Rethinking Education for the Practitioner Using Fink's Taxonomy of Significant Learning: Lessons Learned in Redesigning an Introductory Level Doctoral Course

Ashley Johnston Wicker Southeastern Louisiana University

Abstract

In this practitioner-based paper, the author provides insight into the course redesign process of an introductory doctoral level leadership course for a Doctor of Education in Educational Leadership program. Students needed more support in bridging the scholar and practitioner identities; therefore, to support doctoral student skill development and academic experiences, faculty sought to address several weaknesses with a redesign process using Fink's Taxonomy of Significant Learning. The discussion follows the redesign process, as well as offers observations and lessons learned for faculty seeking to support doctoral student identity development and disposition skill acquisition and retention.

Keywords: doctoral dispositions, doctoral pedagogy, significant learning, course design

Introduction

Students choose to enter graduate programs, specifically at the doctoral level, to become contributing scholars or scholarly practitioners in their fields (Frick & Brodin, 2020; Mantai, 2019; Mendoza & Gardner, 2010; Walker, 2008; Walker et al., 2008). Those seeking a doctorate rely on program design and intentional course progression to help them build up the skills or dispositions necessary to be successful. While doctoral students receive extensive education in developing one's capacity as a researcher, they may still experience feelings of inadequacy in their ability to carry out research-related tasks, such as the dissertation (Fagihi et al., 1999). Furthermore, students may feel conflicted in reconciling this new researcher identity with any previously established professional identity (Stryker & Burke, 2000).

Doctoral programs, specifically those that are practitioner-based, have an opportunity to build a bridge between student identities – one that supports students in managing multiple identities and develops their confidence to contribute to their field through new research (Hall &

Burns, 2009; Jazvac-Martek, 2009). Intentional course design that connects what students are learning to their daily practice, or future research (i.e., dissertation study), allows students to experience a seamless progression throughout their tenure in a doctoral program, and faculty can develop more ways to collaborate with one another, thus, creating a cohesive doctoral experience and improves skill development (Antonenko, 2015; Caskey et al., 2020; Kumar & Antonenko, 2014).

The purpose of this paper is to share the author's reflections of a course redesign experience. The lessons learned would be beneficial for other faculty and higher education professionals seeking to support doctoral education, specifically the Education Doctorate (Ed.D.). The driving force behind the redesign was to enhance the foundation for doctoral student support and create meaningful learning experiences. The existing program structure provided students with the necessary content to grow as educational leaders; however, as discovered through reflections of course evaluations, feedback, and working with students in the dissertation process, the connection between theory and practice was found to be lacking. Through the implementation of best practices for instructional design and development of necessary doctoral student dispositions, such as research self-efficacy, the course redesign process provided a face-lift for the entry-level course of the program.

Using Fink's Taxonomy of Significant Learning as the guiding framework for redesign, the following discussion explores the redesign process, lessons learned along the way, and observations of the new course in practice. To better understand decisions behind the redesign process, the author first offers a review of literature on the identity development of doctoral students and their socialization to the field, as well as an introduction to Fink's Taxonomy of Significant Learning. This taxonomy served as the framework for instructional design. These concepts are crucial to the motivation in using a framework that aids doctoral students in connecting theory to practice throughout their entire doctoral journey.

Review of Literature

Doctoral Student Identity and Socialization

Doctoral students encounter an identity development process in graduate school. To facilitate this process, programs play a role in establishing opportunities for identity exploration (Colbeck, 2008; Darvin & Norton, 2019; Rayner et al., 2015; Sverdlik & Hall, 2020). One crucial element of the doctoral experience is a process called socialization. This process is

defined by many in the literature, and generally consists of a process by which one acquires knowledge, skills, and dispositions that make them effective members in society (Gardner et al., 2007; Rayner et al., 2015; Sverdlik et al., 2018; Sweitzer, 2009; Weidman et al., 2001). Part of this socialization process contributes to a student's identity as a doctoral student, scholar, and researcher.

Students enrolling in practitioner-based programs often come to the table with an already established professional identity (Labaree, 2003). This professional identity frequently takes priority since it is typically aligned with a student's values and goals and likely has contributed to professional growth and satisfaction. The internal conflict of managing and/or reconciling multiple identities, especially when having to prioritize tasks or responsibilities, can lead to a decrease in student satisfaction, delay in program advancement, or even student attrition, if not adequately supported (Colbeck, 2008; Stryker & Burke, 2000). When faced with multiple identities, students are often confronted with internal negotiations, and thus, an identity hierarchy is constructed (Hunter et al., 2007). For example, when a student prioritizes the practitioner component of their education over the researcher component, in their minds, they are still seeking to become an expert in their field. These experiences are now elevated by their doctoral experiences. However, to prioritize one identity over the other (practitioner vs. researcher) often means the skills and tasks that align with personal and professional goals are the aspects of doctoral education that students become most engaged with, which can mean students may not be the most prepared researchers (Golde & Dore, 2001; Kovalcikienea & Buksnyte-Marmiene, 2015). Furthermore, by enrolling in a doctoral program, students are shaped by their journey, which makes it essential to consider the landscape they traverse (Rayner et al., 2015).

Doctoral Student Skill Development

There are missed opportunities to capitalize on this already established identity; instead, students are seen as novice learners of the scholarly community, and programs sometimes fall short in bridging the theory-to-practice gap. This can lead to feelings of inadequacy in connecting what students are doing in the classroom to what they are doing on a day-to-day basis (Wicker et al., 2022). Therefore, students may be riddled with anxiety when it comes time to conduct doctoral dissertation because they haven't consistently practiced those skills outside of the research coursework sequence (Colbeck, 2008).

One of the many dispositions that is essential to doctoral student success is research self-efficacy. The idea of research self-efficacy was born out of Bandura's work from the 1970s and is defined as confidence in being able to carry out research related tasks (Bandura, 1977; Lambie et al., 2014). Many scholars have studied research self-efficacy in terms of predicting a student's contribution to the field and it affects many aspects of a student's experience, including mindset, identity development, engagement, and overall satisfaction with their education (Fagihi et al., 1999; Johnston, 2015; Lambie et al., 2014).

If students can become more confident in carrying out tasks that are research-related, they tend to be more motivated to engage with research and research knowledge. Research courses are a logical way to incorporate the development of technical skills; however, the more those skills are reinforced in non-research related coursework, students can hopefully go into the dissertation process equipped with the confidence and knowledge to carry out their study (Gee, 2000; Kumar & Antonenko, 2014). This also provides programs an opportunity to enhance courses with cross-course faculty collaborations, which can ultimately lead to a better overall experience for students and allow them to see the bigger picture of how the program all ties together (Wicker et al., 2022).

Fink's Taxonomy of Significant Learning

There are many frameworks that can be used to elevate academic experiences for students and guide curriculum decisions for faculty. Fink (2013) created a taxonomy aimed at doing just that by changing how we view student learning. Instead of focusing on cognitive functions, such as taxonomies created by Bloom (1956) or revised by Anderson and Krathwohl (2001), Fink's model goes beyond that and instead encourages faculty to think about long-term goals for their learners, rather than just the short-term goals accomplished by completing the course. The goal is to not build a course primarily focused on content knowledge; instead, the goal is to build a course focused on the skills learners should be able to retain far beyond the course, while still learning basic content (Fallahi, 2011).

Fink's taxonomy includes six major categories, all of which work interactively with one another to create synergistic learning experiences. This interactivity between the categories creates opportunities of enhancement in learning, meaning that when a student makes progress in one category, it has the potential to significantly impact learning in another category. The six categories include Foundational Knowledge, Application, Integration, Human Dimension,

Caring, and Learning How to Learn, all of which create the Taxonomy for Significant Learning. Furthermore, Fink provides characteristics associated with each category. Foundational Knowledge includes the basic understanding of content – remembering information and ideas associated with the content; application consists of the use of skills acquired and critical thinking strategies; integration involves connecting everything together – ideas are connected to people, people are connected to life, etc.; human dimension consists of learning more about the self and others in the process of learning the content; caring consists of understanding new feelings associated with new content, as well as developing interests and values associated with these feelings; and learning how to learn consists of students becoming the agents of their own learning (Fink, 2013).

Course Redesign Process

A Doctor of Education (Ed.D.) in Educational Leadership program at a mid-size regional institution in the southeastern United States served as the basis for this course redesign process. The Ed.D. program provides tracks in both K-12 leadership and postsecondary leadership, and students enroll in a cohort-based structure. Courses are offered on a semester basis, and student enroll in two courses, or six credit hours, per semester for approximately ten semesters. For the first six semesters, one course provides students with content knowledge in leadership and areas of practice, while the second course provides foundations in research methodology and skills. The research foundation courses also focus on building students' confidence in being able to carry out a dissertation study. After six semesters of this course combination (leadership and research-based coursework), the research skill-based course is replaced with a writing course devoted to the dissertation. For this article, the redesign process focused on the introductory leadership content course, which is typically taught in the first semester. The objectives for this course enhance skill development in non-research related coursework and provide students with meaningful academic experiences.

The decision to revise the introductory course came from the need to address several challenges occurring in the program. Faculty involved in teaching the introductory leadership course came together to determine how the introductory course could address challenges students would encounter later in the program and contribute to students' overall skill development. Faculty involved in this collaboration were leadership faculty and research faculty who were familiar with teaching in the introductory semester of the doctoral program.

Challenges

To determine challenges, faculty reflected upon their experiences teaching the course, as well as their experiences in working with students at the dissertation stage. Several themes became apparent through these reflections. First, students were initially introduced to leadership theory in the first semester. However, there was a lack of understanding of how theoretical concepts connected to practice. Additionally, this connection was not reinforced much in other courses, meaning leadership theory was not revisited after the first semester, which contributed to weak association of theoretical constructs at the dissertation stage. Second, in conversations regarding continuous improvement of courses, faculty reflected on course connections, specifically seeking to understand how learning objectives of paired courses can support and enhance one another. These reflections revealed that the paired courses were seen as running parallel to each other, instead of intersecting to form meaningful connections between leadership content and research methods and skills. Leadership content courses did not intentionally reinforce the research skills being practiced in the same semester. Faculty and students missed opportunities for cross-course collaborations. Finally, faculty noticed that when students began their dissertation process, their ability to conceptualize how leadership theory folded in with research design was lacking. This was a skill necessary for students to learn early and retain throughout the duration of their program.

Faculty began looking at how the introductory leadership course could be elevated to address some of these concerns. However, the activities and assessments in this course were surface level. Using Anderson and Krathwohl's (2001) revised taxonomy of Bloom's original work from 1956, assessments were mainly geared to address the simpler levels of the cognitive domain: remembering and understanding, with the final project focusing on application. Students had an opportunity to apply the leadership theories to their own skills by examining their personal leadership styles and practice, and students wrote a paper on addressing an example leadership problem and how theory may be folded into to support leaders. There were not many opportunities for students to look at real-world issues they saw in their fields, nor were students given an opportunity to explore leadership theory as it connects to topics of interest. Furthermore, while students participated in class discussions, there was not an opportunity built in for peer feedback in the work done on theory application.

The paired research course focused on introducing students to doctoral research design and guided students through the steps in organizing research proposals. A collaboration between the two courses was the perfect opportunity to bridge theory and practice, while also elevating assessments in the leadership course to higher levels of cognitive thinking through analyzing, evaluating, and creating. Therefore, faculty set out to explore course goals, learning outcomes, activities, and assessments that would benefit students in skill development. Additionally, the goal was to provide students opportunities to see that multiple identities could work in tandem, rather than fighting against each other, if the environment supported the notion that multiples identities can, and should, complement each other.

Course Structure

Previously, the leadership theory course was taught in a 15-week format, with 12 of the 15 weeks focused on reviewing, discussing, and applying concepts associated with a particular leadership theory. It was largely focused on retention of content knowledge, with some opportunities for application. As each theory was discussed, case studies were used to practice applying those concepts; however, the case studies were generic examples from the text and application was done in concert with small groups. In addition to small writing assignments throughout the semester, the major assessments for the existing course included a paper on a chosen leadership theory, a theory application assignment in which they addressed an ill-defined problem, and a personal leadership reflection, all of which addressed application cognitive functions.

Course goals and outcomes were reassessed using Fink's Taxonomy of Significant
Learning and supported by Anderson and Krathwohl's (2001) revised taxonomy. The first half of
the course mirrored the previous course, with revisions mainly occurring in targeted learning
outcomes and structured modules. The introductory content knowledge was essential to the
overall experience, and foundational knowledge is key to Fink's Taxonomy. However, in
previous iterations of the course, students were relying on class time to be introduced to
theoretical concepts in lecture format. A new format was explored, using flipped classroom
strategies, and class time was devoted to asking and discussing questions brought upon by
readings and analyzing how theoretical constructs related to the overall purpose of Educational
Leadership. The strategy used for this course required students to read, watch, and apply content
before coming to class, embracing the idea of flipped learning. Flipped learning, a concept

introduced by Bergmann and Sams (2014), involved the use of digital media to explain course content outside of in-class time, where students could explore at their own pace. For each class, two leadership theory chapters were assigned for reading and accompanied by four short, eightminute presentations to supplement lecture material from the instructor. Breaking the chapter into shorter presentations allowed students to focus their attention on the highlights and absorb the information in smaller chunks. It also allowed them to confirm or expand on their initial thoughts after reading about the theoretical framework. Students were then prompted to review a case study. Case studies were introduced as a way of practicing theory application; however, students were encouraged to review case studies on their own, and then use peer groups (in-class time) to review, compare, and contrast application skills. This allowed students to interact with three of the six categories in Fink's taxonomy: Foundational Knowledge, Application, and Integration. Students learned the basic foundations of each theory on their own (Foundational Knowledge), and applied the concepts in critical, creative, and practical ways during class time. The case study discussions moved beyond simply answering the questions and instead, conversations evolved into those seeking to understand the practical applications of the concepts (Application). Finally, providing more time for discussion in class allowed students to integrate the knowledge into their professional lives. They asked questions about the usefulness of concepts, and they were able to share stories from the field to understand how the concepts might manifest in everyday life (Integration).

The second half of the course was devoted to analyzing topics of interest and applying theoretical constructs to problems that held meaning or purpose to the students. This complemented their paired research course; they were already conducting an initial investigation of problems or issues in their field as potential dissertation topics. A mid-semester reflection was introduced at this point to gauge how students viewed the connections between their courses, how they knew what they were learning in their courses, and how they saw the skills being developed would help them long term. The prompts, which were adapted from a model for critical reflection by Ash and Clayton (2009), were as follows:

- 1. **What:** What did I learn about my theory related to practice and to my dissertation topic?
- 2. **How:** How did I learn about connecting theory with practice and my dissertation topic?

- 3. **Why:** Why does this matter, and how is this significant to practice, my other courses, and my dissertation topic?
- 4. **Now What:** What will I do with the information in connection to practice, the goals for other courses, and my own goals for doctoral education? (Wicker et al, 2022, p. 423).

Students still conducted a personal leadership reflection; however, the reflection now included a connection to an interested problem of practice and explored why they were invested in addressing said problem. Finally, a new capstone project was introduced to allow students to explore conceptualization of theoretical constructs in real-world situations. These were significant additions to the course because students were able to demonstrate three more types of significant learning: Human Dimension, Caring, and Learning How to Learn, while still interacting with the previous three categories. Students now took the time to learn about themselves and others (Human Dimension); they explored feelings associated with what they were learning and how it connected back to the values instilled in their professional lives (Caring); and they explored inquiring about new subjects and how to work as self-directed learners (Learning How to Learn).

Capstone Project

The final capstone project allowed students to explore theory conceptualization in a way that provided purpose and meaning and bridged together the idea of a scholar and practitioner working in concert to view an issue. Theory conceptualization can be overwhelming; however, by reinforcing this skill in a non-research related course, students can see relevance in the skill, and it becomes something real to them when used with real-world problems (Kumar & Antonenko, 2014). The capstone also promoted all six major categories of Fink's Taxonomy and provided students opportunities to interact with each one as much as they wanted.

For this project, students were asked to identify a problem or issue and apply three theoretical frameworks discussed in the first half of the semester. The selection of theories was reinforced by the exploration of literature done on their topic in their paired research course, course discussions, and case study practice. Students were then asked to compile information on each theory, including origin and background material, application of theory in different situations from scholarly literature, and major theoretical constructs associated with the theory (Foundational Knowledge). This information enhanced the initial dissemination of theory

knowledge imparted on students in the first half of the semester, and it allowed students to explore the theoretical constructs in real world examples that were like their topics of interest. Once they had theory information organized, students were guided by a series of prompts to engage in a Theory in Practice reflection. The reflection included three major prompts:

- 1. Provide a rationale for why you chose this particular theory.
- 2. Identify any strengths of applying the theory to your chosen problem or issue and explore the fit of constructs.
- 3. Identify any criticisms of applying the theory to your chosen problem or issue and explore why particular constructs may not be the best fit.

The reflection allowed students to explore the why behind their decisions, as well as evaluate the fit of a particular theory in its application based on the constructs associated with its theoretical framework (Application, Integration, Human Dimension).

To complete the capstone project, students were asked to prepare a presentation and lead their peers in a discussion exploring what they explored in their reflections. The presentations were conducted in round-robin fashion in groups of three-to-four students for two purposes. Small groups allowed the overall process to be conducted in an efficient manner, and the small group setting made for a more intimate presentation setting. Then, peers had an opportunity to provide both verbal and written feedback, and each student was asked to respond to their peer feedback in the form of a revision plan they would incorporate in future work on their topic (Caring, Learning How to Learn). Last, all materials were submitted as the final capstone project.

Observations

For reflection purposes, faculty collected observation data through multiple forms of evidence, such as student interactions, verbal course feedback as the course was conducted, and student opinion of teaching evaluation. Feedback from students indicated the initial overview of the redesigned course was overwhelming for many students. As phrases like conceptualization of theoretical frameworks and application of theoretical constructs were discussed, students appeared confused and were not confident in their ability to carry out assignments. For example, students had many questions for clarification, voiced concerns with being able to understand the assignment, and appeared hesitant at the task set before them. By the end of the course, not only were they successful in completing the requirements, the conversations, especially those associated with the peer engagement process, were enlightening and encouraging to faculty.

The final semester reflection was conducted to gauge how students' answers evolved from the mid-semester reflection. Based on those final reflections, faculty noted improvement in the reflection content – students began to think deeper about connections, what they were learning, and how they knew they were learning it – and attitudes toward the content. Students used passionate language to convey their thoughts on the capstone project and their overall growth from the start of the semester. It was truly eye opening to see the difference in both reflections, as faculty felt the redesign truly made a difference in seeing the big picture of their doctoral experience. They were providing evidence of interacting with elements Fink's Taxonomy – experiencing characteristics of Caring, Human Dimension, and Learning How to Learn, while demonstrating that their Foundational Knowledge, Application, and Integration learning had been enhanced. These observations provide evidence that necessary steps are being taken to ensure students can work with both a professional identity and a scholar identity.

The capstone project elevated the overall course and created many new opportunities for students. Through verbal feedback on course activities and assignments and written feedback in the course evaluation process, students conveyed satisfaction with the overall course experience, and they found value in skills developed in the initial semester. It was noted that course activities allowed them to feel comfortable engaging with scholarly research, the presentation of their ideas made them feel vulnerable, yet empowered, and the peer feedback they received opened their ideas to differing perspectives and ideas. The cohort continues to reference this course as a catalyst for viewing their courses as a collaboration, and they can see how skills introduced in that semester have contributed to success throughout the program. The academic experience, while not perfect in its first iteration, aligns with what the research suggests are best practices for doctoral student support (Colbeck, 2008; Golde, 2007; Kumar & Antonenko, 2014; Stryker & Burke, 2000), in that intentional supports in place can contribute to overall student satisfaction with their academic experiences. Students confirmed through course evaluations they were, in fact, satisfied with their experience in this course and saw how their two courses fit together to support one another as a collective education experience.

Lessons Learned

Less is More to Start

The first lesson faculty learned in this process was less is more, especially at the beginning of the course. In the initial review of the course with students, too much detail was

provided on the capstone project, which overwhelmed students. As previously mentioned, students were overwhelmed by the early mentions of capstone goals, which included constructing theoretical evaluations, building a library for their conceptual frameworks, and analyzing a topic through theoretical lenses. Introducing the capstone in smaller doses with simpler language would likely have eliminated unnecessary stress. Finding a way to align capstone requirements with examples of how they may see these tasks in their professional experiences could have also contributed to immediate understanding and familiarity. It demystifies the scholar component to evaluating theories and helps further bridge theory to practice.

Peer Engagement is Valuable

The second lesson learned was that the peer engagement component of the capstone project was incredibly valuable to the overall project and therefore, needed more time. The faculty were not expecting the peer feedback process to be such a meaningful component to students, especially for students in their first semester with their cohort members. The way the peer engagement process positively enhanced the group dynamics of the cohort was surprising; therefore, more time should be devoted to conversations that follow student presentations. It was helpful that peers could also provide written feedback. However, the verbal feedback was so crucial since it was in the moment and raw. It also allowed students to really get a feel for the Integration and Human Dimension component of Fink's Taxonomy. They saw how others were passionate about their topics, and how others demonstrated their learning process through presentations. It was a pivotal moment for this capstone project, and to some extent, the overall success of the course redesign process.

Embrace Cross-Course Collaboration

Finally, an important lesson learned was that non-research courses can embrace research skills being introduced. Faculty were initially worried that students would see activities as beyond the scope of what they hoped to learn in a leadership content course. However, based on written feedback in course evaluations, students felt that the introductory course was meaningful, set expectations for what a doctoral program sought from its students, and prepared them for future courses and their dissertation study. The goal of guiding students to learn skills they would retain beyond the course had been met. Faculty choosing to implement similar strategies would benefit from even the simplest acknowledgement that courses don't happen in silos.

Acknowledging what the students are doing in other courses is a simple way to get the ball rolling. This opens the door for better communication between faculty as well. Cross-course collaborations begin with strong communication between faculty and concern for student learning outcomes in connection to the overall degree experience.

This cross-course collaboration was born out of the idea that if faculty were more aware of what the other was doing with a cohort in the same semester, students may begin to see how coursework came together in the grand scheme of things. The faculty member teaching the leadership course simply began this conversation by inquiring what the major project was in the research course, and that got the ideas rolling on how learning outcomes could be enhanced through collaboration.

Conclusion

Doctoral students need to see the big picture of how courses fit together; otherwise, they lose sight of getting their practitioner identity to work together with their scholar/researcher identity. When faculty work together to design intentional cross-course collaborations, students see relationships formed between classes, and they see how one course supports the other and vice versa. Faculty should not be afraid to engage students in skill development from the very beginning, especially research skill development. If the skills are being reinforced throughout every aspect of the journey, it becomes second nature for them to embrace the scholarly practitioner identity. Using a framework like Fink's Taxonomy of Significant Learning can truly enhance doctoral students' academic experiences and close the gap between theory and practice. Students walk away with a skill set that goes beyond one course and have the potential to be much more successful in their doctoral journey.

References

- Antonenko, P. D. (2015). The instrumental value of conceptual frameworks in educational technology research. *Educational Technology Research and Development*, *63*(1), 53-71. https://doi.org/10.1007/s11423-014-9363-4
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215. https://doi.org/10.1037/0033-295X.84.2.191
- Bergmann, J., & Sams, A. (2014). Flipped learning: Gateway for student engagement.

 International Society for Technology in Education.

- Caskey, M. M., Stevens, D. D., & Yeo, M. (2020). Examining doctoral student development of a researcher identity: Using the draw a researcher test. *Impacting Education: Journal on Transforming Professional Practice*, 5(1), 16-26. https://doi.org/10.5195/ie.2020.92
- Colbeck, C. L. (2008). Professional identity development theory and doctoral education. *New Directions for Teaching and Learning*, (113), 9-16. https://doi.org/10.1002/tl.304
- Darvin, R., & Norton, B. (2019). Collaborative writing, academic socialization, and the negotiation of identity. In P. Habibie and K. Hyland (Eds.) *Novice writers and scholarly publication* (pp. 177-194). Palgrave Macmillan Cham.
- Fagihi, F. Y., Rakow, E. A., & Ethington, C. A. (1999, April). A study of factors related to dissertation progress among doctoral candidates: Focus on students' research self-efficacy as a result of their research training and experience. Paper presented at the annual meeting of the American Educational Research Association. Montreal, Canada. (ERIC Document Reproduction Service No. ED 430 491)
- Fallahi, C. (2011). Using Fink's taxonomy in course design. APS Observer, 24(7), 39-41.
- Fink, L. D. (2013). Creating significant learning experiences: An integrated approach to designing college courses. Jossey-Bass.
- Frick, B. L., & Brodin, E. M. (2020). A return to Wonderland: Exploring the links between academic identity development and creativity during doctoral education. *Innovations in Education and Teaching International*, *57*(2), 209-219. https://doi.org/10.1080/14703297.2019.1617183
- Gardner, S. K., Hayes, M. T., & Neider, X. N. (2007). The dispositions and skills of a Ph.D. in Education: Perspectives of faculty and graduate students in one college of education.

 Innovations in Higher Education, 31, 287-299. https://doi.org/10.1007/s10755-006-9029-1
- Gee, J. P. (2000). Identity as an analytic lens for research in education. *Review of Research in Education*, 25, 99-125. https://doi.org/10.3102/0091732X025001099
- Golde, C. M., & Dore, T. M. (2001). At cross purposes: What the experiences of today's doctoral students reveal about doctoral education. Pew Charitable Trusts.
- Golde, C. M. (2007). Signature pedagogies in doctoral education: Are they adaptable for the preparation of education researchers? *Educational Researcher*, *36*(6), 344-351. https://doi.org/10.3102/0013189X07308301

- Hall, L. A., & Burns, L. D. (2009). Identity development and mentoring in doctoral education.
 Harvard Educational Review, 79(1), 49-70.
 https://doi.org/10.17763/haer.79.1.wr25486891279345
- Hunter, A., Laursen, S. L., & Seymour, E. (2007). Becoming a scientist: The role of undergraduate research in students' cognitive, personal, and professional development. *Science Education*, *91*(1), 36–74. https://doi.org/10.1002/sce.20173
- Jazvac-Martek, M. (2009). Oscillating role identities: The academic experiences of education doctoral students. *Innovations in Education and Teaching International*, 46(3), 253-264. https://doi.org/10.1080/14703290903068862
- Kovalcikienea & Buksnyte-Marmiene, L. (2015). Towards an understanding of doctoral students' professional identity complexity. *Procedia Social and Behavioral Sciences*, 191(2), 2693-2698. https://doi.org/10.1016/j.sbspro.2015.04.603
- Kumar, S. & Antonenko, P. (2014). Connecting practice, theory and method: Supporting professional doctoral students in developing conceptual frameworks. *TechTrends*, *58*(4), 54-61. https://doi.org/10.1007/s11528-014-0769-y
- Johnston, A. (2015). *Preferred mentoring characteristics and doctoral students' research self-efficacy*. (Publication No. 3730350) [Doctoral dissertation, The University of Southern Mississippi]. ProQuest Dissertations and Theses Global.
- Labaree, D. F. (2003). The peculiar problems of preparing educational researchers. *Educational Researcher*, 32(4), 13-22. https://doi.org/10.3102/0013189X032004013
- Lambie, G. W., Hayes, B. G., Griffith, C., Limberg, D., & Mullen, P. R. (2014). An exploratory investigation of the research self-efficacy, interest in research, and research knowledge of Ph.D. in education students. *Innovative Higher Education*, 39(2), 139-153. https://doi.org/10.1007/s10755-013-9264-1
- Mantai, L. (2019) "Feeling more academic now": Doctoral stories of becoming an academic. *The Australian Educational Researcher*, 46(1), 137–153. https://doi.org/10.1007/s13384-018-0283-x
- Mendoza, P. & Gardner, S. (2010). Setting the context. *On becoming a scholar: Socialization and development in doctoral education*. Stylus.
- Rayner, S., Lord, J., Parr, E., & Sharkey, R. (2015). Why has my world become more confusing than it used to be? Professional doctoral students reflect on the development of their

- identity. *Management in Education*, *29*(4), 158-156. https://doi.org/10.1177/0892020614567247
- Stryker, S., & Burke, P. (2000). The past, present, and future of an identity theory. *Social Psychology Quarterly*, 63(4), 284-297. https://doi.org/10.2307/2695840
- Sverdlik, A., & Hall, N. C. (2020). Not just a phase: Exploring the role of program stage on well-being and motivation in doctoral students. *Journal of Adult and Continuing Education*, 26(1), 97-124. https://doi.org/10.1177/1477971419842887
- Sverdlik, A., Hall, N. C., McAlpine, L., & Hubbard, K. (2018). Journeys of a PhD student and unaccompanied minors. *International Journal of Doctoral Studies*, *13*, 361-388. https://doi.org/10.28945/4113
- Sweitzer, V. B. (2009). Towards a theory of doctoral student professional identity development: A developmental networks approach. *The Journal of Higher Education*, 80(1), 1-33. https://doi.org/10.1080/00221546.2009.11772128
- Walker, G. E. (2008). Doctoral education in the United States of America. *Higher Education in Europe*, 33(1), 35-43. https://doi.org/10.1080/03797720802228142
- Walker, G. E., Golde, C. M., Jones, L., Conklin Bueschel, A., & Hutchings, P. (2008). *The formation of scholars: Rethinking doctoral education for the twenty-first century.* Jossey-Bass.
- Weidman, J.C., Twale, D. J., & Stein, E. L. (2001). Socialization of graduate and professional students in higher education: A perilous passage. *ASHE-ERIC Higher Education Report* 28, no.3. Association for the Study of Higher Education.
- Wicker, A. J., Crain-Dorough, M., & Elder, A. C. (2022). Bridging theory to practice: Building research self-efficacy in doctoral students from the beginning. In *Research Anthology on Doctoral Student Professional Development* (pp. 413-430). IGI Global.

Author Biography

Ashley Johnston Wicker is an Assistant Professor at Southeastern Louisiana University and teaches graduate-level leadership courses. She holds the Doug Douglas Endowed Professorship for Innovative Teaching, and she earned her Ph.D. in Higher Education Administration from The University of Southern Mississippi. Her research interests include doctoral pedagogy and skill development.