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Analyzing service-learning reflections through Fink's taxonomy

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ABSTRACT

Reflection is an increasingly essential component of experience-based learning in higher education to encourage students to draw connections between theoretical and practical knowledge and experiences. This qualitative study examines the reflections of undergraduate students in a service-learning course for secondary English teacher candidates. The authors use Fink's taxonomy of significant learning as a lens through which to examine the learning within and critical natures of students' reflections. Findings from this study suggest that to consider and extend students' academic content knowledge and to move students toward new and critical understandings of their service work, reflections should direct students toward more explicit considerations of academic course content over a period of time. To help students write critical reflections that achieve both academic and personal growth learning goals, the authors recommend explicitly teaching the reflective mode, introducing students to Fink's taxonomy, and instructing students to include course content in their reflections.

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Practicum experiences permit teacher education (TE) programs to prepare teacher candidates (TCs) to work in diverse school settings and extend theoretical knowledge (Anderson, Swick, and Yff 2001; Imig 2001; Sleeter 2001, 2008). Coupled with reflection, hands-on experiences help TCs understand abstract course content through concrete community and school experiences. Dewey's (1956) considerations of the relationship between the educated person and the reflective person and Toole and Toole's (1995) work on reflection's connection to lifelong learning have informed teacher educators. Through reflection, students assume personal responsibility for their education and develop as active learners who think and do simultaneously (Bonwell and Eison 1991; Fink 2013).

Service-learning in TE has evolved from teacher educators' desires to help TCs reflect on classroom experiences and plan for future action (Schön 1987). Service-learning differs from traditional practicum and volunteer experiences in two ways. First, service-learning positions the community's needs ahead of the university's needs so

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that a community-identified need is addressed. Second, reflection, the bridge that unites university-based coursework with community-based experiences, plays a central role in service-learning.

To encourage critical considerations of the relationship between community and schools, Ash and Clayton (2004) suggest service-learning cultivates personal growth and extends content knowledge. Toole and Toole (1995, 100–101) describe reflection as 'the use of creative and critical thinking skills to help prepare for, succeed in, and learn from the service experience, and to examine the larger picture and context in which the service occurs'. Thus, service-learning's potential depends on students' critical reflection of service and academics (Toole and Toole 1995).

We advocate for critical reflection, which as Ryan (2013, 154) suggests is 'not an intuitive skill'. Difficult because it requires self-regulation and metacognition (Coulson and Harvey 2013), critical reflection encourages a 'conscious interrogation' (Shoffner et al. 2010, 70) of broader social issues (Mitchell 2008). To reflect critically, one must question assumptions and teaching practices as he or she works to 'understand how considerations of power undergird, frame, and distort educational processes and interactions' (Brookfield 1995, 8). In service-learning, in particular, critical reflection encourages students to consider how they will act in future professional situations.

Fink's (2013) taxonomy of significant learning goals may be a way for students to address academic (foundational knowledge, application, and integration) and personal growth (human dimension, caring, and learning how to learn) objectives of service-learning courses. Used as a guide for critical service-learning reflections, Fink's taxonomy holds implications for preparing teachers to reflect upon the ways social, political, and economic spheres interact in schools and communities (Blouin and Perry 2009; Boyer 1994; Eyler and Giles 1999; Mitchell 2008; Molee et al. 2010).

In this paper, we review current literature about TE, service-learning, and reflection; consider reflection's affordances and challenges; investigate the role of reflection in a service-learning course for TCs at an US Southeastern state university; and offer Fink's (2013) taxonomy as a critical reflection framework. The following questions guided our inquiry:

(1) Do TCs enrolled in a TE service-learning course address all six of Fink's significant learning goals in their reflections?
(2) Are TCs more likely to address certain learning goals than others as they reflect on course material and the service experience?
(3) Does whether TCs reflect throughout the semester or at the end of the semester alter the types of significant learning goals addressed?

Although we discuss critical reflection in relation to service-learning within TE, we believe the implications of this research to have application to other higher education disciplines as well.

Review of the literature

In this literature review, we discuss scholarship in the areas of TE, service-learning, and reflection; introduce Fink's (2013) taxonomy of significant learning; and lay a foundation

for the type of critical reflection, academic growth, and personal growth Fink's taxonomy can facilitate.

Reflection and TE

Our work extends the expansive literature on the importance of reflection in TE (Hatton and Smith 1995; Lee and Moon 2013; Oner and Adadan 2011; Stevenson and Cain 2013). Zeichner and Liston (1987) distinguished between teachers who take reflective action versus routine action. Unlike routine action that is 'guided primarily by tradition, external authority, and circumstance', reflective action is defined by the 'active, persistent, and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the consequences to which it leads' (24). In other words, reflection should result in action informed by new knowledge (Zeichner and Liston 1987). Thus, the *process* of reflection and resulting action are integral. Reflective teachers, then, should examine their practice *and* consider the connections between thoughts about teaching, practices enacted, and end results (Bullough and Gitlin 2001).

Despite rhetoric about reflection's importance in TE, both past (e.g. Hatton and Smith 1995) and current research (e.g. Lee and Moon 2013; Ryan 2013; Stevenson and Cain 2013) articulate its difficulties. Hume (2009) found the reflection component of service-learning to be challenging for her science TCs; they had not written previously in the reflective mode or seen models of effective reflections. In addition to the paucity of experience with the reflective mode, many TCs have received limited guidance on the characteristics that constitute a desirable reflective piece (based on the instructor's educational aims). In their study of English and music TCs' reflections in multimodal writing environments, Kajder and Parkes (2012) found the *quality* of reflection writing often receives little consideration. Several scholars have suggested teaching students the reflective mode before assigning reflections (Coulson and Harvey 2013; Hume 2009; Ryan 2013).

Reflection and service-learning

In contrast to community service, service-learning focuses on academic learning and reflection. Specifically, service-learning considers the ways that academic curriculum can negotiate a community's needs 'through active engagement and reflection' (Anderson, Swick, and Yff 2001, xi). Because of its emphasis on reflection that extends content knowledge, service-learning has been increasingly incorporated into TE programs (Anderson, Swick, and Yff 2001; Imig 2001; Ash and Clayton 2004). Through critical reflection, students might interrogate the power dynamics (Brookfield 1995) and social issues (Mitchell 2008) that exist in the service-learning context.

Understanding service-learning

Traditional practicum experiences often lack reflection and connection-building across community-based experiences and academic content knowledge. For this reason, service-learning combined with critical reflection offers a unique opportunity for personal and academic growth in TE.

Through service-learning, students should participate in activities that meet a community-identified need and furthers their academic content knowledge and sense of civic

responsibility through reflection (Bringle and Hatcher 1995). In addition to these civic and academic goals, Ash and Clayton (2004) suggest students experience personal growth through service-learning and reflection that can enhance critical considerations of academic and service experiences. The focus of service-learning, then, shifts from charity to change that 'emphasizes the transformative potential' and 'carries the moral, political, and intellectual implications of caring and transformation' (Wilczenski and Coomey 2007, 7–8). An emphasis on change creates space for transformation for both the student (Wade 2006) and community.

Service-learning and reflection in the literature

Our study builds on previous work about reflection and service-learning. In her study of undergraduates across 23 service-learning courses, Mabry (1998) suggested reflection in service-learning should occur weekly, happen in class, and include formative and summative components. Many service-learning instructors have found that Mabry's suggestions for reflection can be achieved through approaches guided by the DEAL (Describe, Examine, Articulate Learning) model and Bloom's taxonomy.

The DEAL model is a three-step reflective process that 'moves students from (a) Describing their service-learning experience, to (b) Examining this experience in light of specified learning objectives for *academic enhancement, personal growth,* and *civic engagement,* to (c) Articulating their Learning' (Molee et al. 2010, 241). In Molee et al.'s study, students' depth of learning scores exhibited lower order thinking and poor to fair critical thinking skills, even after the incorporation of the DEAL model. In a study with two-year college students, Maloy and Carroll (2014) found that though some students needed more time to develop the *describe* aspect before reflecting, the DEAL model helped improve students' critical thinking. Though the DEAL model includes a personal growth component, it is not emphasized overtly.

Bloom's taxonomy is organized around lower order (knowledge, comprehension, and application) and higher order cognitive domains (analysis, synthesis, and evaluation), and provides a way for students to write and teachers to assess service-learning reflections (Vaccarro 2010). While Bloom's taxonomy does encourage critical academic reflection, personal growth goals are not explicitly included.

The challenge of reflection in service-learning courses

Reflection is oft considered the 'hyphen' in service-learning as it brings together the equally important aspects of service and academic understanding to lead to new learning. Though research supports reflection's importance, many instructors find reflection to be the most challenging and easily avoided piece in service-learning courses (Ash and Clayton 2009; Molee et al. 2010). Reflection's specific features are somewhat ambiguous (Anson 1997; Stevenson and Cain 2013) and what students learn through reflective writing can be difficult for instructors to ascertain (Molee et al. 2010). Lack of standard assessment for reflection in service-learning makes it difficult to compare to other pedagogical approaches (Ash and Clayton 2004; Blomstrom and Tam 2008; Molee et al. 2010).

To realize service-learning's academic, civic, and personal goals, reflection should be assigned and assessed often and should follow specific instructor guidelines. Because of personal growth's centrality in service-learning, we assert those reflective methods and

evaluative tools that disregard personal growth fall short of realizing and communicating service-learning's goals and do not emphasize critical thinking at every level. As an alternative, we propose Fink's (2013) taxonomy to encourage TCs to critically reflect on service-learning experiences.

Fink's taxonomy and reflection

In this section, we articulate the categories of Fink's (2013) taxonomy of significant learning and suggest it as a framework to guide critical reflections.

Introduction to Fink's taxonomy

The taxonomy of significant learning developed out of Fink's (2013) finding that many pedagogical methods in college courses were not resulting in increased student learning. Fink found that college 'students were not learning even basic general knowledge, they are not developing higher level cognitive skills, and they are not retaining their knowledge … There is no significant difference between students who take courses and students who do not' (4). Fink suggested the division between students' academic and personal lives was contributing to a lack of learning. Fink found that students need to engage in significant learning that enhances their individual lives as well as their social interactions, encourages them to be more informed citizens, and prepares them for work.

Fink's (2013) taxonomy includes six categories: foundational knowledge, application, integration, human dimension, caring, and learning how to learn. Foundational knowledge involves the subject-specific information students need to understand and remember. Application refers to learners taking the knowledge they have learned and turning it into action. Integration permits learners to make connections between the learning and other learning or life experiences. The human dimension allows learners to consider learning in the context of their or others' lives. Caring encourages learners to care about something as a result of a learning experience. And, finally, learning how to learn offers learners an opportunity to gain knowledge about learning itself. Fink describes the taxonomy not as 'hierarchical' but 'relational and interactive', contributing to a synergistic view of learning. Thus, teachers can construct course goals to help students achieve multiple categories simultaneously.

Fink's taxonomy and critical reflection

Fink's (2013) taxonomy has particular relevance for service-learning reflections. Foundational to Fink's work is an understanding that to learn is to change. To make and change meaning, learners must reconsider the original meanings of ideas and experiences and then reflect on new meanings. These effects of significant learning experiences align with the goals of critical reflection in service-learning.

Whereas the first categories of previous models (i.e. *knowledge* in Bloom's taxonomy and *describe* in the DEAL model) do not permit critical reflection, each aspect of Fink's taxonomy encourages this. Because Fink's model is nonlinear and non-hierarchical, service-learning students can begin reflections with any component and address multiple components simultaneously (Fink 2013). Additionally, the visual representation of Fink's

taxonomy emphasizes reflection and learning's recursive and cyclical nature (Eyler, Giles, and Schmiede 1996; Wilczenski and Coomey 2007).

Our study

We began this study by analyzing the reflections of eight undergraduate students enrolled in a service-learning course. Each week students tutored at a local alternative high school for one hour and attended class at the university for approximately two hours. The tutoring that TCs provided as part of the service-learning course was dependent on students' and teachers' needs. Whenever possible, the TCs tutored in English reading and writing. Tutoring occurred in one-on-one settings and TCs worked with more than one student during the semester.

When considering the reflection's purpose, the professor shared, 'I suppose I have the goal of having all my classes result in reflection. It would have to be a terrible class if it didn't provoke students' reflections.' He continued, 'the goal is no different from any class I've ever taught at any level: to be interesting and challenging enough that students think about it beyond what's required and to consider its implications for their lives and work'. To encourage TCs to consider the implications of their work beyond class requirements, the professor assigned a reflection assignment that permitted TCs to choose a reflective mode: an ongoing blog or journal, a summative essay, or a case study of a focal learner. TCs could choose to write a summative reflection analyzing their tutoring experiences or to maintain a journal throughout the semester. Four TCs chose to maintain ongoing reflections (three using blogs and one hand-writing his thoughts in a notebook) and four completed a summative reflection assignment (three wrote essays and one recorded a video reflection) (see Table 1 for an overview). Those TCs who wrote summative reflections were instructed to maintain some form of personal ongoing reflection that could inform their final product. These ongoing reflections were not collected by the professor as part of the summative assignment, so it cannot be assumed that these reflections were done or that they informed TCs' final products.

To better direct their reflection, the instructor asked TCs to consider what happened during service-learning, what it meant to them, and how it could inform their future as teachers. TCs were provided with 15 sub-questions to guide their thinking on these overarching topics, but it was not required that they address any or all of the questions (see Appendix for list of questions). TCs were also instructed to synthesize in-class readings,

Table 1. Study Participants.

Name	Racial/ethnic identity	Year	Intended undergraduate major	Type of reflection	Goals NOT addressed
Amanda	European American	Junior	English and English education	On-going	–
LuAnne	European American	Junior	Middle grades education	On-going	Integration
Joshua	European American	Junior	English	On-going	–
Kara	African-American	Sophomore	English and English education	Summative	Foundation application
Caren	European American	Freshman	Undecided	Summative	–
Janine	African-American	Junior	Early childhood education	Summative	Application
Lucy	European American	Freshman	English	On-going	–
Christopher	African-American	Junior	Middle school education	Summative	Application

discussions, and service experiences as they reflected. TCs did not receive feedback on their reflective writing until the end of the semester.

Methodology

We approach this research from an interpretivist epistemological stance and view reality as socially constructed. We seek to understand the 'social world from the perspectives of those who are actors in that social world' (Glesne 2011, 6). We determined that the best means to appreciate participants' experiences during all aspects of the service-learning course, their interpretations of those experiences, and the ways that their understandings shaped their learning and view of education was to take a narrative approach to document-based analysis. Specifically, a narrative approach to data analysis allowed us to gather data by collecting participants' stories about personal and interpersonal experiences (Creswell et al. 2007; Ollerenshaw and Creswell 2002).

Theoretical alignment

As we began this research, we wanted to consider the unique benefits of service-learning as a pedagogical tool to encourage TCs to make connections between 'their community experiences and course themes' (Mitchell 2008, 50). In TE, this work is similar to that of narrative data analysis in that the student and the researcher move from theoretical knowledge that is often 'abstract and is about what works in general' (Polkinghorne 2010, 393) to concrete situations that consider 'time, place, person, and circumstance' (Schwab 1971, 494). A narrative approach to data collection and analysis permitted participants to use stories to help them share abstract experiences and understandings (Polkinghorne 2010).

We further considered Bruner's (1986) distinction between paradigmatic and narrative thinking. Paradigmatic thinking is often aligned with theoretical knowledge, as it 'structures experiences by identifying them as an instance of a concept or category' (Polkinghorne 2010, 396). Conversely, 'Practical knowledge involves narrative thinking about how the effect of actions, happenings, and events affect the occurrence of ends' (396). By analyzing their reflections, we explored how participants were able to use story to move from the paradigmatic to the practical and to connect the abstract to concrete experience as they reflected – some in ways that were more critical than others.

Data collection

Upon gaining consent from all eight participants enrolled in the course [the-first-author] observed each class meeting, maintained field notes, conducted one-on-one interviews with each participant, and collected participants' reflections at the semester's end. While all data sets were taken into consideration to triangulate the findings, participants' written reflections were the primary object of analysis, which was conducted post-semester. All identifiers were changed to pseudonyms before data analysis. Interview and reflection transcripts were shared with participants as a form of member-checking and

[the-first-author] communicated with participants during analysis to ensure that her interpretations and use of data aligned with participants' intentions.

Participants

During data collection, all participants were enrolled in the service-learning for TE elective. All eight TCs in the study were undergraduate students in their freshman, sophomore, or junior year. Participants' self-identified racial group, year in school, intended major, and form of reflection is outlined in Table 1.

While no participants had experience in service-learning courses before this class, they all had experience with community service. Most of the participants' previous community service work took place when they were high school students and very few included tutoring. Those participants who had engaged in service during college described scenarios where they observed teachers in classrooms instead of interacting with students.

Data analysis

We searched for themes across the stories participants shared through written reflections and identified major themes and categories. [The-first-author] and [the-second-author] began by reading participants' reflections individually and identifying potentially significant statements. [The-first-author] and [the-second-author] then looked for themes across the highlighted statements (Creswell et al. 2007). After multiple independent readings and preliminary analysis, we discussed the themes we found. During this discussion, academic learning and personal growth were identified as the two overarching themes.

Fink's (2013) six categories were used to further analyze these themes. Whereas all six kinds of significant learning inform and support one another, we identified foundational knowledge, application, and integration as pertaining to academic learning, with human dimension, caring, and learning how to learn directed at personal growth. (See Table 2 for coding scheme and sample data.)

A preliminary reading of participants' reflections suggested that what we considered personal growth goals were referenced three times as often as those considered academic learning goals. For this reason, we were more concerned with the specific components of academic learning than the three areas of personal growth. Finally, we analyzed the data paying particular attention to the type of reflection: ongoing or summative.

Limitations

Two primary factors serve as limitations to this study. First, the small number of participants cannot account for the experiences of all TCs in service-learning courses. Second, the focus of this study was one course at one university and is not generalizable. Acknowledging the study's small scope, we ascribe to Wolcott's (1990, 147) goal of qualitative research: 'to understand a social world we are continuously in the process of constructing'. We are not concerned with establishing generalizable principles but instead to describe, interpret, and understand the lived experiences of these specific participants. Our findings hold potential for enhancing the educative qualities and reflection components of service-learning courses in higher education.

Table 2. Coding scheme and sample data.

Code	Sample
Foundational knowledge	'This topic was emphasized in the most recent Book Club presentation: Beyond Silenced Voices: Class, Race, and Gender in United States Schools, Revised Edition. This book was focused on a limited portion of the US school system, but it brought up some excellent points. The book spoke about certain classes and gender in society and their relationship to education. Many of the students said that the students were extremely hesitant to learning if they did not have a good relationship with their teachers. I found this very relevant.' – Amanda
Application	'It was nice and more familiar to me, a suburban kid, to hear her have such goals like achieving a doctorate. Most of the kids I talked to had ambitions "locked-in at a level that suburban kids would scorn" (Kozol 141). While I did not "scorn" the kids that told me they wanted to be a sanitation worker or funeral director, it was a foreign concept to me.' – Caren
Integration	'Some of Pedro's problem is the language barrier, but a lot of Pedro's problem is his lack of motivation. This may have something to do with his constant battle of being a student of the streets in his home environment, filled with some criminal activity and not enough value in education, versus being a student of academia. I've overheard conversations where Pedro is conflicted between the two worlds, and very rarely does he choose the path of academia.' – Christopher
Human Dimension	'I worked with a student I haven't worked with yet and a student who spoke English as a second language helping her in her literature class. I was informed that she was working on an essay and was having a difficult time forming the essay yet had great ideas. It was a very interesting task and was definitely something that I have never done before. I was worried and intimidated at the task at hand yet I knew that I had been mentoring long enough that I could do it.' – LuAnne
Caring	'I looked around and saw the girl with scars on her arms from cutting herself, the boy who is handsome and charming, but he said he had anger issues – the boy who was trying his best just to fit in. They were all the misfits of schools that they couldn't find a place in, which is a shame, because they all have so much to give back.' – Joshua
Learning How to Learn	'Initially, I didn't see a grand difference between the "advanced" students and the lower track students. I actually often times questioned my mentor teacher on the purpose and effectiveness of the divide. It wasn't until I paid very close attention, thereafter, that I noticed the pace of one level, in comparison with the pace of the other.' – Christopher

Findings

We found that only Amanda, Caren, Joshua, and Lucy's reflections included all six types of learning goals. However, there were no significant patterns across these participants that signified a particular reason for their abilities to address all six goals. For instance, Joshua and Amanda were both considered upperclassmen, while Caren and Lucy were both in their freshman year of college. Amanda, Joshua, and Lucy all completed ongoing reflections whereas Caren wrote a summative reflection paper. During their one-on-one interviews, all participants were asked about their past volunteer and service experiences. While Lucy had participated in more volunteer work than any other participant in the study, Joshua shared he had done no volunteer work during high school and some during college. Finally, there was no pattern found across these four participants in terms of their backgrounds (socioeconomic status, type of high school attended, or parental education level), which could differentiate them from the four participants who did *not* address all six learning goals. We now transition to an analysis of the reflections in relation to Fink's (2013) learning goals.

Academic learning goals

Although participants referenced in-class readings and discussions in their reflections, these references rarely were used to connect to and extend experiences at the service site. Instead, participants used coursework to label and identify issues they experienced

and observed. After working with one student for three weeks, LuAnne found she was able to slowly build a relationship with him:

> Another thing that I learned today was that patience is so important when working with any student. My book club presented on the book 'The Reason I Jump' about a young boy with autism and we discussed in class how important patience was when working with students.

LuAnne referenced in-class readings to help her name a teacher disposition – patience – not to extend critical thinking about the subject.

In her second reflection, Lucy recalled a piece of advice shared by the professor, writing 'One of the biggest lessons I took away from [the professor's] class was something he said on this topic, to the effect of "Give your students the benefit of the doubt".' Lucy elaborated on the meaning of this advice:

> If you treat your students like smart, unique, purpose-driven, responsible adults, they will rise to the challenge. I would so much rather be let down by a student then have my expectation of a student keep him or her in a box of mediocrity.

While the information Lucy learned during the course was something she found valuable and relatable to teaching, she did not make explicit connections to her tutoring work to help her understand methods presented to her.

Christopher provided an alternative case as course readings and discussions did help him evaluate and critique situations at the alternative school. While working with a student, Pedro, Christopher reflected on his reading of Atwell (1998), writing, 'where she provides reasons for why students struggle with writing, she states that students are assigned topics that are not of interest or prior knowledge'. Christopher continued, 'From Pedro's journal entries, I can very easily hear his voice in his free writes versus his submissions when he's told to write on a certain topic.' Christopher drew connections between writing and reading instruction, suggesting that 'for them to critically understand what they're reading, they have to have an interest in or at least to be able to relate to some of the texts they read. This is also relatable to students' writing'. Christopher considered the ways he could help Pedro understand assigned reading and make subsequent writing assignments relevant to Pedro's life.

Foundational knowledge

Foundational knowledge refers to student recall and understanding of information and ideas presented and discussed during class (Fink 2013). Of the academic learning goals, foundational knowledge references were the most frequent.

When she began tutoring, Amanda referenced the in-class reading *Beyond Silenced Voices: Class, Race, and Gender in United States Schools* (Weis and Fine 1993). She wrote, 'I have learned that building relationships is crucial to helping a student develop their education.' Amanda found the authors' assertion about student resistance when they have a poor relationship with a teacher relevant.

LuAnne used her course text to help her understand her experiences. After a challenging day, LuAnne reflected that she was developing patience. LuAnne connected this experience to her reading of *The Reason I Jump* (Higashida 2013) and the importance of patience when working with students who have diverse needs.

While some participants explicitly linked their course readings with service experiences in their reflections, other participants referenced course readings without connecting to service work. For instance, Janine often dropped in references to academic content but did not elaborate on or build explicit connections to her service experiences. In one reflection Janine followed a discussion on parents' roles in schools with an unrelated summary of *Beyond Silenced Voices* (Weis and Fine 1993):

> This book viewed schools, race and economics as a catalyst to the whole institution of learning in U.S. public schools. […] Although I was not a fan of this book, it spoke for those who could not speak for themselves in this state, but not for the whole U.S.

Janine did not further connect this reading to tutoring observations or experiences.

Application

Application goals help students acquire specific skills and different types of thinking and may encourage students to analyze and evaluate, imagine and create, or to solve problems and make decisions (Fink 2013). Participants only explicitly applied their content knowledge to the service experience in 10 instances.

Caren used her own experiences in school to help her make sense of the alternative high school. However, Caren also wrote in-class reading helped give her the language she needed to understand her experiences:

> It was nice and more familiar to me, a suburban kid, to hear her have such goals like achieving a doctorate. Most of the kids I talked to had ambitions 'locked-in at a level that suburban kids would scorn' (Kozol 141). While I did not 'scorn' the kids that told me they wanted to be a sanitation worker or funeral director, it was a foreign concept to me.

Not only did Kozol's (1991) text help Caren communicate her thoughts more clearly, but it also helped Caren understand her positionality in the service setting and reflect on her beliefs and assumptions. Analyzing her reflection for Fink's (2013) criteria of application, we see how Caren positioned herself in terms of larger social issues, here critically reflecting on students' economic issues (Mitchell 2008).

Joshua was also able to apply his reading of Kozol's (1991) text to his work with Sutton:

> Sutton was not in class today; Ms. Em said he had been complaining about his teeth hurting and had asked to go home. I thought this was purely similar to the children in Jonathan Kozol's book, 'Savage Inequalities.' Sutton's dental problems may not be quite that bad but it still goes to show how medical problems can affect the students' educational aspirations.

Joshua's reading prompted him to think more deeply about Sutton's absence than he may have otherwise and encouraged him to consider concretely the roles of class, socioeconomic status, and healthcare in education.

Integration

Integration learning goals are those concerned with students' building of connections between courses, between course material and personal experience, and between ideas within the course (Fink 2013). We focused our analysis on instances where participants considered the role of community in students' school experiences. Of the 41 academic learning codes, 12 were identified as evincing integration.

In her first reflection, Lucy's wrote about understanding the local community:

> This county is one of the poorest in the nation, and for a lot of families – and the students within those families – education is not a number one priority. In other words, most of these students aren't buzzing with excitement about learning. In other words, it's going to be hard.

Lucy's accurate knowledge of the county's economic status influenced her beliefs about her students and the potential challenges she believed would lay ahead. However, after working with a particular student, Alexa, Lucy shared, 'I'm learning through students like Alexa that teaching is a roll-with-the-punches kind of job.' Rather than making grand assumptions about a group of people based on one piece of information (i.e. knowledge of the community members' socioeconomic status), Lucy wrote, 'I'm starting to think that if I come in with no expectations at all I'll be better off.' By working with and getting to know individual students, Lucy was able to challenge essentialized understandings of her students based on limited (albeit accurate) knowledge of the community.

Personal growth goals

Personal growth goals, the human dimension, caring, and learning how to learn, were named more frequently than academic learning goals in students' reflections.

Human dimension

The human dimension is primarily concerned with what students should learn about themselves during the service experience. This self-awareness should inform their interactions with others and encourage students to recognize human components in academic content (Fink 2013).

Many participants identified their own weaknesses, assumptions, and/or worries as they wrote about their service experiences. Early in her reflection Amanda demonstrated an understanding of herself as a learner: 'I would have preferred to work with Janell, but I think working with different students with different abilities is better preparing me for my future.' Often, participants found that even when they felt the least prepared or most worried to work with a particular student, the experiences resulted in a positive personal lesson. LuAnne demonstrated a heightened sense of self-efficacy when she was asked to work with a student who was an English Language Learner. After working with the student on an essay, LuAnne reflected the task 'was definitely something that I have never done before. I was worried and intimidated at the task at hand yet I knew that I had been mentoring long enough that I could do it'.

Other participants found that rather than assuaging teaching feares, more time spent tutoring led to greater awareness of the challenges that lay before them as educators. Caren expressed an initial frustration at the amount of time and energy her tutee required. However, as she reflected on the experience, Caren wrote, 'I finally realized nothing was going to change with him until he changed his state of mind about education. No matter how badly I wanted him to succeed; he had to want it too.' Christopher reflected that tutoring made him consider schooling from a fresh perspective: 'It's also pushed me to understand that all students aren't the same, and that I have to find what things work for what students.' Both Caren and Christopher found that learning is a highly individual experience and that students' learning styles may differ from theirs.

Caring

The caring component of Fink's (2013) taxonomy deals with developing new feelings, interests, and values. Participants expressed their care and concern for students most frequently throughout the reflections. Such care for students' feelings, ideas, and experiences led participants to consider alternative views of education. Joshua expressed concern for his tutees:

> I looked around and saw the girl with scars on her arms from cutting herself, the boy who is handsome and charming, but he said he had anger issues – the boy who was trying his best just to fit in. They were all the misfits of schools that they couldn't find a place in, which is a shame, because they all have so much to give back.

Conversely, many participants were concerned with students' individual experiences. LuAnne wrote 'Because of her [Alexa] success it was obvious that she had gained some confidence to take the tests and do the work herself which was such an encouraging experience.'

Learning how to learn

This personal growth goal is concerned with the individual's development into a self-directed learner (Fink 2013). Many participants found tutoring was unearthing more questions and leading them to learn more about education and school practices. Joshua had a particularly challenging experience as he worked with Sutton on a characterization assignment:

> I realize now, because of class discussions, just how injurious it must be to Sutton, a young black man, to have so few models of himself in literature. How can this boy learn to love reading and literature if he cannot identify with any of the protagonists?

Joshua realized, 'I doubt there is any 'classic' literature with a black protagonist. So, trying to find school and age approved material could prove to be a daunting task.' Joshua's thought process not only demonstrated his progression toward becoming a more self-directed learner but was also evidence of his developing teacher identity. Joshua used Fink's (2013) area of learning how to learn to critically reflect via questioning canonical texts and by considering the ways that power can 'undergird, frame, and distort educational processes and interactions' (Brookfield 1995, 8).

Type of reflection

Out of the eight participants, four chose to complete ongoing reflections over the course of the semester and four chose to complete a summative reflective essay at the semester's end. Of the 176 total codes, 123 were found in ongoing reflections, with only 53 codes attributed to summative essays.

All four participants who completed ongoing reflections, LuAnne, Lucy, Joshua, and Amanda, addressed the human dimension and learning to learn goals consistently throughout their reflections. LuAnne, Amanda, and Joshua consistently addressed caring goals, while none of Lucy's reflections were coded for caring. The frequency of these codes is not altogether surprising, given that all of the reflections completed by the participants were coded more frequently for personal growth goals. Finally, in terms of time of reflection across these four participants, there was no noticeable pattern with which the foundational, application, and integration goals were coded. For instance, whereas Lucy's first reflection was coded for application, only Joshua's eighth and tenth reflections were coded as such.

Discussion and recommendations

Fink (2013) suggests that in order to be meaning-makers, rather than merely meaning-receivers, students must reflect. Furthermore, Zeichner and Liston (1987) stress that to move from routine action and toward reflective action, students must consider and reconsider long-held beliefs and supposed forms of knowledge. Thus, reflection necessarily considers and extends academic content to move students to new understandings. Our analysis suggests that to accomplish the goals set forth by Fink (2013) and Zeichner and Liston (1987), reflection should direct students toward more explicit considerations of course content over a period of time.

Considering course content

Across all of the reflections, we found participants were working to reconcile their experiences in school and/or their assumptions about and understandings of the community with their course readings and tutoring. Participants expressed concern with the more general setting of the school and the school's specific approach to education.

Amanda's service experience culled up questions about pedagogical choices and the academic environment of the school. Amanda reflected,

> When I arrived in the classroom I noticed that computers completely lined the walls of the room. This was very different than the normal high school classrooms. In my high school, we only had a few computers in the back of the room for students to work on.

During her interview, Amanda continued her critique of the computer-based approach:

> You still have to have face to face and you have to learn how to sit and be you know, not lectured to, but you have to sit and listen, you can't just play with a computer the entire day.

Amanda used her high school experience to help her make sense of what she was seeing at the alternative school. She did not, however, reference texts or discussions from the service-learning course to help her consider reasons for these pedagogical choices.

Throughout their reflections, the participants experienced many challenges and had many questions about tutoring. Only few participants, however, used academic readings and discussions to make sense of these questions. Janine's cursory references to course texts evinced exposure to academic content but did not indicate a 'conscious interrogation' (Shoffner et al. 2010, 70) into social issues she was observing. Our expectation as researchers is not that participants could use their academic reading and discussions to help them arrive at clear answers to their questions. Instead, more explicit references to course content could help TCs move past assumed understandings of others and toward more critical and complex views of their behaviors, choices, and environments.

Time of reflection

Specific references to academic learning goals occurred with more frequency across the ongoing reflections than the summative reflections. Mere frequency, however, does not necessarily indicate a critical consideration of academic learning goals. In her second reflection, LuAnne considered a student's description of a peer as 'really white' as she remembered

> we had discussed in class stereotypes and how people are labeled based on their race, gender, and class. I had never actually heard a student say something like that right in front of me but when she did, it had such an impact on me.

However, with the exception of acknowledging that stereotypes had been addressed in class, LuAnne did not use course-based academic content knowledge to problematize the topic of race or consider how she could have responded to the student's racialized classification of others.

In his fourth reflection, Joshua considered his work with a student, Sutton, whom he considered apathetic to learning. While thinking about Sutton's disposition toward school, Joshua shared he was interested in finding some activities that might encourage Sutton's engagement. Joshua remembered a discussion from class 'about how the arts help students build knowledge about life and how to function in a society' and made a mental note to himself to 'look more into that and ask him [the professor] about it'. However, similar to LuAnne, Joshua did not go on to outline explicit changes he could make to his interactions with Sutton that could help increase his engagement with school.

Our third research question inquired into the relationship between the time of reflection and TCs' consideration of particular learning goals. Our findings suggest that those TCs who completed reflections throughout the semester were more frequently invoking academic content (either course readings, references to class discussions, or specific advice from the professor) as they wrote about their tutoring experiences. To extend the possibility of more critical reflections during service-learning courses like the one presented here, we offer recommendations for the presentation and incorporation of ongoing reflection.

Teach the reflective mode

Though students may have written previously in the reflective mode, they may not have been coached on how to compose effective, critical reflective pieces. Merely assigning students reflective journals does not always provide students or teachers with a deep insight into students' thinking (Smith 2011). Unless qualities of an effective reflection are identified and used to both assign and assess reflections, students may continue to submit pieces that are reflections in name only. As Ryan (2013, 153–154) posited, without teaching the reflective mode, 'students are unlikely to produce succinct, rigorous and transformative reflections'. Advocating instructors teach the reflective mode before and during the experience-based learning opportunity (Coulson and Harvey 2013), we suggest instructors introduce students to Fink's (2013) taxonomy and encourage them to address academic learning goals.

Introduce TCs to Fink's taxonomy of significant learning

TCs were given a lot of freedom to select their reflective writing process and content. To address our first research question, we analyzed the data to determine if participants attended to all six learning goals in their reflections. Whereas some participants did address all six learning goals, most participants overlooked academic learning goals almost entirely, focusing instead on human dimension goals. We acknowledge Fink's (2013) taxonomy was not offered to participants as a springboard for their reflections.

However, an instructor introduction to Fink's taxonomy as the reflective framework (Coulson and Harvey 2013) may have encouraged participants to address all six learning goals.

Make expectation of inclusion of course content explicit

Our second research question inquired into the tendency of TCs to meet some learning goals with greater frequency than others. Participants in this study generally ignored academic learning goals. There are a few possible reasons for this. In the directions for reflection on the syllabus, TCs were asked to consider: 'How did the on-campus classes affect your service-learning experience?' Of the 15 questions used to direct reflection, this was the only one that directly referenced the university-based course, suggesting that TCs should reference academic material. If the instructor were concerned with addressing Fink's (2013) six learning goals in relation to course content (and we do not assume that he was), then the guiding questions should explicitly direct TCs to consider academic content. Instructors of service-learning courses should be more explicit about their expectations that students include course content in reflections.

To encourage critical reflection, we recommend instructors introduce students to Fink's (2013) taxonomy of significant learning and make expectations of course content inclusion explicit. Furthermore, we argue that ongoing and frequent feedback on students' reflections throughout the semester could redirect students toward more academic and critical considerations of their service experiences.

Conclusion

Our work suggests that the frequency and type of reflections students complete influence the learning outcomes possible from the reflective component of service-learning courses. We advocate for the scaffolding of students' reflective writing and providing students a 'context for reflection' and framework or model (Coulson and Harvey 2013, 405). Instructors need to have an explicit purpose for the reflections they ask students to write and students may need to be informed more explicitly about the components of an effective reflective piece. Fink's (2013) taxonomy for significant learning was used to examine students' service-learning reflections and is offered here as an effective framework to encourage students to produce the types of reflections that lead to reflective and critical action. To help students engage in reflection about their experiences that will best inform their future professional lives, it may be ourselves as instructors who need to first reflect on the ways in which we assign, teach, and assess reflection.

Disclosure statement

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Appendix

15 Questions

COURSE-END QUESTIONS FOR REFLECTION

What happened through the service-learning experience?

From your perspective, what was the purpose of this course?

What did you accomplish through your service-learning experience?

What did you learn through the service-learning experience?

How well were you prepared for your service-learning experience?

How did the on-campus classes affect your service-learning experience?

How would recommend that this course be improved for future students?

What did your experience mean to you?

Do you believe that your work this semester made a difference? Please explain.

Do you believe that a service-learning experience of this sort should be required of all English Education majors? Please explain.

How do feel about your service-learning experience?

What have you learned about yourself this semester through your service-learning experience?

What have you learned about teaching and learning through your service-learning experience?

What have you learned about the institution of school through your service-learning experience?

Where do you go from here?

How do you anticipate that you will build on this experience in your future as an educator?

How do you anticipate that you will build on this experience in your future as a citizen?

How has this experience affected your goal of becoming a secondary school English teacher?