago-Ortiz, A. (2019). From critical to decolonizing service-learning: Limits and possibilities of social justice-based approaches to community service-learning. *Michigan Journal of Community Service Learning*, 25(1), 43–54. <https://doi.org/10.3998/mjcsloa.3239521.0025.104>
- Schein, E. H. (1996). Kurt Lewin's change theory in the field and the classroom: Notes toward a model of managed learning. *Systems Practice*, 9, 27–47. <https://doi.org/10.1007/BF02173417>
- Sink, C. A., & Stroh, H. R. (2006). Practical significance: The use of effect sizes in school counseling research. *Professional School Counseling*, 9(5), 401–411. <https://www.jstor.org/stable/42732713>
- SOURCE. (2020). *JHU SOURCE Service-Learning Academy*. <https://source.jhu.edu/audiences/faculty-and-staff/fellows/index.html>
- Tinkler, B., Hannah, C. L., Tinkler, A., & Miller, E. (2014). Analyzing a service-learning experience using a social justice lens. *Teaching Education*, 25(1), 82–98. <https://doi.org/10.1080/10476210.2012.744742>
- Veresov, N. (2017). The concept of perezhivanie in cultural-historical theory: Content and contexts. In *Perezhivanie, emotions and subjectivity* (pp. 47–70). Springer, Singapore.
- Veresov, N., & Fleer, M. (2016). Perezhivanie as a theoretical concept for researching young children's development. *Mind, Culture, and Activity*, 23(4), 325–335. <https://doi.org/10.1080/10749039.2016.1186198>
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Harvard University Press.
- Vygotsky, L. S. (1987). *The collected works of L. S. Vygotsky: Vol. 1. Problems of general psychology* (R. W. Rieber & A. S. Carton, Eds.; N. Minick, Trans.). Plenum Press.
- Welch, M., & Plaxton-Moore, S. (2017). Faculty development for advancing community engagement in higher education: Current trends and future directions. *Journal of Higher Education Outreach and Engagement*, 21(2), 131–166. <https://openjournals.libs.uga.edu/jheoe/article/view/1333>
- Wenger, E. (2011). *Communities of practice: A brief introduction*. <https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/11736/A%20brief%20introduction%20to%20CoP.pdf>
- Whitt, E. J., Nesheim, B. E., Guentzel, M. J., Kellogg, A. H., McDonald, W. M., & Wells, C. A. (2008). "Principles of good practice" for academic and student affairs partnership programs. *Journal of College Student Development*, 49(3), 235–249. <https://doi.org/10.1353/csd.0.0007>
- Young, C. A., Shinnar, R. S., Ackerman, R. L., Carruthers, C. P., & Young, D. A. (2007). Implementing and sustaining service-learning at the institutional level. *Journal of Experiential Education*, 29(3), 344–365. <https://doi.org/10.1177/105382590702900306>