

Balancing Fidelity and Agency in Higher Education Curriculum:
Implementing a Complex, Large-Scale Redesign

by

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ABSTRACT

The purpose of this action research study was to improve the implementation of a large-scale redesign of teacher preparation programs at Arizona State University. This was a highly complex redesign that impacted over 150 courses across 27 programs, involving more than 200 faculty and 2,500 students annually. As a result, implementing the redesign posed significant challenges for supporting fidelity and agency across all faculty involved, including many part-time faculty and new hires who were not involved in the redesign. While this challenge was not unique, I approached it in a novel way in this action research study by creating course “fact sheets” that provided simple, visual representations of each course’s intended purpose within the program’s context to solve what was fundamentally an information transfer challenge. To study the effects of this intervention, I used a convergent mixed methods approach to address three guiding research questions aimed at exploring (1) how faculty used the course fact sheets, (2) how that use related to differences in outcomes related to implementation fidelity and sense of teaching agency, and (3) how those differences compared to an online orientation module as a more traditional form of professional development. Results showed that a majority of the 122 faculty members surveyed used the course fact sheets and, on average, found them highly usable for this purpose. Furthermore, those who used course fact sheets had significant increases in their knowledge and confidence of implementation fidelity practices and significant increases in their sense of teaching agency. The results also showed more positive outcomes for those using the fact sheets than those who participated in an orientation module. However, interview results suggested that the fact sheets may not have been enough to address all the factors that

influence faculty agency. Nevertheless, this study has important implications for faculty development initiatives in higher education, demonstrating the potential of course fact sheets as a scalable solution to improve the implementation of large-scale redesigns.

DEDICATION

To my wife, for your patience, encouragement, and understanding on this long journey. I love you.

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First and foremost, I want to acknowledge the ongoing support and guidance from Karen Bossen, my irreplaceable colleague, mentor, and friend. You have been my partner in crime since before I decided to do this crazy thing called a dissertation, and your guidance, collaboration, and encouragement have been instrumental in making this dissertation what it is. While I am the one who wrote it, this dissertation is the outcome of our work and would not have been possible without you.

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(Maricopa) Indian Communities, whose care and keeping of these lands allows us to be here today.

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CHAPTER 1

INTRODUCTION AND CONTEXT

This study aimed to improve the implementation of a complex, large-scale redesign at a public research university in the United States by addressing challenges related to implementation fidelity and faculty agency. In the Summer of 2018, the faculty at Mary Lou Fulton Teachers College (MLFTC) at Arizona State University (ASU) began a multi-year project to redesign all initial PreK-12 teacher certification-focused programs. As one of the largest teacher's colleges in the United States, this effort involved over 150 courses across 27 programs at the undergraduate and graduate levels, impacting more than 200 faculty and 2,500 students annually. I joined MLFTC as a senior learning designer at the beginning of this initiative. My role was to help guide and support the faculty through this complex organizational redesign. To do so, I helped to organize the process following a constructive alignment approach.

Constructive alignment is an approach to systematically designing higher education curricula. Rather than focusing on traditional teaching methods that rely on intrinsic motivation and highly developed study skills, constructive alignment blends constructivist theories with instructional design principles to create intentional, student-centered learning experiences (Biggs & Tang, 2011). It is based on the principle that faculty should focus on aligning Assessment Tasks (ATs) and Teaching and Learning Activities (TLAs) to Intended Learning Outcomes (ILOs) written from the student's perspective to improve student learning (Biggs & Tang, 2011). ATs include papers, exams, and other performance measures used to assess ILOs. TLAs encompass readings,

lectures, group discussions, and other formative teaching activities to develop the student's knowledge and skills related to ILOs.

Researchers have found numerous benefits to following a constructive alignment approach. For example, Biggs et al. (2001) found that constructively aligned curricula encourage students to adopt deeper approaches to learning, which is notable for its impact on student learning and transfer. Research also suggests that constructive alignment improves students' metacognitive skills (Tractenberg et al., 2010), increases faculty adoption of student-centered teaching approaches (Trigwell & Prosser, 2004), and supports the alignment of the curriculum to workforce needs (Bone & Ross, 2019). In addition, researchers have found that engaging in constructively aligning curricula increases faculty collaboration, supporting continuous improvement of their programs and courses (Uchiyama & Radin, 2009; Wijngaards-de Meij & Merx, 2018).

More recently, practitioners have used constructive alignment to design program curricula by articulating program-level ILOs (i.e., PLOs) and aligning them to TLAs and ATs across courses as students progress in their level of mastery across the program (e.g., Biggs & Tang, 2011; Dyjur & Lock, 2016; Veltri et al., 2011). Constructive alignment provides a way to distinguish outcomes at five levels of complexity: (1) Prestructural, (2) Unistructural, (3) Multistructural, (4) Relational, or (5) Extended Abstract (Biggs, 1996). This structure has been used as the basis for curriculum mapping efforts designed to conceptualize PLOs at increasing levels of complexity across a program's curriculum (e.g., Huet et al., 2009; Metzler et al., 2017; Veltri et al., 2011), create significant improvements to the coherence of faculty plans (Veltri et al., 2011), develop faculty communities of practice (Uchiyama & Radin, 2009), and uncover aspects of the

curriculum in need of reform (Bone & Ross, 2019). The years of research and practice around constructive alignment made it an ideal guiding framework for our complex teacher preparation redesign initiative at MLFTC. However, critics have also pointed out the tendency for constructively aligned curricula to focus on locking down content in specified, controlled pathways that restrict faculty agency, creativity, and academic freedom (Knight, 2001; Matthews & Mercer-Mapstone, 2018; Wang, 2015). As such, the goal of this action research study was to develop a strategy to support the implementation of the redesign that balanced the need for fidelity to the constructively aligned intentions with faculty agency to determine how they teach their courses. The remainder of this chapter explains the context for this investigation, situating it within the larger landscape of curriculum redesign processes and discussing the previous cycles of action research that have led to the research questions guiding this current study.

Larger and Local Context: The Teacher Preparation Redesign

Institutions and programs engage in program redesign for various reasons. While initiatives sometimes result from internal discussions or curriculum review processes, external forces often influence the need for redesign either because the institution responds to external pressures or because educational ideas have developed elsewhere and are adopted by the institution (Tadesse & Melese, 2016). Leading up to the teacher preparation redesign at MLFTC, there had been growing internal and external pressure to redesign the programs. Internally, the programs had not been substantially updated in many years. While individual courses had been redesigned, some faculty were interested in reviewing the programs holistically to improve the student experience across courses. Externally, the college and university administration wanted to refresh the curriculum to

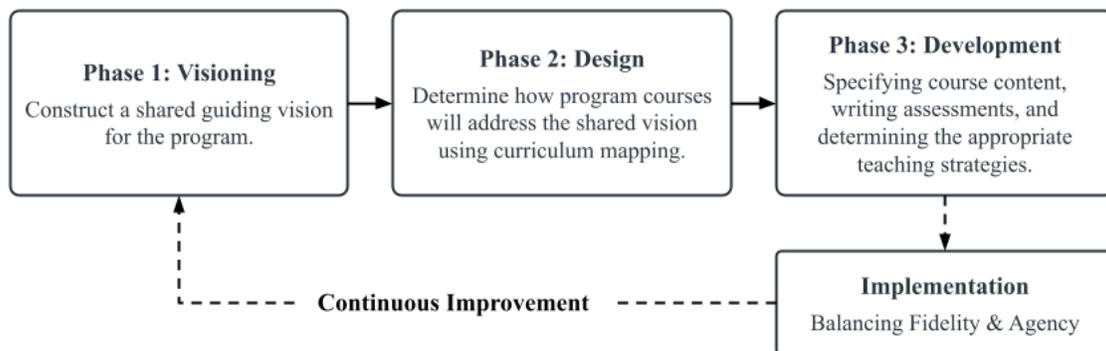
address critical and timely topics for the “Next Education Workforce” (NEW). MLFTC launched the NEW initiative in 2016 to address systemic challenges within the PreK-12 education workforce that have resulted in a steady decline in qualified classroom teachers over time. A 2018 NEW white paper asserts:

The prevalent one-classroom, one-teacher model asks teachers to be all things to all people at all times. It asks teachers to be content experts and pedagogues; to assess children’s socio-emotional and academic development and manage classrooms of 30 or more students; to teach children of all abilities; to be role models and social workers; to be data analysts, trauma interventionists and a host of other roles. It’s an unreasonable expectation... Research has significantly advanced the field’s understanding of how different instructional approaches, interventions and support can help different learners. (Thompson et al., 2019, p. 5)

To support this complex redesign effort, we followed three overarching research-based phases, as shown in Figure 1: visioning, design, and development.

Figure 1

Program Curriculum Redesign Process



In the visioning phase, faculty and administrators co-construct a shared guiding vision for what the program should be (Oliver & Hyun, 2011; Wolf, 2007). This shared vision is typically articulated into intended program-level outcomes (PLOs) (Biggs & Tang, 2011). For the teacher preparation redesign at MLFTC, a small group of program faculty ($n = 9$) met regularly to articulate 20 intended PLOs across all teacher preparation-focused programs. All faculty engaged in this phase were full-time MLFTC faculty selected by the college administration—some tenured and some non-tenure eligible. Most had many years of experience and some type of program leadership role. These faculty represented each teacher preparation program (e.g., Secondary Education, Special Education, Elementary Education). Furthermore, they wrote the PLOs to reflect national teacher preparation program standards (e.g., Interstate New Teacher Assessment and Support Consortium, International Society for Technology in Education, Council for Exceptional Children, and National Association for the Education of Young Children) as well as college- and university-level initiatives (e.g., NEW, Principled Innovation, Justice, Equity, Diversity, and Inclusion).

In the design phase, faculty determine how the program's courses will be planned to address the shared vision (Boitshwarelo & Vemuri, 2017; Wolf, 2007). This phase typically involves creating a curriculum map that articulates how each course addresses the PLOs as students progress toward mastery (Dyjur & Lock, 2016; Veltri et al., 2011; Wolf, 2007). For the teacher preparation redesign at MLFTC, the same group of faculty who worked on the visioning phase met regularly to plan the programs' curricula based on the PLOs. To enable intentional design and program assessment development, the faculty decomposed all PLOs into component knowledge and skills at three levels of

progression toward mastery: introduced, reinforced, and mastered. Using this list of “progression indicators” across the PLOs, the program faculty created a series of curriculum maps to plan sequences of courses with intentional design to scaffold the knowledge, skills, and dispositions across each program. The faculty committee sought input from all full-time teacher preparation faculty in creating and revising the curriculum maps during faculty meetings.

Finally, the development phase is when the plans from the design phase are enacted in the program’s courses (Wolf, 2007). This phase includes specifying course content, writing assessments, and determining the appropriate teaching strategies to meet the program’s goals (Boitshwarelo & Vemuri, 2017). This phase typically emphasizes the intentional alignment of course activities (i.e., TLAs) and assessments (i.e., ATs) to PLOs (Biggs & Tang, 2011; Wolf, 2007). For the teacher preparation redesign at MLFTC, the nine faculty involved in the visioning and design phases, along with college and program administrators, contracted full-time faculty members across MLFTC to develop individual courses. They chose course developers based on their availability, interest, background, and expertise in the course’s subject matter. These faculty were tasked with developing courses to address (1) the specific content knowledge of that course and (2) the PLO progression indicators mapped to that course in the design phase. To support this intentionality in development, faculty course developers were asked to write individual course-level Student Learning Outcomes (SLOs) and 1-3 Common Assessments (CAs) and map both to the PLO progression indicators. CAs were defined as course assignments that are *common* (i.e., always used or required) in every version or section of the course (e.g., face-to-face, hybrid, online, or different instructor sections).

When done on the small scale of an individual program, all program faculty are typically involved in every step of a redesign to create coherent curricula through collaborative decision-making (Knight, 2001; Uchiyama & Radin, 2009). All faculty members responsible for implementing the program have both a high level of curricular knowledge (supporting fidelity) and have been decision-makers in the curriculum redesign work (supporting agency). However, large-scale redesigns across multiple programs, colleges, or universities introduce additional implementation challenges. Often—as was the case with the teacher preparation redesign at MLFTC—only a small group of faculty members create the shared vision, design the sequence, and develop the courses. To implement the redesign, other faculty may either teach pre-developed courses without adaptation resulting in high implementation fidelity yet low faculty agency, or they may teach their own content regardless of the program design resulting in high faculty agency yet low implementation fidelity.

Problem Statement: Implementing the Teacher Preparation Redesign

In implementing the teacher preparation redesign at MLFTC, the pool of faculty involved expanded substantially to all teacher preparation program faculty ($n \cong 200$), many of whom were part-time faculty. In addition, new faculty are onboarded regularly, and existing faculty are frequently asked to teach courses they were not involved in developing and about which they often know little. This lack of knowledge poses significant challenges for supporting fidelity and agency when implementing the redesign and is the primary concern in the local context of this study. Before arriving at this study's intervention and research questions, I began exploring the challenge and possible solutions through initial action research cycles.

Previous Action Research Cycles

To address challenges of scale, I completed an initial exploratory cycle of action research in Fall 2020 using semi-structured interviews with a diverse sampling of MLFTC faculty ($n = 5$). This cycle aimed to understand what knowledge faculty who had not been involved in the redesign sought to be able to teach redesigned courses. Since those involved in the redesign committee already possessed the curricular knowledge to implement the redesign with fidelity and agency, the initial question guiding this cycle was: what would other faculty want to know to support their implementation of the redesign?

Several important themes emerged from this reconnaissance. First, all participants discussed the value of knowing the shared vision for the program, and they all sought information about the alignment and scaffolding of their courses to this shared vision. Participants found program-level design and alignment information one of the most challenging elements to track. Additionally, all five participants described the importance of knowing student perspectives. They all described the need to understand how their course designs affect their student's learning across courses, including recognizing what students are taught before, during, and after their courses. Findings from this reconnaissance cycle led to the idea of developing course "fact sheets" as a novel approach to faculty development (see example in Appendix A). It was clear from this cycle that the faculty sought a consistent yet concise way to understand the program curriculum and the placement of various courses within that design. While never previously used in this way, fact sheets seemed to fit this need. Fact sheets are concise documents that contain the most relevant information about a subject in the least amount

of space possible (Cubon-Bell, 2019). In applying this idea to implementing constructive alignment, course fact sheets were intended to succinctly and visually describe the course's positionality within the program's intended design.

For the second cycle of action research completed in Fall 2021 - Spring 2022, I created a mockup of a fact sheet for one course. Since using fact sheets for faculty development had not been previously studied, this cycle aimed to gain formative feedback on a high-fidelity prototype. I gathered feedback from faculty and instructional designers to improve the course fact sheet content and layout using an online survey ($n = 7$). Survey questions were primarily open-ended, aimed at gathering feedback on specific aspects of the mockup (e.g., "What did you think of the layout of the content on the fact sheet?" "What was confusing about the fact sheet?" "Are the on-page instructions clear?" "What, if any, information was missing?" and "How might you use the fact sheet?"). Responses to these questions resulted in adjusting the overall design for clarity and adding information not initially included (e.g., a definition of CAs).

Based on the provided mockup, participants were also asked to rate (1) to what extent fact sheets would help them understand the purpose/position of a course in a program and (2) how likely they would be to use fact sheets on a 10-point scale from *not at all* to *a lot*. Responses to these questions were both high ($M = 8.4$ and $M = 10$, respectively). While the sample size was small, this strong result suggested that the mockup provided useful information to address the knowledge gap from the initial reconnaissance cycle findings. As such, I decided to expand these fact sheets to all redesigned courses as the targeted intervention for this action research dissertation. However, since the course fact sheets were untested as a form of faculty development, I

decided to also create an online orientation module to be shared alongside the course fact sheets. Doing so aided my study in several ways. First, as a more traditional form of professional development of the kind found across higher education institutions worldwide, comparing the outcomes from participating in the orientation with using the fact sheets enabled me to gauge the efficacy of the fact sheets against a more traditional form of professional development. Second, while the fact sheets had many potential advantages for faculty development, they also had limitations. Namely, their short form factor did not allow me to explicitly discuss forms and concepts of agency within them. Instead, I relied on an assumed level of agency development based on increased knowledge of the positionality of courses within the context of the redesign. That is, if you know what *should not* change, then you also, by process of elimination, should learn the inverse (i.e., what *can* change), thereby increasing agency. However, the orientation module did not have this limitation, enabling me to attempt to influence the faculty's sense of teaching agency by explicitly unpacking the concept of agency within the context of the redesigned teacher preparation programs.

Research Questions

In this study, I focused on the following questions to examine the use and efficacy of course fact sheets and an online orientation module to support the faculty's ability to implement the redesigned curriculum with fidelity *and* support their teaching agency:

1. How and to what extent do faculty use course fact sheets and find them usable?
2. How and to what extent does the faculty's (a) knowledge, confidence, and perceived usefulness of implementation fidelity practices (*KCU*) and (b) sense of

teaching agency (*SoTA*) significantly differ based on their use of course fact sheets?

3. How do the observed differences from using course fact sheets compare to an online orientation module?

In the next chapter, I discuss the theoretical constructs guiding the investigation of these questions.

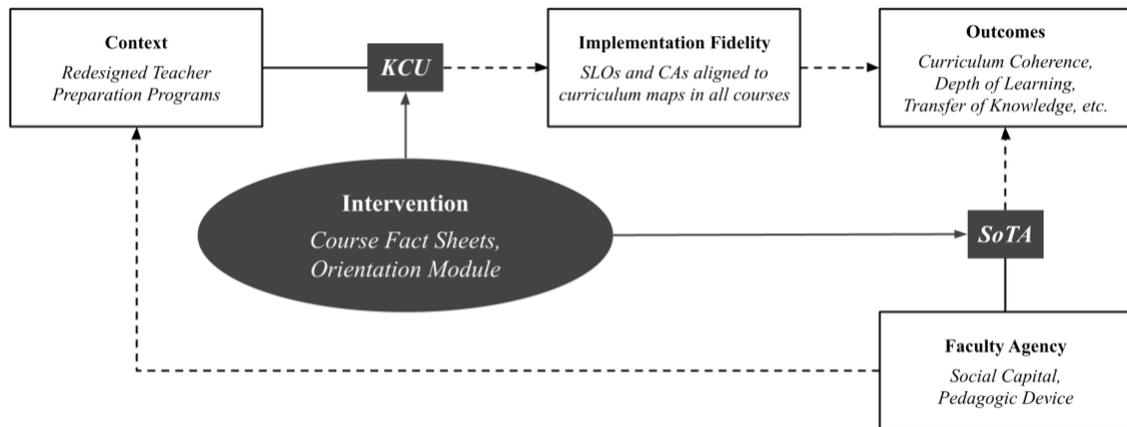
CHAPTER 2

REVIEW OF SUPPORTING SCHOLARSHIP

As shared in chapter 1, this study aimed to improve the implementation of a constructively aligned program redesign by (1) increasing the faculty's knowledge, confidence, and perceived usefulness of implementation fidelity practices and (2) supporting the faculty's sense of teaching agency. This purpose was grounded in a theoretical understanding of implementation fidelity, faculty agency, and faculty development, as shown in Figure 2.

Figure 2

Conceptual Framework of Constructive Alignment Implementation



Note. *KCU* = Knowledge, Confidence, and Perceived Usefulness of implementation fidelity practices; *SoTA* = Sense of Teaching Agency. Solid lines = direct (observed) effects; dashed lines = indirect (theoretical) effects.

This chapter reviews the guiding theories underlying this conceptual framework to understand the concepts that drove this study's intervention, methods, and desired outcome. I did not directly assess the process or the outcome of the redesigned curricula

in this study. The purpose was not to determine whether constructive alignment was the appropriate strategy in this context, nor was it to assess whether the redesigned programs have better outcomes. Instead, I aimed to build on established knowledge about the theoretical and empirical value of constructive alignment to explore how to improve implementation by accounting for fidelity and agency with a faculty development initiative. As such, I begin in this chapter by applying constructive alignment to Carroll et al.'s (2007) framework to explore implementation fidelity within the context of this study. Then, I examine Pierre Bourdieu's (1986) theory of social capital and Basil Bernstein's (2000) concept of the pedagogic device to understand faculty agency within higher education curricula. Finally, I unpack Knowles' (1985) theory of andragogy (i.e., adult learning) and Keller's (2009) theory of motivational design to understand what efficacy and usability look like for this study's faculty development intervention approach.

Constructive Alignment and Implementation Fidelity

Put simply, implementation fidelity is “the degree to which programs are implemented as intended by the program developers” (Carroll et al., 2007, para. 1). However, this deceptively simple idea is anything but simple in practice. While a comprehensive review of implementation fidelity literature is beyond the scope of this study, I use Carroll et al.'s (2007) conceptual framework for implementation fidelity as a guide to understand how to define what fidelity to the redesigned teacher preparation programs looks like and how to improve fidelity by targeting the faculty's knowledge, confidence, and perceived usefulness of implementation fidelity practices. To define what fidelity looks like, Carroll et al.'s (2007) framework relies on the concept of “adherence,”

which they define as the degree to which the result of the implementation process is an effective realization of the intended design. Adherence includes the content, coverage, frequency, and duration of the intervention described by its designers. If all elements are adhered to perfectly, implementation fidelity can be considered high. However, Carroll et al.'s (2007) framework also accounts for factors that potentially moderate adherence. These factors include (1) the intervention's complexity, (2) facilitation strategies used to optimize and standardize implementation, (3) the quality of delivery as intended, and (4) the participant's responsiveness to the value and relevance of the intervention to them. Therefore, Carroll et al. (2007) emphasize the need to define implementation fidelity wholistic across the elements of adherence, potential moderators, and the relationship between them.

Adherence to Constructively Aligned Program Curricula

Since the teacher preparation curriculum redesign in this study followed a constructive alignment approach, constructive alignment is used here to define adherence to implementation fidelity. Implementing constructively aligned program curricula with fidelity means adhering to the alignment of TLAs and ATs to ILOs as conceptualized at increasing levels of complexity across the program's courses (Biggs & Tang, 2011). From the lens of Carroll et al.'s (2007) framework, the *content* of the constructively aligned program curricula is the articulated list of program-level ILOs (i.e., the PLOs and progression indicators for the redesign in this study) and the curriculum maps showing their intended alignment to course TLAs (i.e., SLOs) and ATs (i.e., CAs). The *frequency*, *duration*, and *coverage* are measured by how well all courses—regardless of instructor, modality, or session—maintain the intended alignment. Therefore, improving adherence

is a matter of improving how faculty implement the curriculum with the intended alignment when teaching.

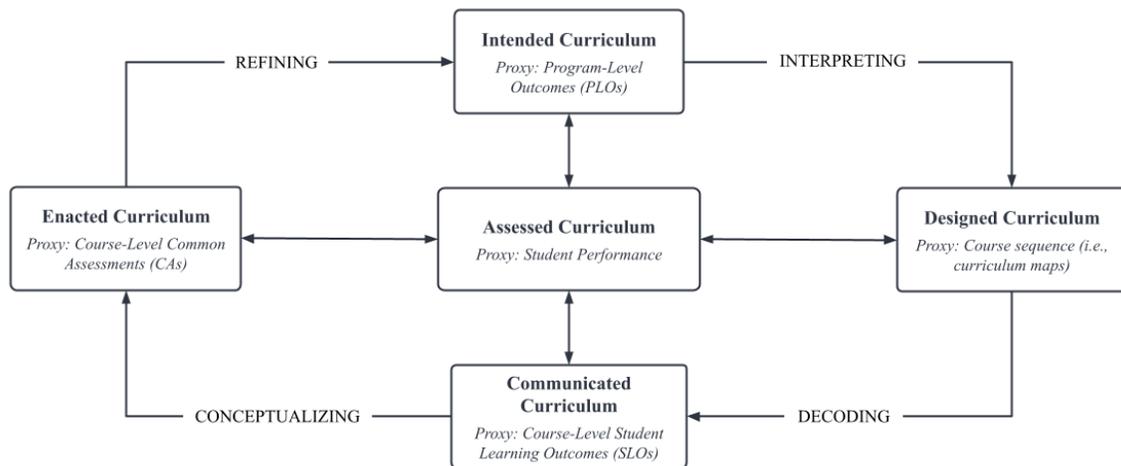
In a certain sense, improving this adherence is easy. Programs can lock down content into pre-built courses with specified paths. However, this approach limits faculty agency and thereby decreases the quality of student outcomes (Knight, 2001; Wang, 2015). Instead, I aim to improve implementation fidelity by improving the faculty's knowledge, confidence, and perceived usefulness of implementation fidelity practices. I have identified these practices by expanding Veltri et al.'s (2011) conceptualization of constructively aligned program curricula from the faculty's perspective. These conceptualizations of curricula are (1) intended, (2) designed, (3) communicated, (4) enacted, and (5) assessed—each relating to an aspect of constructive alignment. The intended curriculum is reflected in the program ILOs. The designed curriculum is reflected through the course sequence. The communicated curriculum is reflected in the course ILOs. The enacted curriculum is reflected in the course TLAs. The assessed curriculum is reflected in the course ATs.

Using this conceptual framework helps to understand how constructive alignment is manifested at the program level: through the alignment of these conceptualizations of the curriculum. However, Veltri et al.'s (2011) framework does not account for *how* these conceptualizations are aligned in practice. They were concerned only with measuring to what extent they did align. Therefore, I expand Veltri et al.'s (2011) framework here to define what happens *in between* the different conceptualizations (see Figure 3). How do faculty go from the intended curriculum to the designed curriculum to the communicated curriculum to the enacted curriculum? To go from what is intended to what is designed,

faculty are *interpreting* how intended PLOs should be designed into the course outcomes, activities, and assessments at the appropriate level of content complexity. To go from what is designed to what is communicated, faculty are *decoding* for students how the course design relates to relevant PLOs, including explaining jargon/discipline-specific terminology in PLOs. To then go from what is communicated to what is enacted, faculty are *conceptualizing* for students how they can apply the communicated knowledge, skills, and dispositions within the PLOs in authentic contexts. Finally, to go from what is enacted back to what is intended, faculty are *refining* how the course is aligned to the PLOs based on student feedback and performance in the course as enacted.

Figure 3

Faculty Conceptualizations of Curricula Adapted from Veltri et al. (2011)



I have depicted the faculty’s knowledge, confidence, and perceived usefulness (KCU) of these implementation fidelity practices in Figure 2 on the line going from the context (i.e., the redesigned teacher preparation programs) to implementation fidelity (i.e., adherence). Carroll et al. (2007) emphasize the importance of the relationship

between elements in their implementation fidelity framework. This placement reflects that importance by showing how engaging in these practices improves fidelity of implementation.

Potential Moderators to Fidelity

Improving the faculty's knowledge, confidence, and perceived usefulness of these four implementation fidelity practices is essential because of the influence of the potential moderators from Carroll et al.'s (2007) framework (i.e., intervention complexity, facilitation strategies, quality of implementation, and participant responsiveness). Implementing the redesigned teacher preparation curricula has a high complexity, potentially negatively impacting fidelity (Carroll et al., 2007). Carroll et al. (2007) suggest that this negative impact can be mitigated through a detailed and specific explanation of the intended design. They further suggest that more complex interventions may need more training and guidance (i.e., facilitation strategies). These ideas both suggest a need for increased *knowledge* regarding how to implement the intended design. In this study, that means increasing knowledge of the implementation fidelity practices.

However, knowledge alone is not enough to address all potential moderators. Carroll et al.'s (2007) paper also discusses the quality of delivery and participant responsiveness. Since the quality of delivery refers to how well an intervention is delivered to achieve the intended outcome, this would suggest that faculty also need to have *confidence* in their ability to engage in implementation fidelity practices. Confidence here refers to an individual's perception of their ability to master implementation fidelity practices. While confidence is connected to self-efficacy (i.e., an individual's perception of their abilities), it is more closely related to the educational

psychology concept of competence in this study. Educational psychologists define competence as “context-specific cognitive dispositions that are acquired and needed to successfully cope with certain situations or tasks in specific domains” (Leutner et al., 2017, p. 2). In this way, confidence extends knowledge by focusing on the individual’s ability to do something within a specific context based on their knowledge. Therefore, faculty should have confidence in using implementation fidelity practices when teaching their courses to achieve quality of delivery.

Finally, participant responsiveness refers to whether those responsible for enacting the program perceive it as valuable. For this study, this is defined by how *useful* faculty perceive implementation fidelity practices to be. Perceived usefulness refers here to an individual’s disposition. Are they intrinsically motivated to gain the requisite knowledge and confidence to follow the implementation fidelity practices because they see the value of those practices for themselves or others (e.g., their students, other faculty)? I created the course fact sheets and online orientation module for this study to address these potential moderators by improving knowledge, confidence, *and* perceived usefulness of the implementation fidelity practices. This relationship is depicted in Figure 2 in the circle for the intervention pointing to KCU.

Social Capital, Power, and Faculty Agency

While implementation fidelity accounts for one primary influence on the outcomes of implementation in Figure 2, faculty agency is the other primary influence. As such, I also sought to develop faculty agency in this study. Like with fidelity, a comprehensive review of the extensive social psychological literature on agency is outside the scope of this study. However, a brief overview of the central concepts of

agency is warranted to provide context for understanding faculty agency in the curriculum. Sense of agency is typically defined as “the experience of controlling one’s own actions, and through them, changes in the external environment” (Grünbaum & Christensen, 2020, p. 1). Social psychologists have distinguished between a low-level *sense* of agency and a high-level *judgment* of agency (Grünbaum & Christensen, 2020). The low-level sense of agency refers to a person’s ability to discern that they are the agent of some action (as opposed to the action resulting from another agent’s actions). Alternatively, the high-level judgment of agency is based on a deeper understanding of how it feels to act (not by what the action does). Researchers have also connected agency with self-efficacy (Settlage et al., 2009). However, while judgments of agency may be rooted in a sense of self-efficacy (i.e., a person’s beliefs about their ability to perform actions), it also goes beyond self-efficacy to recognize people’s sense of actually performing actions and not just their ability to do so (Grünbaum & Christensen, 2020; Tapal et al., 2017). Many factors influence this sense of agency. Of most relevance to this study are (1) the structures of higher education institutions that enable or constrain agency and (2) the power dynamics that enable or constrain the faculty’s ability to define valid knowledge.

Higher Education Structures and Agency

In higher education, agency to implement program curricula is shaped by the faculty’s interactions with structures that enable or constrain their agency (Annala et al., 2021; Ashwin, 2012). Faculty are commonly grouped in the United States into three broad categories based on their role within institutional structures: tenured/tenure track (T/TT), full-time non-tenure eligible (NTE), and part-time adjunct. While there has been

minimal empirical research on the impact of these institutional structures on faculty agency in curriculum, Drake et al. (2019) found that NTE and adjunct faculty were often marginalized in conversations about curriculum and felt their agency was constrained by the overarching power structures of T/TT faculty and administration. Bourdieu's (1986) notion of "field," "capital," and "habitus" also provides a helpful lens to examine agency within the context of higher education institutional structures.

Pierre Bourdieu was a prominent French educational sociologist in the late 20th century. His social capital theory was based on a Marxist perspective that capital is an asset individuals can accumulate to be spent for their gain. *Social* capital is the form of capital accumulated through relationships within an institution that increases the ability of an actor to advance their interests in that setting (Bourdieu, 1986). A Bourdieusian approach examines the forms of "capital" (e.g., social, economic, political) that agents (i.e., faculty) seek in playing the game that a particular "field" (e.g., institution, department) values. This interaction is also unconsciously motivated and influenced by each agent's "habitus" (i.e., dispositions developed from historical experience) (Bourdieu, 1986).

Applied to higher education curricula, I use Bourdieu's (1986) theory in this study to suggest that faculty may seek different forms of capital to influence their position within the institution based on their role, background, and the institutional structures of the college or university. For example, NTE and adjunct faculty may have less social capital and, therefore, have limited agency in implementing the program's curriculum. As such, they may adopt practices that are the least likely to cause disruption. Alternatively, T/TT faculty may have greater social capital and may be motivated to use that capital to

increase their agency to influence the curriculum of their courses to align with their research specializations (even to the detriment or exclusion of the program's intentions).

Power and Agency in Curricula

The faculty member's status and social capital also influence their agency to define what counts as valid knowledge in the curriculum. British educational sociologist Basil Bernstein's (1971, 2000) lifetime of work focused on understanding how knowledge, power, and control come together to define valid knowledge within teaching-learning contexts. In the fifth and final volume of his *Classes, Codes, and Control* series, Bernstein (2000) described a "pedagogic device" for translating disciplinary knowledge into pedagogic discourse. The pedagogic device brings together macro and micro structuring of knowledge by relating three hierarchical levels of knowledge creation and interpretation rules: distribution rules, reconceptualization rules, and evaluation rules. At the highest level are *distribution rules* that define knowledge production (i.e., creation). Distribution rules are determined through a struggle over what can legitimately be taught within a program's curriculum. Put another way, distribution rules are defined by those with the power to legitimate new knowledge (i.e., change the rules) in relation to existing disciplinary knowledge practices (Bernstein, 2000).

Underneath distribution rules are *recontextualizing rules* that describe how disciplinary knowledge is transformed into a program's curriculum (Bernstein, 2000). According to Bernstein (2000), recontextualizing rules are influenced by the *official recontextualizing field* (ORF), created and dominated by the state (i.e., local, regional, or national systems of governance), and the *pedagogic recontextualizing field* (PRF). The PRF represents the knowledge created and perpetuated by actors within the discipline

(e.g., university departments, academic journals, private research foundations). The state is often working to weaken the power of the PRF, thus weakening the agency of faculty to define what knowledge is taught within program curricula. At the same time, faculty are often working to increase the power of the PRF to lessen the influence of the state on what is included in their curricula. In this study, this is manifested in a tension between what the state and local governments (i.e., ORF) want to be included in the redesigned teacher preparation curricula through program accreditation and certification processes and what MLFTC faculty (i.e., PRF) think is the most important. Whether the PRF or ORF have greater influence is an ongoing power struggle affected by the context of the curriculum being developed and the relative power of different actors. For example, Bernstein (2000) argued that elite institutions have greater PRF influence and, therefore, have greater agency to recontextualize disciplinary knowledge in their curricula.

Finally, recontextualized disciplinary knowledge is reproduced by teachers through their pedagogic practice using *evaluation rules* (Bernstein, 2000). Evaluation rules are the lowest level of the pedagogic device and are therefore nested within the recontextualization rules of the program curriculum and the distribution rules of the discipline. According to Bernstein (2000), continuous evaluation of what is transmitted and acquired is key to pedagogic practice. Through this evaluation, faculty can determine the impact of the program's curriculum on their students' learning the recontextualized disciplinary knowledge.

Much of the contemporary research using Bernstein's (2000) pedagogic device focuses on centering knowledge within the curriculum (Ashwin, 2014; Lindén et al., 2017; Maton, 2013; Pluim et al., 2020; Young, 2013) or understanding power dynamics

in teaching-learning interactions (Ashwin, 2012; Bovill & Woolmer, 2019). I use the pedagogic device similarly in this study as a critical lens to understand what power faculty have to identify and prioritize knowledge within a program's curriculum. Understanding this power dynamic has important implications for faculty agency. When faculty have more power to define valid knowledge, recontextualize that knowledge into program curricula, or evaluate that knowledge in their courses, they have more agency to implement curricula at all levels according to their desires.

This power dynamic is evident throughout the redesign of the teacher preparation programs in this study. The disciplinary rules were articulated in the national and local standards to which the PLOs were aligned. The recontextualization rules for the redesigned curricula were defined in the PLOs. While other faculty could influence these outcomes when providing feedback, they were written by those with a high degree of social capital based on their roles and years of experience. The dotted line from faculty agency to the context (i.e., the redesigned curricula) in Figure 2 indicates how agency indirectly influences the design of the overall program. However, all faculty can influence implementation through the evaluation rules. The implementation fidelity practices that support implementation fidelity are situated within the evaluation rule level. By engaging in these implementation fidelity practices, faculty increase their sense of teaching agency to influence how the recontextualized knowledge (i.e., PLOs) are applied in their courses. Therefore, the circle for this study's intervention also points to sense of teaching agency (SoTA) in Figure 2 to depict the influence the course fact sheets and online orientation module should have on this sense of agency.

Andragogy, Motivational Design, and Faculty Development

As has now been established, the key to improving fidelity and agency in implementing the redesigned teacher preparation programs is to increase the faculty's knowledge, confidence, and perceived usefulness of implementation fidelity practices and their sense of teaching agency. The question remaining is: how do I most effectively do this? There are many ways this could be approached from a faculty development perspective. Cafarella and Zinn (1999) identified three categories of faculty development: (1) self-directed learning (e.g., teaching, research, informal mentorship), (2) formal training programs (e.g., workshops, seminars, conferences), and (3) organizational development strategies (e.g., quality control, leadership development, incentives/awards). In a systematic review of the faculty development literature, Phuong et al. (2018) found that formal training was the most common. More than half of the studies they analyzed used workshops, training programs, and professional meetings. However, researchers have criticized these traditional forms of formal training for lacking a focus on faculty as self-directed adult learners (Graham et al., 2013; Phuong et al., 2018). As such, I focused on creating the course fact sheets as a form of self-directed learning using the principles of adult learning theory (i.e., andragogy) and motivational design to create a faculty development tool that was relevant, accessible, and flexible to the specific needs and goals of individual faculty members.

Andragogy and Use of Faculty Development Resources

While the term “andragogy” predates him, U.S. adult education theorist Malcolm Knowles is credited with developing andragogy into a unifying theory of adult learning processes. Knowles (1985) integrated learning theory, adult learning, developmental

psychology, sociology, and philosophy to identify six guiding assumptions of adult learning. These are the core principles of andragogy. Knowles (1985) delineates these core principles from pedagogy (i.e., the teaching of children) by recognizing that “we become adults when we arrive at a self-concept of being responsible for our own lives, of being self directing” (Knowles et al., 2020, p. 43). That is, pedagogy emphasizes the role of the teacher in taking full responsibility for what, how, and when ideas will be learned, while andragogy focuses on the role of the teacher as a guide and facilitator of adults' self-directed learning. The core principles of andragogy are:

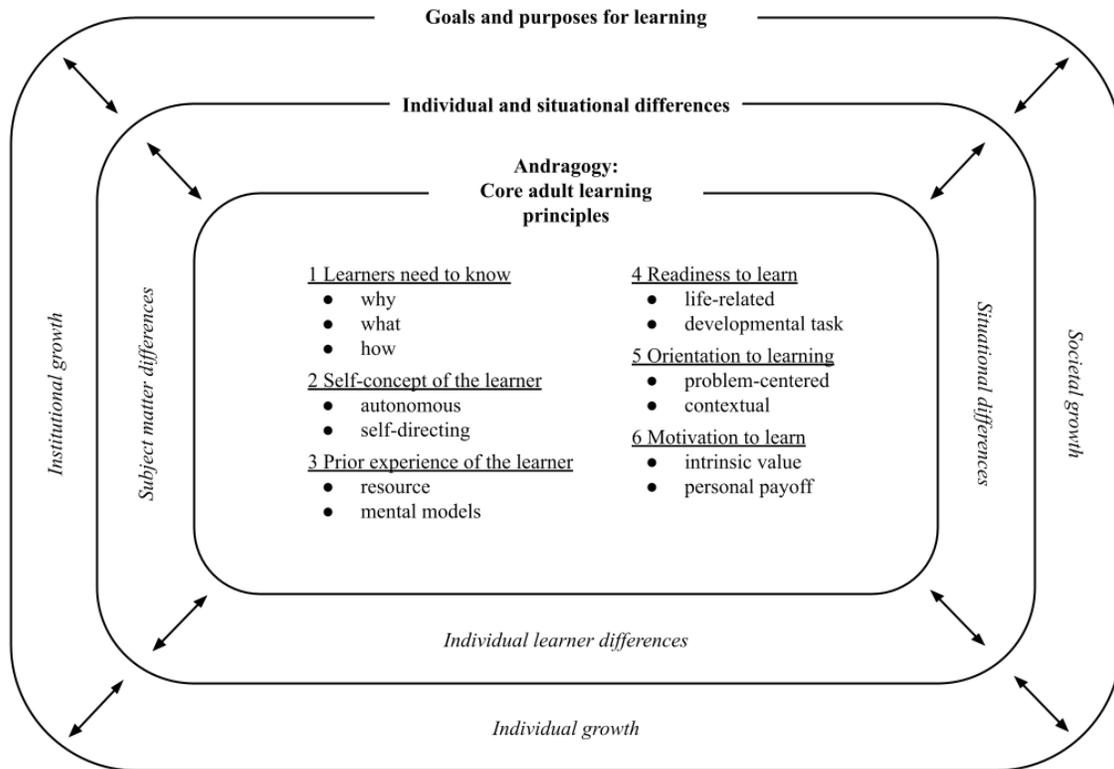
1. *The need to know.* Unlike children, adults decide when and what to learn. They need to understand why they need to learn something before engaging in educational activities.
2. *The learners' self-concept.* Adults have a self-concept of being responsible for their learning and decisions.
3. *The role of learners' experiences.* Adults have a lifetime of experience they bring to educational activities. They want educational activities to recognize and appreciate what they bring to the learning environment.
4. *Readiness to learn.* Adults become ready to learn when that learning will support them with things they need to know or do in their lives.
5. *Orientation to learning.* Adults are motivated to learn things when they can connect them to their personal context or real-life scenarios.
6. *Motivation.* While external motivators can have some influence (e.g., a better job, promotion), adults are more strongly internally motivated to learn (e.g., increased job satisfaction, self-esteem).

As andragogy has been debated and refined through use, Knowles (2020) added contextual layers to these core principles to create the andragogy in practice model (Figure 4). In this model, the six core principles remain the central dimension of adult learning surrounded by two additional context dimensions: (1) goals and purposes for learning and (2) individual and situational differences.

The goals and purposes dimension (the outer ring) accounts for the influence of three general categories (i.e., individual, institutional, and societal growth) on the purpose of educational activities. For example, an educational activity offered for individual growth may emphasize different things than one offered for institutional or societal growth. Individual and situational differences (the middle ring) further influence the educational activity by accounting for subject matter, situational, and individual differences. These include any variations at the micro or macro level that influence and shape the educational activity from one context or individual to another.

Figure 4

Andragogy in Practice Adapted from Knowles et al. (2020)



Since its introduction in the 1980s, andragogy in practice has been profoundly influential across many disciplines and social sectors, including faculty development in higher education (e.g., Dalgarno et al., 2020; Eddy et al., 2019; Meyer & Murrell, 2014). I use andragogy similarly in this study to conceptually understand how to design an intervention to impact faculty learning by influencing the use of self-directed learning resources. For example, addressing the core principles of the learner's need to know, orientation to learning, and motivation to learn relates to increasing the perceived usefulness of the faculty development resource.

Motivational Design and Efficacy of Faculty Development

While andragogy describes the core principles that underlie adult learning, motivational design connects learning theory to instructional design to influence the efficacy of learning experiences. Keller (2009) developed the ARCS model approach to instructional motivation based on an extensive review of the theoretical and empirical research on motivation. The ARCS model is an acronym for attention, relevance, confidence, and satisfaction—the four main categories of motivational design (Table 1).

Table 1

Categories of Motivational Design Adapted from Keller (2009)

Categories	Definitions	Process Questions	Strategies
Attention	Capturing the interest of learners; stimulating the curiosity to learn	How can I make this learning experience stimulating and interesting?	A1: Perceptual Arousal A2: Inquiry Arousal A3: Variability
Relevance	Meeting the personal needs/goals of the learner to affect a positive attitude	In what way will this learning experience be valuable for my students?	R1: Goal Orientation R2: Motive Matching R3: Familiarity
Confidence	Helping the learners believe/feel that they will succeed and control their success	How can I via instruction help the students succeed and allow them to control their success?	C1: Learning Requirements C2: Success Opportunities C3: Personal Control
Satisfaction	Reinforcing accomplishment with rewards (internal and external)	What can I do to help the students feel good about their experience and desire to continue learning?	S1: Natural Consequences S2: Positive Consequences S3: Equity

By designing learning experiences using the 12 strategies, this model has been used to design effective instruction from K-12 through higher education and adult learning. There are obvious overlaps with andragogy in the ARCS model. For example, attention connects with the principles of the learners need to know and orientation to learning. Relevance connects with motivations for learning and readiness to learn. Confidence connects with prior experience and the learner's self-concept. Finally, satisfaction connects with orientation to learning and motivations to learn. The benefits of motivational design are based on the connection between learner motivation, persistence, and learning gains (Keller, 2009). As such, I use motivational design in this study to inform the design of the faculty development interventions and as a framework for assessing its efficacy. In the next chapter, I describe how I designed, implemented, and ultimately assessed this intervention to impact the faculty's knowledge, confidence, and perceived usefulness of implementation fidelity practices and their sense of teaching agency.

CHAPTER 3

ACTION AND METHODS

Based on the theoretical perspectives discussed in chapter 2, this pedagogical action research study used a mixed-methods approach to explore (1) how and to what extent faculty use course fact sheets and find them usable, (2) the differences in (a) the faculty's knowledge, confidence, and perceived usefulness of implementation fidelity practices and (b) their sense of teaching agency based on their use of course fact sheets, and (3) how those differences compared to participating in an online orientation module. Action research is a broad term incorporating many different research approaches and methods. Action research has its origins in the science of education movement and Kurt Lewin's (1946) writings about integrating theory and practice. In more recent times, Hillary Bradbury (2015) has championed the use of action research as "an orientation to knowledge creation that arises in a context of practice and requires researchers to work with practitioners" (p. 93). As such, the purpose of action research is to solve practical problems within a local context and, in doing so, aim toward improving practice for the future (Creswell & Guetterman, 2019).

Building from this broad concept of action research, Norton (2009) developed and championed pedagogical action research (PedAR). PedAR shares the same defining characteristics of other types of action research but with additional focuses on (1) teaching and learning in higher education and (2) contributing findings to not just practice but also the broader disciplinary knowledge about teaching and learning in higher education. This study adopted a PedAR approach in that the investigation focuses

on improving teaching and learning practices within a higher education context from a post-positivist perspective.

While positivism asserts that there are objective truths that can be investigated and uncovered through research, post-positivism recognizes the role of the researcher in influencing the complex understanding of human experiences (Ryan, 2006). Following a post-positivist perspective, I recognize that my thoughts and beliefs influenced this study's design. Therefore, my goal was to learn *with* my participants rather than conduct research *on* them. Using a post-positivist perspective to develop and guide this study emphasized gathering data from diverse perspectives to continuously research and refine our understanding of the concepts of implementation fidelity and faculty agency. As such, this study aimed to contribute to the broader disciplinary knowledge around these ideas. While the goal of this study was not on the generalizability of the findings, the intervention, procedures, and methods are documented in this chapter to aid transferability to other contexts.

Participants and Setting

All faculty members listed on the class schedule to teach at least one course in the redesigned teacher preparation programs at MLFTC in the Fall 2022 semester were recruited to participate in this study ($N = 192$), of which 122 (63.54%) participated in at least one part of the data collection methods used. Participants included a diverse and representative sampling of the population (see Table 2). The vast majority were female ($n = 106$; 86.89%), which was also true of most faculty within MLFTC. Approximately half were full-time non-tenure eligible faculty ($n = 60$; 49.18%), followed by part-time adjunct ($n = 53$; 43.44%), then tenure/tenure track faculty ($n = 9$; 7.38%). Just under half

of the participants had previously been involved in the redesign ($n = 58$; 47.54%) and the majority had no leadership role in the division ($n = 74$; 61.16%). Participants represented faculty with 0-43 years of experience teaching in higher education ($M = 9.14$; $SD = 8.3$) who were teaching anywhere from 1 to 6 or more classes in the Fall 2022 semester ($M = 2.62$; $SD = 1.45$).

Table 2

Participant Demographics

Variable	Level	<i>n</i>	%
Gender	Male	9	7.38
	Female	106	86.89
	Other/Prefer not to say	7	5.74
Employment Status	Tenure/Tenure Track (T/TT)	9	7.38
	Non-Tenure Eligible (NTE)	60	49.18
	Adjunct	53	43.44
Involvement	Total	58	47.54
	<i>Writing or revising the PLOs</i>	31	25.41
	<i>Completing ADE paperwork</i>	19	15.57
	<i>Developing individual course(s)</i>	50	40.98
	<i>Writing program assessment plan(s)</i>	13	10.66
	<i>Thought partner for individual course(s)</i>	40	32.79
Leadership Role	Total	47	38.52
	<i>Course Coordinator</i>	38	31.15
	<i>Design Topical Action Group (TAG) Member</i>	14	11.48
	<i>Other Topical Action Group (TAG) Member</i>	26	21.31
	<i>Program Area Strategist</i>	11	9.02
Levels of Support of the Redesign	Enthusiastic Support	58	49.15
	Lukewarm Support	56	47.46
	Meager Support	4	3.39
	Strong Objection	-	-
Years Teaching		$M = 9.14$ $SD = 8.3$	
Classes Taught		$M = 2.62$ $SD = 1.45$	

Role of the Researcher

In action research, the role of the researcher as a practitioner within the context being investigated is essential. Unlike other forms of research, the goal of action research is not to position oneself as an objective outsider looking in. Instead, action research aims to use one's position as an insider to define the problem and then enact and test an intervention (i.e., *action*) to improve practice (Mertler, 2020). From this perspective, my role as a non-faculty educational developer was ideal for conducting this action research study. As a core team member, I was an insider from the beginning of the teacher preparation redesign. However, as a non-faculty participant, I maintained an objective distance. My role was to facilitate conversation and guide progress without making decisions. I could leverage this insider-outsider perspective to see the big picture of the redesign and understand what is needed to improve implementation.

Intervention Procedures

This study's intervention is built upon the work already completed within the study context around curriculum mapping and course development, as described in Chapter 1. Because those resources already existed, I could expand and re-interpret that information into course fact sheets and an online orientation module for my study's intervention.

Course Fact Sheets

I designed the course fact sheets to spur individual growth following several of the core principles of andragogy outlined in chapter 2. For example, the open-ended use of fact sheets for various purposes supported self-directed learning and autonomy. The

fact sheets were also problem-centered in the context of teaching courses in the redesign, supporting the orientation to learning and readiness to learn principles. To implement course fact sheets, I copied the template refined in cycle 2 (see Appendix A) to create a version for 88 redesigned teacher preparation courses using a specialized page designer tool available within Airtable, where the underlying curriculum mapping data was stored. The completed fact sheets were posted to the MLFTC Curriculum Hub—an internal website for all MLFTC faculty and staff designed to provide resources related to the design of MLFTC programs—and shared out by email to all faculty teaching classes with fact sheets in the Fall 2022 semester.

Online Orientation Module

I also develop an online orientation module to supplement the course fact sheets (see Appendix B). This module was created and hosted in the MLFTC Curriculum Hub using the web development tool used to host that website (i.e., Softr), where MLFTC faculty could self-enroll anytime. I designed the orientation module to improve the faculty's knowledge, confidence, and perceived usefulness of implementation fidelity, agency, and course fact sheets, following the core principles of andragogy (see Table 3). The module contained an introduction describing its relevance to orient the learner and support their need to know. Following the introduction, faculty could self-direct their learning across four sections:

- *What is the redesign?* This section contextualized the redesign, why it was done, the guiding principles, and the essential components (i.e., course types, PLOs, progression indicators)

- *How does the redesign affect my teaching?* This section explored the concepts of implementation fidelity and agency within the redesign’s context. To explore implementation fidelity, I described essential elements of coherence using an innovation configuration (IC) map (Hord et al., 2006) designed by me in consultation with the program faculty. To explore faculty agency, I provided a high-level overview of the levels of knowledge creation and agency (i.e., the pedagogic device (Bernstein, 2000)) and connected it to their teaching practices.
- *How does my course “fit” into the redesign?* This section guided faculty to access relevant course fact sheets and understand how to use them with an interactive walkthrough of an example course fact sheet. In this interactive walkthrough, I made explicit connections between the information on the fact sheet and the ideas of implementation fidelity and faculty agency.
- *What should I do next?* This final section connected the orientation’s content to their specific practice by guiding participants toward the next steps in enacting the ideas in their courses.

Table 3

Orientation Module Structure and Content Aligned to Andragogy Principles

Module Section	Topics	Reflection questions	Andragogy Principles
What is the redesign?	<ul style="list-style-type: none"> • Why redesign? • Guiding principles • Puzzle pieces of the redesign • Program-level Outcomes (PLOs) 	<ol style="list-style-type: none"> 1. How can you enact the guiding principles in your teaching? 2. How might you use the division PLOs to guide your teaching practices? 	<ul style="list-style-type: none"> • Self-concept of the learner • Orientation to learning

Module Section	Topics	Reflection questions	Andragogy Principles
How does the redesign affect my teaching?	<ul style="list-style-type: none"> • Implementation Fidelity <ul style="list-style-type: none"> ○ Curriculum maps ○ IC Map • Faculty Agency <ul style="list-style-type: none"> ○ Levels of Knowledge Creation and Agency 	3. Do you see components of the redesign in how you teach? How might you align your teaching to these components? 4. What types of agency do you think are most important to be an effective teacher? Why?	<ul style="list-style-type: none"> • Self-concept of the learner • Prior experience of the learner
How does my course “fit” into the redesign?	<ul style="list-style-type: none"> • Course fact sheets explanation • Anatomy of a Course Fact Sheet 	5. How might course fact sheets be useful to you? Why or why not?	<ul style="list-style-type: none"> • Self-concept of the learner • Orientation to learning
What should I do next?	<ul style="list-style-type: none"> • Step 1: Pause and Reflect • Step 2: Review your course(s) on the Curriculum Hub • Step 3: Contact your course coordinator 	6. What are you still wondering about the redesign?	<ul style="list-style-type: none"> • Self-concept of the learner • Orientation to learning

Sharing the Intervention

I worked with the college’s administration and faculty governance committees to share the course fact sheets and online orientation module with all faculty ahead of and during the Fall 2022 semester in multiple ways. In August 2022, I emailed all faculty in the sample frame with information on how to access course fact sheets and the online orientation via the MLFTC curriculum hub. I followed that general announcement with individualized emails to each course coordinator with the orientation module and the fact sheet(s) for their course(s) and a brief explanation of their use. In that email, I encouraged

them to share these fact sheets and the orientation module with all faculty teaching the courses they coordinate. Finally, I worked with the college's administration to have faculty leaders share the fact sheets and the orientation module with their faculty in program faculty meetings.

Data Collection Procedures and Measures

Following IRB approval (see Appendix C), I used a mixed methods design to collect and analyze data quantitatively and qualitatively to answer this study's research questions. Mixed methods research is beneficial when different types of data better explain different aspects of a research question than either type would on its own (Creswell & Guetterman, 2019). Using a convergent design, I simultaneously collected quantitative and qualitative data using a variety of sources.

Quantitative Data

I collected quantitative data on several independent, dependent, and demographic variables from an orientation evaluation survey sent to all faculty who participated in the orientation module ($N = 52$) in September 2022 (Appendix D) and an online survey sent to all faculty in my sample frame ($N = 192$) in October 2022 (Appendix E). Twenty-four faculty completed the orientation evaluation survey (46.15%) and 115 faculty completed the online survey (60%). Sixteen faculty completed both instruments. I obtained signed consent at the beginning of each survey instrument. Using personalized Qualtrics links, I tracked and connected participant responses across both surveys to create a single data table for analysis. Across both surveys, I collected data on the following quantitative measures: course fact sheet levels of use (*LoU*), orientation participation (*participation*), implementation fidelity practices knowledge, confidence, and use (*KCU*), sense of

teaching agency (*SoTA*), course fact sheet system usability score (*SUS*), the reduced instructional materials motivation survey (*RIMMS*), and participant demographics (see Table 4). I document each of these measures in this section with a focus on the validity and reliability of each.

Table 4

Quantitative Data Measures

Purpose	Measure (Variable)	Scale	Instrument(s)	RQs
Demographic	T/TT, NTE, or Adjunct Employment Status (<i>status</i>)	Nominal	Online Survey, Orientation Evaluation Survey	RQ1
	Years of Experience Teaching (<i>years</i>)	Ratio	Online Survey, Orientation Evaluation Survey	RQ1
	Number of Courses Taught that Semester Total (<i>classes</i>)	Ratio	Online Survey, Orientation Evaluation Survey	RQ1
	Number of Courses Taught that Semester within Teacher Preparation (<i>DIclasses</i>)	Ratio	Online Survey, Orientation Evaluation Survey	RQ1
	Leadership Role (<i>role</i>)	Nominal	Online Survey, Orientation Evaluation Survey	RQ1
	Involvement with the Redesign (<i>involvement</i>)	Nominal	Online Survey, Orientation Evaluation Survey	RQ1
	Level of Agreement with the Redesign (<i>support</i>)	Ordinal	Online Survey, Orientation Evaluation Survey	RQ1
	Gender (<i>gender</i>)	Nominal	Online Survey, Orientation Evaluation Survey	RQ1

Purpose	Measure (Variable)	Scale	Instrument(s)	RQs
Independent	Course Fact Sheet Level of Use (<i>LoU</i>)	Ordinal	Online Survey	RQ1, RQ2, RQ3
	Orientation Participation (<i>participation</i>)	Nominal	Orientation Evaluation Survey	RQ3
Dependent	Implementation Fidelity Practices Knowledge, Confidence, and Use (<i>KCU</i>)	Interval	Online Survey	RQ2, RQ3
	Sense of Teaching Agency (<i>SoTA</i>)	Interval	Online Survey	RQ2, RQ3
	Course Fact Sheet System Usability Score (<i>SUS</i>)	Interval	Online Survey	RQ1
	Reduced Instructional Materials Motivation Survey (<i>RIMMS</i>)	Interval	Orientation Evaluation Survey	RQ3

Demographics. I collected faculty demographics related to their T/TT, NTE, or Adjunct status (*status*), years of experience teaching (*years*), the number of courses taught that semester total (*classes*), and within teacher preparation (*DIclasses*), their leadership role (*role*), their involvement with the redesign (*involvement*), their level of agreement with the redesign (*support*), and their gender (*gender*) as part of both survey instruments. These demographics aided in ensuring a diverse sampling of faculty and in evaluating who used the course fact sheets to address the first research question.

Level of Agreement with the Redesign (*support*). I measured Level of agreement with the redesign using the gradients of agreement scale. The gradients of agreement scale was created as a facilitation tool for group decision-making (Kaner, 2014). It

includes eight ordinal levels of agreement with a proposal or initiative ranging from full support to complete disagreement. These levels are classified into four categories describing the level of support (i.e., enthusiastic support, lukewarm support, meager support, strong objection). To gauge the level of agreement with the redesign in this study, participants were asked which statement corresponding to each level from the gradients of agreement scale most closely described how they felt about the redesign (see Table 5).

Table 5

Gradients of Agreement with the Redesign

Level of Support	Gradients of Agreement	Statements
Enthusiastic Support	1. Fully support	1. “I fully support the redesign”
	2. Endorsement with minor concerns	2. “It’s not perfect, but the redesign is good enough”
Lukewarm Support	3. Agree with reservations	3. “I can live with the redesign”
	4. Abstain	4. “I have no opinion”
	5. Stand aside	5. “I don’t understand the redesign well enough yet”
Meager Support	6. Disagreement, but willing to go with majority	6. “The redesign is not great, but I don’t want to hold it up”
	7. Disagreement, with request not to be involved in implementation	7. “I am not on board with the redesign”
Strong Objection	8. Can’t support the proposal	8. “I would like to block the redesign”

Independent Variables. The two independent variables used in this study were the faculty’s levels of use of course fact sheets and their participation in the orientation module. These variables were used to create quasi-experimental groups for

users/nonusers and participants/non participants for analysis related to answering all three research questions.

Course Fact Sheet Levels of Use (LoU). The LoU measure included seven self-reported behavior scale questions based on Hall et al.'s (2006) research-validated LoU interview protocol from the concerns-based adoption model. These behavior questions used an 8-point sliding scale asking faculty to self-report their LoU from *never or not at all to frequently or a lot* (i.e., 0 = *Nonuse*; I = *Orientation*; II = *Preparation*; III = *Mechanical Use*; IVA = *Routine*; IVB = *Refinement*; V = *Integration*; and VI = *Renewal*) for each of the categories of use defined by Hall et al. (2006) (see Table 6).

Table 6

LoU Survey Measure Item Development from Hall et al. (2006)

LoU Categories	LoU Survey Measure Questions
Performing. Carries out the actions and activities entailed in operationalizing the innovation.	How much have you explored various ways to use course fact sheets?
Knowledge. That which the user knows about characteristics of the innovation, how to use it, and consequences of its use. This is cognitive knowledge related to using the innovation, not feelings or attitudes.	How much do you know about how to use the elements included on course fact sheets?
Acquiring Information. Solicits information about the innovation in a variety of ways, including questioning resource persons, corresponding with resources agencies, reviewing printed materials, and making visits.	How often have you asked questions, reviewed printed materials, or sought out more details about course fact sheets?
Sharing. Discusses the innovation with others. Shared plans, ideas, resources, outcomes, and problems related to the use of the innovation.	How often have you shared plans, ideas, resources, outcomes, or problems with others related to using course fact sheets?

LoU Categories	LoU Survey Measure Questions
Assessing. Examines the potential or actual use of the innovation or some aspect of it. This can be a mental assessment or can involve the actual collection and analysis of data.	How much have you thought about the potential or actual use of course fact sheets?
Planning. Designs and outlines short- and/or long-range steps to be taken during the process of innovation adoption, i.e., aligns resources, schedules, and activities and meets with others to organize and/or coordinate use of the innovation.	How much have you aligned resources, schedules, and activities, or met with others to organize and/or coordinate the use of course fact sheets?
Status Reporting. Describes personal stand at the present time in relation to use of the innovation.	Overall, how often do you currently use course fact sheets?

As a self-reported measure of behavior, there are obvious limitations to this LoU survey measure. Hall et al. (2006) developed their original LoU measure as an interview protocol to avoid these limitations. However, conducting and scoring lengthy interviews also severely limits the feasibility of collecting larger sample sizes for statistical analysis. In developing a survey measure to diagnose LoU, I took several steps to mitigate the limitations of self-reporting. Basing the questions and measurement scales off Hall et al.'s (2006) existing, validated LoU measure established a high level of content validity for the construct being measured (see Table 6). In addition, I sought criterion validity by determining LoU using Hall et al.'s (2006) validated interview protocol (Appendix F) with a random smaller sample of the survey participants ($n = 14$). I found a 78% agreement between the overall survey and interview LoU scores, which exceeded Hall et al.'s (2006) average reported interrater reliability of 72% across interview raters. As such, the LoU survey measure was at least as consistent in scoring overall LoU as the original

interview protocol. A Cronbach's alpha test confirmed that the seven items had excellent internal consistency ($\alpha = 0.94$).

Orientation Participation. On the orientation survey, I asked participants which sections of the online orientation they completed (i.e., “what is the redesign?”, “How does the redesign affect my teaching?”, “How does my course ‘fit’ into the redesign?”, and “What should I do next?”). Participants could mark all sections they completed.

Dependent Variables. I collected data on four dependent variables. The first two (i.e., perceived knowledge, confidence, and usefulness of implementation fidelity practices and sense of teaching agency) focused on differences in faculty outcomes for those who used the interventions to address the second research question. The other two (i.e., fact sheet usability and orientation module efficacy) were collected to assess the quality of the two interventions in addressing the first and third research questions, respectively.

Perceived Knowledge, Confidence, and Usefulness (KCU). The KCU measure was adapted from Oakes et al. (2018) to assess the faculty’s perceived knowledge, confidence, and usefulness of practices that support implementation fidelity, as described in chapter 2 (see Table 7). This was a 12-item measure asking faculty to rate their perceived knowledge, confidence, and usefulness of specific concepts/strategies related to implementation fidelity practices using a 5-point Likert-type scale (e.g., 1 = *I have no knowledge of this concept/strategy*; 2 = *I have limited knowledge of this concept/strategy*; 3 = *I have some knowledge of this concept/strategy*; 4 = *I have more than average knowledge of this concept/strategy*; and 5 = *I have a substantial amount of knowledge about this concept/strategy*; see Appendix E).

Table 7*KCU Concepts/Strategies Development Aligned to Implementation Fidelity Practices*

Implementation Fidelity Practices	KCU Concepts/Strategies
Interpreting how intended PLOs should be designed into the course outcomes, activities, and assessments at the appropriate level of content complexity.	1. Aligning relevant PLOs to course outcomes 2. Planning teaching and learning activities to address relevant PLOs 3. Designing assessment tasks to address relevant PLOs
Decoding for students how the course design relates to relevant PLOs, including explaining jargon/discipline- specific terminology in PLOs.	4. Explaining to students how course outcomes relate to relevant PLOs 5. Communicating to students how assessment tasks relate to relevant PLOs 6. Defining jargon/discipline-specific terminology in relevant PLOs
Conceptualizing for students how they can apply the communicated knowledge, skills, and dispositions within the PLOs in authentic contexts.	7. Teaching concepts from relevant PLOs 8. Adapting instruction to students' prior knowledge about relevant PLOs 9. Providing feedback to students on their performance related to relevant PLOs
Refining how PLOS are aligned to the course based on student feedback and performance in the course as enacted.	10. Suggesting refinements to relevant PLOs based on student performance 11. Assessing student performance related to relevant PLOs 12. Adapting instruction to students' need related to gaps in relevant PLOs

I established validity for this survey measure in several ways. To support content validity, I developed the 12 concepts/strategies on the KCU measure from the implementation fidelity practices established in the theoretical framework (see Table 7). In addition, I sought criterion validity through cognitive interviews with a small sample of faculty from the target population in May 2022 ($n = 3$). For the cognitive interviews, I met 1:1 with faculty to have them complete the pilot survey measure while narrating what

they were thinking. Through this narration, I saw where their perceptions of concepts/strategies aligned with the intended constructs being measured. In a few cases where their perceptions did not align, I adjusted the concepts/strategies to improve clarity. I calculated Cronbach's coefficient alphas to assess reliability. Reliability estimates were excellent for each construct (0.96, 0.96, and 0.95 for perceived knowledge, confidence, and usefulness scales, respectively).

Sense of Teaching Agency (SoTA). Faculty agency is difficult to measure directly. Most measures of agency are based on perceptions or sense of agency (e.g., Grünbaum & Christensen, 2020; Tapal et al., 2017). Even still, there are limited, validated measures of sense of agency developed to date. Tapal et al. (2017) developed and validated a 13-item measure of a context-independent sense of agency with a sample of 236 participants. Tapal et al. (2017) developed their scale to cover multiple aspects of the agency experience (e.g., controlling self, physical self, interactions with the environment) from the relevant literature on sense and judgment of agency (e.g., Grünbaum & Christensen, 2020). Their scale included two factors: sense of positive agency (SoPA) and sense of negative agency (SoNA). While researchers have explored other ways to measure sense of agency in specific contexts, including related to faculty's sense of professional agency regarding decisions about work and family (O'Meara & Campbell, 2011), there have been no measures developed to date focused on measuring faculty's sense of *teaching* agency. As such, I developed the Sense of Teaching Agency (*SoTA*) measure as an 8-item measure for this study.

With the SoTA measure, I asked participants to rate their level of agreement with eight statements (see Table 8) on a 5-point Likert-type scale from 1 (*strongly disagree*) to

5 (*strongly agree*). Like Tapal et al.'s (2017) scale, four items measured *positive* sense of teaching agency, and four items measured *negative* sense of teaching agency. Items measuring the negative sense of teaching agency were scored in reverse.

Table 8

SoTA Item Development Related to Aspects of Agency

Aspect of Agency	Positive SoTA	Negative SoTA
Controlling self	I can decide how I teach the content of my classes	I do not have a choice about how I teach the content in my classes
Ownership	I plan how I teach my classes from the very beginning to the very end	While I am teaching, I feel like I am facilitating someone else's class
Outcome expectancy	I am responsible for everything that results from how I teach my classes	The outcomes of my teaching generally surprise me
Personal efficacy	If I want, I can choose to teach my classes how I prefer	I have to teach my classes the way someone else decided

Note. SoTA = Sense of Teaching Agency. Items measuring negative SoTA are scored in reverse.

To support content validity, I developed the items used to measure SoTA based on an understanding of the existing literature on sense of agency and teaching self-efficacy (e.g., Fives & Looney, 2009; Grünbaum & Christensen, 2020; Tapal et al., 2017). Like Tapal et al. (2017), I developed the SoTA scale to measure multiple aspects of agency from both a positive and negative perspective (see Table 8). As with the KCU constructs, I sought criterion validity for the SoTA items through cognitive interviews with a small sample of faculty from the target population in May 2022 ($n = 3$), which

resulted in no changes to the item wording. Since this was a new measure based on multiple aspects of agency from both the positive and negative perspective, I had no presumptions about what underlying factors might exist within the items. Therefore, I also conducted an exploratory factor analysis (EFA) to identify the underlying factors which described the variance structure among the items. The procedures and results of this analysis are documented in Chapter 4. A Cronbach's alpha test confirmed that the items had very good internal consistency overall ($\alpha = 0.86$).

Course Fact Sheet System Usability Scale (SUS). The SUS is a widely used measure to create a single number representing a system's overall usability and learnability. In this study, the "system" was the course fact sheets. The SUS is a 10-item measure developed by Brooke (1996) using a 5-point Likert-type scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Odd-numbered items are worded positively, and even-numbered items are worded negatively. To clarify the system investigated in this study, I replaced the word "system" with "course fact sheets" in all statements. This approach is consistent with Lewis and Sauro's (2009) finding that replacing the word "system" with "product" in all items did not affect reliability.

While Brooke (1996) developed the SUS relatively informally as a "quick and dirty" approach to usability, several studies have since established reliability and validity with large sample sizes. Researchers have determined the SUS's concurrent validity with other questionnaire-based usability measures (Lewis, 1995; Lewis & Sauro, 2009). Researchers have also found that the SUS effectively discriminates between systems with high and low usability (Lewis, 1995). Reliability has been consistently high ($\alpha > 0.9$) in numerous studies (e.g., Bangor et al., 2009; Lewis, 1995), and a Cronbach's alpha test

confirmed that the ten items had very good internal consistency ($\alpha = 0.85$) in this study as well.

Reduced Instructional Materials Motivation Survey (RIMMS). The RIMMS measure is an adaptation of Keller's (2009) Instructional Materials Motivation Survey (IMMS). Since motivation correlates with persistence and achievement, the IMMS has been widely used to measure the quality of instructional design (e.g., Keller, 2009; Loorbach et al., 2015). It is used similarly here to assess the overall motivation of participants in the online orientation module. Keller (2009) developed the IMMS as a 36-item measure to assess the four constructs from the ARCS model of motivational design (i.e., attention, relevance, confidence, and satisfaction) using a 5-point Likert-type scale (i.e., 1 = *Not true*, 2 = *Slightly true*, 3 = *Moderately true*, 4 = *Mostly true*, 5 = *Very true*; see Appendix D). More recently, Loorbach et al. (2015) validated a 12-item Reduced IMMS (RIMMS), which had equal or better construct validity and reliability than the original IMMS measure in a self-directed instructional setting with adults. Because of the similarity in context and a desire for a shorter measure (without sacrificing validity and reliability), I used the 12-item RIMMS measure for this study. The RIMMS includes three of the original IMMS items for each ARCS construct (see Appendix D). A Cronbach's alpha test confirmed that the 12 items had very good internal consistency overall ($\alpha = 0.89$).

Qualitative Data

I collected qualitative data from open-ended reflection prompts embedded within the online orientation module, semi-structured interviews with faculty participants, and a researcher journal. Since researchers have questioned the value and purpose of

determining the validity and reliability of qualitative data (e.g., Freeman et al., 2007; Tracy, 2010), I focus in this section on discussing rich rigor (i.e., the appropriateness and complexity of the data collected) and meaningful coherence (i.e., the alignment across literature, research questions, methods, procedures, and interpretations) for my qualitative data (Tracy, 2010).

Orientation Reflections. The orientation included several opportunities for participants to respond to open-ended reflection questions online while completing the module (see Appendix B). Reflection questions related to the faculty's reasons for participating in the module (i.e., "What knowledge of the redesign, implementation fidelity, and agency do you already have?" "What do you want to gain by participating in this module? Why?"), perceptions of teaching agency (i.e., "When have you experienced high teaching agency? Low teaching agency? Why?" "What types of agency do you think are most important to be an effective teacher? Why?"), and explorations of implementation fidelity (i.e., "For your course, what elements support adherence to the intentions of the redesign? Why?"). Their responses to these questions were recorded in the orientation module. Participants provided consent to review and analyze responses as part of the evaluation survey (see Appendix D).

Rich rigor was sought by the diversity of participants across all demographic variables (e.g., *involvement, support, status, role*). The module's value and the data collected from the reflections cut across all types of faculty regardless of their role, experience, or any other factors. Aligning the reflection questions to the theoretical perspectives on implementation fidelity, agency, and andragogy also aimed for a high level of meaningful coherence to address the guiding research questions. While the intent

was to explore the experiences of all types of faculty through these reflection questions to provide a depth and breadth of understanding that is important for qualitative inquiry, the responses were not as rich as anticipated, making the module reflections less valuable for data analysis.

Semi-Structured Interviews. I asked faculty to participate in 30-minute semi-structured interviews using a purposive sampling technique. I grouped faculty who volunteered for follow-up interviews on the online survey instrument ($n = 45$) into four groups based on their involvement with the redesign and their use of course fact sheets (i.e., involved/nonusers, involved/users, not involved/nonusers, and not involved/users). I then selected participants ($n = 14$) from within each of these groups based on their employment status (i.e., T/TT, NTE, or Adjunct), using a random number generator when multiple participants met the selection criteria. This resulted in interviews with 3-4 participants from each category, representing a diverse range of employment statuses to establish rich rigor (see Table 9). Interview participants included one T/TT, nine NTE, and four adjunct faculty with a mix of those who had used the fact sheets ($n = 10$) and those who hadn't ($n = 4$), as well as a mix of those who had previously been involved in the redesign ($n = 9$) and who held a leadership role ($n = 7$).

Table 9

Interview Participant Demographics

#	Gender	Status	Years of Experience	Fact Sheet LoU	Prior Involvement	Leadership Role
A	Female	Adjunct	3	0	No	No
B	Female	Adjunct	1	III	Yes	No

#	Gender	Status	Years of Experience	Fact Sheet LoU	Prior Involvement	Leadership Role
C	Female	Adjunct	1	0	No	No
D	Female	NTE	8	0	Yes	Yes
E	Female	NTE	0	III	No	No
F	Female	NTE	2	VI	No	No
G	Female	NTE	26	III	Yes	Yes
H	Female	NTE	10	III	Yes	Yes
I	Female	T/TT	15	VI	Yes	Yes
J	Female	NTE	15	IVA	Yes	Yes
K	Female	NTE	1	III	Yes	Yes
L	Female	Adjunct	4	IVB	No	No
M	Female	NTE	6	0	Yes	Yes
N	Female	NTE	7	IVA	Yes	No

Interviews were conducted via a web conferencing platform (i.e., Zoom) in October 2022. At the beginning of the interview, I obtained verbal consent from interview participants, including consent to be audio recorded. Following a semi-structured protocol based on Hall et al.'s (2006) Levels of Use interview protocol to establish meaningful coherence, interview questions explored how faculty used course fact sheets and how that use affected their implementation fidelity practices and sense of teaching agency (e.g., "Has using course fact sheets changed anything about the way you think about teaching your course?" "What do you see as the strengths and weaknesses of course fact sheets in your situation?"; see Appendix F). After an initial review of the orientation module reflections during data collection, I also determined that I was not

getting the depth of responses I sought related to the participant's perceptions of the concepts of fidelity and agency. As such, I added two additional questions to the survey instrument before beginning the interviews (i.e., "What are your impressions of the teacher preparation redesign?" and "What do you think of the concept of academic freedom within the guardrails of the redesign?"; see Appendix F) to capture this data. I audio-recorded and then transcribed the interviews verbatim to aid with data analysis.

Researcher Journal. I also kept a researcher journal during the implementation and data collection period (i.e., from August 2022 to November 2022). For this journal, I responded in writing to several guiding questions each week related to two purposes. First, I reflected on my role as a non-faculty educational developer in the implementation of the redesign (i.e., "What have I done in the past week to support the implementation of the redesign?", "In the past week, what impact has my role had on the implementation of the redesign?"). These reflections were intended to provide a valuable perspective for understanding the potential contribution of non-faculty roles like mine in supporting and improving curriculum redesign work in higher education. These reflections were also an important process for reviewing how my personal experiences and position influenced the design and outcomes of this study—a key element of action research from a post-positivist paradigm.

The second purpose of this journal was to reflect on my observations related to the impact of the study's intervention on implementation fidelity and faculty agency (i.e., "What have I observed in the past week related to how faculty are implementing the redesign?", "What have I observed in the past week related to how faculty describe their agency related to the redesign?", "In the past week, how have I observed faculty

engaging with fact sheets and the online orientation module?”). These observations were intended to provide insights into potential confounding factors which were not directly measured or observed as a part of this study. For example, I did not directly assess the level of implementation fidelity. However, using the journal to keep track of my observations related to implementation fidelity helped judge how well faculty implemented the redesign with fidelity.

I kept this journal electronically. I did not document specific names or other identifying characteristics. When observations were made about specific individuals, I identified them only by demographic characteristics such as employment status, gender, and involvement with the redesign (e.g., “This week, a clinical faculty member who has not been involved heavily with the redesign but has taught courses for many years said...”). Therefore, I used journal reflections only in identifying broad trends and did not tie my reflections directly to individual participant responses on the online survey, interviews, or orientation reflections.

Data Analysis

I analyzed all quantitative and qualitative data in conjunction to triangulate the findings. Focusing on the strengths of different research methods, I used quantitative analysis to determine who used the course fact sheets and what the differences in *KCU* and *SoTA* were for those who used fact sheets and participated in an online orientation module. I used qualitative analysis to explore the faculty’s experience using the fact sheets and implementing the redesign to help explain why the quantitative results were found. I stored all data in a password-protected online storage account only accessible by

the research team members. I analyzed the quantitative data using SPSS and R and qualitative data using Atlas.ti Cloud.

Quantitative Data

To determine who used the study's interventions, I used chi-square tests of independence (for nominal data) and Spearman's correlations (for ordinal/interval data) to determine how demographic characteristics related to participating in or using the study's interventions. The chi-square test of independence is used to determine whether two categorical variables are independent. Significance was evaluated by calculating a chi-square statistic (χ^2) and obtaining a p -value from a χ^2 distribution with $(r - 1) \times (c - 1)$ degrees of freedom, where r and c are the number of rows and columns in the contingency table. Spearman's correlation is a bivariate measure of the association (or strength) of the relationship between two variables and the magnitude of that relationship. Correlation coefficients (r_s) vary from 0 (no relationship) to 1 (perfect linear relationship) or -1 (perfect negative linear relationship). Positive coefficients indicate a direct relationship, indicating that as one variable increases, the other variable also increases. Negative correlation coefficients indicate an indirect relationship, indicating that as one variable increases, the other variable decreases.

To determine the differences on *KCU* and *SoTA* based on using course fact sheets or participating in the orientation, I used 2 x 2 factorial analysis of variance tests to assess the mean differences between faculty who either participated in or used either or both of the study's interventions and those who did not. I treated the composite scores across all items for *KCU* and *SoTA* as continuous variables for the analysis as is consistent with previous research that composite scores across Likert items using five or more scale

levels are valid for analysis as a continuous variable (e.g., Sullivan & Artino, 2013; Zumbo & Zimmerman, 1993). Analysis of variance tests assess whether mean differences among groups on a single or combination of dependent variables are likely to have occurred by chance (Mertler et al., 2021). For multivariate analysis of variance (MANOVA), the test creates a linear combination of the dependent variables to create a grand mean and assesses whether there are group differences on the set of dependent variables. Post hoc tests determine where significant differences are found. Analysis of variance tests allowed me to account for the difference in main effects between fact sheet users and orientation participants and any interaction effects between those two variables. Additionally, MANOVA tests control for multiple comparisons, reducing the risk of making Type I errors. Alternatively, as a more conservative test, MANOVAs are less likely to detect significant results when they actually do exist. However, they can be a valuable tool for investigating complex relationships between multiple dependent and independent variables, as in this study.

Qualitative Data

I began analyzing the interviews as I was conducting them by writing brief memos with my immediate thoughts and reactions to what the participants said immediately following each interview. These memos aided in identifying themes that became structural codes I used when completing my coding analysis of the transcripts after completing all the interviews. To do this coding analysis, I first indexed the interview transcripts into six broad structural codes aligned to the central research questions and the identified themes from my initial memo writing. These structural codes were: (1) *fact sheet uses*, (2) *reasons for not using fact sheets*, (3) *fact sheet strengths*, (4)

information or structures missing from fact sheets, (5) reasons fact sheets supported implementation fidelity, and (6) reasons fact sheets supported agency. While this approach narrowed the scope of my analysis, it also helped focus on the most salient themes to address the research questions.

With the passages identified for each structural code, I then sub-coded transcripts. Sub-codes were data-driven, using a combination of descriptive and in vivo codes to capture the participants' voices and experiences as authentically as possible (e.g., *orienting new, "I already know the facts", "viewability"*) (Saldaña, 2021). As I completed the sub-coding, I kept an open mind to the possibility of disconfirming evidence related to any structural codes and any other unrelated ideas that could emerge organically from the data but did not directly align with any of the pre-identified structural codes. I coded these passages using a combination of descriptive and in vivo codes as well but did not group them under any structural code (e.g., *academic freedom responsibilities, how you teach vs what you teach, understanding why*). I used a subsumption strategy when completing this sub-coding process (Schreier, 2014). That is, I read the transcripts until I encountered a relevant concept and checked whether I had already created a sub-code covering that concept. If so, I *subsumed* the concept under that sub-code, sometimes modifying the original sub-code to better match the complexity of the concepts now subsumed under it. If I had not already created a sub-code covering that concept, I created a new one. I then continued to review the reflections for more concepts following this process until I had completed coding the interview transcripts (Schreier, 2014). Through this process, I identified 54 unique sub-codes that encompassed the concepts found in the transcripts. Once I had coded all transcripts this way, I collected the

sub-codes into a single list for each structural code to enable grouping. Multiple passes through the sub-codes, re-reading interview transcripts, and analytical memo writing supported the grouping process.

While I initially planned to analyze the module reflections and researcher journal using traditional qualitative coding methods as well, I ultimately did not code either of these data sources as they did not address any of my research questions directly. Instead, I referred to both data sources as I analyzed my other quantitative and qualitative data to aid in formulating themes and conclusions. Additional data analysis details are presented alongside the results in the next chapter.

CHAPTER 4

ANALYSIS AND RESULTS

As described in the previous chapter, this convergent action research dissertation used a combination of quantitative and qualitative data to develop a detailed and nuanced understanding of (1) how faculty used and engaged with course fact sheets, (2) how the faculty's (a) knowledge, confidence, and perceived usefulness of implementation fidelity practices and (b) sense of teaching agency differed based on their use of course fact sheets, and (3) how those differences compared to participation in an online orientation module. In this chapter, I present the results related to each of these research questions.

Fact Sheet Levels of Use

To facilitate my analysis, I first identified each participant's use of fact sheets using the LoU measure, essentially creating experimental and control groups for users and nonusers. To do so, I identified each participant's overall LoU based on their response to the LoU scale questions. Following Hall et al.'s (2006) original interview scoring guidelines, I used the modal response for LoU across the seven categories to classify the faculty's overall course fact sheet LoU. When there was a tie, I used the higher response for their overall course fact sheet LoU. I then grouped participants into a binary variable coded as users or nonusers. The LoU measure includes three categories for nonusers (i.e., 0, I, II) and five for users (i.e., III, IVA, IVB, V, VI). In addition, Hall et al. (2006) reported that the impacts of innovations are often not observed until users reach at least level IVA (i.e., routine use). Prior to this level, users are considered mechanical users only and have not begun to internalize the use of the innovation as part of their routine practice. As such, I created a binary variable coded as routine users (i.e.,

those at or above IVA on their LoU) or others to use as a second experimental grouping for analysis. Analysis procedures and results are presented in the rest of this chapter based on these experimental groups.

Use of Course Fact Sheets

The first research question guiding this study asked how and to what extent faculty used the course fact sheets and found them usable. A slight majority of participants used the course fact sheets ($n = 62$; 53.91%), of which the largest number were at level III: mechanical ($n = 29$; 25.22%) followed by level IVA: routine ($n = 19$; 16.52%). Among the nonusers, the majority were at level 0: nonuse ($n = 38$; 33.04%), which means they had never heard of fact sheets. The rest were either at level I: orientation ($n = 9$; 7.38%), which means they had heard of the fact sheets but never used them, or level II: preparation ($n = 6$; 5.22%), which means they had thought about using the fact sheets but had not yet. See Table 10 for the full breakdown.

Table 10

Faculty Course Fact Sheet Levels of Use

		Levels of Use	<i>n</i>	%
Nonusers	0	Nonuse	38	33.04
	I	Orientation	9	7.38
	II	Preparation	6	5.22
Users	III	Mechanical Use	29	25.22
	IVA	Routine	19	16.52
	IVB	Refinement	4	3.48
	V	Integration	6	5.22
	VI	Renewal	4	3.48

To determine who used fact sheets and who did not, I began with a series of quantitative tests. First, I performed a series of Pearson's chi-square tests of independence ($\alpha = 0.05$) to examine the association between fact sheet use and several demographic variables (i.e., *status*, *involvement*, and *role*; see Table 11). Employment status was entered as a nominal variable with all three categories (T/TT, NTE, and adjunct) included. Involvement with the redesign was entered as a binary variable coded as involved in the redesign or not. Involvement in the redesign included any response categories for that question on the survey instrument. Similarly, leadership role was entered as a binary variable coded as having a leadership role or not. All options for leadership roles from the survey instrument were included. I calculated effect sizes using Cramer's V to determine the magnitude of these associations. Effect sizes were interpreted as follows: 0.10 = small, 0.30 = medium, and 0.50 = large (Cohen, 2013).

The strongest associations were between fact sheet use and involvement, $\chi^2 (1, n = 115) = 12.26, p < .001$, with a medium effect size (Cramer's $V = 0.33$), and between fact sheet use and status, $\chi^2 (2, n = 115) = 10.66, p < .01$ with a medium effect size (Cramer's $V = 0.30$). However, the association between fact sheet use and leadership role was also significant, $\chi^2 (1, n = 115) = 8.80, p < .01$, with a small effect size (Cramer's $V = 0.28$). These associations suggest that these relationship between involvement, status, and course fact sheet use are unlikely to have occurred by chance. Furthermore, the medium effect sizes suggest that there is a meaningful relationship between these variables. More specifically, it appears that those involved in the redesign and those with a leadership role

were more likely to use fact sheets. It also appears that NTE faculty were more likely to use fact sheets, and adjuncts were less likely.

Table 11

Chi-square Tests of Independence for Fact Sheet Use

		Fact Sheet Use				Test statistics			Effect size
		Users <i>n</i> = 59		Nonusers <i>n</i> = 45		df	X ²	<i>p</i>	Cramer's <i>V</i>
Group		<i>n</i>	%	<i>n</i>	%				
By Involvement	Involved	39	62.90	16	30.19	1	12.26	< .001	0.33
	Not Involved	23	37.10	37	69.81				
By Employment Status	T/TT	5	8.06	4	7.55	2	10.66	0.005	0.30
	NTE	39	62.90	18	33.96				
	Adjunct	18	29.03	31	58.49				
By Leadership Role	Leader	32	51.61	13	24.53	1	8.80	0.003	0.28
	Nonleader	30	48.39	40	75.47				

I also conducted a Spearman's correlation ($\alpha = 0.05$) to examine the relationship between using course fact sheets and the faculty's levels of support for the redesign. Spearman's correlation is the preferred analysis method when examining the relationships between ordinal variables (Conover & Iman, 1981). Levels of support were determined based on categorizing statements of agreement into their corresponding categories for meager support, lukewarm support, and enthusiastic support (see Table 2; no responses were given for strong objection). I used Cohen's standard to evaluate the strength of the relationships, which uses the same scale for interpretation as Cramer's *V* outlined above (Cohen, 2013).

I observed a significant positive correlation between levels of support and fact sheet use, with a correlation of 0.40, indicating a medium effect size ($r_s(111) = 0.40, p < .001$). This significant correlation suggests that as levels of support increased (i.e., from meager to lukewarm to enthusiastic support), participants were more likely to use fact sheets. However, the direction of this relationship cannot be assumed. That is, it could be that those who supported the redesign more were more likely to use fact sheets, or it could be that using fact sheets resulted in increased support for the redesign. Unfortunately, none of the participants spoke about this relationship in the interviews, so there was no way to infer more details from the qualitative data either.

Fact Sheet Usability

Another valuable quantitative measure of fact sheet use was their perceived usability by the faculty participants. To test this, I calculated the composite score for SUS following Brooke's (1996) guidelines: (1) for odd items, I subtracted one from the response; (2) for even items, I subtracted the response from five; (3) I summed the converted responses for each participant and multiplied by 2.5. Total SUS scores for usability can range from 0 to 100. Based on this calculation, the overall SUS score for course fact sheets averaged relatively high at 73.35 ($SD = 16.52$). While this score is out of 100, Brooke (1996) emphasizes that it is not a percentage score. Instead, I followed Sauro's (2011) guidance for evaluating the SUS score based on the percentile rank of the score compared to other products (e.g., websites, mobile apps, software). Based on decades of SUS results, Sauro (2011) found that the average SUS score is 68. Therefore, the SUS score of 73.35 in this study indicates that the usability of course fact sheets was

greater than approximately 68% of products, suggesting that faculty found them to be highly usable overall.

I then performed a series of Spearman's correlations ($\alpha = 0.05$) to examine the relationship between fact sheet usability and several demographic variables (*status, involvement, or role*). I used the non-parametric Spearman's analysis because the data violated the assumptions of normality for the standard parametric analysis (Pearson's *R*). Employment status was entered as two binary variables. The first binary variable was coded as T/TT faculty or not, and the second as NTE faculty or not. Therefore, the reference group included all part-time adjunct faculty, which I chose because this group was the largest among the population. Involvement and role were coded the same as used for the chi-square tests of independence above. The only significant correlation was between usability and T/TT faculty, $r_s(69) = 0.26, p < .05$, suggesting that T/TT faculty may have found the fact sheets more usable than others. However, the correlation of 0.26 indicates a small effect size, suggesting that the real-world effect of this difference was negligible. In addition, the lack of a significant relationship between usability and other demographic factors suggests that faculty found the fact sheets equally usable regardless of their prior involvement or leadership role.

Fact Sheet Perceptions

Following the quantitative analysis, I then turned to my qualitative data from the follow-up interviews to understand the results more deeply. Analyzing sub-codes related to the *fact sheet uses, reasons for not using fact sheets, fact sheet strengths, and information or structures missing from fact sheets* structural codes from those interviews helped to develop a richer understanding of the faculty's perceptions of course fact

sheets, including how they were being used. As mentioned in Chapter 3, I began this analysis by listing all the sub-codes within these structural codes in a single document to enable grouping. However, as I reviewed this list of the 21 sub-codes for these four structural codes, I quickly realized that abstracting the codes into groups and themes would not be the most effective way to address this research question since it was helpful to review all the possible uses, strengths, and weakness identified and determine which were the most or least-frequently cited. As such, it was helpful to review frequencies across all the codes to identify trends and patterns in the use of fact sheets and their strengths and weakness (see Table 12). By reviewing this table and the quotes within each code, I identified the uses, strengths, and weaknesses of the fact sheets that were most salient to the interview participants.

Table 12

Frequency of Sub-codes Related to Fact Sheet Uses, Strengths, and Weaknesses

Structural Code	Sub-code	Count
<i>Fact sheet uses</i>	<i>Orienting new faculty</i>	15
	<i>Faculty collaboration</i>	10
	<i>Reviewing connections across the program</i>	10
	<i>Identifying students' prior knowledge</i>	8
	<i>Connecting experiences for students</i>	4
	<i>Quick overview</i>	3
	<i>Understanding the impact of changes</i>	3
	<i>Communicating with district stakeholders</i>	1
	<i>Lack of awareness</i>	3

Structural Code	Sub-code	Count
<i>Reasons for not using fact sheets</i>	<i>“I already know the facts”</i>	1
	<i>Using alternative sources of information</i>	1
<i>Fact sheet strengths</i>	<i>Aesthetics (design)</i>	4
	<i>Well organized</i>	4
	<i>Getting better with more use</i>	3
	<i>“Viewability”</i>	2
	<i>Consistency</i>	1
<i>Information or structures missing from fact sheets</i>	<i>Connections to other course details</i>	3
	<i>Confusing to understand meaning</i>	1
	<i>Course formats/schedules</i>	1
	<i>Definitions of terms/concepts</i>	1
	<i>Details about professional experience</i>	1

The most cited fact sheet use was to orient new faculty ($n = 15$), which included faculty using them for their own onboarding and discussing how they could be used to orient others. The other commonly cited uses were to enable or support faculty collaboration ($n = 10$), to review connections across the programs ($n = 10$), and to identify their students’ prior knowledge ($n = 8$). Other less commonly cited reasons included connecting experiences across courses for students ($n = 4$), getting a quick overview of the course ($n = 3$), understanding the impacts of course changes on their students or the program ($n = 3$), and communicating with external partners ($n = 1$). Alternatively, the reasons participants cited for not using fact sheets were a lack of awareness about the fact sheets ($n = 3$), already knowing the information on the fact sheets ($n = 1$), and using alternative sources to get the information ($n = 1$).

Participants described several strengths related to the visual design of the fact sheets, citing things like how well they were organized ($n = 4$), their aesthetic appeal ($n = 4$), and their “viewability” ($n = 2$). Several participants discussed how quick and easy they were to review without reading through much information. For example, Participant K, an NTE faculty member with prior involvement with the redesign, stated that “when looking at the course [fact] sheet and referring to it as somebody who was trying to learn more about the course, it let me know more of the big picture about what I really needed to emphasize and also meet.” Similarly, Participant E, an NTE faculty member with no prior involvement, shared that for them the strength was in the “viewability of it,” stating that they “didn't have to read a lot to understand a lot.” Another theme related to their consistent design and use across courses, citing strengths related to their increased adoption among the faculty ($n = 3$) and their consistent design ($n = 1$). Multiple participants emphasized the need for faculty to use them more for their true advantages to be seen. For example, Participant I, a T/TT faculty member with prior involvement in the redesign, argued that “they're only going to get better over time the more familiar we are with them and the more we understand the PLOs and how they all work together.” Participant G, an NTE faculty member who had also been involved in the redesign, extended this idea by talking about the strength of expanding their usage because “they all look alike so if you look at one, you know where to find the information.”

However, not everyone found the visual design effective. For example, Participant J, an NTE faculty member who used the fact sheets to orient new adjunct faculty, stated that “although it's pretty cool because of the visual, it took the new people a while to pick up those bubbles and figure it out. It was at first really confusing and it

was like ‘I don't understand what this means.’” In addition to this confusion, three participants cited a desire to see more details about the connections to other courses as an area for improvement. For example, Participant E, an NTE faculty member, shared that since they had no prior involvement with the redesign, they would have liked to have the entire string of courses in their program all in one PDF, stating, “I don't have time to click around and find things, but if it's easily accessible to me, I will gladly look at it.” This quote suggests that more work could be done to support busy faculty in gaining access to the fact sheets when and how they want to get them to support their work.

Outcomes of Using Course Fact Sheets

The second and third research questions guiding this study explored how and to what extent *KCU* and *SoTA* differed for those who used course fact sheets and how those differences compared to participating in an online orientation module. As with the first research question, I began this exploration with a quantitative analysis of the survey data.

Orientation Participation and Efficacy

To aid this analysis, I first identified participation in the online orientation module as a binary variable coded as orientation participant or not. Participation included any response categories for that question on the evaluation survey (i.e., anyone who said they completed at least one section of the module). Thirty-nine faculty (31.97%) participated in the online orientation module. These participants included four T/TT, 25 NTE, and 10 Adjunct faculty. Twenty-two participants (56.41%) had previously been involved in the redesign, and 20 (51.28%) held a leadership role.

Before comparing the differences between participating in the orientation module with using course fact sheets, I first examined the efficacy of the orientation module. This

was important to establish that the quality of the module did not impact the findings (i.e., if participants found the module ineffective, it might have an artificially low effect on KCU and SoTA compared to a more effectively designed module). To measure this efficacy, I summed the items for each ARCS dimension from the RIMMS measure on the module evaluation survey (i.e., attention, relevance, confidence, and satisfaction). Total scores for each 3-item composite score ranged from 3 to 15, with higher scores indicating greater attention, relevance, confidence, and satisfaction. Participants' attention scores averaged 13.24 ($SD = 1.55$); relevance scores averaged 13.67 ($SD = 1.43$); confidence scores averaged 13.62 ($SD = 1.94$); and satisfaction scores averaged 12.76 ($SD = 2.05$). These high mean scores suggest that participants found the orientation effective.

Therefore, I proceeded with the analysis to compare online orientation participation with fact sheet use.

Differences in Knowledge, Confidence, and Usefulness

Prior to conducting data analysis, I summed the ratings for the 12 concepts or strategies from the KCU measure to create composite scores for each construct (i.e., perceived knowledge, perceived confidence, and perceived usefulness). Total scores for the 12-item composite scores ranged from 12 to 60, with higher scores indicating higher knowledge, confidence, and perceived usefulness. Knowledge composite scores averaged 44.38 ($SD = 11.60$), confidence composite scores averaged 43.99 ($SD = 11.09$), and perceived usefulness composite scores averaged 47.84 ($SD = 9.61$). These composite scores indicated that faculty participants had fairly consistent perceived knowledge and confidence and relatively higher perceived usefulness of the implementation fidelity practices.

Multivariate Analysis of Variance. As mentioned in Chapter 3, to examine the difference in KCU based on fact sheet use and orientation participation, I conducted a 2 X 2 factorial multivariate analysis of variance (MANOVA; $\alpha = 0.05$) with use of fact sheets and participation in the orientation as the factors and the composite knowledge, confidence, usefulness scores (i.e., *KCU*) as the dependent variables. While KCU were technically ordinal Likert-scale type variables, I treated the composite scores across all items as continuous variables for the analysis as is consistent with previous research (e.g., Sullivan & Artino, 2013; Zumbo & Zimmerman, 1993). I calculated effect sizes using partial eta squared to determine the magnitude of the differences, where 0.01 were small, 0.06 were medium, and 0.14 were large (Cohen, 2013).

Assumptions. MANOVA tests have several assumptions related to the normality of the data and outliers (Mertler et al., 2021). To examine the assumption of homogeneity of covariance matrices, I conducted a Box's *M* test. The results were significant ($\chi^2(18) = 51.20, p < .001$), indicating that the assumption of homogeneity of variance-covariance was not met. I then checked for multivariate outliers by calculating Mahalanobis distances and comparing them to a χ^2 distribution. Outliers are generally defined as any Mahalanobis distance that exceeds 16.27 (i.e., the 0.999 quantile of a χ^2 distribution with 3 degrees of freedom) (Newton & Rudestam, 2012). I identified three observations as potential outliers, which I then investigated. None of the observations appeared to be from errors in the data collection; therefore, it did not make sense to remove them from the analysis. On the contrary, all three observations represented what Gottfredson and Joo (2013) call interesting outliers. They all came from participants who were adjunct faculty that did not use either of the study's interventions and had no prior involvement with the

redesign and therefore rated their perceived knowledge and confidence at or near the bottom of the rating scale. When dealing with interesting outliers such as these, Gottfredson and Joo (2013) recommend determining their impact on the results by running the analysis with and without the outliers included. Removing the outliers had minimal impact on the MANOVA results and no changes in significant findings. As such, I continued with the analysis with these outliers included; however, because of the presence of outliers and the significant finding from the Box's *M* test, I used the more robust Pillai's Trace test statistic to interpret the multivariate results, which is robust to violations of the MANOVA assumptions (Mertler et al., 2021).

Results. No significant effects were detected when examining users/nonusers as the first factor and orientation participation as the second factor ($p > .05$). However, I then conducted a second 2 X 2 factorial MANOVA with routine users/others as the first factor and participation in the orientation module remaining unchanged as the second factor. The means and standard deviations for each crosswise comparison for this analysis are presented in Table 13.

Table 13

Mean of KCU Constructs by Fact Sheet Use and Orientation Participation

Combination	<i>n</i>	Knowledge		Confidence		Usefulness	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Other/Non Participant	50	43.02	11.87	42.96	11.38	46.52	10.48
Routine User/Non Participant	18	46.11	9.51	45.56	9.26	49.06	7.21
Other/Participant	17	39.35	11.84	38.71	11.18	48.12	7.96
Routine User/Participant	13	54.15	5.87	53.00	5.70	50.92	10.60

MANOVA results for this second analysis revealed a significant main effect for routine users, Pillai's Trace = 0.09, $F(3, 92) = 3.09$, $p < .05$, with a medium effect size ($\eta_p^2 = 0.09$) and a significant interaction effect between routine users and orientation participation, Pillai's Trace = 0.08, $F(3, 92) = 2.83$, $p < .05$, with a medium effect size ($\eta_p^2 = 0.08$). These results indicate that there was a significant difference in the linear combination of knowledge, confidence, and perceived usefulness between routine fact sheet users and those who used fact sheets at the routine level in combination with the orientation module. The effect size was large enough to suggest that this intervention may have the potential to enhance faculty's understanding of KCU in a real-world setting.

To further examine the significant effects, I conducted follow-up univariate analysis of variance (ANOVA) tests for each KCU construct (see Table 14). To avoid inflating the Type I error rate, I made a Bonferroni correction to adjust the alpha level for each test to 0.0167 so that the combined alpha for the *set* of dependent variables did not exceed 0.05 (Mertler et al., 2021). Because each factor only included two levels, no additional post hoc tests were required. For perceived knowledge, ANOVA results showed a significant main effect for routine users, $F(1, 95) = 12.83$, $p < .001$, with a medium effect size ($\eta_p^2 = 0.12$), indicating there was a significant difference in perceived knowledge based on using course fact sheets at the routine level with an effect size large enough to suggest that using them may have the potential to enhance the faculty's perceived knowledge in a real-world setting. For perceived confidence, ANOVA results showed a significant main effect for routine users, $F(1, 94) = 12.45$, $p < .001$, with a medium effect size ($\eta_p^2 = 0.12$) and a significant interaction between routine users and orientation participation, $F(1, 94) = 5.50$, $p < .0167$, with a medium effect size ($\eta_p^2 =$

0.06). These results indicate a significant difference in perceived confidence between routine users who only used course facts and those who used the facts sheets in combination with the orientation module. As with perceived knowledge, the effect size was large enough to suggest that this intervention has the potential to enhance faculty's perceived confidence in a real-world setting. ANOVA results indicated no significant main effects for orientation participation on knowledge, confidence, or perceived usefulness ($p > .05$), indicating there were no significant differences in any KCU constructs based on only participating in the orientation. There were also no significant results for either fact sheet use or orientation participation on perceived usefulness ($p > .05$), indicating there were no significant differences in perceived usefulness based on either intervention.

Table 14

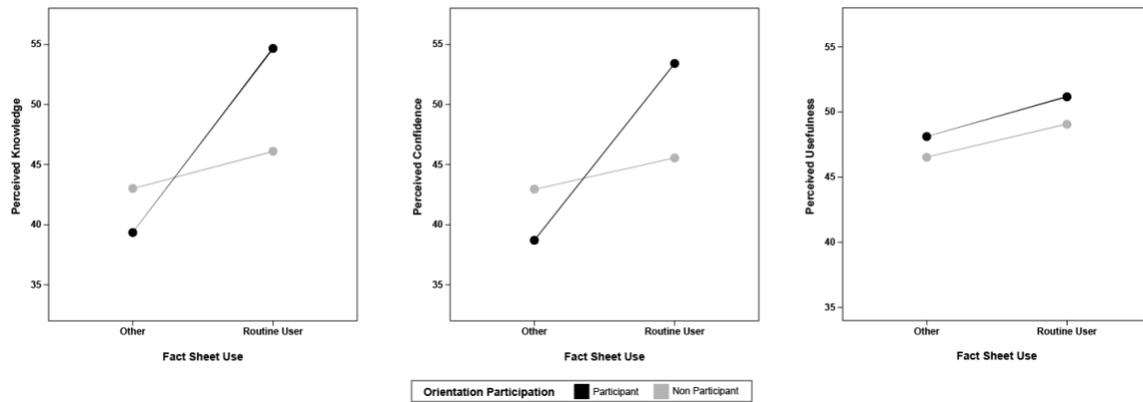
Univariate ANOVA Results for KCU Constructs

KCU Construct	Factors	Test statistics				Effect size
		df _m	df _e	F	p	η^2_p
Perceived Knowledge	Routine Users	1	95	12.83	< .001	0.12
	Orientation Participants	1	95	0.77	0.383	0.01
	Routine Users * Participants	1	95	5.50	0.021	0.05
Perceived Confidence	Routine Users	1	94	12.45	< .001	0.12
	Orientation Participants	1	94	0.44	0.507	0.01
	Routine Users * Participants	1	94	5.98	0.016	0.06
Perceived Usefulness	Routine Users	1	94	1.47	0.228	0.02
	Orientation Participants	1	94	0.62	0.433	0.01
	Routine Users * Participants	1	94	0.004	0.951	< .01

To aid in interpreting the significant interaction and main effects, I then created interaction plots for each univariate analysis (see Figure 5). When interaction effects are significant, the ability to interpret the main effects is limited (Mertler et al., 2021). However, as evidenced in the interaction plots, all routine users showed increases in their knowledge, confidence, and perceived usefulness, with the most significant gains in knowledge and confidence from those who also participated in the orientation module. While the interaction plots also show increases in knowledge, confidence, and perceived usefulness based on orientation participation, none of these effects were significant. It is also clear from the interaction plot for perceived usefulness that the mean score for nonusers and non participants was already higher than for knowledge or confidence, suggesting that the mean growth was not large enough to show significance.

Figure 5

Interaction Plots for KCU Constructs



Perceptions of KCU. I then turned to the qualitative data from the follow-up interviews to help explain these quantitative results. Analyzing themes from the *reasons fact sheets support implementation fidelity* structural code from those interviews helped

explain how using fact sheets related to participants' increased KCU for implementation fidelity practices. To identify themes, I collected the six sub-codes created through the initial coding process described in Chapter 3 related to this structural code into one list. By reviewing the sub-codes and rereading passages from the interview transcripts, I identified two broad themes which encompassed the six sub-codes.

The first theme was defined by the faculty's increased awareness of their course's positionality and included the sub-codes for *awareness of the positionality of the course*, *active students' prior knowledge*, and *reduce redundancies*. Within this theme, faculty participants described how the fact sheets helped them understand and become aware of how their course related to other courses students were taking either before, during, or after their course. For example, Participant L, an Adjunct faculty member, described how they used fact sheets a lot at first to look at "the objectives, the overview, and where [my course] fit into the term so that I could look to see what students were doing before they got to me and what they were doing after they got to me." Several participants also described how this increased awareness helped them to activate their students' prior knowledge. For example, Participant H, an NTE faculty member, described how, despite their prior involvement with the redesign, using the fact sheets helped them to gain a better idea of what students had already done to determine "what kind of knowledge they are already coming in with," which they found valuable so that they could plan for "what can I do now." Participant E, a new NTE faculty member, echoed this sentiment, stating that the fact sheets helped them "activate a little bit of prior knowledge in my students because I know what classes they've taken," but went on to say that they are "still so new that it's not easily accessible information to me."

This increased knowledge of their courses' positionality also helped faculty to reduce redundancies across courses. For example, Participant I, a T/TT faculty member, described how they saw the fact sheets as an essential tool for making the student experience be "more connected and meaningful for students" by making more intentional connections across courses. This benefit of making connections for their students came up numerous times. For example, Participant D, an NTE faculty member, described how "it is nice if I can reach out to the other faculty members and we can coordinate if there are any large assignments due to make sure they're divided up in a way that's manageable for students if there are any overlaps." Several participants extended this idea by describing how they could use the fact sheet to explain to students where some overlap might be intentional to go deeper into concepts or evaluate them from a different lens. In this vein, Participant L, an adjunct faculty member, described how the fact sheets enabled them to tell students that the overlap was intentional because they were looking at it from a different lens. They described how they told their students: "you're looking at it from the instructional design lens, and then you're looking at it from the assessment lens, but the two go together." This quote suggests a deep level of connection between content across courses, as was the intention of the redesigned curricula.

The second theme that emerged from this analysis concerned the faculty's knowledge of components of the redesign and included the sub-codes for *knowledge of course focus*, *understanding the PLOs*, and *lends authority*. Related to this theme, participants described the benefit of course fact sheets in directly increasing their knowledge of the focus of the courses they were teaching and the PLOs that guided the redesign. For example, Participant I, a T/TT faculty member with prior involvement in

the redesign, underscored how the fact sheets help faculty focus on the PLOs to “really know what the big picture is” which “helps keep us on track when we start to stray.” This statement, and others like it, emphasized the value of this knowledge in keeping courses aligned to their intended purpose as part of the redesign, a key component of fidelity.

Differences in Sense of Teaching Agency

I then turned to sense of teaching agency, first analyzing the differences quantitatively. As with the KCU constructs, prior to data analysis for SoTA, I calculated a composite SoTA score. As mentioned in Chapter 3, since SoTA was a newly-developed measure for this study with no assumptions about the number of measured constructs, I conducted an EFA to consider the latent factors present within the eight items. Before the analysis, I completed a series of assumption checks on the data. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was 0.84, above the commonly recommended value of 0.6 (Mertler et al., 2021), and Bartlett's test of Sphericity was significant; $\chi^2(21) = 314.97, p < .001$. Item six (i.e., “The outcomes of my teaching generally surprise me”) had a communality below the recommended threshold of 0.3.

The results of a Parallel Analysis suggested that a one-factor solution was most appropriate. The final solution included seven items and explained 48.40% of the total variance with an eigenvalue of 3.39. The factor loadings were interpreted by taking the absolute value of each loading and implementing the criterion suggested by Comrey and Lee (2013). Values greater than 0.71 were considered excellent, values between 0.63 and 0.71 were very good, values between 0.55 and 0.63 were good, values between 0.45 and 0.55 were fair, and values between 0.32 and 0.45 were poor. Tabachnick and Fidell (2013) also recommend that 0.32 should be the minimum threshold used to identify

significant factor loadings. Items 1, 5, and 8 had excellent loads; 2, 3, and 7 had very good loadings; and item 4 had fair loading; see Table 15.

Table 15

SoTA Factor Loadings

Scale Items	Factor Loading
1 I can decide how I teach the content of my classes	0.81
2 While I am teaching, I feel like I am facilitating someone else's class*	0.63
3 I have to teach my classes the way someone else decided*	0.68
4 I am responsible for everything that results from how I teach my classes	0.51
5 I plan how I teach my classes from the very beginning to the very end	0.76
6 The outcomes of my teaching generally surprise me*	0.15
7 I do not have a choice about how I teach the content in my classes*	0.69
8 If I want, I can choose to teach my classes how I prefer	0.75

Note: * = items scored in reverse

According to Costello and Osborne (2005), inspecting the number of strong loadings for each factor is a good way to analyze the validity of the factor structure. All items had significant loadings ($> .32$), which is indicative of a strong and solid factor (Costello & Osborne, 2005). Therefore, I summed the ratings from the seven items (after reversing the negatively worded items) to create a single SoTA composite score. Total scores of the 7-item composite score ranged from 7 to 35, with higher scores indicating a greater sense of teaching agency. SoTA composite scores averaged 26.48 ($SD = 5.41$).

Analysis of Variance. I then compared mean differences in the SoTA construct based on fact sheet use and orientation participation using a 2 X 2 factorial univariate analysis of variance (ANOVA; $\alpha = 0.05$) with the same factors for fact sheet use and orientation participation as the MANOVA test above and the SoTA composite score as the dependent variables. As with KCU, the SoTA composite score was treated as a continuous variable for analysis.

Assumptions. As with the MANOVA, several assumptions are required for ANOVA tests related to normality and outliers (Mertler et al., 2021). To examine the assumption of homogeneity of variance, I conducted a Levene's test ($\alpha = 0.05$). The results were not significant ($F(3, 97) = 1.91, p > .05$), indicating that the assumption of homogeneity of variance was met. I then calculated Studentized residuals and plotted them against the observed numbers to identify influential points. An observation with a Studentized residual greater than 3.17 in absolute value (i.e., the 0.999 quantile of a t distribution with 100 degrees of freedom) is generally considered to have a significant influence on the results of the model (Pituch & Stevens, 2015). No observations had Studentized residuals greater than 3.17.

Results. As with KCU, effects for fact sheet use on SoTA were only significant for users above IVA (i.e., routine users). The means and standard deviations for each crosswise comparison for this analysis are presented in Table 16.

Table 16*Mean of SoTA Construct by Fact Sheet Use and Orientation Participation*

Combination	<i>n</i>	<i>M</i>	<i>SD</i>
Other : Non Participant	52	24.79	5.69
Routine User : Non Participant	18	27.83	4.50
Other : Participant	18	27.61	3.76
Routine User : Participant	13	29.62	5.27

ANOVA results indicated there was a significant main effect for fact sheet use on SoTA, $F(1, 97) = 4.65, p < .05$ with a medium effect size $\eta^2_p = 0.05$, indicating there was a significant difference in sense of teaching agency based on using course fact sheets at the routine level with an effect size large enough to be meaningful in a real-world context. There were no significant main effects for orientation participation or interaction effects between routine users and orientation participation ($p > .05$). See Table 17.

Table 17*Univariate ANOVA Results for SoTA Construct*

Factors	Test statistics				Effect size
	df_M	df_E	<i>F</i>	<i>p</i>	η^2_p
Routine Users	1	97	4.65	0.034	0.05
Orientation Participation	1	97	3.87	0.052	0.04
Routine Users * Participation	1	97	0.20	0.658	< .01

I then calculated *t*-tests between each pair of measurements to examine further the differences among mean scores for the different crosswise comparisons ($\alpha = 0.05$; see

Table 16). I used the Tukey HSD p-value adjustment to correct for the effect of multiple comparisons on the family-wise error rate (Mertler et al., 2021). The mean SoTA composite score for routine users ($M = 28.58$, $SD = 4.84$) was significantly higher than for others ($M = 25.51$, $SD = 5.38$), $p < .01$.

Perceptions of SoTA. As with KCU, I followed the quantitative analysis with an analysis of the qualitative data from the follow-up interviews to help explain the results. The initial coding of those interviews following the process described in Chapter 3 yielded two unique sub-codes within the *reasons fact sheets support agency* structural code: *recognizing guardrails* and *affirmed the value of agency*. Of these two sub-codes, *recognizing guardrails* was by far the most discussed reason faculty identified. As Participant F, an NTE faculty member with no prior involvement in the redesign, succinctly put it, the course fact sheet “really highlights what you're committed to versus where, as an instructor, I can do what I feel is best for my students.” Related to this idea of highlighting what they were committed to, most participants focused on identifying which assessments in the course were the “common assessments,” a key paradigm related to the guardrails of the redesign. However, Participant I, a T/TT faculty member, extended this idea of guardrails further when describing how the fact sheet helped them shift their mindsight about the kinds of restraints placed on their teaching from thinking, “I don’t believe in these things, so I’m not going to do it at all” to thinking “if you don't do that at all, when they get to the next space, then they're not gonna be prepared for that mastery level, or the applied level, because I haven't provided the reinforcement opportunity.” This discussion is a clear example of how recognizing the guardrails helped

some participants recognize the value and purpose of their agency in deciding how to teach their courses.

However, not all faculty interviewed saw any connections between using the fact sheets and their sense of teaching agency when asked whether using them impacted their sense of agency. Several participants initially responded with statements like this one from Participant B, an adjunct faculty member, saying that they “had not even considered the fact sheet leading to any sort of additional agency” and went on to say that “with more time to think about it, I could speculate how [fact sheets] might impact [agency], but I have not to this point.” As such, it may be that the course fact sheets had a value that the participants were not consciously aware of or had not previously considered.

However, it may also be that some faculty may not have considered the idea of agency in their teaching at all prior to being asked about it in the interview. That is, agency may not have been something they were either concerned with or felt they had any ability to influence.

In addition to these connections between fact sheet use and sense of agency identified in response to being asked if they saw an explicit connection, I also asked participants more broadly how they felt about the concept of agency as a balance between academic freedom and the guardrails of the redesign. In analyzing the interview transcripts related to this question, I created an additional 25 sub-codes in my initial coding that did not align with any of the pre-identified structural codes, most of which related to other factors participants perceived as impacting their sense of teaching agency. While these sub-codes did not directly address the research question I sought to answer, they nonetheless spoke to broader trends within the faculty participants’ experiences that

might inform future iterations of the course fact sheets or other interventions targeting the faculty's sense of teaching agency. Therefore, I analyzed these sub-codes to identify themes as I did within the structural codes. To do so, I first gathered the 25 sub-codes into a single list. I then reviewed the codes and re-read passages from the transcripts to identify two overarching themes encapsulating these remaining sub-codes.

The first theme focused on faculty discussions about their desire to understand the why behind decisions that impacted their agency. For example, Participant F, an NTE faculty member, stated, “like anything with education, if you don't know why you're doing it, sometimes you don't do it the way you're supposed to do it.” Participant E, an NTE faculty member with no prior involvement in the redesign, extended this idea to agency by stating how they wanted to know and understand the content they were teaching, but also wanted “to believe in it.” That, to them, was agency. However, there also appears to be more need to expand this knowledge of why, particularly among Adjunct faculty. Several of the Adjuncts interviewed made comments similar to this one from Participant A, in which they stated how “being an [Adjunct] is hard because I do things sometimes—I'm told, and I do it—but I don't understand why and I don't understand the bigger picture.” As such, in addition to the factual knowledge about what guardrails existed, there was also a desire for knowledge about *why* those guardrails existed, something which was not an explicit part of the design of the fact sheets for this study.

The other theme that emerged from discussions of agency related to finding the right balance between providing a consistent experience across students and adapting to individual students' needs. Several participants described agency in these terms. For

example, Participant I, a T/TT faculty member, described how they were fine with the boundaries because they know students need to learn the things that states identified, but also felt they could respond to the needs of their students by choosing kinds of activities to meet that requirement. Similarly, Participant L, an Adjunct faculty member, touched on this idea in describing how they saw agency manifested in how each section of their course differed because they adapted it to each group of students' needs. However, there was also an undercurrent within this theme among some faculty who described being afraid to change anything for fear of impacting the students' experience in unknown ways. For example, Participant H, despite being an NTE faculty member with prior involvement in the redesign, described how "I don't even go in there and implement any kind of extra reading or anything like that because I feel like I don't want to step on anyone's toes, so I really just follow whatever's there." While comments like this were in the minority, they speak to a broader trend among some faculty who appeared to have a very restricted sense of teaching agency. However, the data from this study cannot fully answer why that was the case. For Participant H, they went on to say that they are "a rule follower," so they "always want to check with someone else" to make sure changes can happen. While this suggests that sense of teaching agency may have been a more intrinsic characteristic for Participant H, it is unclear whether that would be true for all participants who felt less agency in their teaching or if Participant H's feelings ultimately stemmed from broader environmental factors they did not identify. As such, limited conclusions can be drawn about why some faculty felt a low sense of teaching agency in this study; however, the fact that some clearly did have a low sense of teaching agency

suggests that perhaps a more explicit discussion of agency than was afforded from the use of fact sheets would be needed to increase some faculty's sense of teaching agency.

Summary of Findings

In summary, the quantitative and qualitative data suggest that a wide range of faculty used course fact sheets to support the onboarding of new faculty, improve their knowledge of what their students should have already learned, and collaborate with their peers, among other uses. While there was some room for improvement in the format and information included within fact sheets, most faculty found them highly usable regardless of their role or level of involvement with the college or redesign. Many faculty reacted positively to their simple, visual design to quickly see relevant information about their courses, which translated into significant differences in the outcomes measured in this study. The quantitative data showed that faculty who used the fact sheets had significantly higher knowledge and confidence of implementation fidelity practices and a significantly higher sense of teaching agency. The qualitative data suggest that these differences were largely due to an increased awareness of the positionality of the course and the components of the redesign that constituted the guardrails of agency (e.g., PLOs and Common Assessments) that came from using the course fact sheets. However, the qualitative data also suggest that the fact sheets did not address all aspects of agency which impacted the faculty's experiences. These included a desire to understand the why behind decisions that impacted their agency and to find the right balance between providing a consistent experience across students and adapting to individual students' needs. This finding is consistent with the fact that the effect size of the difference in sense of teaching agency for those who used fact sheets was smaller than it was for knowledge

and confidence of implementation fidelity practices, suggesting that the fact sheets were less effective overall in impacting faculty agency than implementation fidelity practices.

While perceived usefulness did not show a significant difference among those who used fact sheets, the fact that perceived usefulness had a higher average score for all faculty suggests that faculty perceived the implementation fidelity practices as useful regardless of whether they used fact sheets. Furthermore, the lack of a significant difference in any of the outcome variables measured based on participating in the orientation module suggests that the fact sheets were more effective than participating in the orientation module in improving the faculty's implementation fidelity practices and agency. I conclude this dissertation in the next chapter with a discussion of these findings in relation to existing literature and a discussion of limitations and implications for future research and practice.

CHAPTER 5

DISCUSSION

The purpose of this study was to improve the implementation of a large-scale redesign at Arizona State University. In doing so, I aimed to find a balance between promoting implementation fidelity and supporting faculty agency. However, I faced a critical challenge in scaling this need across hundreds of faculty, a majority of whom were part-time adjuncts or newly hired faculty with no prior knowledge of the redesigned program curricula. While this challenge was not unique (e.g., Annala & Mäkinen, 2017; Bone & Ross, 2019), I approached it in a novel way by creating course fact sheets to solve what was fundamentally an information transfer challenge. As such, I sought to address three guiding research questions aimed at exploring (1) how faculty used the course fact sheets, (2) how that use related to differences in outcomes related to implementation fidelity and sense of teaching agency, and (3) how those differences compared to an online orientation module as a more traditional form of professional development. In this chapter, I discuss how the results of this investigation addressed these questions and relate to existing literature. I then discuss the limitations and implications of this study.

Outcomes Related to Fact Sheet Use and Usability

The first research question guiding this study asked: how and to what extent do faculty use the course fact sheets and find them usable? On this, the results were clear and positive. A majority of the faculty used the course fact sheets and, on average, found them more usable than 68% of products or tools assessed using the SUS measure. In addition, they used them for a wide variety of purposes—some I anticipated, some I did

not. The main uses faculty reported were to onboard new faculty and learn about a course they were teaching for the first time, which aligned with the main challenges I sought to address with the fact sheets. However, another main use was as a tool for collaboration and communication with other faculty, which I had not intended or predicted. There is a wealth of literature on the value of faculty collaboration in improving curriculum coherence (e.g., Annala & Mäkinen, 2017; Salmona & Smart, 2017; Uchiyama & Radin, 2009). As such, while it was unintentional, it may be that some of the value faculty saw in using the fact sheets came from increased collaboration with others that resulted from their use as a tool to facilitate communication. More research is warranted to examine this use and its impact, but the fact that so many faculty discussed their use for facilitating collaboration means it cannot be discounted as a potential value of course fact sheets for this purpose.

The reasons faculty used the fact sheets and found them usable are also consistent with the relevant literature on adult learning theory (Knowles, 1985; Knowles et al., 2020). In particular, the faculty's reported uses for fact sheets followed a self-directed approach to learning. For example, faculty described using fact sheets to identify their students' prior knowledge so they could improve their teaching, which relates to the principles of *readiness to learn*, *orientation to learning*, and *motivation* from Andragogy (Knowles et al., 2020). On the flip side, faculty who did not use the course fact sheets talked about feeling like they already knew the information or had alternative sources for that information, which is also consistent with the principles of *the need to know* and *the role of the learners' experiences* from Andragogy (Knowles et al., 2020), and suggests that one way to increase the use of course fact sheets might be to address these concerns

from adult learning theory. Faculty in this study also discussed the fact sheets' visual design, viewability, and consistency as strengths. While this is not a part of Andragogy, it is consistent with the literature on user experience design and usability (Davis, 1989; Norman, 2013; Osterwalder et al., 2014).

Outcomes Related to Differences in Constructs Based on Fact Sheet Use

The second research question guiding this study asked: how and to what extent does the faculty's (a) knowledge, confidence, and perceived usefulness of implementation fidelity practices (*KCU*) and (b) sense of teaching agency (*SoTA*) significantly differ based on their use of course fact sheets? Here, too, the results showed strong indications for the value of fact sheets. Those who used them had higher average scores across all four of these constructs (i.e., perceived knowledge, perceived confidence, perceived usefulness, and sense of teaching agency), all of which were significant except for perceived usefulness, which was high for everyone. As a novel approach to faculty development, to my knowledge, there is no previous literature on course fact sheets with which to compare this result. However, the reasons faculty reported for these differences are consistent with my intentions for the fact sheets based on a theoretical understanding of fidelity and agency.

As discussed in Chapter 2, implementation fidelity was defined in this study following Carroll et al.'s (2007) framework, which focused on adherence to the intentions of the design. In this study, that meant adhering to the constructive alignment of courses to the intended PLOs as conceptualized at increasing levels of complexity across the program's courses within curriculum maps (Biggs & Tang, 2011; Veltri et al., 2011). Faculty discussed the value of course fact sheets in increasing their knowledge of

components of the redesign and where their courses fit into the bigger picture of what came before, during, and after their course in the curriculum maps. Both of these points are consistent with how I defined implementation fidelity.

Alternatively, the differences in faculty agency were more varied and nuanced. As discussed in chapter 2, agency was defined in this study based on an understanding of Bourdieu's (1986) theory of social capital and Bernstein's (2000) lifetime of work devoted to understanding knowledge, power, and control within teaching-learning contexts. More specifically, I aimed to increase the faculty's knowledge of the distribution and recontextualization rules from Bernstein's (2000) Pedagogic Device in the form of "guardrails" to help the faculty identify what they could change as part of the evaluation rules. While this was an implied focus on agency (rather than an explicit one), recognizing the guardrails is something the faculty discussed as a value of using the course fact sheets. However, there were also several confounding factors outside the scope of the fact sheets the faculty described as influencing their sense of teaching agency, including a desire to understand why the guardrails existed and to find the right balance between providing a consistent experience for students and meeting different students' needs. This suggests that the implicit approach of the fact sheets may not be enough to address all the factors which influence the faculty's agency over the evaluation rules for their courses.

In addition, there was no apparent connection within the data between agency and social capital. For example, there was no consistency in who described higher and lower senses of teaching agency between adjunct and NTE faculty. One of the faculty members interviewed, who theoretically should have had high social capital based on their role as

an NTE faculty member, their years of experience, and their prior involvement with the redesign, described feeling some of the most significant constraints on their sense of agency. At the same time, several relatively new adjunct faculty members, who theoretically should have had low social capital, described high levels of agency in determining how their courses were taught. Not enough T/TT faculty were interviewed to identify any trends in their sense of teaching agency. While Bourdieu's (1986) theory includes other factors that influence social capital, including someone's habitus (i.e., prior experience), it is unclear from the data whether that influenced different faculty members' sense of teaching agency in this study.

Outcomes Related to Other Forms of Professional Development

The third research question asked: how do the observed differences from using course fact sheets compare to an online orientation module? This question aimed to explore the potential value of course fact sheets in relation to more traditional forms of faculty development. As described in Chapter 2, faculty development initiatives have often relied most heavily on formal training programs (Phuong et al., 2018). However, the efficacy of these types of training has been questioned (Graham et al., 2013; Phuong et al., 2018). As such, I aimed to see how the course fact sheets, as a more novel self-directed approach to faculty development, compared to an online orientation module, a more traditional form of formal training program.

Related to this inquiry, the results support Phuong et al. (2018) and Graham et al.'s (2013) contention that self-directed learning is more effective than formal training programs, at least for the curriculum implementation purpose of this study. While the gains for those who used fact sheets were significant on their own for three out of four of

the measured constructs (i.e., perceived knowledge, perceived confidence, and sense of teaching agency), none of the gains for those who participated in the orientation module were significant. Furthermore, while both the orientation module and course fact sheets were promoted simultaneously using the same methods, more faculty used the course fact sheets ($n = 62$) than participated in the orientation ($n = 39$), suggesting that the fact sheets were not only more effective at producing gains for those who used them but were also more effective at reaching a broader audience.

Limitations

As with any research, this study had a few limitations that are important to note. First and foremost was my lack of direct access to all faculty, particularly adjunct faculty, in the sample frame because of my role and position as a staff member within the study context. While my role as an insider within the study's context provided me with a high level of access to faculty in leadership roles across the college, I had no involvement or participation in the process of adjunct onboarding and training where critical messaging about the redesign, course fact sheets, and the orientation module were shared. I relied on bulk emailing and asking other faculty responsible for these tasks to share information about the study's interventions and data collection instruments on my behalf. While it is clear that this was at least moderately successful given the high response rate and overall majority of participants using the course fact sheets, it also may be one reason why adjunct faculty, in particular, were less likely to have used the course fact sheets or participated in the orientation module.

The other primary limitation I faced was navigating the political tensions around agency within the study's context. There was a strong emphasis among the faculty and

administrative leadership of the college on implementation fidelity. As an action research study, I aimed to meet the needs of the setting within which I conducted my study. The design of the course fact sheet to emphasize knowledge and confidence to improve adherence reflects that focus. However, as a researcher-practitioner within the context, I also felt it did a disservice to the academic literature and the feelings of many faculty to ignore the importance of agency as a counterbalance to fidelity. From the beginning of my study, I tried to find ways to insert agency into the conversation and intervention strategies despite a lack of explicit desire for any focus on it among some in leadership roles in my context. As such, it was often a struggle to emphasize agency in the intervention strategies and as part of the data collection without overstepping leadership's desires. Had I had more freedom, the focus of the fact sheets and orientation module would have been more balanced toward explicitly addressing implementation fidelity and agency equally. Even though my chosen approach showed a significant difference in sense of teaching agency for those who used the fact sheets, the balance between these concepts was never equal in the design and execution of this study, and it would be interesting to see how the outcomes might differ had they been more balanced.

Implications for Practice

The results of this study have several potential implications for practice. One of the primary takeaways is the potential value of course fact sheets as a tool for faculty professional development. Not only did the results show that the fact sheets were effective and usable, but they also suggested that they were more effective than the online orientation. While more work should be done to examine the efficacy of fact sheets for other contexts and uses, this result aligns with Phuong et al.'s (2018) finding that self-

directed learning opportunities better align with faculty needs as adult learners. It also strongly suggests that fact sheets could be a valuable addition to the arsenal of faculty development strategies employed by teaching and learning centers, offices of digital learning, and others with responsibilities for faculty development. I have created a one-page handout—a fact sheet about fact sheets—to aid in the dissemination of this result to practitioners in these spaces (see Appendix G). However, their individualized nature also meant the fact sheets took a lot of time to create and maintain. As such, their use should be carefully considered alongside more traditional forms of formal training used for faculty development (e.g., orientation modules, workshops) to determine when their value might have the most impact. Such a determination should be based on the affordances of different formats. For example, the results of this study suggest that the fact sheets were highly effective in promoting implementation fidelity for a large-scale redesign but did not promote faculty agency as fully. While they may have been a good start, there were factors influencing the faculty’s sense of teaching agency that were not addressed in the fact sheets. As such, if we care about promoting faculty agency in higher education, then there may be other tools or strategies that are more effective.

It is worth noting, however, that we cannot take for granted that all institutions and contexts—including the one in this study—explicitly aim to promote faculty agency. Over time, academic freedom and faculty agency have eroded as institutions hire more adjunct faculty to save costs and seek to exert more control over curricula to maintain quality across this new part-time workforce (Annala et al., 2021; Kezar, 2018). However, research also suggests that agency has an impact on faculty approaches to teaching (Trigwell & Prosser, 2004), creativity (Knight, 2001), and satisfaction when adopting

change (Buller, 2014). In this study, while they disagreed on a single definition of agency, all the faculty interviewed valued the concept in their practice as a teacher. As such, another implication for practice is the need to identify more ways to support and promote faculty agency in productive ways, even among part-time, adjunct faculty.

Implications for Future Research

In addition to these implications for practice, there are, of course, several implications for future research based on the results of this study. Primarily, there is a need to investigate the multitudinous potential uses of course fact sheets in various contexts and for various purposes. This study represented one possible use of this new approach to faculty development and provided enough evidence to suggest they have value for this use. However, more research is warranted to see if their efficacy would hold across multiple contexts and institutions. Similarly, fact sheets were used for one particular use case in this study (i.e., to support the implementation of a large-scale redesign based on a constructive alignment approach). More research is warranted to examine their efficacy for different use cases. Would there be differences in outcomes on a smaller scale? For a program that did not follow a constructive alignment approach? For a program that is already well established? These and many more are tantalizing questions to fully explore the potential of fact sheets and understand when and how they should be used to be most effective in enhancing the quality of teaching and learning.

There is also another intriguing finding from this study related to the fact sheets that warrants further investigation. In this study, there was a strong positive correlation between the use of fact sheets and levels of support for the redesign. However, as discussed in chapter 4, the data collected for this study did not allow me to determine the

causality of this relationship. If using course fact sheets increases the levels of support for the redesign, that suggests another value of course fact sheets for anyone implementing a redesigned curriculum. Change researchers have discussed the challenges associated with change management in higher education institutions, resulting from their unique structure as distributed organizations (Buller, 2014; Kezar, 2018). Increasing faculty buy-in on large-scale change initiatives could provide tremendous value to those championing that change. As such, it would be valuable to explore this correlation between fact sheet use and levels of support to identify the causality of the relationship for future practice.

Finally, another substantial avenue for future research relates to understanding faculty agency. The results of this study suggested that numerous factors influence the faculty's sense of teaching agency in positive and negative ways. However, it was not my primary purpose or intention with this study to examine those factors in depth to understand how agency is manifested and negotiated in the context of teaching and learning interactions in higher education. Yet, so many of my participants were interested in sharing their thoughts and opinions regarding their sense of teaching agency, suggesting that this would be a valuable investigation to pursue. Future research is warranted to understand faculty agency more deeply and, ultimately, determine strategies that might nudge that agency in productive ways. One promising direction to approach this investigation would be to conduct in-depth interviews or focus groups with faculty members with varying levels of experience and social capital. Using in-depth qualitative methods would provide an opportunity to explore their experiences, attitudes, and beliefs regarding agency in teaching and learning interactions. Additionally, future research could expand on the Sense of Teaching Agency measure developed for this study to

investigate the impact of various institutional policies and practices on the faculty's sense of teaching agency. By gaining a deeper understanding of faculty agency, researchers could develop evidence-based interventions to support faculty members' professional development and enhance their teaching effectiveness, ultimately benefiting students' learning outcomes.

Conclusion

In the end, I accomplished most of what I sought to do with this action research study. The course fact sheets proved to be an effective tool for faculty development that promoted the faculty's ability to implement the redesigned curriculum with fidelity and agency. As with any action research study, this was just one step on a long journey toward improving implementation. The results were promising and suggested several avenues for future action research cycles as I seek to continue to find ways to improve the faculty's knowledge, confidence, and perceived usefulness of implementation fidelity practices and their sense of teaching agency. In doing so, the goal was always to have a meaningful impact on the quality of the teaching and learning in my context, something which should be the goal of all higher education research as we, as a profession, continuously seek better learning experiences for our students.

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APPENDIX A
COURSE FACT SHEET EXAMPLE

COORDINATOR(S): Jill Oliver

CREDITS: 1

GEN ED:

DEV SHELL ID: DEV-X-TEL371-TeacherPrepUndergrad

THIS COURSE IS TAKEN BY STUDENTS IN 11 PROGRAM(S):

Elementary Education (BAE), Early Childhood Education (BAE), Elementary Multilingual Education (BAE), Special Education (BAE), Secondary Education (BAE), Physical Education (BAE), Secondary Education (English) (BAE), Secondary Education (Biological Sciences) (BAE), Secondary Education (History) (BAE), Secondary Education (Mathematics) (BAE), Special Education (Visual Impairment) (BAE)

INTENDED STUDENT JOURNEY MAP

Each bubble represents coverage of program-level outcomes (PLOs) for a given course within each domain. Review the full curriculum map online (at the link below).

<https://mltc.softr.app/curriculum-maps>

BUBBLE COLOR

Level of complexity of the domain coverage in the course

- I Introduced
- R Reinforced
- A Applied

BUBBLE SIZE

Relative emphasis of the domain in the course

- Low
- High

			Design & Decision Making (DDM)	Growth, Leadership, Advocacy, Ethics (GLAE)	Educator Scholar (ES)
Term 1	TEL 101	Prof Ed: Student Experience	C	I	I
Term 2	TEL 171	Prof Ed Series: Equity in Educ	C	I	I
Term 3	TEL 270	Prof Ed: Connect Rsrch to Prac	C	R	A
Term 4	TEL 271	Prof Ed: Inclusivity in Pract	C	R	A
	TEL 310	Instructional Thought & Action	C	R	
Term 5	TEL 318	Instr Thght & Actr: Assess Lrn	C	R	R
	TEL 370	Prof Ed: Building Prof Network	C	R	R
	TEL 317	Inst Thgt Act: Learn Envi Mgmt	C	A	
Term 6	TEL 371	Prof Ed: Educational Policies	C	R	R
Term 7	TEL 340	Families, Communities&Cultures	C	R	A
	TEL 470	Prof Ed: Career Growth&Planning	C	R	R
Term 8	TEL 471	Prof Ed: Principled Educator	C	A	A

*Professional experience details: <https://mltc.softr.app/professional-experience-ugrd>

THIS COURSE HAS 3 COMMON ASSESSMENTS

These assessments are used for program evaluation or ADE certification purposes and should therefore be "common" (i.e., required) in every version/section of the course (e.g., F2F, Hybrid, Online; different instructors)

1. Professional Advocacy Journal (GLAE2, GLAE4)
2. Self-Selected Professional Learning Project on Policy/Procedure/Regulation Analysis (ES1, ES2)
3. Professionalism (GLAE1, GLAE3, GLAE4, DDM5)

Learn more: <https://mltc.softr.app/course?recordid=rec8My9KpDsdDcQ>

PROGRAM LEARNING TRAJECTORY**PROGRAM-LEVEL OUTCOMES (PLOs)****EMPHASIZED IN THIS COURSE:**

DDM6: Habits of Mind (Introduced)
 GLAE1: Professional Growth Plan (Introduced, Reinforced)
 GLAE2: Advocacy (Reinforced, Introduced)
 GLAE3: Supporting Educational Contexts (Introduced)
 GLAE4: Personal & Professional Ethics (Introduced, Reinforced)
 GLAE5: Ethical Issues in Education (Introduced, Reinforced)
 ES1: Contextual Analysis (Reinforced)
 ES3: Reasoned Analysis (Introduced)

PLO details: <https://mltc.softr.app/d1-plos>

BEFORE THIS COURSE, STUDENTS SHOULD HAVE ALREADY LEARNED...

- An introduction to Principled Innovation & systemic issues within the American education system. [TEL 101]
- Professional practices that foster inclusivity for students with a range of learner assets, abilities, & needs. [TEL 271]
- About the potential intended & unintended consequences of choices & actions. [TEL 370]
- About the influence of education policies, procedures, & regulations on students, families, & communities. [TEL 370]
- Critical professional educator skills (e.g., collegial conversations, personal reflection, & professional networking). [TEL 370]

WITHIN THIS COURSE, STUDENTS SHOULD FOCUS ON LEARNING...

- How to analyze formal district, state, or federal education policy.
- Potential implications of policy for students, families, & community.
- How to engage in collegial and professional discourse and conversations.

AFTER THIS COURSE, STUDENTS WILL LEARN...

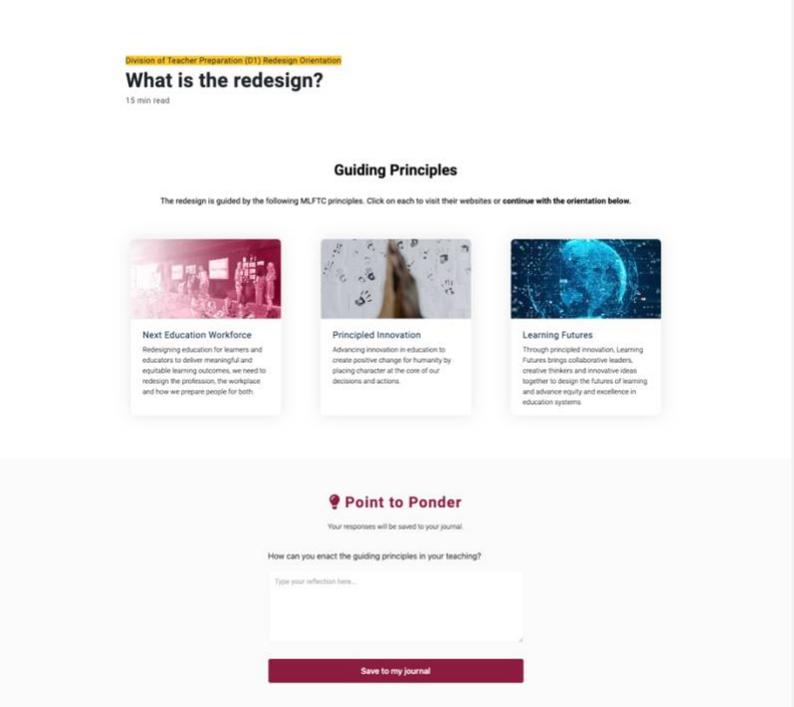
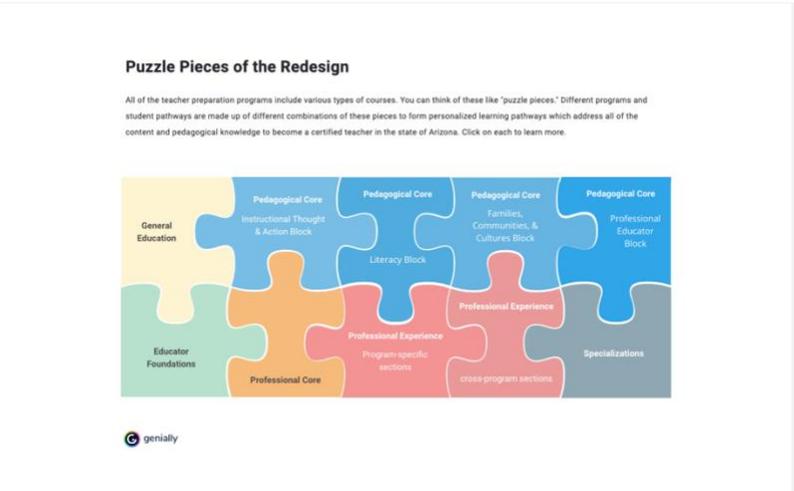
- To reflect on potential intended and unintended consequences of professional choices & actions. [TEL 470]
- Effective means for career planning and growth. [TEL 470]
- To expand professional skills critical for their development as an educator. [TEL 470]
- How to examine and reflect on the advocacy efforts of professional educational organizations. [TEL 471]
- How to develop a professional learning project, researching an advocacy organization. [TEL 471]

APPENDIX B

ORIENTATION MODULE OUTLINE AND SCREENSHOTS

Table B1

Page 1: What is the redesign?

Outline	Screenshot
<p>Guiding Principles [Links to MLFTC Website]</p> <ul style="list-style-type: none">• <i>Reflection:</i> <i>How can you enact the guiding principles in your teaching?</i>	
<p>Puzzle Pieces of the Redesign [Interactive Graphic]</p>	

Outline

Screenshot

Program-Level Outcomes (PLOs)

- Understanding the PLOs
 - PLO Domains
- Using the PLOs for Course Design
- Using the PLOs for Program Assessment
- *Reflection: How might you use the division PLOs to guide your teaching practices?*

Program-Level Outcomes (PLOs) Guiding the Redesign

The division of teacher preparation program-level outcomes are an articulation by the faculty of the intended knowledge, skills, and dispositions of the graduates of any teacher preparation program in the Mary Lou Fulton Teachers College. These outcomes reflect teacher preparation program standards such as INTASC, ILTE, CTE, and NCTE as well as the processes of Principled Instruction and the Division's Key Transformational Elements.

Understanding the PLOs

The division PLOs are divided into three domains at both the undergraduate and graduate levels. Both undergraduate and graduate programs share the Education Design and Decision-Making (EDM) and Professional, Growth Leadership, Advocacy, and Ethics (GLAE) domains. These domains and PLOs are intentionally mirrored across undergraduate and graduate programs as the knowledge, skills, and dispositions encompassed within these areas are related to initial teacher preparation. They are, therefore, the same regardless of the student's educational level.

The third domain is similar at both the undergraduate and graduate level but adjusted for the level of prior knowledge and expectation of graduates at the different levels. At the undergraduate level, the third domain is Educator Scholar (ES) and focuses on developing students as inquiry-minded problem solvers in their professional careers. At the graduate level, this domain is extended to Educator-Scholar and Integrative Knowledge (ESIK) with an increased expectation for students to complete action-research related to a problem of practice in their local context that integrates and builds on prior knowledge from interdisciplinary contexts.

Each of these domains includes a set of 4-6 cognitively complex program outcomes. Graduates should be able to demonstrate mastery of each outcome in its entirety by the time they graduate from any teacher preparation program at MLFTEC. Each complete outcome is broken down into indicators at three levels of progression towards mastery: Introduced, Reinforced, and Mastered. The number of progression indicators for each outcome varies based on the component knowledge or skills required for the given PLO.



PLO Domains

<p>EDM: Education Design and Decision-Making (AE)</p> <p>Graduates of our program design, implement and assess effective learning environments for all learners.</p> <p>Read more</p>	<p>GLAE: Professional Growth, Leadership, Advocacy, and Ethics (AE)</p> <p>Graduates of our program demonstrate responsibility for continuous improvement of themselves and the profession and advocating for all learners, families, and communities.</p> <p>Read more</p>	<p>ES: Educator Scholar (Undergraduate)</p> <p>Graduates of our program demonstrate the ability to carry out inquiry-based research by applying their knowledge and expertise to solve a problem of practice in their work, families, or communities.</p> <p>Read more</p>	<p>ESIK: Educator Scholar & Integrative Knowledge (Graduate)</p> <p>Graduates of our program demonstrate the ability to apply advanced knowledge and expertise to solve a problem of practice by creating new solutions and creating positive change for all learners, families, or communities.</p> <p>Read more</p>
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[View full list of PLOs](#)

Using the PLOs for Course Design

The PLOs have and should be used as a formative part of the program and course design and development process for the redesign. For example:

- To help write course-level student learning outcomes by extending the indicator to match the content of a course and/or further decomposing the indicator into more narrow component knowledge or skills addressed at the course level.
- To create a curriculum map that identifies how PLOs are scaffolded across the program's courses and where there might be gaps in coverage of key concepts from the PLOs.
- To identify or write performance criteria for course assessments.

Using the PLOs for Program Assessment

The PLOs are the cornerstone of program assessment for continuous improvement. Using the PLO progression indicators, we can "track" assignments and rubrics in the Canvas course shell that align to each outcome and then create a dashboard of real-time data on student performance across their outcome at different levels of progression. These data are invaluable for determining when students might be falling off track and need additional learning to support their progression of knowledge toward mastery of the cognitively complex PLOs.

When grading some assignments in your Canvas course, you may encounter an additional (augmented) rubric row which should be evaluated alongside the traditional graded rows to determine whether the student has met or not met the criteria of the PLO progression indicator. This will look something like the following graphic:

Criteria	Ratings				pts
	10 pts	8 pts	6 pts	0 pts	
CONCEPT This is an overview of learning content and reflects deep understanding of concepts and materials, terminology and concepts and used appropriately with reasoning.	Distinguished	Proficient	Competent	Unsatisfactory	10 pts
MULTIPLE-STEP, OPEN-ENDED INQUIRY OR INQUIRY USE ONEZ DOES NOT EXIST (FORMER CRITERIA) Apply research-based pedagogical practices and and theories in 2+ methods, strategies, high-leverage practices, technologies, and components to inform the design a component(s) of an instructional cycle.	Met	Met	Not Met	Not Met	--

© generally

Point to Ponder

Your response will be saved to your journal.

How might you use the division PLOs to guide your teaching practices?

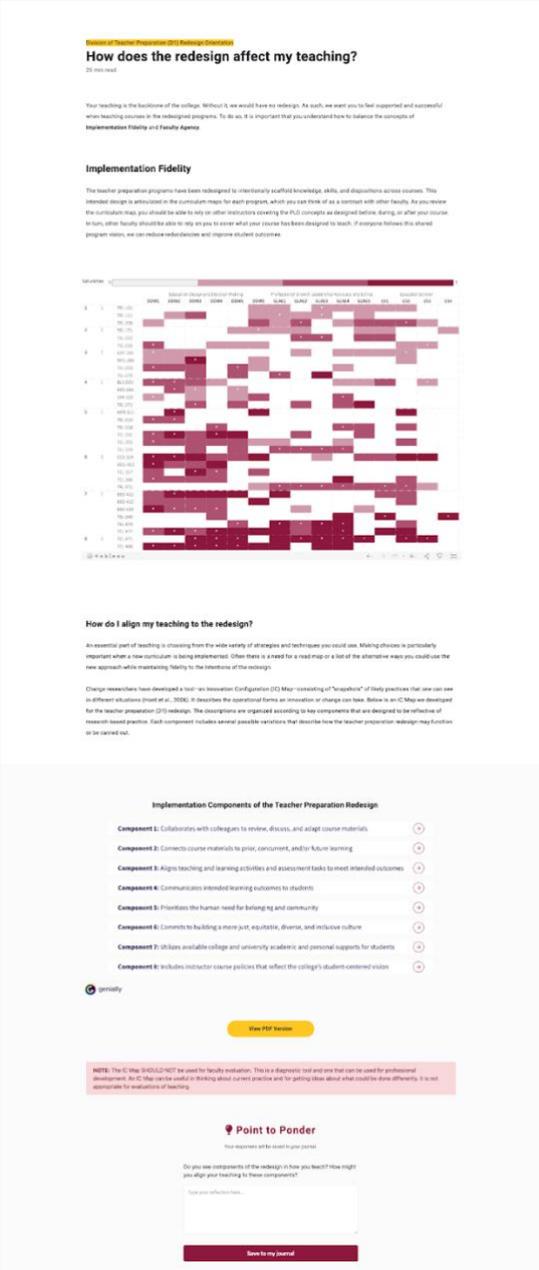
Type your reflection here.

[Save to my journal](#)

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Table B2

Page 2: How does the redesign affect my teaching?

Outline	Screenshot
<p>Implementation Fidelity</p> <ul style="list-style-type: none">• Curriculum maps• How do I align my teaching to the redesign?<ul style="list-style-type: none">○ Innovation Configuration (IC) Map (i.e., implementation components of the teacher preparation redesign)• <i>Reflection: Do you see components of the redesign in how you teach? How might you align your teaching to these components?</i>	 <p>The screenshot displays a web page with the following sections:</p> <ul style="list-style-type: none">How does the redesign affect my teaching? (with a sub-header "Do not read")Text: "Your teaching is the backbone of the college. Without it, we would have no students. So, each, we want you to feel supported and successful when teaching courses in the redesigned programs. To do so, it is important that you understand how to balance the concepts of Implementation Fidelity and Faculty Agency."Implementation Fidelity Text: "The teacher preparation programs have been redesigned to intentionally scaffold knowledge, skills, and dispositions across courses. This intentional design is reflected in the curriculum maps for each program, which you can look at as a contrast with other faculty. As you review the curriculum maps, you should be able to see an other instructor covering the FLU concepts as designed before. Doing so after your course is full, other faculty should be able to rely on you to ensure your course has been designed to teach. If everyone follows this shared program vision, we can reduce redundancies and improve student outcomes."IC Map: A grid showing course alignment for various programs (e.g., BA, BS, MA, MS, MEd, MEd-EdS, MEd-EdS-EdS, MEd-EdS-EdS-EdS, MEd-EdS-EdS-EdS-EdS) across semesters (1-8).How do I align my teaching to the redesign? Text: "An essential part of teaching is choosing from the wide variety of strategies and techniques you could use. Making choices is particularly important when a new curriculum is being implemented. Often there is a need for a road map or a list of the alternative maps you could use the new approach while maintaining fidelity to the intentions of the redesign." Text: "Change researchers have developed a tool—an Innovation Configuration (IC) Map—consisting of “modules” of study practices that one can use in different situations (Jord et al., 2020). It describes the operational forms an innovation or change can take. Below is an IC Map we designed for the teacher preparation (TP) redesign. The descriptions are organized according to key components that are designed to be reflective of research-based practice. Each component includes several possible practices that describe how the teacher preparation redesign may function, or be carried out."Implementation Components of the Teacher Preparation Redesign<ul style="list-style-type: none">Component 1: Collaborates with colleagues to review, discuss, and adapt course materialsComponent 2: Connects course materials to prior, concurrent, and/or future learningComponent 3: Aligns teaching and learning activities and assessment tasks to meet intended outcomesComponent 4: Communicates intended learning outcomes to studentsComponent 5: Fosters the human need for belonging and communityComponent 6: Committed to building a more just, equitable, diverse, and inclusive cultureComponent 7: Utilizes available college and university academic and personal supports for studentsComponent 8: Includes instructor course policies that reflect the college's student-centered visionPoint to Ponder Text: "How inspired are you to learn?" Text: "Do you see components of the redesign in how you teach? How might you align your teaching to these components?" Text: "Share your reflections here." Button: "Save to my Journal"

Outline

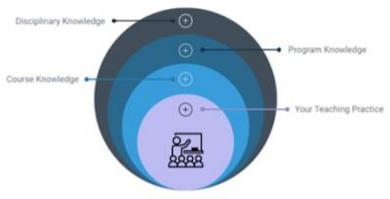
Screenshot

Faculty Agency

- Levels of Knowledge Creation and Agency [interactive graphic]
- *Reflection: What types of agency do you think are most important to be an effective teacher? Why?*
- What if I think something about the program or course knowledge should change?
 - Levels of Academic Freedom

Faculty Agency

While maintaining fidelity to the intentions of the redesign is important, so is adopting agency over how you teach. All faculty have academic freedom. Critical educational theorists have identified several levels of knowledge creation based on who has the agency to define what counts as valid knowledge. You can think of these as "guardrails" for what content to cover based on the intended design of the program within existing knowledge hierarchies. From this perspective, your teaching agency is nested within the broader landscape of knowledge creation at the discipline, program, and course level (i.e., guardrails). Explore the levels of knowledge creation & agency in the graphic below.



Point to Ponder

Your responses will be saved to your journal.

What types of agency do you think are most important to be an effective teacher? Why?

Type your reflection here...

[Save to my journal](#)

What if I think something about the program or course knowledge should change?

That's great! The curriculum should always be a living, flexible construct that adapts to new ideas, student feedback, or changes to the discipline. We want all faculty to actively contribute to improving the courses and programs through continuous improvement processes. The best way to engage in this continuous improvement depends on your role. View the guidelines below.

Levels of Academic Freedom [Working Draft]

Guidelines drafted by the Division of Teacher Preparation.

[View Guidelines](#)

Table B3

Page 3: How does my course “fit” into the redesign?

Outline	Screenshot
<p>Course “Fact Sheets”</p> <ul style="list-style-type: none">• For individual course design/teaching• To build connections• To collaborate with colleagues• To communicate intended learning outcomes to students• As a teaching and learning tool	 <p>The screenshot shows a webpage titled "How does my course 'fit' into the redesign?" under the heading "Division of Teacher Preparation (DTP) Redesign Orientation". It indicates a 5-minute read. The main heading is "Course 'Fact Sheets'". Below this, it explains that these sheets are intended to succinctly and visually describe a course's positionality and purpose within the program's intended design. A list of five purposes is provided: 1. For individual course design/teaching; 2. To build connections; 3. To collaborate with colleagues; 4. To communicate intended learning outcomes to students; 5. As a teaching and learning tool. At the bottom, there is a search bar and three course fact sheet cards: BLE 220 Foundations of Structured English Immersion, BLE 324 Social Studies for Diverse Language Classrooms, and BLE 338 Foundations of Second Language Acquisition and Development. A "See more" button is also visible.</p>

Outline

Screenshot

Anatomy of a Course Fact Sheet [Interactive Graphic]

- *Reflection: How might course fact sheets be useful to you? Why or why not?*

Anatomy of a Course Fact Sheet

Explore the interactive fact sheet exemplar below to understand how to read and interpret the fact sheet for your course(s).

TEL 571
Educator Scholar Community II

COURSE INFORMATION: Credits: 1 | **KEY SKILL ID:** DEV 2023 (Part A: TEL 571) Teacher/Practitioner

THIS COURSE IS TAKEN BY STUDENTS IN 4 PROGRAMS:
Physical Education (MPE), Elementary Education (Teacher Certification) (MET), Secondary Education (Teacher Certification) (MSE), Special Education (Teacher Certification) (MSE)

INTENDED STUDENT JOURNEY MAP
Each bubble represents coverage of program-level outcomes (PLOs) for a given course within each domain. Review the full curriculum map online (at the link below).

BUBBLE COLOR: Level of consistency of the domain coverage in the course
● Introduced
● Reinforced
● Applied

BUBBLE SIZE: Relative emphasis of the domain in the course
● Low
● High

PROGRAM LEARNING TRAJECTORY
PROGRAM LEVEL OUTCOMES (PLOs) EMPHASIZED IN THIS COURSE:
DCM2: Equitable & Inclusive Learning Environments (Applied)
DCM3: Habits of Mind (Applied, Reinforced)
GLAE1: Professional Growth Plan (Reinforced)
GLAE4: Personal & Professional Ethics (Reinforced)
ESK2: The Inquiry Process (Applied, Reinforced)
ESK3: Integrative Knowledge (Applied, Reinforced)

BEFORE THIS COURSE, STUDENTS SHOULD HAVE ALREADY LEARNED...

- How to foster creative expression & manage uncertainty w/ PBL2 classroom (TEL 572)
- Principled innovation & interdisciplinary concepts, methods, & techniques (TEL 572)
- How to substantiate learning theories & write a curriculum philosophy based on beliefs of teaching & learning (TEL 572)
- How to identify issues of behavior in the learning environment (TEL 572)
- How to establish equitable learning systems & implement behavioral interventions (TEL 572)

WITHIN THIS COURSE, STUDENTS SHOULD FOCUS ON LEARNING...

- Skills to help them and their students productively navigate uncertainty
- Professional educational leadership skills (e.g., academic writing, research)
- Interdisciplinary perspectives & methods connecting learner outcomes in educational contexts
- How to design & implement a creative learning activity that creates opportunities for original expression within existing constraints

AFTER THIS COURSE, STUDENTS WILL LEARN...

- How to apply interdisciplinary perspectives and methods in educational contexts (TEL 572)
- The impact of the institutional context, personal histories, & relevant experiences on a complex educational challenge (TEL 572)
- Design learning experiences/environments for managing uncertainty and creative expression (TEL 572)
- How to design & implement an applied project to investigate a classroom issue (ISE)
- About their role as teacher-researcher to examine effective pedagogical practices (ISE)

THIS COURSE HAS 2 COMMON ASSESSMENTS
These assessments are used for program evaluation or ACE certification purposes and should therefore be "assessed" (i.e., required) in every session/section of the course (e.g., STL Hybrid, Online, different instructor)

- Mini-Project 1: Lesson Engineering (DCM2, DCM3, ESK2, ESK3)
- Mini-Project 2: Power-Up Design (DCM3, ESK2)

Learn More: [View the course page](#)

Created by Derek Thurber and Karen Bessner for Mary Lou Fulton Teachers College
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Point to Ponder

Your responses will be saved to your journal.

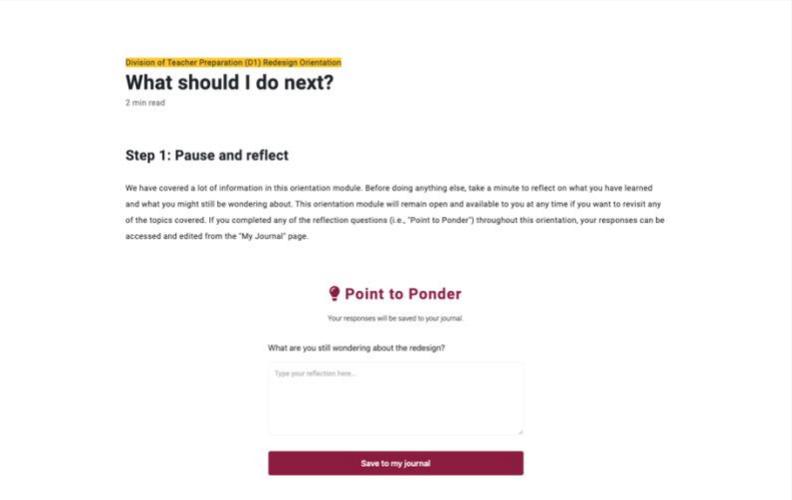
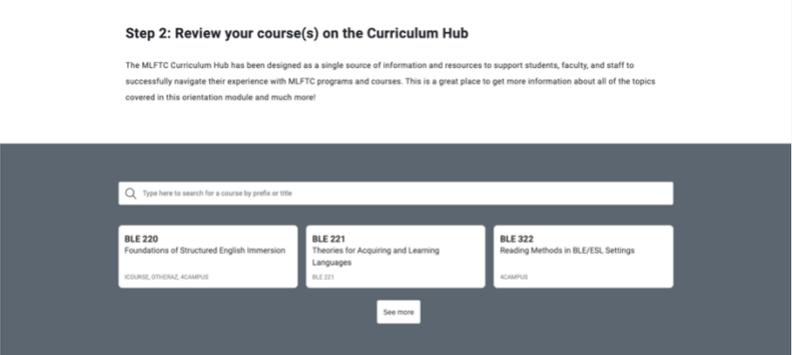
How might course fact sheets be useful to you? Why or why not?

Type your reflection here...

Save to my journal

Table B4

Page 4: What should I do next?

Outline	Screenshot
<p>Step 1: Pause and Reflect</p> <ul style="list-style-type: none">• <i>Reflection: What are you still wondering about the redesign?</i>	 <p>The screenshot shows a web page titled "Division of Teacher Preparation (D1) Redesign Orientation" with the heading "What should I do next?" and a "2 min read" indicator. Below this is the section "Step 1: Pause and reflect". The text explains that users should reflect on what they've learned and what they're still wondering about. It mentions that responses to "Point to Ponder" questions are saved to a "My Journal" page. The interface includes a "Point to Ponder" icon, a note that responses are saved to the journal, a text input field with the placeholder "Type your reflection here...", and a "Save to my journal" button.</p>
<p>Step 2: Review your course(s) on the Curriculum Hub</p>	 <p>The screenshot shows the "Step 2: Review your course(s) on the Curriculum Hub" section. It includes a search bar with the placeholder "Type here to search for a course by prefix or title". Below the search bar are three course cards: "BLE 220 Foundations of Structured English Immersion" (COURSE, OTHERNAZ, ACAMPUS), "BLE 221 Theories for Acquiring and Learning Languages" (BLE 221), and "BLE 322 Reading Methods in BLE/ESL Settings" (ACAMPUS). A "See more" button is located below the cards.</p>

Outline

Screenshot

Step 3: Contact your course coordinator

Step 3: Contact your course coordinator

When in doubt or if you have additional questions, your course coordinator should be your first point of contact. They should be able to provide you with additional support and resources to get you started teaching your course(s).

Enyah Abadjivor	COURSES COORDINATED
EMAIL	
Enyah.Abadjivor@asu.edu	

Philip Abbadessa	COURSES COORDINATED
EMAIL	
Philip.Abbadessa@asu.edu	

Abdurzak Abdurhman	COURSES COORDINATED
EMAIL	
zabdurhm@asu.edu	

[See more](#)

APPENDIX C
IRB APPROVAL LETTER



EXEMPTION GRANTED

Jill Wendt
Division of Teacher Preparation - Polytechnic Campus
480/727-0840
Jill.Wendt@asu.edu

Dear Jill Wendt:

On 8/3/2022 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Implementing a Large-Scale Program Redesign
Investigator:	<u>Jill Wendt</u>
IRB ID:	STUDY00016244
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none">• interview_consentform_12-07-2022.pdf, Category: Consent Form;• interview_recruitment_email_12-07-2022 (1).pdf, Category: Recruitment Materials;• IRB_protocol_13-07-2022.docx, Category: IRB Protocol;• supporting_materials_12-07-2022.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);• survey1_consentletter_12-07-2022.pdf, Category: Consent Form;• survey1_recruitment_followup_12-07-2022.pdf, Category: Recruitment Materials;• survey1_recruitment_initial_email_12-07-2022.pdf, Category: Recruitment Materials;• survey2_consentletter_12-07-2022.pdf, Category: Consent Form;• survey2_recruitment_followup_12-07-2022.pdf, Category: Recruitment Materials;• survey2_recruitment_initial_email_12-07-2022.pdf,

	Category: Recruitment Materials;
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The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 8/3/2022.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

If any changes are made to the study, the IRB must be notified at research.integrity@asu.edu to determine if additional reviews/approvals are required. Changes may include but not limited to revisions to data collection, survey and/or interview questions, and vulnerable populations, etc.

REMINDER - Effective January 12, 2022, in-person interactions with human subjects require adherence to all current policies for ASU faculty, staff, students, and visitors. Up-to-date information regarding ASU's COVID-19 Management Strategy can be found [here](#). IRB approval is related to the research activity involving human subjects, all other protocols related to COVID-19 management including face coverings, health checks, facility access, etc. are governed by current ASU policy.

Sincerely,

IRB Administrator

cc: Derek Thurber
Amy Markos
Derek Thurber
Lydia Ross

APPENDIX D

MODULE EVALUATION SURVEY 118

The following evaluation survey is intended to collect data about your experience with the online division of teacher preparation (D1) orientation module. This data will be used as part of an IRB-approved study. Completing this survey will take approximately 5 minutes. Participation is voluntary. You have the right not to answer any question, and to stop participation at any time.

You must be 18 years of age or older to participate. There are no foreseeable risks or discomforts to your participation. Your responses are confidential. We will keep a master list that links your responses across multiple data collection sources. Only certain project staff can access this master list which will be stored on a secure cloud storage for four years. The responses you give will only be shared in an aggregate form to identify trends and patterns rather than individual behaviors. Data will be stored on a secure server for four years. Results from this study may be used in reports, presentations, or publications but no identifying information will be used. De-identified data collected from the current study will not be shared with other investigators for future research purposes.

If you have any questions concerning the research study, please contact the research team – Amy Markos at ampost@asu.edu or Derek Thurber at derek.w.thurber@asu.edu or (602) 496-2530. If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact Amy Markos at ampost@asu.edu or the Chair of Human Subjects Institutional Review Board through the ASU Office of Research Integrity and Assurance at (480) 965-6788.

By signing this form, I agree and affirm that:

- I have read and understood the purpose of the information stated above.
- I am over 18 years of age or older.
- I am participating in the project voluntarily (i.e., I was not coerced, forced, threatened, or intimidated).

Part I: Reduced Instructional Materials Motivation Survey (RIMMS)

There are 12 statements in this questionnaire. Please rate each statement in relation to this online orientation module using the criteria provided. Give the answer that truly applies to you, not what you would like to be true or what you think others want to hear. Think about each statement by itself and indicate how true it is. Do not be influenced by your answers to other statements

- 1 – Not true
- 2 – Slightly true
- 3 – Moderately true
- 4 – Mostly true
- 5 – Very true

#	ARCS	Statement	Response
1	R	It is clear to me how the content of this material is related to things I already know.	1 2 3 4 5
2	A	The quality of the writing helped to hold my attention.	1 2 3 4 5
3	C	As I worked on this lesson, I was confident that I could learn the content.	1 2 3 4 5
4	S	I enjoyed this lesson so much that I would like to know more about this topic.	1 2 3 4 5
5	A	The way the information is arranged on the pages helped keep my attention.	1 2 3 4 5
6	S	I really enjoyed studying this lesson.	1 2 3 4 5
7	R	The content and style of writing in this lesson convey the impression that its content is worth knowing.	1 2 3 4 5
8	C	After working on this lesson for a while, I was confident that I would be able to pass a test on it.	1 2 3 4 5
9	A	The variety of reading passages, exercises, illustrations, etc., helped keep my attention on the lesson.	1 2 3 4 5
10	R	The content of this lesson will be useful to me.	1 2 3 4 5
11	C	The good organization of the content helped me be confident that I would learn this material.	1 2 3 4 5
12	S	It was a pleasure to work on such a well-designed lesson.	1 2 3 4 5

Note. A = Attention, R = Relevance, C = Confidence, S = Satisfaction

Part II: Module Participation

Which sections of this orientation did you complete? (Please select all that apply)

- What is the redesign?
- How does the redesign affect my teaching?
- How does my course “fit” into the redesign?
- What should I do next?

What are the top three things you learned by participating in this orientation? [open-ended]

In what ways do you see components of the redesign in your course(s)? In how you teach? [open-ended]

What types of agency do you think are most important to be an effective teacher? Why? [open-ended]

Part III: Demographics

How many years of experience do you have teaching in higher education? [0-99]

Which best describes your current employment status? (Please select one answer)

- Tenured/Tenure Track
- Full-time Non-Tenure Eligible (e.g., Clinical)
- Part-time Adjunct (e.g., Faculty Associate/FA)
- Part-time Academic Associate (e.g., Co-Instructor, Academic Associate)
- Other, please specify:

How many classes are you teaching this semester across all sessions (i.e., A, B, C)? (Please select one answer)

- 0
- 1
- 2
- 3
- 4
- 5
- 6+

How many classes are you teaching this semester across all sessions (i.e., A, B, C) in the Division of Teacher Preparation (Division 1)? (Please select one answer)

- 0
- 1
- 2
- 3
- 4
- 5
- 6+

Do you hold any of the following leadership positions within a program? (Please select all that apply)

- Program Area Strategist
- Design Topical Action Group (TAG) Member
- Other Topical Action Group (TAG) Member
- Course Coordinator

In what ways have you been involved in the Division of Teacher Preparation (Division 1) redesign? (Please select all that apply)

- Writing or revising the PLOs/Progression Indicators
- Completing ADE paperwork
- Developing individual course(s)
- Writing program assessment plan(s)
- Thought partner for individual course(s)
- Other, please specify:

Which statement best represents your current feelings about the Division of Teacher Preparation (Division 1) redesign? (Please select one answer)

- “I fully support the redesign”
- “It’s not perfect, but the redesign is good enough”
- “I can live with the redesign”
- “I have no opinion”
- “I don’t understand the redesign well enough yet”
- “The redesign is not great, but I don’t want to hold it up”
- “I am not on board with the redesign”
- “I would like to block the redesign”

How do you identify? (Please select one answer)

- Male
- Female
- Non-binary / third gender
- Prefer not to say

Part IV: Conclusion

Is there something you are still wondering about the redesign you didn’t learn in the orientation? [open-ended]

Is there something else you would like to tell us about your experience with this orientation? [Open-ended]

APPENDIX E
ONLINE SURVEY

The following survey is intended to collect data about your experience teaching any of the redesigned Division of Teacher Preparation (Division 1) programs' courses. This data will be used as part of an IRB-approved study. Completing this survey will take approximately 20 minutes. Participation is voluntary. You have the right not to answer any question, and to stop participation at any time.

You must be 18 years of age or older to participate. There are no foreseeable risks or discomforts to your participation. Your responses are confidential and have no connection to hiring, tenure, or promotion decisions. We will keep a master list that links your responses across multiple data collection sources. Only certain project staff can access this master list which will be stored on a secure cloud storage for four years. The responses you give will only be shared in an aggregate form to identify trends and patterns rather than individual behaviors. Data will be stored on a secure server for four years. Results from this study may be used in reports, presentations, or publications but no identifying information will be used. De-identified data collected from the current study will not be shared with other investigators for future research purposes.

If you have any questions concerning the research study, please contact the research team – Amy Markos at ampost@asu.edu or Derek Thurber at derek.w.thurber@asu.edu or (602) 496-2530. If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact Amy Markos at ampost@asu.edu or the Chair of Human Subjects Institutional Review Board through the ASU Office of Research Integrity and Assurance at (480) 965-6788.

By signing this form, I agree and affirm that:

- I have read and understood the purpose of the information stated above
- I am over 18 years of age or older.
- I am participating in the project voluntarily (i.e., I was not coerced, forced, threatened, or intimidated).

Part I: Demographics

How many years of experience do you have teaching in higher education? [0-99]

Which best describes your current employment status? (Please select one answer)

- Tenured/Tenure Track
- Full-time Non-Tenure Eligible (e.g., Clinical)
- Part-time Adjunct (e.g., Faculty Associate/FA)
- Part-time Academic Associate (e.g., Co-Instructor, Academic Associate)
- Other, please specify:

How many classes are you teaching this semester across all sessions (i.e., A, B, C)?
(Please select one answer)

- 0
- 1
- 2
- 3
- 4
- 5
- 6+

How many classes are you teaching this semester across all sessions (i.e., A, B, C) in the Division of Teacher Preparation (Division 1)? (Please select one answer)

- 0
- 1
- 2
- 3
- 4
- 5
- 6+

Do you hold any of the following leadership positions within a program? (Please select all that apply)

- Program Area Strategist
- Design Topical Action Group (TAG) Member
- Other Topical Action Group (TAG) Member
- Course Coordinator

In what ways have you been involved in the Division of Teacher Preparation (Division 1) redesign? (Please select all that apply)

- Writing or revising the PLOs/Progression Indicators
- Completing ADE paperwork
- Developing individual course(s)
- Writing program assessment plan(s)
- Thought partner for individual course(s)
- Other, please specify:

Which statement best represents your current feelings about the Division of Teacher Preparation (Division 1) redesign? (Please select one answer)

- "I fully support the redesign"
- "It's not perfect, but the redesign is good enough"
- "I can live with the redesign"
- "I have no opinion"
- "I don't understand the redesign well enough yet"

- “The redesign is not great, but I don’t want to hold it up”
- “I am not on board with the redesign”
- “I would like to block the redesign”

How do you identify? (Please select one answer)

- Male
- Female
- Non-binary / third gender
- Prefer not to say

Part II: Course Fact Sheet Levels of Use (LoU)

This section focuses on your use of course fact sheets which you might use in various ways, including:

- **For individual course design/teaching:** Understand and align teaching and learning activities and assessments tasks in your course to intended outcomes (e.g., SLOs, PLOs, standards).
- **To build connections:** Strategically activate students’ prior knowledge, help students transfer learned skills into authentic contexts, and explain to students how they will use what they are learning in future courses or experiences.
- **To collaborate with colleagues:** Work with other program and course section faculty to review, discuss, and adapt how course materials align with the intended design of the program.
- **To communicate intended learning outcomes to students:** Explain the purpose and intent behind teaching and learning activities and assessment tasks.
- **As a teaching and learning tool:** Encourage students to develop as reflective practitioners by assessing the effectiveness of content, activities, or assessments on their learning intended outcomes.

Using the provided sliders, please indicate how much you feel you have engaged in the following behaviors related to using course fact sheets in any of the above ways or any other ways you have discovered on your own.

#	Question	Never or not at all	Frequently or a lot
1	How much have you explored various ways to use course fact sheets? This includes actions you have considered or taken in using course fact sheets in any of the ways outlined above or any other ways you have discovered on your own.	0	7

#	Question	Never or not at all	Frequently or a lot
2	How much do you know about how to use the elements included on course fact sheets?	0	7
3	How often have you asked questions, reviewed printed materials, or sought out more details about course fact sheets?	0	7
4	How often have you shared plans, ideas, resources, outcomes, or problems with others related to using course fact sheets?	0	7
5	How much have you thought about the potential or actual use of course fact sheets? This can be a mental assessment or can involve the actual collection and analysis of data.	0	7
6	How much have you aligned resources, schedules, and activities, or met with others to organize and/or coordinate the use of course fact sheets?	0	7
7	Overall, how often do you currently use course fact sheets?	0	7

Can you summarize where you see yourself right now in relation to using course fact sheets?

Part III: Course Fact Sheet System Usability Score (SUS)

[Only shown if respondent answers above 0 to more than half of LoU categories; Otherwise, skip to part IV.]

This section focuses on the usability of course fact sheets. Please rate the statements below using the criteria provided. Select the option that best fits your immediate reaction. Do not spend a long time on each item: your first reaction is probably the best one.

#	Statement	Strongly Disagree	Strongly Agree
1	I think that I would like to use course fact sheets frequently.	1 2 3 4 5	

#	Statement	Strongly Disagree				Strongly Agree
2	I found the course fact sheets unnecessarily complex.	1	2	3	4	5
3	I thought the course fact sheets were easy to use.	1	2	3	4	5
4	I think that I would need the support of a technical person to be able to use course fact sheets.	1	2	3	4	5
5	I found the various elements in the course fact sheets were well integrated.	1	2	3	4	5
6	I thought there was too much inconsistency in the course fact sheets.	1	2	3	4	5
7	I would imagine that most people would learn to use course fact sheets very quickly.	1	2	3	4	5
8	I found the course fact sheets very cumbersome to use.	1	2	3	4	5
9	I felt very confident using the course fact sheets.	1	2	3	4	5
10	I needed to learn a lot of things before I could get going with course fact sheets.	1	2	3	4	5

Part IV: implementation fidelity practices Knowledge, Confidence, and Use (KCU)

This section focuses on your perceived knowledge, confidence, and usefulness of interpreting, decoding, conceptualizing, and refining the use of the Division of Teacher Preparation (Division 1) Program-Level Outcomes (PLOs) in your courses.

Please rate the concepts/strategies listed below using the criteria provided. Decide how knowledgeable you are about each concept/strategy. Then rate how confident you are in your ability to use each concept/strategy in your course(s). Finally, rate how useful each concept/strategy is for you.

- Knowledge**
- 1 – I have no knowledge of this concept/strategy.
 - 2 – I have limited knowledge of this concept/strategy.
 - 3 – I have some knowledge of this concept/strategy.
 - 4 – I have more than average knowledge of this concept/strategy.
 - 5 – I have a substantial amount of knowledge about this concept/strategy.

- Confidence**
- 1 – I am not confident in my ability to use this concept/strategy.
 - 2 – I am a little confident in my ability to use this concept/strategy.
 - 3 – I am somewhat confident in my ability to use this concept/strategy.
 - 4 – I am more confident than most in my ability to use this concept/strategy.
 - 5 – I am very confident in my ability to use this concept/strategy.

- Useful**
- 1 – I do not view this concept/strategy as useful and/or relevant.
 - 2 – I view this concept/strategy as a little useful and/or relevant.
 - 3 – I view this concept/strategy as somewhat useful and/or relevant.
 - 4 – I view this concept/strategy as more useful and/or relevant than most other concepts/strategies.
 - 5 – I view this concept/strategy as highly useful and/or relevant.

#	Concept/Strategy	Knowledge	Confidence	Useful
1	Aligning relevant PLOs to course outcomes	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
2	Explaining to students how course outcomes relate to relevant PLOs	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
3	Teaching concepts from relevant PLOs	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
4	Suggesting refinements to relevant PLOs based on student performance	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
5	Planning teaching and learning activities to address relevant PLOs	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
6	Communicating to students how assessment tasks relate to relevant PLOs	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
7	Adapting instruction to students' prior knowledge about relevant PLOs	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
8	Assessing student performance related to relevant PLOs	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
9	Designing assessment tasks to address relevant PLOs	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
10	Defining jargon/discipline-specific terminology in relevant PLOs	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

#	Concept/Strategy	Knowledge	Confidence	Useful
11	Providing feedback to students on their performance related to relevant PLOs	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
12	Adapting instruction to students' need related to gaps in relevant PLOs	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

Part V: Faculty Sense of Teaching Agency (SoTA)

This section focuses on your sense of agency when teaching Division of Teacher Preparation (Division 1) classes. Agency is defined here as your experience controlling how you teach your classes.

Please rate the statements below using the criteria provided. Select the option that best fits your immediate reaction. Do not spend a long time on each item: your first reaction is probably the best one.

Do not worry about projecting a good image. Your answers are CONFIDENTIAL.

#	Statement	Strongly Disagree	Strongly Agree
1	I can decide how I teach the content of my classes	1 2 3 4 5	
2	While I am teaching, I feel like I am facilitating someone else's class*	1 2 3 4 5	
3	I have to teach my classes the way someone else decided*	1 2 3 4 5	
4	I am responsible for everything that results from how I teach my classes	1 2 3 4 5	
5	I plan how I teach my classes from the very beginning to the very end	1 2 3 4 5	
6	The outcomes of my teaching generally surprise me*	1 2 3 4 5	
7	I do not have a choice about how I teach the content in my classes*	1 2 3 4 5	

8	If I want, I can choose to teach my classes how I prefer	1	2	3	4	5
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* = Scored in reverse.

Part VI: Conclusion/Follow-up

Would you consider participating in a 30-minute follow-up interview? [Yes/No]

APPENDIX F
SEMI-STRUCTURED INTERVIEW PROTOCOL

The purpose of this interview is to explore how you have used or plan to use course fact sheets and how that has affected your teaching. This is a semi-structured interview. I will be reading the questions verbatim in a specific order to aid in data analysis, but if you need any explanation about any of the questions, I will be happy to clarify. I may also ask follow-up prompts to understand the specific behaviors or meanings behind your responses. The interview will take no more than 30 minutes. This study is confidential and has no connection to hiring, tenure, or promotion decisions. The responses you give will only be shared in an aggregate form to identify trends and patterns rather than individual behaviors. Your participation is also voluntary and you have the right to not answer any questions or to stop the interview at any time without any consequences. Before we start, do you have any questions for me?

Once we get started, I will ask you to confirm that you agree to participate in this interview, including being audio recorded. **Are you ready to start?**

START RECORDING

Having read the consent form, do you agree to participate in this interview, including being recorded?

Question	Purpose
Have you used course fact sheets? Are you currently using course fact sheets? (for example, this semester)	To distinguish between users and nonusers; to break LoU 0–II from LoU III–VI.
If YES	
In what ways have you used course fact sheets? Give examples if possible.	To probe fact sheet uses.
What do you see as the strengths and weaknesses of course fact sheets in your situation? Have you made any attempts to do anything about the weaknesses?	To probe Assessing and Knowledge Categories from LoU. To probe information or structures missing from fact sheets.
Are you currently looking for any information about course fact sheets? What kind? For what purpose?	To probe Acquiring Information Category from LoU.
Do you ever talk with others about course fact sheets? What do you tell them?	To probe Sharing Category and check Decision Point E from LoU.
What do you see as being the effects of course fact sheets? In what way have you determined this?	To probe Assessing Category from LoU.

Question	Purpose
Are you doing any evaluating, either formally or informally, of your use of course fact sheets? Have you received any feedback from students? What have you done with the information you get?	To probe Assessing Category from LoU.
Have you made any changes recently in how you use course fact sheets? What? Why? How recently? Are you considering making any changes?	To distinguish between LoU III (user-oriented changes), LoU IVB (impact-oriented changes), and LoU IVA (no or routine changes); to probe Status Reporting and Performing Categories from LoU.
As you look ahead to later this year, what plans do you have in relation to your use of course fact sheets?	To probe Planning and Status Reporting Categories from LoU.
Are you working with others in your use of course fact sheets? Have you made any changes in your use of course fact sheets based on this coordination?	To separate LoU V from III, IVA, and IVB. <i>If a positive response is given, LoU V probes (below) are used.</i>
LoU V Probes [If needed]	
How do you work together? How frequently?	To verify Decision Point E; to probe Performing Category from LoU.
What are the strengths and the weaknesses of this collaboration for you?	To probe Knowledge Category from LoU.
Are you looking for any particular kind of information in relation to this collaboration?	To probe Acquiring Information Category from LoU.
When you talk to others about your collaboration, what do you share with them?	To probe Sharing Category from LoU.
Have you done any formal or informal evaluation of how your collaboration is working?	To probe Assessing Category from LoU.
What plans do you have for this collaborative effort in the future?	To probe Planning Category from LoU.

Question	Purpose
Are you considering making or planning to make major modifications or to replace course fact sheets at this time?	To separate LoU VI from III, IVA, IVB, and V. To probe information or structures missing from fact sheets.
Has using course fact sheets changed anything about the way you think about teaching your courses? What has its effects appeared to be on students? How so?	To probe reasons fact sheets support implementation fidelity practices.
Has using course fact sheets impacted how you think about your teaching agency? What do you think of the concept of academic freedom within the guardrails of the redesign?	To probe reasons fact sheets support sense of teaching agency
If NO	
Why don't you use course fact sheets?	To probe reasons for not using fact sheets.
Have you made a decision to use course fact sheets in the future? If so, when?	To separate LoU 0 from I; to probe Status Reporting, Planning, and Performing Categories; to separate LoU I from II.
Can you describe course fact sheets as you see them?	To probe Knowledge Category from LoU. To probe fact sheet uses.
Are you currently looking for any information about course fact sheets? What kinds? For what purposes?	To probe Acquiring Information Category from LoU.
What are the strengths and weaknesses of course fact sheets for your situation?	To probe Assessing Category from LoU. To probe information or structures missing from fact sheets.
At this point in time, what kinds of questions are you asking about course fact sheets? Give examples if possible.	To probe Assessing, Sharing, and Status Reporting Categories from LoU.
Do you ever talk with others and share information about course fact sheets? What do you share?	To probe Sharing Category from LoU.

Question	Purpose
What are you planning with respect to course fact sheets? Can you tell me about any preparation or plans you have been making for the use of course fact sheets?	To probe Planning Category from LoU.
What are your impression of the teacher preparation redesign? Has it changed the way you think about teaching your courses? What do you think of the concept of academic freedom within the guardrails of the redesign?	To probe implementation fidelity practices and sense of teaching agency.
Past-User Questions	
Why did you stop using course fact sheets?	To probe reasons for not using fact sheets.
Can you describe how you organized your use of course fact sheets and what its effects appeared to be on students?	To probe reasons fact sheets support implementation fidelity practices.
When you assess course fact sheets at this point in time, what are its strengths and weaknesses for you?	To probe information or structures missing from fact sheets.

Is there anything else you would like to share about course fact sheets?

Before I end the recording, do you have any final thoughts or questions for me?

END RECORDING

This interview protocol was adapted from Hall et al.'s (2006) Level of Use protocol from the Concerns Based Adoption Model (CBAM).

APPENDIX G

HOW (AND WHY) TO CREATE COURSE FACT SHEETS GUIDE

How (and Why) to Create Course Fact Sheets

A Guide for Higher Education Faculty and Practitioners

Derek Thurber

WHAT ARE COURSE FACT SHEETS?

Fact sheets are brief documents that provide the most important information about a subject in the least amount of space possible. When used for courses, a fact sheet should briefly and visually give a quick overview of the course structure, learning goals, requirements, and how it fits into the overall program.

HOW DO I CREATE COURSE FACT SHEETS?

Course fact sheets are not limited to a specific format or design. To create useful fact sheets, consider the context and purpose of the fact sheets. Knowing the intended purpose will guide the rest of the design process. Here are some steps to follow once you have identified the purpose:

- 1 COLLECT INFORMATION**
Gather details about the course such as description, objectives, prerequisites, textbooks, assignments, criteria, and other relevant information.
- 2 ORGANIZE THE FACT SHEET**
Structure the information into sections and sketch a layout with the most important details in the top left and the least important in the bottom right.
- 3 DESIGN THE FACT SHEET**
Use headings, bullet points, tables, or other visuals to make the information clear and easy to navigate. Use visual cues to focus on what is most important.
- 4 INCLUDE WAYS TO LEARN MORE**
Provide easy ways for users to find out more information, such as contact information and links to additional resources.
- 5 REVIEW AND REVISE REGULARLY**
Fact sheets are living documents that should be updated regularly to ensure they remain accurate and relevant. Establish a schedule for regular revisions.

WHY FACT SHEETS?

Fact sheets are not like other forms of faculty development. Their structure and brevity provide unique advantages around:

EFFICIENCY

Fact sheets are short and concise, allowing users to quickly understand the most important aspects of a course.

CONSISTENCY

Fact sheets standardize the presentation of information, simplifying usage across courses.

ACCESSIBILITY

Fact sheets are easy to distribute in various formats, making information accessible to users when and where they need it.

• • •

Because of this flexibility, fact sheets are especially useful for:

ONBOARDING

Fact sheets can be used to introduce courses to new faculty members, providing a quick and easy way to understand the most important aspects of a course and how it fits into the larger program.

FACULTY COLLABORATION

Fact sheets can facilitate faculty connections across courses in the program.

IDENTIFY PRIOR KNOWLEDGE

Fact sheets can help faculty identify what prior knowledge students should have before taking their course, which can help them teach the course more effectively.

ANATOMY OF A FACT SHEET (EXAMPLE)

TITLE AT THE TOP MAKES IT CLEAR WHICH COURSE THIS FACT SHEET THIS IS FOR

LEAD CONTACT PERSON FOR THE COURSE IS CLEARLY IDENTIFIED AT THE TOP IF THERE ARE MORE QUESTIONS

HIGH-LEVEL COURSE DETAILS PROVIDE IMPORTANT INFORMATION AT A GLANCE

VISUAL IS PROMINENT AND EYE CATCHING TO FOCUS ON COURSE POSITIONALITY

LINK TO MORE INFORMATION PROVIDED IN CONTEXT

SIDEBAR FORMATTING PROVIDES VISUAL SEPERATION FOR SECTIONS

LESS IMPORTANT DETAILS ARE LOWER ON THE PAGE

LINK TO LEARN MORE IS PROMINENTLY FEATURED WITH BOLD COLOR CONTRAST

LAST UPDATED TIME STAMP LETS PEOPLE KNOW HOW RECENT THE INFORMATION IS, CREATING TRUST IN ITS ACCURACY

BLE 220
Foundations of Structured English Immersion

COORDINATOR(S): Alexandria Estrella-Bridges **CREDITS:** 3 **GEN ED:** L **DEV SHELL ID:** DEV-X-BLE220-LowerDivisionSyllabus

THIS COURSE IS TAKEN BY STUDENTS IN THE FOLLOWING PROGRAM(S): Elementary Education (BAE), Secondary Education (BAE), Secondary Education (Biological Sciences) (BAE), Secondary Education (English) (BAE), Secondary Education (History) (BAE), Secondary Education (Mathematics) (BAE), Special Education (BAE), Special Education (Visual Impairment) (BAE), Secondary Education (certificate) (NDUG), Elementary Multilingual Education (BAE), Early Childhood Education (BAE), Physical Education (BAE), Bilingual Education and English as a Second Language (Certificate) (NDUG)

Course Fact Sheet

INTENDED STUDENT JOURNEY MAP
Each bubble represents coverage of program-level outcomes (PLOs) for a given course within each domain. Review the full curriculum map online (at the link below).

<https://hrhc.asu.edu/curriculum-maps>

	Design & Decision Making (DDM)	Growth, Leadership, Advocacy, Ethics (GLAE)	Educator Scholar (ES)
Term 1			
TIL 101 Prof Ed: Student Experience	●	●	●
TIL 111 Exploration of Education	●	●	●
TIL 208 Literacy in a Changing World	●	●	●
Term 2			
TIL 171 Prof Ed Series: Equity in Educ	●	●	●
TIL 212 Understand/Culturally Diverse	●	●	●
TIL 218 Intro to Child/Adolescent Dev	●	●	●
Term 3			
EDF 180 Text/My Proin: Shing Dig/Tem	●	●	●
TIL 303 Planning/Implementing Instr	●	●	●
TIL 276 Prof Ed: Connect Teach to Prac	●	●	●
BLE 220 Foundations of SEI	●	●	●
Term 4			
SPE 222 Direct to SEI Exceptional Child	●	●	●
TIL 271 Prof Ed: Inclusivity in Pract	●	●	●

[Professional experience details, https://hrhc.asu.edu/professional-experience-ogr](https://hrhc.asu.edu/professional-experience-ogr)

PROGRAM LEARNING TRAJECTORY

PROGRAM-LEVEL OUTCOMES (PLOs) EMPHASIZED IN THIS COURSE:
 DDM1: Instructional Design (Introduced, Reinforced)
 DDM2: Pedagogical Content Knowledge (Introduced, Reinforced)
 DDM3: Equitable & Inclusive Learning Environments (Introduced, Reinforced)
 DDM4: Assessment (Introduced)
 GLAE4: Personal & Professional Ethics (Introduced)
 GLAE5: Ethical Issues in Education (Introduced)
 ES1: Contextual Analysis (Reinforced)
 ES3: Reasoned Analysis (Introduced)

BEFORE THIS COURSE, STUDENTS SHOULD HAVE ALREADY LEARNED...

- About the effects of literacy & illiteracy on the individual and society. [TEL 206]
- About social justice policies, standards, & ethics in education & the community. [TEL 212]
- How to advocate for culturally responsive connections among learners, families & communities. [TEL 212]
- About the role of larger social systems surrounding individuals' development. [TEL 215]
- How to identify appropriate materials to support the needs of all learners. [TEL 203]

WITHIN THIS COURSE, STUDENTS SHOULD FOCUS ON LEARNING...

- About cultural competence and asset-based instruction.
- Lesson plan development centering emergent bilinguals.
- Theoretical knowledge of second language acquisition.

AFTER THIS COURSE, STUDENTS WILL LEARN...

- Foundational theories of learning to plan & deliver effective instruction that promotes inclusive & equitable instructional practices & environment. [TEL 210]
- About issues of disproportionality in management practices for students with special needs & English learners. [TEL 317]
- About the ethical use of assessment (e.g., bias & misuse of assessments). [TEL 318]
- To recognize & appreciate diversity among families, local communities, & the cultural contexts of schools. [TEL 340]
- Potential implications of policy for students, families, & community. [TEL 371]

THIS COURSE HAS 2 COMMON ASSESSMENTS
 These assessments are used for program evaluation or ACEL certification purposes and should therefore be 'common' (i.e., required) in every version/section of the course (e.g., F2F, Hybrid, Online, different instructors)

- Cultural Competence Research Paper - Final Draft (ES3)
- Lesson Plan Analysis Paper (DDM2, DDM1)

[Link to learn more](https://hrhc.asu.edu/assessment/assessment&MAY%2020)

Created by Derek Thurber and Karen Bossen for Mary Lina Fulton Teachers College.
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