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An Examination of Oregon Department of Education's Implementation Processes and Practices

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AN EXAMINATION OF OREGON DEPARTMENT OF EDUCATION'S IMPLEMENTATION PROCESSES AND PRACTICES

by

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ABSTRACT

The purpose of this study was to examine state-level implementation practices and processes of current initiatives or programs through personal interviews with implementation managers at the Oregon Department of Education. This study used a qualitative research design for gathering individual perspectives on their effective and ineffective processes and practices for implementation and identified commonalities across implementation managers and departments. This study answered three research questions: (1) What are the practices and processes described by implementation managers in this study as effective for the implementation of their initiative or program?; (2) How are implementation elements conceptualized, enacted, and measured by implementation managers in this study?; and, (3) Which elements are identified by implementation managers in this study as key to contributing to overall implementation effectiveness?

The findings in this study identified 6 key themes and 20 sub-themes comprised of elements and components of implementation processes and practices. These findings were compared against three meta-frameworks found in the research on best practices in implementation: (1) Active Implementation Framework (AIF), (2) Quality Implementation Framework (QIF), and (3) Strategy Implementation Framework (SIF). I used the findings from this study to develop an Implementation Conceptual Framework and a Framework for Implementation Processes and Practices that can be used to: (1) develop an understanding of the interconnected systems of policies, processes, and practices that influence each other; (2) provide a process for breaking down complex implementation processes and practices; and (3) create a strategy for alignment and coherence across implementation of initiative and programs, while providing areas for variation and innovation.

Key words: Implementation, Initiatives, Programs, Processes, Practices, Active Implementation Framework (AIF), Quality Implementation Framework (QIF), and Strategy Implementation Framework (SIF)

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CHAPTER 1

INTRODUCTION

Since 1872, ODE has worked with school districts and individual schools across the state to improve outcomes for students. These outcomes are generally associated with academic achievement but have also addressed improvements in student social-emotional development, college and career readiness, graduation rates, post-secondary access, student transportation, nutrition, and attendance rates (Oregon's Statewide Chronic Absenteeism Plan, 2016). It is typical to find ODE staff involved in new or ongoing initiatives or programs, and for school districts to be engaged in multiple initiatives at various stages of implementation.

Given the heavy demands on districts and their staff to maintain many initiatives, it is common for ODE to implement an initiative that districts cannot sustain with support or funding when the grant period ends. When initiatives fail to improve outcomes or continued change in schools, they represent an annual loss of millions of dollars. Some of the initiatives are no longer supported or funded through ODE, and on occasion, a few districts prioritize an initiative and find their own district funds to sustain or scale up implementation efforts. This is the best possible outcome for initiatives, and can assist in moving forward Oregon's state vision, mission, and goals for educational progress.

Oregon is a local control state, providing districts flexibility in how they implement various initiatives, programs, and state requirements. Results have been widely mixed, for both implementing and sustaining change, regardless of the focus. An example of an initiative with mixed results has been the Oregon Diploma initiative, and the implementation of the Essential Skills and Personalized Learning requirements. While ODE has provided professional learning and technical assistance to districts on the state graduation requirements, they are implemented at

the local level to various degrees of fidelity and effectiveness. For example, a review of Oregon's 2018 graduation rates and Division 22 Assurances on graduation requirements have provided some implementation data and outcomes with mixed results.

What has been consistent across most initiatives is that funding and support is directed at solving some type of problem. There are two things that have varied across initiatives: (a) how much of the solution has been defined at the outset, and (b) how much of the solution can be defined during the implementation, particularly as it pertains to the local district's needs. ODE regularly engages in various initiatives with two common types being: (a) initiatives that involve implementation of a program to solve a problem, and (b) initiatives that support innovation to solve a problem.

Effective initiatives or programs are the ones that meet their own intended outcomes and are implemented and sustained while accommodating substantial variation in local contexts (Datnow, 2005). There has not been internal routines or processes for how someone in ODE would carry out the implementation of an initiative or program and it is challenging to understand what constitutes effective implementation at the state-level. This can make it difficult for districts to know what to expect from ODE. ODE could benefit from understanding what is required of implementation managers for various initiatives or programs, and it may be helpful to understand what could be applied at various points of the implementation process. It may also be beneficial for ODE to learn about similar challenges and successes other states have faced in order to learn what they have done to inform and improve their policies, processes, and practices.

Implementing new initiatives or improving student outcomes in large agencies, such as ODE, can be a challenging process (Schroeder & Mauriel, 2000). State-level program and initiative implementation is a complex process and there is no one easy method for developing

state-level practices for implementing effective interventions (Rogers, 2008). Interventions are described as evidence-based programs, initiatives, or innovations that support school districts and schools during implementation (Domitrovich et al., 2016). Evidence-based programs (EBPs) are typically those that have demonstrated the highest level of evidence of effectiveness based on a set of criteria, such as: 1) evaluation research has shown that the program produces the expected positive results, 2) results can be attributed to the program itself and no other factors or events, 3) the evaluation is peer-reviewed by experts in the field, and 4) the program is supported by a federal agency or respected research organization. Implementation is defined as a set of specified activities that are designed to put into practice an activity or program of known dimensions (National Implementation Research Network, 2018b).

Implementation processes are purposeful and are described in enough detail that a person can determine which activities are needed for implementation (National Implementation Research Network, 2018b). School districts and schools tend to have a range of practices and approaches to the implementation of interventions. There continues to be individual practices and mismatched efforts within ODE in the attempt to create effective approaches to implementation. Research has shown a need to improve approaches to implementation, to better understand the commonalities between them, and to appreciate the distinctive features and strengths of them collectively (LeMahieu, Bryk, Grunow, & Gomez, 2017).

As states face challenges with scarcity of resources and increased needs across districts and schools, there is a sense of urgency and demand to change how state-level agencies support school districts and schools, leverage resources, and engage in innovation and improvement practices that are sustainable. Studies such as Fixsen, Blasé, Metz, and Van Dyke (2013) have found that "efforts to diffuse, translate, transport, disseminate, mandate, incentivize, and

otherwise close the 'science-to-service gap' have not been successful in getting the growing list of evidence-based programs routinely into practice" (p. 213). ODE recognizes the challenges and opportunities in providing funding and support to a broad range of need for programs and initiatives across the state. Providing effective support to districts, schools, and ultimately students, requires ODE to coordinate supports across initiatives, programs and offices in an efficient and coherent manner.

ODE had been engaging internal staff from across offices and programs to identify how the agency can effectively support districts with implementation of their initiatives and programs, while reducing burden by eliminating redundancies. The foundation of this work was focused on organizational change needs, root-cause analyses, creation of a driver diagram, and the development of several internal cross-office work groups. These work groups had been charged with identifying existing state-level supports for districts, learning where new supports are needed, creating more alignment between initiatives, and developing cohesive and focused approaches and tools for districts. ODE has also been working with districts on the implementation of a local needs assessment tool and continuous improvement process. Innovative thinking and the process of inquiry were recently elevated, by the Director of Public Instruction at the Oregon Department of Education, as important ways of working and areas of investment for the agency.

There are key differences between initiatives and programs; therefore, for purposes of understanding research and implementation it is important to define what is meant for each using nationally recognized common language. Initiatives are the priority efforts or projects that people are involved in to solve a problem or produce changes resulting in desired outcomes. In contrast,

programs are the activities and connections between activities designed to produce a set of desired outcomes (National Implementation Research Network, 2018a).

While the ODE grant management manual and online training is useful for those who have recently been required to complete them, there continues to be a lack of internal resources and supports for implementing programs and initiatives. In addition, when legislation funds various initiatives or programs, there tends to be a short timeline in which to plan and launch them. What could be advantageous is to have processes or practices that support developing, implementing, improving, and evaluating the various initiatives and programs launched around the state.

A review of current research has provided insufficient evidence of state-level infrastructures, processes, and practices that support statewide implementation of initiatives and programs. Since there has not been evidence of institutionalized processes or practices for implementing initiatives or programs at ODE, implementation managers have developed their own methods. This creates an ongoing lack of consistency and methodology in implementation between teams and departments.

Purpose of the Study

The purpose of this study was to examine state-level implementation practices and processes of current initiatives or programs through personal interviews with implementation managers at the Oregon Department of Education. This study used a qualitative research design for gathering individual perspectives on their effective and ineffective processes and practices for implementation and identified commonalities across implementation managers and departments. A review of the literature highlighted three meta-frameworks as potential for offering an understanding of common themes and components found in implementation research. These

meta-frameworks provide a synthesis of relevant research on the best practices in implementation and potentially could be used at the state-level in the field of education.

The findings in this study identified 6 key themes and 20 sub-themes comprised of elements and components of implementation processes and practices. These findings were compared against three meta-frameworks found in the research: (1) Active Implementation Framework (AIF), (2) Quality Implementation Framework (QIF), and (3) Strategy Implementation Framework (SIF). The areas of alignment between the findings and the meta-frameworks provide an analytical lens for the best practices and processes used in the implementation of initiatives and programs by implementation managers at ODE, while the areas of gap or misalignment provide opportunities for further exploration, improvement, and innovation within ODE.

Research Questions

This study was designed to provide insight into processes and practice for the "how to" of implementation at ODE by answering the following three research questions:

1. What are the practices and processes described by implementation managers in this study as effective for the implementation of their initiative or program?
2. How are implementation elements conceptualized, enacted, and measured by implementation managers in this study?
3. Which elements are identified by implementation managers in this study as key to contributing to overall implementation effectiveness?

Scope and Delimitations

The delimitations are the boundaries that were determined by the researcher for the study (Dusick, 2011). This research study focused on understanding the individual implementation

processes and practices between implementation managers across departments within ODE. Participants were selected from a roster of employees in various departments and teams. The participants identified for the study were responsible for implementing and overseeing implementation. The initiative or program had to be current within the last two legislative sessions, and could be funded or unfunded. All the participants consented to being interviewed.

Limitations

The limitations of the study design were the characteristics that impacted the results and were out of my control. While the study is agency-wide in scope, this dissertation study draws from six participants in five different departments across ODE. The agency does not have an inventory of initiatives or programs; therefore, information was not located in one place. The study was conducted at ODE where I am employed and the participants are my colleagues to varying degrees of familiarity. The interviews were influenced by the participant's willingness or reluctance to respond openly and honestly to the interview questions. The results of this study could be open to others interpretation and interests. The results of this study are specific to the context of ODE.

Discussion of Key Terms

Based on the literature review and for purposes of this study, the following key terms have been defined here and are used throughout study:

Initiatives. The priority efforts or projects that ODE is directly engaged in to solve a problem or produce changes resulting in desired outcomes.

Programs. The activities and connections between activities designed to produce a set of desired outcomes (National Implementation Research Network, 2018a).

Implementation. A set of specified activities that are designed to put into practice an activity or program of known dimensions (National Implementation Research Network, 2018b).

Implementation Manager. Refers to the research participants in this study, who are responsible for and have substantial involvement in implementation of initiatives and programs at ODE.

Practices. The methods or techniques used most often to produce desired results.

Processes. A series of actions, decisions, or steps taken in order to achieve a particular outcome.

Active Implementation Framework (AIF). Consists of 5 frameworks in one meta-framework on effective implementation of initiatives or programs.

Quality Implementation Framework (QIF). Provides 4 phases with 14 steps to guide implementation.

Strategy Implementation Framework (SIF). Identifies 4 categories for examining and evaluating complex implementation.

Bracketing

As an educator for more than 15 years, and previous work in the business and health care fields, I have implemented and supported the implementation of a number of initiatives and programs at various levels. I understand the complex nature of implementation, improvement within systems and local context, and have experienced both effective and ineffective practices and processes. I am passionate about not only understanding implementation practices and processes of others, but also in examining social-cultural systems and organizational strategies. This acknowledgement of my professional roles as well as my educational background in cultural anthropology, social psychology, counseling, and educational leadership, contribute to

the lenses I bring to this study and my awareness of potential researcher bias. For these reasons, it is appropriate to establish myself in the context of this study, which is anchored in the context of my place of work. The narrative that follows was developed to accomplish this orientation and to establish that I may be in a similar role as some of the research participants in this study.

During a legislative short-session in the early spring of 2016, the Oregon Department of Education (ODE) hired me as an Education Specialist. My position was developed based on recommendations for a senate bill which had identified a long-standing gap and need to provide support to educators in career and college readiness (CCR) and Comprehensive School Counseling Programs around the state. Within the first two months of being hired at ODE, I was identified as the education specialist who would develop, implement, and oversee multiple statewide initiatives. Two of the initiatives came with legislative funding, while the third initiative was unfunded and absorbed into my position responsibilities.

The first funded initiative required me to pull together a large group of internal and external cross-agency and organizational personnel to help strategically plan the details of the statewide initiative of improving postsecondary advising practices through professional learning modules. The second funded initiative required me to develop a set of criteria and an application process to distribute enough grant funds for 50 high schools to develop or purchase a college access program as well as resources to assist students with postsecondary access. The third initiative was unfunded from the short session, and was a new project. It required me to develop and lead a collaborative statewide content and advisory panel to update Oregon's Framework for Comprehensive School Counseling Programs as well as the School Counseling Student Standards.

While these initiatives were developed, implemented, and supported through strategic planning and collaboration with various internal and external partners, I found there were no streamlined or established internal policies or processes to help navigate the complex intricacies of launching an initiative or program. I sought and received guidance from several education specialists who were knowledgeable about the process from implementing other past initiatives and programs, and who had indicated they learned what to do from others who had implemented by doing it themselves. Additionally, I learned that ODE does not have shared or common language for what defines an initiative or program.

I recognize that personal biases and experiences may have an impact on objectivity when analyzing data from my study. It was important for me to identify my biases in order to avoid the impact that they could have on how I conducted this study. I was purposeful in being cognizant of my biases and made sure to check details, completeness of interviews, other potential biases, and potential mistakes that could be made in the data collection and analysis of this study.

The nature of my relationship with participants was a high priority in this research study since I am an employee of ODE and a colleague of participants in the study. The researcher-participant relationship could have raised unforeseeable issues, therefore ethical considerations were important for this study. A peer review and debriefing process was implemented with several of colleagues to examine where bias may arise throughout the process of this study. It has been because of my experience with implementation of initiatives and programs at ODE that I chose to explore this area of study with colleagues across the agency.

Summary

State-level implementation can be complex and this study has the potential to offer a unique perspective from various state-level implementation managers on their implementation

practices and processes for initiatives and programs. The remaining chapters of this dissertation will further detail this research study. Chapter Two includes a discussion of three meta-frameworks, which provide an analytic lens, and explores relevant research literature on the complex nature of implementation. Chapter Three provides a detailed description of the methodology for the study. Chapters Four and Five present the analyses, findings, and implications for further research.

CHAPTER 2

REVIEW OF THE LITERATURE

Implementation frameworks, strategies, measurements, and outcomes are among the concepts that are dominating the literature and activities within implementation science; and can be considered as well established. These concepts provide a starting point for discussing how they can be used in education science and practice (Albers & Pattuwage, 2017). The literature review in this chapter is organized around the following three themes: (a) an overview of implementation meta-frameworks, (b) implementation strategies, processes, and practices, and (c) aspects of implementation that could be evaluated to determine effectiveness.

Implementation frameworks provide structure of various descriptive categories, such as concepts, constructs, or variables, and the relationships between each other (Nilsen, 2015). Frameworks provide information on what could influence implementation outcomes. For example, frameworks for implementation can be used to conceptualize and describe the characteristics of initiatives or programs and how to identify and organize the elements that influence implementation outcomes. It is important to understand key elements and practices that can support frameworks in order to move research into practice. Since there is no one field of study that is home to implementation research, it provides valuable information to understand implementation across a range of fields (Proctor et al., 2010).

Implementation Meta-frameworks

Implementation frameworks have been developed in various fields such as health care, mental health, and business (Fixsen et al., 2005; Meyers et al., 2012; Okumus, 2003), which provide an understanding of common components that can be useful for the field of education. A synthesis of the implementation literature on theories, models, frameworks, and studies has

provided meta-frameworks on the essential elements of effective implementation. Meta-frameworks are developed through systematic and thorough reviews of different research studies and literature, known as meta-analysis. The synthesis of meta-analyses produces themes or characteristics between studies and findings. Educational researchers use these meta-analyses to develop frameworks that are then used for further research studies (Hattie, Rogers, & Swaminathan, 2013).

The frameworks identified in this literature review provide a synthesis of relevant research including meta-frameworks on the best practices in implementation research. The meta-frameworks include the Active Implementation Framework (AIF), Quality Implementation Framework (QIF), and Strategy Implementation Framework (SIF) (Fixsen et al., 2005; Meyers et al., 2012a; Okumus, 2003). They were chosen because they offer insight into the complex nature of implementation and provide an analytic lens on the practices and processes of implementation. Table 1 provides a brief comparison of key assumptions, method of analysis, and elements of the three implementation meta-frameworks, which are discussed in further detail in the literature.

Table 1

Implementation Meta-framework Comparison

	Active Implementation Frameworks (AIF) (Blase, Fixsen, Naoom, & Wallace, 2005)	Quality Implementation Framework (QIF) (Meyers et al., 2012a)	Strategy Implementation Framework (SIF) (Okumus, 2003)
Key Assumptions	Consists of 5 frameworks for effective use of evidence-based programs and evidence-informed innovations	Conceptual overview containing 4 temporal phases and 14 critical steps to guide quality implementation	Conceptual framework with 4 categories to examine and evaluate complex factors of implementation
Method of Analysis	Uses stage-based implementation activities, core implementation components, implementation teams, and connects policy to practice	Use steps 1-10 prior to implementation, steps 11-13 during implementation, and step 14 after implementation; steps may be strengthened, revisited, or adapted during implementation	Uses 4 categories in relation to each other to provide coherence, as categories may influence other categories and outcomes
Elements of Meta-framework	Usable Innovations, Implementation Stages, Implementation Drivers, Improvement Cycles, and Implementation Teams	Phase One: assessment strategies, decisions about adaptation Phase Two: structural features Phase Three: ongoing support strategies Phase Four: learning from experience	Strategic Content, Strategic Context, Operational Process, and Outcome

These three frameworks mentioned above provide a synthesis of the literature and offer their own meta-frameworks based on the best practices in implementation research. This section below will provide an understanding of three different frameworks that describe the procedures and strategies of quality implementation. High quality implementation is a critical factor associated with successful outcomes (Durlak, 2013) and it can be important for understanding what components constitute high quality.

Active implementation framework (AIF). In 2005, the National Implementation Research Network (NIRN) provided a monograph authored by Fixsen, Naoom, Blase, Friedman, and Wallace (2005) of implementation findings across various fields, along with interviews with experts to learn about best practices in implementation. This research synthesis resulted in the conceptualization of Active Implementation Framework (AIF) based on 25 different frameworks. The AIF is a universal framework for implementation that can be applied to any initiative or program. The AIF has five overarching frameworks (Figure 1) that provide insight into what needs to happen (effective innovations), how to establish what needs to happen, who will do the work and when (effective implementation), and where effective implementation and hospitable environments (enabling contexts) will occur (Blase, Fixsen, Naoom, & Wallace, 2005).

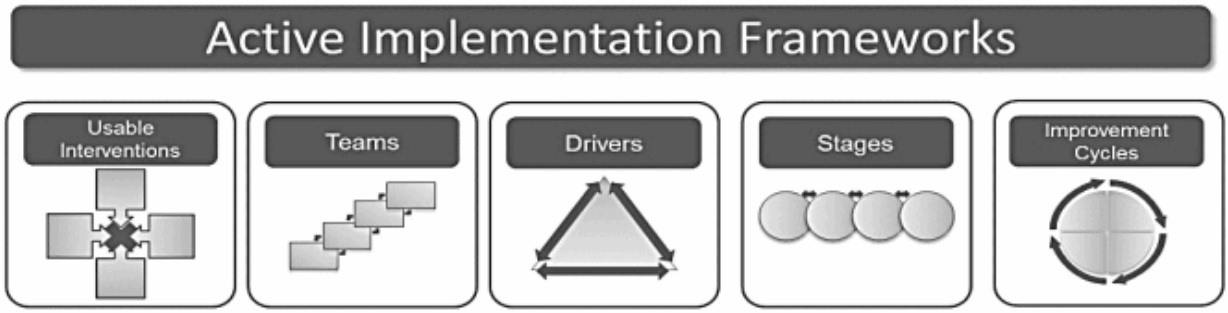

Figure 1. Five Universal Frameworks of AIF. Adapted from "Change Leadership: A Guide for School Leaders," by New Leaders. Copyright 2018 by Minnesota Department of Education.

A review and synthesis of the research, as well as further studies and field experience, has led to additional development and changes to implementation frameworks and best practices (Blase, Van Dyke, & Fixsen (in press); Fixsen, Blase, Metz, & Van Dyke, 2013; Fixsen et al., 2010). For implementation to be successful it is important to have, a solid understanding of the implementation context and knowledge of the strategies and tools needed to support the specific context (Ejler, Ostersen, Graff, & Dyrby, 2016). The researchers suggested the use of a

predefined framework such as the AIF to emphasizes five core areas of focus for implementation, as described below.

Usable innovations. Effective and fully operationalized initiatives or programs must be well-defined, so they are teachable, learnable, doable, and readily assessable in practice. When initiatives or programs lack clarity, this can create an obstacle to the effective implementation of the initiative or program. It is also important to clearly identify the essential functions and features of what must be present in an initiative or program. Additionally, performance assessment practices of implementation help discriminate implementation problems from intervention problems and guide problem solving to improved outcomes. Effectiveness can be tied to a measure of the presence and strength of what is being put into practice (Fixsen et al., 2013). For example, innovation components of a program include: (a) model definition, (b) theory bases supporting elements and activities, (c) the practice model's theory of change, (d) target population, and (e) any alternative models (Bertram, Blase, & Fixsen, 2015).

Implementation teams. Fixsen et al. (2005) noted that teams are comprised of experts who have special knowledge regarding implementation stages and drivers, improvement cycles, use of initiatives and programs, and organization and system change methods. They are accountable for planning, determining usable innovations, exercising effective implementation strategies and processes, supporting system change, and ensuring that intended outcomes are met through the implementation process. Implementation teams are typically comprised of several people or a group of individuals representing a program or practice who actively work with others who are knowledgeable about their context, and who will be implementing the initiative or program. Implementation teams seem to require more than forming adaptive cross-agency problem-solving teams. Metz et al. (2015) believe they require new ways of organizing

themselves to address complex problems, an ability to build team capacity and competencies for implementation, a willingness to discuss core issues, make sound decisions, and improve ways of interacting with each other.

The AIF has been developed based on an extensive review of the implementation evaluation literature (Fixsen et al., 2005), analysis of best practices (Blase et al., 2005; Blase et al., 2015), and evaluation in organizations and system change efforts (Fixsen et al., 2013). The research synthesis provides a comprehensive foundation for AIF and a way to integrate core elements of implementation across disciplines and fields of study. The framework serves to close the research to practice implementation gap by promoting the effective use of practices that improve implementation outcomes (Fixsen at al., 2005).

Implementation drivers. Drivers are the core components or building blocks of the infrastructure and establish the capacity to influence successful implementation of initiatives or programs (Fixsen et al., 2005). These components are based on commonalities across practices and programs, and as with the implementation stages, the drivers are dynamic and interactive. The implementation drivers have been categorized into three types and when used together, they ensure implementation fidelity and sustainability (Bertram, Blase, Shern, Shea, & Fixsen, 2011; Blase, Van Dyke, Fixsen, & Bailey, 2012). The core components are comprised of competency drivers (selection, training, coaching, fidelity), organization drivers (decision support data systems, facilitative administration, systems intervention), and leadership drivers (adaptive, technical).

The implementation drivers can be integrated to impact each other while also supporting one another, so when there is a weakness in one, the strength of another can compensate. For example, an organization implementing a program may not be able to provide coaching or

training in the competency driver; therefore, may need to focus more on facilitative administration within the organization driver to support it in other ways. This might mean districts and schools would play a larger role in training and coaching their employees than what ODE would have the capacity to do, while ODE may be able to support them through strong technical assistance.

Implementation stages. Fixsen et al. (2005) describe the stages of implementation as a dynamic process and not a linear progression making it possible to move back and forth between the stages, depending on changes in conditions of the organization, funding sources, leadership, staffing changes, or other circumstances. For example, changes to any of these factors may require an organization to go back to one of the earlier stages of implementation to increase the likelihood of success at other stages. The Active Implementation Framework incorporates best practices for implementation stages and implementation drivers, which are integrated into each other. The implementation best practices have come from concept mapping and nominal groupings taken from those who have successfully implemented evidence-based programs for years (Blase et al., 2005). The stages of implementation are exploration, installation, initial implementation, and full implementation (Fixsen et al., 2010).

Improvement cycles. Fixsen et al. (2005) highlighted that implementation depends on three iterative processes by which improvements are made and problems solved: Plan-Do-Study–Act (PDSA) Cycle, Usability Testing, and Practice-Policy Communication loops. These three processes allow organizations to see the system that produces the current outcomes and begins to improve what can be measured. It can be used to test improvements, define and refine new initiatives and ways of working, and to help align policies and practices to the work. The PDSA cycle uses a scientific experimental method to promote the "prediction of the outcome of a test of

change and subsequent measurement over time (quantitative or qualitative) to assess the impact of an intervention on the process or outcomes of interest" (Taylor et al., 2013, p. 291).

Continuous improvement cycles use both quantitative and qualitative research methods; therefore, it is important for implementation teams to be familiar with implementation, improvement processes, and initiative or program outcomes (Young & Lewis, 2015). Usability testing is an improvement cycle comprised of a series of tests on an initiative or program to detect problems and make corrections as needed. The Practice-Policy Communication Loop provides feedback on what needs to change and how much change is needed to produce the desired outcomes. Implementation teams are central to these improvement cycles as they have the knowledge, skills, and experience to help others make use of the initiative or program (Fixsen et al., 2005). The AIF can provide a valuable lens for determining which components are in place and where there are areas of improvement within ODE.

Quality implementation framework (QIF). The Quality Implementation Framework (QIF) contextualizes implementation by using Rogers' (2003) classic model. Rogers' model illustrates that implementation is one of the five stages in the decision-making process for diffusion of innovations. The model provides insight into organizational strategies for rates of adoption and teaming that can influence adoption of the innovation. The five stages described in this model are knowledge, persuasion, decision, implementation, and confirmation. The focus of the QIF is on quality implementation, which is defined as operationalizing an innovation in such a way that it meets the standards necessary to achieve the innovation's desired outcomes (Meyers et al., 2012a).

This quality implementation definition was found to be consistent with the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC,

1998) and refers to quality as the components of a product or service that meets its stated or implied need (Meyers, Durlak, & Wandersman, 2012b). The ISO provides international standards for organizations in the creation of safe, reliable, and quality products and services. For example, several school districts in Oregon, have used the standards of ISO to develop a quality assurance model for improvement as part of their performance management system. The ISO provides a structure for how quality implementation can be conducted across different organizations.

The QIF provides a meta-analysis of synthesized critical themes from the literature to provide suggested actions to ensure quality implementation (Figure 2). Based on the results of the synthesis, there were four important findings that emerged: (a) identification of 14 distinct steps of quality implementation, (b) steps could be divided into four sequential phases, (c) considerable agreement among the various literature sources of the steps, and (d) quality implementation is a systematic process involving a coordinated series of related elements (Meyers et al., 2012b).

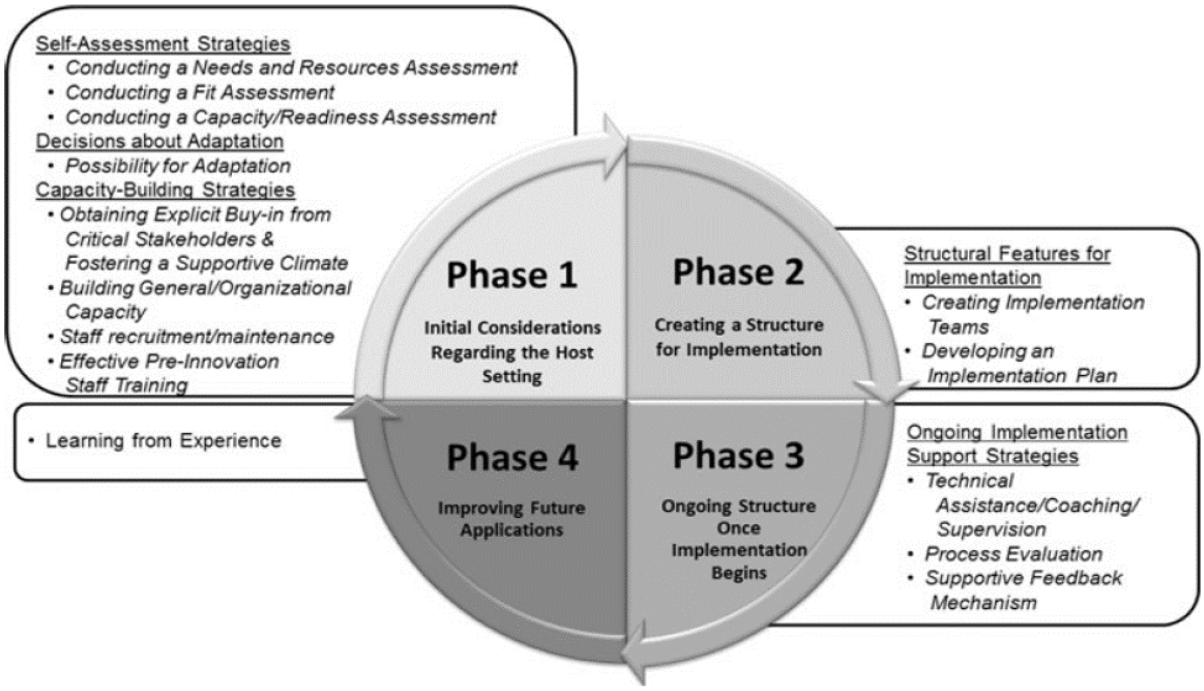

Figure 2. Interplay Between QIF Phases and Critical Steps. Adapted from "The Quality Implementation Framework: A Synthesis of Critical Steps in the Implementation Process," by D. C. Meyers, J. A. Durlak, and A. Wandersman, 2012, *American Journal of Community Psychology*, *50*(3-4), 462-480.

Meyers et al. (2012b) found that the QIF demonstrated convergence on many of the elements, suggesting there are similar steps in the implementation process, which can provide a systematic approach to implementation. The implementation steps found in a sequential ordering suggests that the innovations that failed to achieve their intended outcomes may have been due to poor implementation. Furthermore, this implies that implementation is a dynamic process and modifications may be necessary due to the complex nature of the settings and the context.

The QIF findings were further translated into a practical implementation tool called the Quality Implementation Tool (QIT) (Meyers et al., 2012a). The QIT identifies the six components determined as most important for implementation and can be used as a guide for collaborative planning, monitoring, and evaluation of how initiatives or programs are implemented. The six components include: developing an implementation team, fostering

supportive climates and conditions, monitoring implementation plans, providing technical assistance, collaborating with program developers, and evaluating effectiveness of implementation. The QIF can provide a valuable lens for critical implementation phases and steps, while the QIT can provide support and guidance for the process.

Strategy implementation framework (SIF). The field of strategic management has shifted its focus from strategy formulation to implementation, and more organizations are using implementation strategies that address their organizational implementation processes (Okumus, 2003). Strategic implementation puts strategies into actions, which can help organizations reach their desired goals. Okumus (2003) notes that there are common models and frameworks used such as SWOT (strengths, weaknesses, opportunities, and threats) analyses, environmental scans, industry structural analyses, and other generic strategies for analysis and formulation, but there are no comprehensive implementation frameworks for strategic management.

Implementation of strategies can focus on the entire organization and system, while at the same time, providing a strategic map to reach the desired goals and outcomes (Okumus, 2003). Furthermore, a comprehensive approach can be used for addressing the complex factors of implementation, and to understand how strategies can be implemented when other aspects of coherence between implementation factors cannot always be achieved. A strategy implementation framework was developed from a meta-analysis of the research that brings strategy formulation and implementation together (Okumus, 2003). The implementation framework (Figure 3) identifies four common key categories: Strategic Content, Strategic Context, Operational Process, and Outcome. The role and importance of each implementation factor in the strategy implementation process can be described as follows:

- Strategic content is the development of strategy and refers to how and why the strategy is initiated.
- Strategic context is divided into two categories. External context refers to environmental uncertainty. Internal context refers to organizational structure, culture, and leadership.
- Operational process consists of operational planning, resource allocation, people, communication, and control and feedback.
- Outcome is the intended and unintended result of the implementation process.

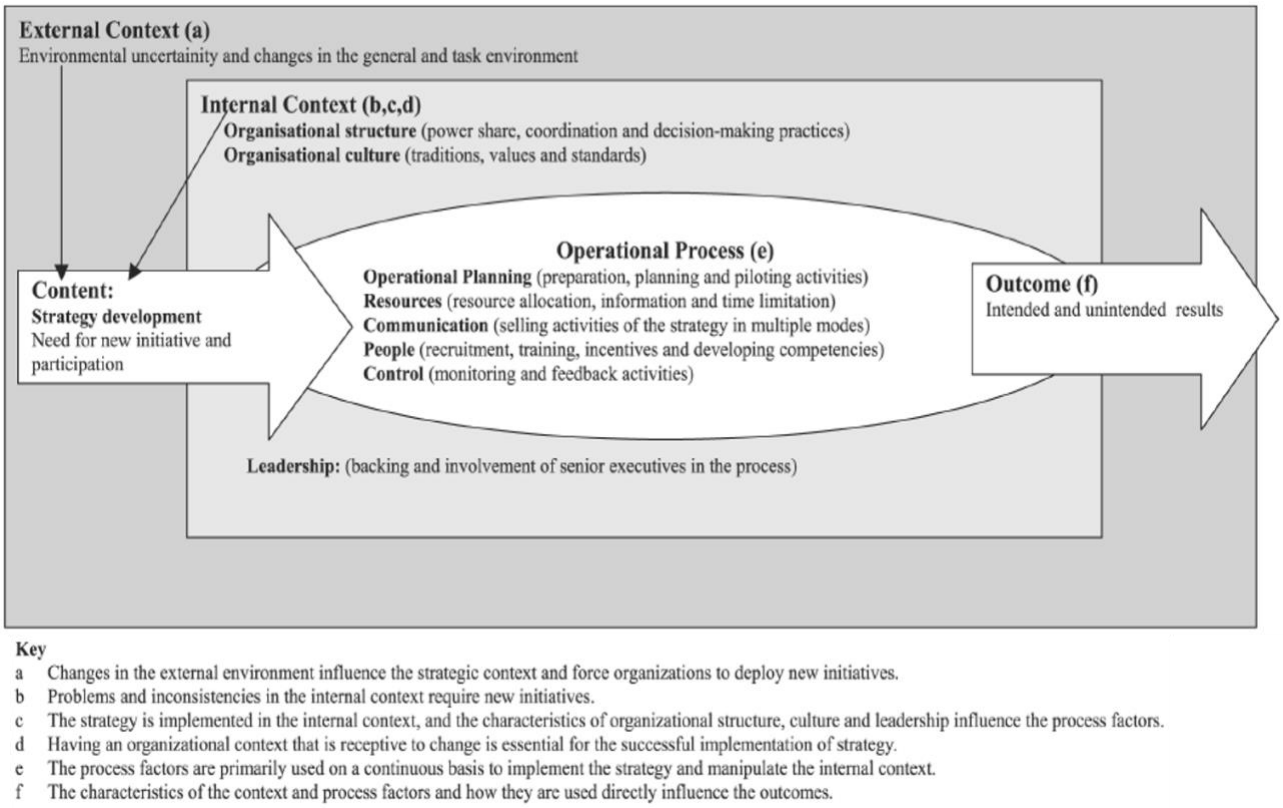

Figure 3. Illustration of the Four Key Categories of SIF. Adapted from "A framework to implement strategies in organizations," by F. Okumus, 2003, *Management Decision, 41*(9), 871-882.

The SIF provides a comprehensive approach to content, context, process and outcomes, and the implementation process is analyzed and evaluated over a period of time using a contextual and process approach. Those who support a comprehensive approach suggest that that

the four factors are best understood as a complex transformational process (Dawson, 1997; Okumus, 2001; Pettigrew, 1997) and believe that organizations should work with their complex and dynamic environments rather than strive for coherence between the factors (Okumus, 2003). For future research studies such as the study of this dissertation, Okumus (2003) suggests that this framework can be empirically tested and improved through analyzing strategy implementation on the four factors within organizations. This meta-framework offers the field of education an opportunity to address organizational and system strategy implementation using a roadmap to reach its goals and outcomes.

The meta-frameworks in this section provide an understanding of the essential elements of effective implementation found in the research literature. Meta-frameworks for implementation can be used to conceptualize and describe characteristics of initiatives or programs, how to identify and organize the elements, and provide a categorical structure for understanding how common components of implementation across various fields can inform and influence implementation outcomes. Furthermore, an understanding of these characteristics and common components, provides this research study a valuable lens for identifying core strategies, processes, and practices that yield quality implementation efforts.

Implementation Strategies, Processes, and Practices

Implementation is a set of activities that occur at clear stages, and there are common components that are purposefully implemented (Fixsen et al., 2005). The strategies, processes, and practices of implementation consist of various elements that help us understand how effective implementation is achieved. There are various fields (e.g., health care, mental health, and business) which have robust bodies of research and literature and therefore offer a clear understanding of the elements that were found to be most effective. The following

implementation characteristics help us understand the common features, which can be used when putting a decision or plan into place for initiatives or program implementation.

Implementation strategies. Implementation strategies can be defined as the methods or techniques used to enhance the adoption, implementation, and sustainability of programs (Proctor, Powell, & McMillen, 2013; Wilson, Brady, & Lesesne, 2011). Implementation strategies have unparalleled importance in implementation science and serve as the how-to component for changing practices (Proctor et al., 2013). Specific standards have been identified for characterizing implementation strategies, and recommendations have been provided by the researchers who design, conduct, and reported on these studies. The term implementation strategy is referred to as both a single component and multi-faceted strategy. Clear definitions and descriptions of implementation strategies can help to better clarify the designing, conducting, and reporting of implementation studies, as well as empirically studying them (Proctor et al., 2013). They also highlight the prerequisites to measuring implementation strategies and identified them as naming, defining, and operationalizing the strategies.

A comprehensive group study, called the Delphi method, was conducted to learn from managers and practitioners about all the strategies used by researchers for implementation. The study identified strategies that included actions and behaviors such as: (a) access new funding, (b) create new teams, (c) develop and implement tools for quality monitoring, (d) facilitate implementation processes across stakeholders, (e) promote ongoing consultation, and (f) use data experts (Powell et al., 2015). The list of implementation strategies developed from this study provides a resource for educational settings to help develop implementation plans, use continuous improvement, and conduct evaluation of the strategies (Powell et al., 2015).

State educational agencies provide a variety of operations and support to local educational agencies and schools, while building internal capacity to do its work (Redding & Nafziger, 2013). Building capacity begins with the personnel who are doing the work and how they are organized to meet the state functions. A study of state agencies revealed that agencies had difficulty achieving coherence across organizational departments (Kerins, Perlman, & Redding, 2009). Another study found state agencies had several functional problems (Brown, Hess, Lautzenheiser, & Owen, 2011). These studies indicated that the state agencies were overly focused on compliance, lacked transparency, were hindered by federal funding, and had bureaucratic obstacles that got in the way.

A theory of action and logic model can be used for achieving functional coherence, effectiveness, and productivity in state agencies by determining the areas of a logic model: (a) vision, values, goals, strategies; (b) functions; (c) resources; (d) structures; (e) capacity; (f) output; and (g) impact (Redding et al.,2013). Furthermore, state agencies can be organized by similar cross-functional teams to achieve concentrated expertise, more purposeful work, and a structure that facilitates performance management at each level of the organization.

Organizational capacity is identified as personnel being prepared with the expertise and experience to perform the work necessary for certain functions, which include four components: functional capacity, motivational capacity, social capacity, and technical capacity (Redding et al., 2013). Additionally, as part of the performance management system, organizations can include metrics for measuring effectiveness and efficiency in meeting objectives and frequent feedback loops for improvement efforts (Redding et al., 2013). State agencies can enhance their productivity by improving their organizational policies, structures, processes, procedures, and practices to function closer to the ideal. Implementation science can be a way to provide the

means to move state agencies toward greater productivity and improved performance (Redding et al., 2013). It also is useful for designing the capacity-building activities that support organizational structure and practices, as well as for implementing sustainable changes.

Leadership has been identified as an essential component throughout the implementation literature (Aarons, Sommerfeld, & Willging, 2011a; Aarons, Ehrhart, & Farahnak, 2014; Goodman, 2009). A study on the role of leadership in service agencies focused on three implementation strategies centered around leadership: organizational climate/culture, collaborative relationships, and contracting (Moullin, Ehrhart, & Aarons, 2017). Leadership was found to play a significant role in establishing organizational culture and climate, setting the tone for a collaborative implementation process, and for institutionalizing new practices driven by procurement and contracting processes.

The use of the exploration, preparation, implementation, and sustainment framework was helpful in establishing contextual influences of implementation effectiveness within an organization (Aarons, Hurlburt, & Horwitz, 2011b). Implementation leadership provided the knowledge base about the interventions being used, a proactive approach to problem-solving, methods to support others, and help to persevere through the implementation process (Aarons et al., 2014). Furthermore, the implementation climate for supporting implementation was found to improve through initiatives that were aligned across levels of an organization, and to develop and support implementation structures and processes.

Implementation processes. The literature on implementation science provides emerging insights into the key elements or components of effective implementation processes. Duda and Wilson (2015) identify key elements such as effective interventions, effective implementation methods, and enabling contexts, all of which support the adoption of new policies, programs, and

practices leading to desired outcomes. While the continued policy-to-practice gap is seen as largely due to the complexity and ambiguity of educational systems and the localized needs of schools, the science of implementation (also known as implementation science) has been identified as a way to offer practical strategies to close the gap and effectively affect student outcomes (Duda & Wilson, 2015).

Regardless the size of an initiative, Duda and Wilson (2015) suggest that the adoption process of that initiative will cause shifts in the culture of schools, districts, and states, and the management of those shifts will directly affect the outcomes. They further emphasize the importance of understanding implementation science and the active implementation frameworks at all levels. When introducing and rolling out initiatives, they found their use can provide the structure for managing new programs or practices, and the core components can be clearly defined and translated into actions and outcomes.

In conducting educational design research, McKenny and Reeves (2012) describe three main stages of implementation as adoption, enactment, and sustained maintenance; and describes the spread of implementation as a form of dissemination and diffusion. The five phases of the applied research cycle (or process) include: problem identification, diagnosis, planning, action, and evaluation. While there are different types of solutions that can be developed and studied through educational design research, McKenny and Reeves emphasize that educational processes, programs, and policies can be tackled in their own context with a variety of approaches and not a ready-made formula. The process is systematic and intentional, guided by theory and local expertise, but also includes a level of analytical creativity, application of emerging insights, and openness to promising approaches by checking for feasibility.

Understanding the processes by which practices become routinely integrated in everyday life has been a long sought-after question in sociology and other social sciences (May & Finch, 2009). They argue that the sociological problems of accounting for institutionalization, stabilization, and implementation all revolve around the ways in which people do their work, and suggest that the normalization process theory (NPT) can help explore the social practices and organization around this work. NPT is further described as a middle range theory that is the social organization of the work (implementation), making the practices routines (embedding), and sustaining embedded practices in their social contexts (integration).

In order to better understand the processes by which practices are embedded in their social context, May and Finch (2009) outlined key components of the theory taken from exemplars in ethnographic and other studies on the development, implementation, and evaluation of services. Their objective was to replace in-person services with the ability to provide online diagnoses of conditions. They developed a model of these components, which included: coherence (meaningful qualities of a practice), cognitive participation (enrollment and engagement of individuals and groups), collective action (interaction with existing practices), and reflexive monitoring (how a practice is understood and assessed by people involved). The normalization part of the process theory was identified as the work people do as they engage with "activities (that may include new or changed ways of thinking, acting, and organizing) and by which means it becomes routinely embedded in the matrices of already existing, socially patterned, knowledge and practices" (May & Finch, 2009, p. 540). Lastly, in order to operationalize the theory, May and Finch (2009) translated the core constructs into a working model with real-world correlates to form the basis for the conceptual work of describing, explaining, making, and testing the work.

Inquiry and continuous improvement practices. A longitudinal study conducted by Copeland (2003) identified a theory of action that incorporated a cycle of continual inquiry into practices as an ongoing effort to create cultural and organizational changes for effective practices. The cycle of inquiry allowed for identification of structures and processes that are required to help define and shape areas of need within organizations. This study found that theories of organizational learning focused on context-specific practices and ways in which the organizations themselves were learning and building greater capacity for making their own improvements. Results revealed that efforts to use a cycle of inquiry coupled with asking questions, understanding problems, developing accountability frameworks, measuring progress, managing challenges within contexts, and sustaining improvement efforts, were building a shared responsibility, capacity, and coherence that was necessary to sustain and deepen practices of the organizations (Copland, 2003). This study shed light on the need for the use of inquiry in improvement efforts on organizational practices.

In a qualitative study conducted by Century and Cassata (2015), they found that organizations that use inquiry to reflect on their practices and understand the commonalities between intervention characteristics could begin to find the essential components of interventions. When the essential components could be specifically described, organizations could then measure them to determine which ones were successful and supported the effective implementation of interventions. They developed a shared conceptual framework, referred to as the innovation implementation conceptual framework, to identify and measure intervention characteristics that were common across and unique to the contexts in which the innovation was implemented. Based on this conceptual framework, their study found specific and clear descriptions of implementation characteristics that were essential to understanding intervention

impact, but were only part of the understanding, conceptualizing, and measuring implementation. Furthermore, their study found that by measuring the process of implementing interventions and the factors that affect its implementation, a focus on measurement results had the potential to help develop knowledge about what could improve practices and the contexts and conditions in which the intervention took place (Century & Cassata, 2015).

There are six improvement principles that represent the foundational elements for improvement science, which focuses on quality improvement and continuous improvement efforts by learning how to operate under a variety of different organizational situations (Bryk, Gomez, Grunow, & LeMahieu, 2016). The principles identified are carried out in networked improvement communities by engaging different individuals to use well-established tools, their deep knowledge, experiences in innovation, and to learn by solving a shared problem. The basic principles and practical tools are drawn from communities of practice, action research, teaching and learning studies, and user-centered and design-based implementation (Bryk et al., 2016).

The six core principles that represent foundational elements for improvement science conducted through networked improvement communities: (a) make the work problem-specific and user-centered, (b) focus on variation in performance, (c) see the system that produces the current outcomes, (d) improve scale through measurement, (e) use disciplined inquiry to drive improvement, and (e) accelerate learning through networked communities (Bryk et al., 2016). Bryk et al. attempt to set a new path for educators who want to improve educational systems through networked improvement communities by focusing on the tools and processes that can help teams develop greater understanding about the organizations and problems they want to improve. They also emphasize that quality improvement requires educators to solve high-leverage problems using improvement methodologies and networked communities, while

providing a shared language, access to communities of people, and rigorous methods to address problems within education.

The implementation characteristics and the complexity in which they are applied to various contexts demonstrates an unparalleled importance in understanding the components that are used when making a decision or planning for initiative or program implementation. Implementation strategies and processes cannot be used in practice or evaluated without fully identifying their components, how they should be used, and with enough detail to measure and reproduce their components (Proctor et al., 2013). This means that implementation components are inherently complex and must be operationally defined in order to compare and evaluate them. This leads to better decisions about which implementation approaches are the most appropriate for obtaining the intended purpose or outcome.

Evaluation of Implementation

Evaluation is a concept that is frequently used, and yet educators and researchers have not yet developed a common definition for implementation evaluation. For this study, evaluation can be defined as the identification, clarification, and application of criteria to determine the value of an object under evaluation in relation to the criteria (Fitzpatrick, Sanders, & Worthen, 2011). The purpose of this section relates to the evaluation of programs and initiatives, not with evaluating policies, products, or performance of people. Evaluation uses inquiry and judgment methods such as (a) determining criteria and standards for judging quality and deciding whether the standards should be relative or absolute, (b) collecting relevant information, and (c) applying standards to determine value, quality, utility, effectiveness, or significance (Fitzpatrick et al., 2011). These methods help inform whether evaluation can serve as formative (designed for

improvement) or summative (for the purpose of decisions about adoption, continuation, or expansion) (Fitzpatrick et al., 2011).

Research on program and initiative implementation have shown there are a variety of evaluation designs, and the type of evaluation must be matched appropriately to the program or initiative activity (Holden & Zimmerman, 2009). The implementation stage and scope will determine the level needed and the evaluation method. The level of evaluation refers to the perspective of greatest importance to be measured through evaluation (Holden & Zimmerman). For example, a program being evaluated at the state level could involve different stakeholders and measures than a program being evaluated at the local level. The following section provides information on implementation evaluation, which can be used to better understand the elements that make programs or initiatives successful at meeting its outcomes.

Process evaluation. Process evaluation, also known as formative evaluation, is important for analyzing whether program or initiative activities are implemented as intended. Process evaluation provides valuable information for adjusting strategies or practices to strengthen the quality of implementation and effectiveness (Craig et al., 2008). Process evaluation can be used for several things, such as identifying the targeted population and appropriate strategy, providing data for improvement efforts, and serving as an early warning for problems (Craig et al, 2008). Process evaluation may be used throughout implementation to provide critical information on implementation activities and to track information related to the *who*, *what*, *when* and *how* of programs or initiatives, which can be used to strengthen or adjust the activities (Duda & Wilson, 2015).

Formative evaluation or process evaluation is used in various social sciences, and while there is a mix of definitions and approaches, Stetler et al. (2006) defines it as "a rigorous

assessment process designed to identify potential and actual influences on the progress and effectiveness of implementation efforts" (p. 1). The research conducted by Stetler et al. (2006), used an experimental design combined with descriptive and observational research in a mixed method approach. Their study utilized the Department of Veteran Affairs' Quality Enhancement Research Initiative (QUERI) approach, which addresses quality improvement of practices and continues to contribute to this effort through the implementation of research findings and innovations into routine clinical practice. A common evaluation objective in QUERI was to identify constructs that appear to distinguish between organizations with high and low implementation success (Stetler et al., 2006). There are constructs that provide insights into the key areas that influence implementation. The QUERI approach draws on rapid and significant improvements through systematic application of best practices.

To understand regional approaches to policy and systems changes related to chronic risk factors and access to preventative services, Walkinshaw et al., (2015) conducted a qualitative study through 34 informal interviews with the Washington State Department of Health's Community Transformation Grant. Their process evaluation identified the challenges for planning, building, and implementing a regional model for prevention, which included stakeholder buy-in, regional geography, and communication. Furthermore, their facilitators included shared regional history and infrastructure, strong leadership and collaborative relationships, a shared vision and goals, adequate funding, and technical assistance with training. They learned that policy and systems change required adequate time, funding, staffing, and close relationships with local leaders to address challenges.

Outcome evaluation. Outcome evaluation, also known as summative evaluation, is essential for looking at results to measure the direct effects of program and initiative activities.

This can take place with targeted populations or problems. Implementation outcome variables are the intentional actions to deliver services, such as acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, coverage, and sustainability (Peters, Adam, Alonge, Agyepong, & Tran, 2013). Implementation research uses these variables to assess the extent as to how well implementation has occurred or if it can provide information on other outcomes (Peters et al., 2013). These variables can provide information on whether a program or initiative is being effective in reaching its long-term goals or objectives, and also serves to assist in making judgments about program adoption, continuation, or expansion (Peters et al., 2013).

Implementation outcomes refer to organizational adjustments that support fidelity and sustainability of a program so that desired outcomes are more likely to occur. Outcome evaluation is described as requiring a systematic process for collecting data on the impacts, outputs, products, and outcomes, which then provides information on the degree of success, effectiveness, or goal of implementation (Patton, 1997). In evaluation research, many researchers refer to outcome evaluation as the extent to which desired outcomes are being achieved (Patton, 1997).

Implementation is not considered an event, but a process of careful organizational adjustments that unfold over the course of two to four years (Bertram et al., 2011; Fixsen, Blase, Naoom, & Wallace, 2009). Successful program and initiative implementation require evaluation and adjustments of organizational structures, culture, and capacity as well as development of new staff competencies (Bertram et al., 2015). It is important to assess the quality of implementation by examining how programs and initiatives are delivered (process evaluation), where improvements or refinements are needed (continuous improvement), and the direct effects of activities on the targeted goal (outcomes evaluation).

Summary

The purpose of this literature review was to summarize and synthesize research on implementation frameworks, identify relevant information about implementation strategies, processes, and improvement, and to understand effective practices for evaluating implementation. This literature review provides a landscape of effective methods to complex implementation approaches that can be used in organizations such as ODE. The literature offers a starting place for understanding how to enact those approaches.

It is important to consider that implementation and evaluation of programs and initiatives can go beyond the methods and tools. This can be accomplished by acknowledging, valuing, and utilizing different perspectives and ways of practice, that have the potential to improve understanding, planning, delivering, and evaluating programs and initiatives to achieve their intended outcomes. To deeply understand state-level implementation, the voices of the implementation managers who are responsible for overseeing and implementing initiatives and programs must be taken into account.

A study such as this has the potential to offer a unique perspective of the implementation processes and practices at ODE. This insight could be used to inform the agency on key elements of processes and practices that are common across implementation of initiatives and programs at the state-level, and to help create better alignment and efficient processes and practices for effective initiatives and program implementation. The next chapter will introduce the specific methodology and process used to carry out this study.

CHAPTER 3

METHODOLOGY

This study was conducted to gain an understanding of state-level implementation practices and processes of current initiatives and programs by implementation managers at the Oregon Department of Education (ODE). This chapter presents the design of the study, philosophical approach and the rationale, describes the participants and sampling strategy, the role of the researcher, instrument development process, data collection procedures, data analysis procedures, and ethical considerations and strategies to ensure soundness of the data.

Research Design

This study utilized a qualitative research approach to report on the practices and processes described by implementation managers at ODE that are important in implementing an initiative or program. I conducted this research study through structured interviews with participants on ODE's implementation practices and processes. The structured approach provided a clear focus for the interview and allowed for comparisons of information between participants, while also providing some flexibility in the interview for expansion on personal experiences (Merriam, 2009). This interview structure allowed participants to reconstruct their processes and practices while reflecting on their experiences within the context of their work (Seidman, 2013).

Philosophical Approach

A qualitative research method was appropriate for this study as the intent was to provide a better understanding of the complex nature of implementation at ODE and help to explore the practices and processes associated with the participants identified for the study (Creswell, 2013; Seidman, 2013). Because the study sought to first understand the processes and practices of

individuals engaged in implementation, and then identify the common practices across participants, interpretative social science was the philosophical method of choice through a constructivist lens. The purpose of this approach was to understand the meaningful actions taken by participants, whereby their actions have purpose and intent, and therefore are meaningful. Additionally, these actions are best studied within the context that surrounds and contextualizes those actions (Dilthey, 1988).

Participants and Sampling Strategy

The population for this study was comprised of ODE staff responsible for implementing or overseeing implementation of initiatives or programs. These employees have substantive knowledge and involvement in implementation and are referred to as implementation managers throughout this study.

Selection. Through deliberation with my research committee, six to eight participants were discussed as ideal for this study, due to the amount of data that this study would produce and the limited information on this population for sampling. ODE had not conducted an agency-wide inventory of all initiatives and programs; therefore, participants were selected based on my knowledge of those across the agency who are responsible for implementing at least one current initiative or program in the last two legislative bienniums, meaning within the last two to four-year period. The Oregon Legislative Assembly creates a biennial state budget every two years, which can be insightful for understanding the funding mechanism for initiatives and programs in this study. In addition, I conducted a brief scan of the ODE website looking for initiatives and programs to help identify other potential participants.

A purposive sampling strategy was employed to select a homogeneous group of participants from different departments and teams across ODE. The homogeneous sampling was

used to identify participants who shared the similar characteristic of being responsible for implementation of a current initiative or program within the last two bienniums (Creswell, 2013). Four of the participants were identified as having knowledge and experience in implementing programs and initiatives. The other two participants were identified, before the study began, through a reputational or network sampling. This is a method where I informally asked colleagues at ODE about other potential participants who met the specific sampling criteria for this study (Creswell, 2013). The participant sampling concluded with six individuals who were identified from across the agency as implementation managers.

Invitation. Following the selection, I invited potential participants through face-to-face communication, email, and an Invitation to Participate letter (see Appendix A). All six participants agreed to participate in the study and indicated that they met the sampling criteria. I then sent them the Interview Questions (see Appendix B) at least two days before their interview to prepare responses and any supporting documents they wanted to provide.

Participants received the Letter of Consent (see Appendix C) during their personal interview. The consent to participate letter explained the research study, the purpose of the research, the method of the research, the extent of their participation, my role in the research study, and how the research findings would be used. Additionally, each participant received information on the identifying selection criteria, purpose of the study, research process, and expected time commitment. Lastly, I provided participants the opportunity to receive the findings after the study was complete.

Instrument Development

An initial draft of the interview questions was formulated by determining key aspects of each of the research questions as supported by research and meta-frameworks identified in the

literature review. The emphasis was to understand both the processes and practices of the individual and to understand what the individual identified as effective or key to implementation. Questions related to demographics and background experience were added. The interview questions were peer reviewed by my dissertation committee and two research colleagues at ODE. The interview contained a total of 34 questions (see Appendix B) developed for the instrument and selected for eliciting the appropriate responses and to obtain individual and comparable information from all participants.

The initial instrument was tested in a pilot interview, and refined for this study. The participant in the pilot interview was identified, selected, and interviewed in the same manner as the other participants in this study. The reason for this was to keep the conditions for the participant criteria and sampling strategy the same. During the pilot interview, the initial interview questions were used with the participant and audio recorded for review. After the pilot interview, the participant was asked to provide feedback on the order and meaning of the questions.

Feedback from the pilot participant identified where interview questions were not structured in a sequence or an order that made a smooth transition between key areas and question types. This feedback and the audio recording of the interview were reviewed by me to determine if the responses to the questions elicited the type of information necessary for me to conduct an analysis. I was able to do an analysis of the transcript; however, decided to reordered the interview questions into an interview protocol format that created connections between sections of questions and gave the participants a clear understanding of what was being asked of them throughout the interview. The interview questions did not change and probing questions were added for additional clarification or expansion of responses if needed.

The final version of the interview questions was turned into an interview protocol for me to use in the study. The interview protocol was divided into nine sections. The first section was an introduction to the interview and provided the opportunity for participants to ask questions before we started, agree to being recorded, and confirm their informed consent. The second section provided common terms and definitions used in implementation science that were going to be used during the interview. The third section was short demographic and background questions to learn more about the participants and their experience.

The fourth section focused in on the characteristics or features of the initiative or program that they are currently implementing and how they know the elements of implementation were in place. The fifth section provided the opportunity for participants to share important aspects of planning for implementation. The sixth section allowed for participants to discuss supports for implementation. The seventh section inquired about how participants evaluated outcomes and progress towards their initiative, grant or program goals. The eighth section focused in on how changes were made to implementation strategies. And, the ninth section provided the opportunity for participants to discuss what could have improved their implementation and recommendations they had for future implementation efforts.

Data Collection Procedures

Data collection was conducted through one structured interview with each individual participant for approximately 60-90 minutes, over a three-week period. Three of the six interviews were face-to-face in conference meeting rooms at ODE, while the other three interviews were conducted by conference call with me at ODE in a conference meeting room. The conference call option was provided to participants due to inclimate weather and busy schedules during the legislative session. The conference meeting rooms were selected to ensure

privacy and a familiar comfortable environment for participants. With permission, I took field notes of the interviews and used a digital voice recorder on my phone to record all the participants. For those participants who conference called during the interview, the recorder was placed next to the phone speaker to record the interview.

Consideration went into the use of structured interview questions with participants, in order to solicit the relevant information while also providing some open-ended questions to gain deeper understanding of the complex nature of implementation and associated issues. I used occasional reflection and checking throughout the interviews to compare my understanding of what the participants said with what participants meant, to ensure interpretation was accurate. This allowed participants to check for accuracy and resonance with their experiences, as well as clarify if needed.

After the interviews commenced, I uploaded the recordings to Verbalink.com website through a secure MP4 file transfer process. Verbalink.com transcribed the files into detailed documents, one for each participant, and formatted them by researcher question and then participant response for each interview question. This provided a word for word account of the interviews. The transcriptions were emailed to me for review and I determined that the transcripts were clear and useable for analysis. The data collection process commenced after the interviews were complete.

Data Analysis Procedures

This section describes how I reviewed and analyzed the information gathered throughout this study. My field notes and the interview responses were analyzed and synthesized to identify common themes, concepts, practices and processes, as well as measures of process and

outcomes. The transcripts were analyzed one at a time to identify key information. I pattern coded the interview transcripts for initial, focused, and thematic responses.

Initial categories. Interview transcripts were read multiple times and initially coded into 466 pieces of raw data. The codes for each transcript were written onto colored sticky notes that corresponded with each individual participant. The sticky notes were then taped to my home office wall from one transcript at a time. As the codes evolved into patterns, the sticky notes were moved around on the wall forming 17 categories that grouped related concepts. This allowed me to visually map out areas of intersect among common practices and processes, revealing patterns in the data that were similar or different between implementation managers.

Emergent themes. The 17 categories were consolidated and collapsed to form themes that focused on broader patterns in the data. The themes were analyzed for what was present in the data and also what was missing. The themes were further refined to identify main themes and sub-themes. There were six themes and 20 sub-themes identified. When the coding and analyzing processes were complete, the data was saturated. The themes and subthemes were then compared to the meta-frameworks identified in the literature review in order to explore further commonalities between the findings and research. The final themes and sub-themes that make meaningful contributions to answering the research questions in this study are described in detail below. The final themes and analysis were member checked by two participants to elicit feedback as a means of establishing credibility of the findings and to capture the full meaning of the points made in the analysis. Their feedback was used to refine and provide clarification of elements in the categories of the themes.

Ethical Considerations

This study involved adult participants within ODE and was reviewed and approved by George Fox University's Institutional Review Board (IRB) process and ODE's management team. There was no student-level data used in this study; therefore, ODE data restrictions were not necessary according to ODE's research department. However, ethical considerations and sensitivity were a high priority in this research study since I am an employee of ODE and a colleague of participants.

Trust is a critical component and foundational to an ethical and trustworthy relationship between researcher and participants. As the researcher, I provided anonymity in this study for participants and their initiatives or programs. This means that the names of initiatives, grants and programs were removed from this study, as well as identifying information about participants. These details were not pertinent to this particular study and could cause significant ethical issues related to a decision to use them.

Participants were informed during the invitation to the study and also at the start of the interview that their identifying information would be kept anonymous. All six participants asked for reassurance at one point or another during the interview that their participation would be kept confidential. While I assured all six participants that the study would not reveal who they are or their initiative or program, one participant was nonverbally and verbally tense during the interview and at times challenging interview questions. My reassurance and detailed description of how the data would be handled, allowed participants to provide information without the risk of associated issues with participant identification.

During the analysis process, I recognized that the more individualized and detailed the responses were from participants, it unintentionally created recognizable and identifiable

information of participants. To mitigate this, I made the decision to discuss participants in individual and group responses at the level they are described in the next chapter. This further allowed me to group and display practices and processes that were similar or different across participants.

The interview audio recordings, transcripts and field notes originally contained references to participants and their initiative or program. These have been screened in detail to protect participants' identities. Identifying information was removed or coded to keep anonymity and confidentiality. Participant audio recordings, transcripts and field notes that were used in this study were color coded to further protect participants from undue risks. This was done by coding transcripts to corresponding colored sticky notes, which helped to negate any participant identifying information (e.g., name, initiative, supervisor, department, etc.).

During this study, I remained aware to the relationship between myself and the participants, as well as sensitive to protecting participants when they revealed something that could identify them or be used against them by others interested in the outcomes of the study (Mills & Gay, 2016). Process debriefing was conducted with the first two participants, that was used to improve future interviews. Participants were made aware of the benefits of participating, the notation of risks, and their right to withdraw from participation at any point. I further reduced any risk to participants by gaining consent to confidentially archive data during the time of study. Once the data was analyzed, the raw data and other materials were stored and will be kept for three years. I will then dispose of the research materials through a confidential manner, per requirements identified by the university's IRB process.

Summary

This section discussed the design of the study and the rationale for using a qualitative research approach. It included a description of the methodology, the process for identifying and selecting participants, the data collection process, and data analysis process. This purpose of this study was to examine ODE's implementation processes and practices across departments and between implementation managers. Through structured interviews, implementation managers were able to describe their practices and processes that are important for implementing initiatives or programs at ODE.

CHAPTER 4

FINDINGS

This chapter begins with a description on the background of participants who managed the implementation of initiatives or programs at Oregon Department of Education (ODE) and provides a summary of their processes and practices that shape the context for the findings. The six major themes that emerged from the data are discussed: external influences, organizational factors, operational policies and procedures, collaborative implementation features, supportive strategies, evaluation and continuous improvement, as well as a future considerations section. The first theme is the *external influences* on initiatives and programs from the federal government and Oregon state legislature. The second theme focuses on organizational factors such as training, leadership and culture of ODE. *Operational policies and procedures* make up the third theme, which includes an equity lens, rulemaking process, procurement process, grant awarding process, grant reporting, and funding structure. The fourth theme highlights the *collaborative implementation features* of the core team, advisory committees, and partnerships. *Supportive strategies* used to impact outcomes is the fifth theme, which include key decision making, communication, technical assistance, and the use of data and tools. The sixth theme is the *evaluation and continuous improvement* of initiatives and programs through the use of evaluation and improvement process. The last section provides future considerations and recommendations from all six participants for future implementation efforts. These themes from the findings answer the following research questions of this study:

1. What are the practices and processes described by implementation managers in this study as effective for the implementation of their initiative or program?

2. How are implementation elements conceptualized, enacted, and measured by implementation managers in this study?
3. Which elements are identified by implementation managers in this study as key to contributing to overall implementation effectiveness?

Background of Participants

Interviews provided some background information on the participants, described here and further detailed in Table 2. Throughout this chapter, participant's responses are discussed as individual or group descriptions at the depth they are presented so as to maintain confidentiality; therefore, further demographic information is not displayed. This information provides a focus on the similarities and differences of practices and processes across participants without revealing identifiable information of participants or their initiative or program. As a group, the six participants were employed at ODE through at least the last two legislative sessions and at the most four legislative sessions. Participants were from five offices across ODE; two participants were located in the same office, but reported to different directors on separate teams.

Table 2

Participant Background Information

Participant	Position Title	Initiatives, Grants, or Programs Led	Implementation Training from ODE	Previous Implementation Responsibility
1	Education Specialist	1	No	No
2	Education Specialist	10	No	Yes
3	Education Specialist	1	No	Yes
4	Education Specialist	4	No	No
5	Operations Policy Analyst	1	No	No
6	Program Analyst	8	No	No
Total		25	0	2

Key Themes from the Data

The key themes describe the implementation processes and practices of six ODE implementation managers. The descriptions in this chapter for initiatives or programs are described as "their," or belonging to an implementation manager, because they are the personnel responsible for overseeing the implementation. The way in which participants in this study implement their various initiatives and programs are detailed throughout this chapter within each of the themes. Each theme delineates where there were individual processes and practices conducted, and where there were commonalities in processes and practices across implementation managers.

Theme 1: External influences. The first theme, external influences, is related to the roles by the federal government and Oregon state legislature in directing the work of ODE. Federal programs and grant funds, as well as Oregon laws and funding, were mentioned across all participants as the impetus for their initiative or program. One participant described this influence by saying that "ODE's role is to implement the laws and rules, and to ensure that

districts are in compliance." While laws and rules served as the conduit for these initiatives and programs at ODE, the ways in which participants describe their processes and practices throughout this chapter goes beyond compliance. Participants discussed their supportive role in building capacity of districts and schools to implement the laws and rules they were charged with carrying out.

Federal. Two of the participants were responsible for implementing a federal grant. Both participants followed federal guidelines for implementation, but made aspects of their grant specific to Oregon. One participant reported their federal grant was part of a program they provided for districts, while the other described how their federal grant was folded into a larger initiative internal to ODE. One of the participants discussed the extensive federal grant process that required them to outline elements to measure, how they would be measured, and data sources that would be used. This participant found the detailed work done upfront for the application helped serve as a guidance tool for implementation. As the participant developed an implementation plan, it incorporated components of Implementation Science, including an implementation timeline and evaluation plan with a rubric to measure the process and outcome goals of the initiative.

State. Four of the participants reported that their initiative or program was based on an Oregon legislative mandate. Three of these participants received legislative funding, while two indicated their mandates also created new structures and processes within ODE. The four participants used reports from legislative taskforces or committees that served as resource guides for informing their implementation process.

Theme 2: Organizational factors. The organizational factors are the second theme discussed during the interviews and provided information on the implementation background and

training of participants, leadership support for initiatives and programs, and the changing culture of the agency.

Training. Participants were asked about their experiences previous to ODE in implementation and about any implementation training they had while at ODE. All participants identified themselves as the person responsible for developing and implementing at least one initiative or program for ODE, and one participant had managed up to 10 different initiatives or programs while at ODE. Two participants discussed their previous experiences before working with ODE. Implementation done in their previous jobs helped them transfer some knowledge to their implementation practices at ODE, while the other four participants mentioned they had no prior implementation experience to ODE. While employed with ODE, all six participants said that they had not received any training or resources for the implementation of their initiatives or programs. Two participants identified supports developed by ODE within this last year, which were the procurement grant manager training and bill implementation checklist training. The two participants reported that both supports had not been created in time for them to use when they implemented their initiative or program, but may have been helpful for others.

Leadership. All six participants mentioned ODE's leadership as having differing levels of knowledge and support for their initiative, grant, or program. Four of the six participants found their director was supportive, yet minimally involved at the start of their implementation planning, rule-making process, and grant development process. Two participants mentioned that their former Assistant Superintendents were supportive, while one of the participants asked a rhetorical question of, "How do we onboard new leadership and what if they do not fully understand the objectives?" One participant said their former Assistant Superintendent had some understanding while another participant said theirs was not knowledgeable and "created more

work because of their lack of knowledge." Two participants mentioned that executive leadership had a basic understanding and knowledge of their initiative, but did not know the details. One participant believed the State Board of Education, other agencies, and the Governor were very supportive of their initiative.

Culture. The culture of ODE was discussed in two interviews. One participant said the culture of ODE was changing and people were learning how to collaborate across departments and across teams to "de-silo" the work within the agency. The participant mentioned that the purpose behind this was to improve outcomes for students through coherence, collaboration, reducing burden, and building capacity to better support districts. The other participant said that "ODE is becoming a learning organization and it takes time to change." While culture was specifically discussed during two interviews, all participants either hinted at or named aspects of the organizational culture that helped or hindered their implementation processes and practices. At one point or another during all the interviews, participants demonstrated a sense of fear and apprehension to discuss areas of need, gaps, and improvement of the agency and wanted reassurance of their anonymity.

Theme 3: Operational policies and procedures. The third theme details the operational policies and procedures that were commonly used among participants as part of their implementation process. This section has the largest description, as it provides the core for implementation of initiatives and programs managed by the participants. The sub-themes in this section are equity lens, rulemaking process, procurement process, grant awarding process, grant reporting, and funding structure of ODE.

Equity lens. Five of the participants said equity was at the center of their initiative or program. One participant mentioned that Oregon's Equity Lens (Oregon Department of

Education, 2019) was used during their rule-making process. Three participants used an equity lens to identify student populations who were not being served in order to ensure equitable distribution of grant funds. One participant stated they "work closely with districts who are having trouble getting grant funds and prioritize them higher for technical assistance, as opposed to those districts who routinely receive grants." Another participant did not use an equity lens and assumed that districts did so when distributing their funds. This participant said that "it is possible for districts to use the funds inequitably by providing some of their schools more funds over others who need it." Even though this participant did not use an equity lens, they identified a process for working with districts that included a district needs assessment, technical assistance on grant application and requirements, application submission and review, and priority distribution based on a funding formula.

Three participants mentioned they used Oregon's Equity Lens in the professional learning and discourse conversations they had with districts. One participant said, "These are tough conversations to have with districts, but through these discussions districts are learning what they need to do differently." It was also mentioned by one participant that the use of data helped the participant inform districts and guide them into deeper conversations about their students, culture, climate and support for students while using asset-based language.

Rulemaking process. The ODE rulemaking process was mentioned by all four of the participants who had state initiatives or programs. One participant described this process as multi-step. The steps mentioned across all four participants were not necessarily sequential, but were an iterative process, where someone would go from one step to another and then back again or even multiple steps at the same time. The steps described were (a) spend a brief time analyzing the new law and any legislative reports; (b) form a planning team; (c) develop a plan

and timeline; (d) form an advisory committee or workgroup; and (e) develop or update Oregon Administrative Rules. This participant described the process as "You're building it as you are learning about it." Another participant formed a team to help with the rule writing process. One participant mentioned they had to quickly launch their initiative due to an emergency legislative effect date, which meant they had to do implementation planning, rulemaking, and grant process all at the same time in a short timeframe.

Procurement process. All six participants discussed ODE's procurement structure and process. One participant defined the procurement process as the mechanism of "how money gets out the door" of ODE. The six participants discussed how the structure and process created gaps in implementation, in contracting and funding delays, and how it impacted the outcomes of their initiative or program. They described it as being the greatest barrier and challenge for the implementation of their initiative, grant, or program. Three of the six participants mentioned there was not a mechanism for consistent funding or support across biennia, which created instability in funding for anyone who received funds from their program or grant. One participant said:

> The lack of funds or late funding distribution means student populations ODE is trying to impact are not participating and it's creating a lack of access for students. This lack of access is impacting equity-focused grants for students who are historically underserved and are the target of the funding.

Three of the six participants mentioned that student participation rates decreased in their initiative or program over the change in biennia. Two of the six participants mentioned the instability in funding from legislature and the delays from ODE were impacting district hiring and position stability. One of these two participants mentioned that this instability for districts

impacted their retainment of people with historical knowledge and experience. The other participant said that "districts have to use their own funds to continue programs until they get reimbursed, and this reflects poorly on the bill and initiative, and breaks trust with districts."

Four of the participants mentioned delays in contracting and funding due to the process of receiving approval from the Department of Justice for large sums of money, which could take up to "three months or more." One participant recalled that "the funding delay has been getting worse every year and funding isn't being distributed until late-winter or early-spring of the school year." Another participant said, "The delay is impacting the timing of grant funding distribution, which affects programs, students being served, and ultimately the student outcomes are impacted." One participant commented the contracting delays were causing ODE to "lose credibility in communities and with districts, causing a negative reputation, and creating low morale for contractors and advocates." This participant also mentioned that "students are not getting services who are the most vulnerable and needing the most services."

Three of the participants created their own grant guidance documents: Frequently Asked Questions (FAQs) document, procurement navigation guide, and additional resource documents. Two participants suggested that ODE create a common process and a system for Response for Proposals, funding distribution, and training on best practices in managing grants for outcomes. These two participants wanted ODE to create process documents and training on the entire procurement process, Response for Proposal (RFP), Response for Application (RFA), Inter-governmental Agreement (IGA), contracts, and grant agreements. They also suggested ODE provide examples of these documents to use as a resource when creating new documents.

Grant awarding process. The grant process was described by all six participants. Four of the participants discussed a long list of areas they considered at the beginning of their grant

development process. Those considerations included (a) identifying the audience; (b) reviewing baseline data; (c) determining what is already in place; (d) deciding who to partner with; (e) understanding local context and population; (f) participation of rural and urban areas; (g) participation of small and large districts; (h) readiness to participate; (i) criteria for participation; (j) structure of schools, districts, and regions; (k) regional and state-level capacity; and, (l) politics and undercurrents of districts.

One participant discussed the need for ODE to create consistent ways to use what is learned from the implementation of grants across the agency. The participant mentioned having implementation managers use final reports on their initiative, grant or program to "identify successes and challenges, how funds were used, and what was learned." Two participants mentioned that reports such as these could be used to make informed decisions about future areas to focus on, provide funding, and make improvements.

Additional suggestions by three of the six participants were to look at timing of when applications, plans, and reports are required to see if changes could be made, to work more closely with procurement on communication to know when hold-ups are happening, and how to give what is needed in a timely manner. One of the six participants suggested looking at "the cycle for gearing up, closing down, and trying to get funding again. This impacts districts who are receiving smaller grant amounts, as they tend to opt out due to the heavy reporting." The participant suggested, "Creating a greater threshold for funding could increase participation in grants." Additionally, this participant mentioned they created a mandatory grant training webinar for their grantees and thought something like this would be helpful for others.

Grant reporting. Two of the participants required districts to fill out three reports annually. The first report was described as a proposal or a plan with a budget. One participant

mentioned that the first report was developed through collaboration with districts and advisory groups. The second report, or mid-year report, was described as the progress report on how districts are meeting their goals and what supports are needed. The final report was described as an outcomes report with data. One participant required districts to do a final report and presentation of their progress. This presentation was a "form of accountability and a way for districts to share their work." Another participant felt their reports lacked an accountability measure for districts and wanted to improve this in the future.

One of the participants talked about other ways districts report on their progress, such as monthly webinars and picture submission. Another participant mentioned they did not require reports from districts, but did have districts submit requests for reimbursement with invoices or other documentation. Two participants required reports that included progress on their indicators and outcome data. One participant used to provide reports to ODE's strategic plan as part of their grant reporting process, but mentioned this was no longer requested. Five participants provided informational reports to the legislature on their initiative or program that included grant information, while one participant said they do not provide legislative reports or updates on their grant.

Funding structure. All six participants provided suggestions on ways to improve ODE's procurement, grant process, and experience. One of them suggested creating a "centralized system for agreements, legal responsibilities, and how money is tracked." Another participant mentioned that it would be important to have a "coherent agency-wide strategy and knowledge of where the money is going, what's it's focused on, and how we can leverage the funds together to make a bigger impact." This participant suggested creating a "five-year funding structure with separate accounts for October through November across the biennium." They also mentioned it

would be helpful to create an "implementation team to look across all grants and make some connections, do strategic planning around the grant funding across the grants, and then create some common ways to support the implementation of the grants." The participant mentioned what would be helpful is "consistent policies for funding distribution and supporting programs, creating some common expectations for grant management and how they are reported on, and what is being learned from them." One participant found that sustainable funding from legislation helped create stability in districts.

Theme 4: Collaborative implementation features. The fourth theme describes the collaborative features associated with implementation as discussed by participants during the interviews. Core teams, advisory committees, and partners were mentioned by participants as key supports to their implementation processes and practices.

Core team. All six participants formed core planning or implementation teams comprised of two or more people to advise them on their process. Core teams consisted of internal-only or a mix of internal and external partners who were described as helpful in providing different perspectives, being thought partners, and a sounding board for ideas. Two participants thought their team approach could use some improvement in their processes and practices in order to create more efficiency and capacity. Five participants believed their initiative or program was connected to other initiatives or programs in ODE. Two participants consulted with others at ODE whose work aligned, while two other participants said their work was "siloed" from the work of other teams and departments in ODE and had to be proactive to connect their work with others.

Advisory committees. All six participants found their advisory committees helpful in providing feedback and informing their work. Advisories were described by one participant as

"experts in their field." Three participants said their advisories assisted with decision-making to help move work forward, to rework documents, and do something different. Due to the large size of their advisory, one participant found it too difficult for decision-making and scheduling meetings. Another participant said they needed to know "how to have discourse with the advisory group when they did not agree with decisions or ideas."

Partnerships. Two participants found that community advocacy groups were supportive and helpful for informing their work. One of these participants worked with their advocacy group to make decisions, build and implement strategies, and help plan and schedule meetings. Three participants partnered with additional groups, which included Education Service Districts, state liaisons, partner agencies, regional coaches, and outside evaluators. These groups were described as helpful in providing districts with technical assistance, professional learning, and supports for the contextualization of implementation.

Theme 5: Supportive strategies. The fifth theme is supportive strategies used to impact outcomes. All six participants identified their initiative or program's intended outcome. One participant said, "Addressing outcomes [is] a multifaceted approach and intentional strategies are implemented to impact the outcomes." The approaches mentioned across all six participants were (a) helping create community and family-to-school partnerships; (b) regional and stakeholder collaboration; (c) connecting initiatives and programs to each other; (d) providing money to districts to address their identified needs; and, (e) partnering with districts for support and resources. The sub-themes were created as a result of discussions around strategies used intentionally, which are: key decision making, communication, technical assistance, and the use of data and tools.

Key decision making. Three participants discussed the use of their advisory group to help make key decisions. One participant said their advisory group provided feedback on potential decision points. This participant mentioned that they intentionally gave structure to their advisory by taking a proposal or information to their advisory group to provide feedback, such as their draft implementation plan. Another participant used a reflective process with their advisory to determine what worked well and what needed to change, then made those changes. Three participants went to their director or supervisor to help them navigate complex or controversial decisions. Three participants worked with their core team or colleagues who were knowledgeable about their initiative or program to get their input. One participant felt this process helped them "make decisions based on an informed stance." Another participant said that while their core team helped make decisions, "there is no process for how decisions are moved forward and other teams are having the same issue." This participant said, "We know what is needed, know what we want to change, but have no idea how to make it happen and don't have the authority to make it happen." Two of the participants were given autonomy to make their own key decisions. Two other participants utilized data to make key decisions. One participant identified several areas for decision making such as data points, data collection, and grant criteria. Another participant used research from other states and feedback from districts and schools to inform their decision-making.

Communication. During the interviews, all participants mentioned vertical up and down communication, as part of their communication plan and feedback loops for information. Three participants said they provided updates to their director either weekly, monthly, or as needed. Two of the participants mentioned they occasionally give updates to executive management when asked. One participant mentioned that ODE used to use strategic plan check-ins, which

allowed them to provide feedback on their initiative. Another participant mentioned that multiagency community conversations were "strategically embedded in the initiative, providing other agencies the opportunity to learn what is working, what's not, and next steps."

Two of the participants discussed the use of feedback loops to share and receive information from their advisory group, core planning team, and multi-organization, regional, and district partners. One participant shared that multiple meetings per year with regions provided time to plan, identify what's working, success, challenges, and areas to address. Also, the participant mentioned that districts provided information throughout the year through progress checks and reports. Two participants purposefully used their Listservs, webinars, face-to-face meetings, fliers and brochures, newsletters, posters, and marketing strategies to communicate with others.

Technical assistance. District partnership was discussed by all six participants. One participant said that "building a trusting foundation helps districts be candid and allows us to tackle the challenges. Districts know about their students and needs." This participant mentioned they used a team approach with districts, "listening and learning where to help, and being open to what the district needs and not having a set formula for help." The participant said that "learning happens as you go along and sometimes, you're building it as you fly. Sometimes you have to refine your processes and implementation as you go."

All six participants provided technical assistance to districts. The type of technical assistance varied depending on the initiative or program and grant requirements. Five participants worked with districts as they analyzed their data and made informed decisions. One participant helped districts do a root cause analysis to identify needs and then supported the district as they developed a plan based on the findings of the analysis. The participant found it

helpful to support the district plan by understanding the data, what worked and what didn't, and adjusted their approach based on district feedback. Four participants provided support for districts on building their plan. One participant provided technical assistance through professional learning and regional coaches. Another participant helped districts connect with community-based organizations, refine their policies and practices, and evaluate their family engagement strategies.

Three of the participants created networks of professional learning communities to share with each other. The Oregon Educator Network was mentioned by one participant. Two participants provided an annual summit for networks to come together and learn from each other. Both participants discussed professional networks as helpful for discussing strategies that work, the challenges, and best practices. One participant was able to "model best practices such as identifying strategies that are schoolwide and that have the ability to affect all students." One participant said they "started small with the ready and willing districts," and later used them to help get other districts on board when they saw things working. Another participant used pilot sites to help districts learn what worked and what did not, and found it helpful in informing regional and statewide implementation.

Two of the participants reported going outside of ODE to get support, while a third participant consulted with someone from out of state. A form of technical assistance provided to two participants was referred to as communities of practice. They participated in the communities of practice as "a source of support for states to connect and partner with each other, to share information and resources, learn from each other on experiences and best practices, get training and hear from panel presentations, and receive researched-based practice information."

One other participant mentioned that they received Federal technical assistance and found it helpful.

Use of data and tools. All participants used data as part of their initiative or program. Three participants collected and used data through their grant application process. Four participants each used a different data collection and tracking tool. Those mentioned were a federal data collection portal, ODE's E-Grant Management System, Smartsheets, and a spreadsheet. One of the participants used research-based and evidence-based tools and resources. Four participants collected data on stakeholder feedback, student participation, perception data, customer service, supports, and activities. Four of the participants collected data through surveys and another participant used interview data.

Three participants discussed their challenges with using ODE's data. One participant worked with ODE's Information Technology (IT) Department to collect data. This participant said the IT data collections have very specific requirements: "inflexible timelines that cannot accommodate what the legislature tells them to do for data collection." Another participant said that ODE's data is "old and ineffective," being one to two years behind, while they found district data to be "real-time and can be used for formative and summative data." This participant said they had to use other types of data sources such as report cards and local data from districts.

One participant highlighted that "data is impacted by locally controlled policies and practices that inform and misinform data collection." This participant discussed how there are varying degrees of gathering, inputting and sharing of data, and that accurate data collection is difficult with multiracial categories. The participant said that "having an accurate picture of who we're serving is detrimental to our efforts. When we don't, it allows districts to say that we don't have these students in our programs, and therefore they don't get served." Participants offered

some suggestions for what would be helpful to them. These included "create a common project management system," produce "a student data portal where we don't have to pay others to do it for ODE," and "develop an integrated technology system."

Theme 6: Evaluation and continuous improvement. The sixth theme describes the evaluation and continuous improvement of initiatives and programs by participants through the use of an outside evaluator and improvement process.

Use of evaluation. Four of the participants used an outside evaluator for their initiative/program or grant process, and one participant felt it gave their initiative credibility. Three of the participants annually used an outside evaluator, while one participant used them every two to three years. One of the participants said, "If ODE uses an outside evaluator, then we must consider who owns the data on our students." Another participant said that "an external evaluator is great for creating and doing an assessment, providing a baseline of data, helping with accurate planning, identifying issues and barriers for improvement, and measuring progress and outcomes, among other things." A participant who did not use an evaluator said they "would like to do an outside evaluation of the whole program, but do not have the money or capacity."

One of the participants found it helpful to work with an outside evaluator to develop an evaluation plan which measured their implementation process and outcomes. The plan included multiple measures, data sources, a rubric, and report on levels of implementation over time. Another participant used an external evaluation that was used to talk with sites about their programs, process, and outcomes. This participant held professional learning community meetings at different sites to "see firsthand how stakeholders are being engaged."

One of the participants had an implementation plan, which they said "must be reasonable, measurable, and achievable." This participant thought it was important to have a "good plan,

good strategies, work to that plan, and then evaluate it." Another participant evaluated their outcomes by tracking how completely districts are spending their grant money. This participant had their own tracking system where they used a spreadsheet to track percentages of money spent and encouraged districts to spend their money. The participant assessed their spreadsheet at the halfway mark of the grant cycle to determine whether districts had spent 50% of their funds, and if so, districts were marked as making "adequate progress." The participant said that "if the district's money is not spent by a certain point in the grant cycle, then the money is reallocated to another district."

One of the participants did not measure outcomes for their initiative; rather, they felt that "more applicants and participation in grants is a measure of success." After the grant was completed, this participant visited sites to audit how the money was spent. Another participant said they used both qualitative and quantitative data to measure their outcomes, such as student participation rates and stakeholder engagement with communication and collaboration. One participant stated that "measuring outcomes is different between districts because it depends on the goals they set for themselves." This participant worked closely with districts and said that "goals are established in collaboration; there is a financial incentive to participate, and partnership and trust are important." The participant mentioned that "if districts do not meet their goals, ODE will control their funds." The participant explained that this requirement meant that the focus of efforts and money were to produce outcomes. Therefore, specific goals were developed to focus their efforts.

Improvement process. Two of the participants said they used ODE's District and School Effectiveness continuous improvement process, while one of these participants mentioned that it was loosely used and modified to their needs. Two participants described their process as

implementing, gathering data, and refining. One participant regularly reviewed data, such as professional learning evaluations, school and district evaluations, and evaluation reports. The participant used this data to work with their core team to evaluate progress on goals and outcomes. Two of the participants used improvement processes with their core teams to streamline processes and practices and then made decisions based on data they collected. This participant stated that these evaluations "provide a variety of feedback for continuous improvement planning such as formative, perception, and outcome data." Two of the participants used an annual district report for improvement of their initiative, while another participant reviewed district reports at the end of the biennia. One of these two participants used the report to "see where improvements can be made or where better supports can be provided to districts."

Two of the participants used input and feedback from their advisory group, advocates, superintendents, and principals to see what worked and what did not. One participant mentioned they listen to feedback from the legislature to make improvements. Two participants utilized coaches to "help transfer professional learning to practice in districts by developing their capacity" and to "help build sustainable structures and practices." One participant discussed how their coaches provided support to districts based on data and need, and coaches also helped districts with further screening and investigation. Two participants reviewed their processes and made improvements to their rules and grant criteria. The participant who reviewed their data every biennium looked at the grant structure, used feedback from stakeholders, made changes to the program as it matured to meet needs, and used data to change how evaluation happens. One participant found that improvement planning allowed them to change ESD supports, discover where the supports were housed, and use data and feedback to change practices. One of the participants used perception data from the sharing of best practices between districts and schools.

This participant discussed various ideas and practices with their advocate partners to come up with new and better ways of doing things, and then replicated those strategies between districts.

Future considerations. This section provides various recommendations from all six participants on what would have been helpful to them or others who were implementing current or future initiatives and programs at ODE. Four of the participants said ODE should provide onboard training for new employees and updated training for those who have been working at ODE, specifically in the areas of initiative and program implementation. Participants discussed onboarding that would include a long list of training topics. Those mentioned were: procurement training, bill and grant implementation training, IT data collection process and timeline, project management training, training on using the ODE shared drive and 30-day shared folder, and available technology platforms such as Smartsheets, Google Shared drive, and video conferencing in GoToMeeting and Skype.

One participant suggested a "detailed structure and roadmap for implementation" and an implementation guide that addressed various themes. The participant said, "It would have been helpful to have guidance and support for creating a detailed implementation plan, communication plan, and timeline with important decision points. They also commented that implementation supports, considerations for stakeholders and partners, and an evaluation plan were areas that needed support. Across the six participants, they identified the need for guidelines and support for the following: (a) use of best practices, (b) shared and common language, (c) professional development, (d) coaching, (e) high-quality instructional strategies for adult professional learning, and (f) similar strategies to use across implementation.

Three participants mentioned there should be training to understand and incorporate the following: (a) improvement and implementation science, (b) early adoption to late adoption and

how to influence onboarding of districts, (c) shared understanding of best practices, (d) how to evaluate best practices, (e) how to create sharing of best practices happening in districts and schools, (f) how to develop and provide learning modules and webinars for support and training, and (g) how to create a budget. One participant thought it would have been helpful to know the cost of and process for developing coaches, bringing together advisories, hiring for positions, and providing professional learning.

Five of the participants needed more support from leadership and wanted leadership to better understand their initiatives and programs. Two participants wanted support from leadership for decision-making and moving things forward. One participant said, "When a change is needed, districts want it and the advisory group advises on it, then we need an easier way to move forward with making the change." Two participants thought it would be helpful to have implementation mentors who can help with the following: (a) decision points, (b) options, (c) resources, and (d) supports. One participant said that "creating an implementation team who could support any initiative or program would be helpful, or each initiative [should] have its own implementation team to help guide through the process." One of the participants suggested that ODE identify a lead person for each initiative or program to help the implementation team anticipate challenges and barriers, and to streamline processes at the early planning stage. One participant said that "release of responsibilities and support at the beginning of the initiative would have been helpful to do the heavy work of planning out a new initiative or program," and would have allowed them to implement their initiative in a proactive way rather than in a reactive and rushed approach.

One participant said it would be important to "de-silo the work happening across various individuals, teams, and departments, and to figure out how to be more coordinated." This

participant also suggested leveraging researchers, data, and funding across the agency. The participant said ODE should create "strategic communication to highlight successes and outcomes" through ways such as the Confederation of Oregon School Administrators, magazines, newspapers, local radio, and ODE communication listservs and newsletters. The participant also recommended that ODE go out to communities around the state, and "invite all the districts to come, hold a workshop, have booths set up to get needed info, and have breakout sessions on various topics." The participant felt that if ODE staff members could coordinate, plan, and travel together for events, it would provide several benefits. These would include more time for people to talk with each other about one another's work, create less siloed initiatives and programs, and provide more accessibility to each other and to districts.

Summary

This chapter reported on the practices and processes of six ODE implementation managers who were responsible for current initiatives or programs. The six major themes were discussed throughout this chapter and provided the context for answering the research questions. The last section provided an opportunity to learn from implementation managers on what would have been helpful to them and also what could be helpful for future implementation efforts. The next chapter provides a summary of the findings that answer the research questions, discusses connections to the literature, identifies the limitations of the study, and suggests implications for further research, practice, and policy.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

This chapter provides a summary of the main findings, emphasizes connections and contributions to the literature on implementation, and provides a conceptual framework for implementation processes and practices of implementation managers across Oregon Department of Education (ODE). Based on the findings, the limitations of this study and areas of future research are also discussed. The chapter concludes with a focus on the practice and policy implications, and provides recommendations for implementation of initiatives and programs at ODE.

Summary of Findings

This section provides a summary of the main findings and answers the research questions of this study. The findings were presented in six key themes. The processes and practices of implementation managers interviewed at ODE were detailed within these six key themes: (a) external influences; (b) organizational factors; (c) operational policies and procedures; (d) collaborative implementation features; (e) supportive strategies; and (f) evaluation and continuous improvement. The findings also detailed considerations for implementation of current and future initiatives and programs at ODE from the implementation managers interviewed. The implementation considerations included providing implementation managers with the training, teaming, support, guidance, and resources needed to efficiently and effectively navigate implementation of initiatives and programs at ODE. The answer to the three research questions are captured from the findings of this study and summarized below for each question.

Research Question 1

"What are the practices and processes described by implementation managers in this study as effective for the implementation of their initiative or program?" was answered by the six participants as they detailed their individual practices and processes for implementation. Their processes and practices were organized into categories within six key themes. Participants discussed effective practices and processes and used key words such as "important", "most helpful", "essential", and "key." The effective processes and practices identified across implementation manager were: (a) using an equity lens; (b) navigating processes for rulemaking, procurement, grant awarding, and grant reporting; (c) forming and utilizing core teams, advisory committees, and partnerships, (d) developing intentional strategies around decision-making, communication, using data and tools, and providing technical assistance; and (e) using an outside evaluator, review progress, and developing indicators for measuring outcomes.

While participants described their individual practices and processes as effective, it is important to note that implementation managers discussed the necessity to navigate processes outside of their control, which they described as hindering their implementation efforts and outcomes. Those discussed by participants were (a) lack of required implementation training; (b) lack of resources to support implementation phases; (c) supervisors having minimal knowledge, involvement and support with their initiatives and programs; (d) lack of consistent funding from Oregon legislature; (e) late funding distributions from ODE; (f) contracting delays; (g) lack of internal protocols for key decision making, (h) outdated data and inflexible collection timelines; and (i) lack of ODE internal coordination and alignment. There were also several elements of their own practices and processes that participants identified as needing improvement, such as (a) team coherence; (b) internal cross-office alignment and collaboration; (c) developing

implementation supports; (d) two-way communication with procurement for updates; (e) large advisory group facilitation and communication; and (f) district data and reporting accountability.

Research Question 2

"How are implementation elements conceptualized, enacted, and measured by implementation managers in this study?" was answered in the interviews as participants described elements of their implementation processes and practices, the approach they took to get outcomes, and in the ways they measured whether or not their initiative or program was meeting its expected goals and outcomes. The implementation elements were conceptualized by the six participants as multi-layer and multi-process functions that at times were interconnected or ran simultaneously to each other in order to support implementation of their initiative or program. Some of the implementation elements occurred in a certain order, while others happened at different times or were revisited at a later time. For example, participants discussed how implementation elements for Operational Policies and Procedures occurred at the same time and had influence over aspects of their implementation elements within Collaborative Features and Supportive Strategies. This meant that the process of rulemaking and procurement could happen while a core team was being formed or it could influence who was a part of advisory committee or partnership. This also meant that a core team and advisory committee could play a guiding role in the key decisions made, communication plan, and type of technical assistance provided to various stakeholders.

The way in which implementation elements were enacted by participants was described in the approach they took to reach their goals or outcomes. These were described within both the Collaborative Implementation Features and Supportive Strategies. Implementation elements within Collaborative Implementation Features included (a) facilitating communication and

networking and (b) partnering and collaborating across agencies and organizations, education levels, regions and districts, and across internal offices and teams. Those elements in Supportive Strategies were (a) providing technical assistance through guidance and supports and (b) providing some flexibility to adapt the initiative or program to fit with district and community needs.

Implementation managers described what and how they measured elements of implementation. While the elements measured were specific to implementation managers and to their initiative or program, there were some commonalities in elements being measured across other implementation managers. Implementation managers described the various types of data they used to measure elements of implementation, which were perception, participation, and outcome data. These were collected through observations during district/school site visits, surveys, final reports, and network sharing of outcomes and learnings. Some of the elements measured were (a) student participation and outcomes, (b) district/school participation and outcomes, (c) regional collaboration and stakeholder engagement (d) adult changes in behavior, and (e) partnership with districts/schools for continuous improvement.

Research Question 3

"Which elements are identified by implementation managers in this study as key to contributing to overall implementation effectiveness?" was answered by the six participants as they described the overall key elements contributing to reaching the initiative or program goals and outcomes. These included (a) outlining elements to measure and identifying the data sources, (b) having previous implementation experience that transferred to current implementation practices, (c) forming core implementation teams of internal and external partners to provide input and support, (d) using advisory committees and districts for feedback, (e) working with

community groups to inform decisions and implement strategies, (f) creating professional networks to share best practices and challenges, (g) utilizing pilot sites to learn what works and what does not, (h) participating in national communities of practice, (i) receiving technical assistance to support their implementation, and (j) using an outside evaluator to develop an evaluation plan. These elements were described by implementation managers as important for overall implementation effectiveness.

Connections to the Literature

The findings of this study provide comparisons to the three implementation meta-frameworks identified in the literature review section, which provided a synthesis of relevant research on the best practices in implementation. The meta-frameworks included the Active Implementation Framework (AIF), Quality Implementation Framework (QIF), and Strategy Implementation Framework (SIF) (Fixsen et al., 2005; Meyers et al., 2012a; Okumus, 2003). This section explores how the findings support or diverge from the prior research in these meta-frameworks. The findings from my study are organized into the implementation meta-frameworks to demonstrate areas of alignment and show the differences between them. The language used to describe the comparisons is taken from both the meta-frameworks and this study's findings.

Active implementation framework (AIF). The AIF compared to the findings in this study provides insight into where elements align within the five overarching frameworks that comprise AIF (Usable Innovation, Implementation Teams, Implementation Drivers, Implementation Stages, and Improvement Cycles).

Usable innovations. The findings align with Usable Innovations in that at the outset, participants clearly defined their initiative or program and its purpose. They described the

essential functions and features of the initiative or program and identified who was the intended population. An unknown aspect was whether or not participants had created a theory of change to guide their planning process, but it was clear from their interviews that much planning had gone into the development process of their initiative or program.

Implementation teams. The findings align with Implementation Teams since these were identified as an essential part of implementation by the six participants. Participants described who and how their implementation core team intentionally assisted with implementation efforts at various steps in the process. The core team members were specifically chosen by the implementation manager and served as experts for informing aspects of the planning, organizing, implementing, and evaluation of the initiative or program.

Implementation drivers. The Implementation Drivers were compared with the findings of this study and organized by the three drivers within this framework: Competency, Organization, and Leadership.

Competency driver. The Competency Driver has four components (Selection, Training, Coaching, and Fidelity), which aligned with elements of the findings. The Selection component incorporates the background and experience of implementation managers to implement an initiative or program and the director's ability to guide and support the process. This includes new hires and those who had previous implementation experience. The Training component highlights areas in ODE's operational processes that require implementation managers to participate in professional learning which will support them in implementing their initiative, program, or grant. While this component area was not developed for the six implementation managers during the outset of their initiative or program, it was mentioned that grant

management training and implementation checklist training has been developed to assist future implementation efforts across any initiative or program.

The Coaching component was identified by participants as an external support they provided through technical assistance to districts in areas such as data, decision making, and continuous improvement process. The Coaching component was mentioned by several implementation managers as an underdeveloped area internally for directors to effectively understand and support implementation managers. The Fidelity component was addressed by implementation managers as they discussed the ways they measured outcomes through reports, surveys, and data collected and used as feedback to inform improvement of their initiative or program.

Organization driver. The Organization Driver has three components (Decision Support Data Systems, Facilitative Administration, and Systems Intervention) with elements that align from the findings. The Decision Support Data Systems provides insight where implementation managers utilized data to support and improve implementation of their initiative or program, as well as data they obtained from ODE or from districts. Several implementation managers discussed using district "real-time" data to support their planning, decision making, and implementation. The Facilitative Administration component highlights areas where ODE's leadership has, or has not, developed supportive structures and practices to remove barriers to implementation, improve operational procedures and designate resources to efficiently support the competency driver components. The Systems Intervention component also highlights areas where ODE's leadership has, or has not, attended to multi-level alignment, organization, communication, and support for implementation of initiatives or programs. Findings from this

study identified areas where these were in place or where there could be future considerations for areas of improvement.

Leadership driver. The Leadership Driver contains two components (adaptive and technical) that support the implementation of initiatives or programs. The Adaptive component consists of directors who are proactive and take the initiative to change systems by managing the change process more effectively. This component was not adequately discussed in the findings, but suggests that directors could support implementation by anticipating areas where there may be barriers or where implementation managers may have challenges, and then address them in order to provide for an effective implementation process. The Technical component provides insight into areas where directors manage implementation supports. This is an area briefly mentioned in the findings where implementation managers discussed how their directors provide responsive support and guidance to navigate implementation issues that arose.

Implementation stages. The Implementation Stages (Exploration, Installation, Initial Implementation, and Full Implementation) were compared with the findings and suggest that the implementation stages are not a linear process for implementation managers at ODE.

Exploration. In the Exploration Stage, the elements from the findings within External Influences, Organizational Factors, and the Operational Policies and Procedures (except for grant awarding and reporting processes) provided a foundation for this stage. The stage included aspects of Collaborative Implementation Features to be conducted, such as forming implementation core teams and advisory committees to assist with planning implementation features. Most implementation managers reported that their core team and director were utilized to navigate and make decisions throughout the Operational Policies and Procedures components. While some of the Operational Policies and Procedures components required implementation

managers to develop core teams or advisory committees, both were regarded by implementation managers as essential to have in place for effective and efficient movement through the Operational Policies and Procedures processes. Therefore, some implementation manager's processes or practices overlapped within this stage, while other aspects of this stage were revisited once elements were established in the next stage.

Installation. The Installation Stage focuses on elements of the findings within Supportive Strategies, such as making key decisions about implementation, identifying data collection tools and metrics, and creating communication loops for the initiative or program. The core team was relied upon during this phase and directors were sought out to help provide additional support or to remove any barriers that kept this stage from moving forward. In this stage, implementation managers discussed receiving guidance from other experts, either internal or externally of ODE, or relied on national technical assistance. Towards the end of this stage, implementation managers discussed conducting the grant awarding process and then supporting districts or schools moving through their exploration to Installation Stage.

Initial implementation. The Initial Implementation stage was where implementation managers discussed their Supportive Strategies, such as providing technical assistance directly to districts or schools on (a) data, (b) decision making, (c) building an implementation plan, (d) professional learning, (e) countinuous improvement processes, and (f) supporting their implementation strategies depending on where they were in their Installation process. In this stage, implementation managers discussed the importance of working with pilot sites and developing professional learning networks with regional support for implementation and resources. This stage was described by implementation managers as a process of helping districts

and schools implement and begin to improve the initiative or program, and then work towards sustaining it into Full Implementation.

Full implementation. The Full Implementation stage was where implementation managers shared their perspective whether or not districts were implementing with high fidelity, efficiently using the grant funds, focusing their own money to maintain the initiative or programt, retaining staff with the knowledge and expertise to continue implementing the initiative, or sustaining ongoing operations of the initiative or program. Implementation managers discussed how when funding is unpredictable or when a funding cycle is ending, it is difficult to maintain momentum and personnel since the future of funding the initiative or program is unknown or not continued. This was described by a couple implementation managers as a time when districts and schools may (a) decide to no longer participate in an initiative or program, (b) not be able to sustain Full Implementation, or (c) not reach their desired outcomes.

Improvement cycles. The Improvement Cycles (Plan-Do-Study-Act, Usability Test, and Practice-Policy Communication Loops) were compared with the findings of the study and provide insight into areas where implementation managers use practices or processes to address problems, barriers, or make improvements to aspects of their implementation.

Plan-Do-Study-Act (PDSA). Two implementation managers discussed using an informal type of PDSA cycle to improve on their own processes and practices such as (a) creating an implementation plan for their initiative or program, (b) identifying metrics, (c) implementing the initiative or program, (d) determining what's working or not and if the metrics are being met, (e) identifying areas to improve, (f) developing a plan to address them, and (g) starting the improvement cycle again. In their approach from various data sources, implementation managers discussed using both quantitative and qualitative methods, such as outcome, perception, and

process data from surveys, reports, or observations. Several implementation managers shared how they supported districts by using a continuous improvement process, a process that ODE supports.

Usability test. It was unclear if implementation managers were conducting Usability Tests on initiatives and programs; however, as implementation occurred, participants discussed detecting problems and improving them.

Practice-policy communication loops. The Practice-Policy Communication Loops provide feedback on what needs to change and how much of it needs to change. Based on the findings, these communication loops happened as ODE leadership and the Oregon State Legislature asked for updates on various initiatives and programs. Implementation managers shared how they provided these updates as reports or informational presentations when requested.

Quality implementation framework (QIF). The QIF compared to the findings of this study provides areas of connection across the four sequential phases of implementation in the QIF: (a) Initial Considerations Regarding the Host Setting, (b) Creating a Structure for Implementation, (c) Ongoing Structure Once Implementation Begins, and (d) Improving Future Applications.

Phase 1. This phase includes Self-Assessment Strategies (Conducting a Needs and Resources Assessment, Conducting a Fit Assessment, and Conducting a Capacity/Readiness Assessment), Decisions about Adaptation (Possibility for Adaption), and Capacity-Building Strategies (Obtaining Explicit Buy-in from Critical Stakeholders and Fostering a Supportive Climate, Building General/Organizational Capacity, Staff recruitment/maintenance, and Effective Pre-innovation Staff Training). The Self-Assessment Strategies and decisions about

adaptation were not used internally to determine implementation strategies; however, a needs/resources assessment, capacity/readiness assessment, and considerations for adaptation were used across several implementation managers externally with districts which were considering the implementation of an initiative or program. Implementation managers discussed using capacity-building strategies with advisory committees, partnerships, and districts.

Phase 2. This phase includes Structural Features for Implementation (Creating Implementation Teams, Developing an Implementation Plan). These structural features were discussed by implementation managers as part of their processes and practices for implementation. They created a core implementation team of experts and developed an implementation plan which guided their implementation process. The details of implementation plans were not discussed, only that they had been developed for their initiative or program.

Phase 3. This phase includes Ongoing Implementation Support Strategies (Technical Assistance/Coaching/Supervision, Process Evaluation, and Supportive Feedback Mechanism). These implementation supportive strategies were discussed throughout the findings for this study in the themes related to Supportive Strategies and Evaluation and Continuous Improvement. Technical assistance played a major role in supporting implementation efforts, while coaching and supervision were not fully received by implementation managers. Several implementation managers shared how they utilized process evaluation strategies with districts and schools, while several mentioned how they used it on their own implementation strategies. All participants described the supportive feedback mechanisms they developed in the Supportive Strategies theme.

Phase 4. This phase includes Improving Future Implementation (Learning from Experience). The phase was discussed by implementation managers as they described the grant

reporting process, data gathered and shared, professional learning networks, and process and evaluation reports. Grant reporting was identified as one of the only consistent ways of measuring outcomes across implementation managers. It was also an area in which three implementation managers stated they could learn from other implementation managers on their processes and outcomes.

Strategy implementation framework (SIF). The SIF compared to the findings of this study provides areas of connection in the four categories of implementation within the SIF: (a) Strategic Context, (b) Strategic Context (Internal and External), (c) Operational Process, and (d) Outcome.

Strategic content. The Strategic Content category incorporates the development of implementation strategies and the how and why for the strategy. Implementation managers discussed the purpose for their initiative or program, it's intended outcomes, and the way in which they approached implementation through their processes and practices.

Strategic context. The Strategic Context category refers to both the external and internal context. The external context aligns with the External Influences theme where implementation managers described federal and state requirements as well as factors that influenced their implementation processes and practices. At times these were outside ODE mandates, while other times these were internal initiatives, innovative practices, or new ways of working within the agency. The internal context aligns with elements from the Organizational Factors in the findings.

Operational process. The Operational Process category provides insight into the operational planning, resource allocation, people, and control and feedback mechanisms. This category aligns across several themes in the findings, such as Organizational Factors,

Operational Policies and Procedures, Collaborative Implementation Features, and Supportive Strategies. This category lumps together implementation strategies, whereas this study's findings provide a clear delineation between processes and practices implemented in several categories.

Outcome. The Outcome category incorporates the intended and unintended results of implementation. The grant reports, surveys, observational site visits, discussion with partners, and district and school feedback were tools which provided implementation managers with data on whether or not their initiative or program was meeting its outcomes. This information provided implementation managers with the intended and unintended results that were then used to make future improvements to processes and practices.

This section explored comparisons between the findings of this study and the three implementation meta-frameworks from the literature review section of this document. The areas of alignment and differences were discussed in the descriptions organized within the implementation meta-framework sections. The areas of alignment between the findings and the meta-frameworks provide insight on the best practices in implementation research and provide an analytical lens for the practices and processes used in the implementation of initiatives and programs by implementation managers at ODE. The areas of gap or misalignment provide opportunities for further exploration, improvement, and innovation within ODE.

Contributions to the Literature

This study contributes to the research field on implementation in several ways. It informs areas of gaps in research and the literature by contributing to both the education field and state-level implementation processes and practices for initiatives and programs. It provides insight into organizational policies and procedures that implementation managers in this study navigated to effectively implement their initiative or program. It provides an understanding of the complex

nature of state-level implementation, a process for breaking down implementation processes and practices, and a conceptual framework for organizing processes and practices that contribute to a reduced strategy for effective implementation of initiatives and programs.

Validity

It is important to address validity in a qualitative research study design through a variety of strategies. Creswell (2013) refers to validation as a process and strength of qualitative research through extensive time spent in the environment, detailed descriptions, and the relationship between the researcher to participants. My study had several constraints related to validity that were addressed to reduce validity threats. These includes generalizability, research bias, response bias, and triangulation.

Generalizability. The goal for this study was to understand the implementation processes and practices for initiatives and programs at ODE. The detailed responses allowed for comparisons to be made between implementation managers, across departments within ODE, and with the meta-frameworks in the literature on best practices for implementation. While this study was conducted at ODE, it provided rich descriptions of the processes and practices of implementation managers. This study and the research questions were built upon the literature review and provide a process for other educational agencies and states to learn from the findings of this study.

Researcher bias. As mentioned earlier, I am an Education Specialist at ODE and a work colleague of participants in this study. Because I had previous experience in the implementation of initiatives and programs, I felt it would be insightful and valuable for me to deeply learn from other implementation managers on their processes and practices for implementation. I am familiar with the intricacies of implementation at ODE, understand that it is becoming a learning

organization, and believe the findings of this study will provide ODE and my colleagues with areas of insight for our work.

I selected six participants for this study using a purposive sampling strategy. Participants were identified from different department and teams across ODE who were responsible for implementing at least one current initiative or program in the last two legislative bienniums. Four participants were known to me, while two participants were identified through a reputational or networking sampling. I felt it was important for this study to have cross-department representation in order to understand the landscape of implementation practices and processes across the agency. The departments not selected from for this study were due to initiatives and programs not typically being implemented within them.

Response bias. As the interview questions for this study were being developed, they were peer reviewed by my dissertation committee and two research colleagues at ODE. The questions were piloted with one of the participants in this study who afterwards provided feedback on the structure and order of the questions. This helped ensure that participants were not confused by the questions during the interview. The interview questions were shared with all participants prior to the interviews to provide them with the opportunity to share the most accurate and honest information on their processes and practices, as well as put them at ease. Participants were made aware that neither their identity nor their initiative or program would be revealed. Lastly, member checking was conducted with two of the participants as they were asked to provide feedback on the findings and interpretations. The feedback was used to refine or further clarify elements in the categories of the themes.

Triangulation. Triangulation was achieved by capturing multiple participant voices from multiple departments across the agency, all contributing to multiple data points collected over the

interviews. These data points on implementation practices and processes were then compared, looking for areas of commonalities and differences, and then contrasted with meta-frameworks from implementation research in the literature.

Implementation Conceptual Framework

I used the findings from this study to configure the elements of implementation processes and practices into categories that are displayed under the six key themes in Table 3. The six themes and categories serve as the building blocks for implementation processes and practices and provide a potential framework for creating alignment and coherence across implementation at ODE.

Table 3

Framework for Implementation Processes and Practices

External Influences	Organizational Factors	Operational Policies and Procedures	Collaborative Implementation Features	Supportive Strategies	Evaluation and Continuous Improvement
Federal	Training*	Equity lens*	Core team*	Technical assistance*	Use of evaluation*
State	Leadership	Rulemaking process	Advisory committees*	Key decision making	Improvement process
	Culture	Procurement process	Partnerships	Use of data and tools	
		Grant awarding process		Communication	
		Grant reporting			
		Funding structure			

Note. Categories with an asterisk(*) include elements of processes and practices that implementation managers identified as overall effective for implementation of their initiative or program.

I created a conceptual framework (Figure 4) using a hexagon model to capture the implementation processes and practices across departments and between implementation managers within the six themes. These themes do not necessarily occur in a sequential order, but provide an understanding of the interconnections between them. The figure displays arrows between themes where elements influence each other.

Figure 4. Implementation Conceptual Framework. Interconnected themes for implementation processes and practices. The themes next to each other contain elements of implementation processes and practices that were closely interconnected, whereas themes further away had elements that were less influenced by each other or not influenced at all.

Operational policies and procedures. The Operational Policies and Procedures were the common ODE processes utilized across implementation managers. This theme contained elements that directed or guided implementation processes and practices, and had an influence on the other five themes. The five other themes were interconnected with the Operational Policies and Procedures, as they supported elements of required implementation processess within ODE.

External influences. The External Influences were federal and state legislative elements that impacted the implementation processes and practices within ODE. The External Influences

typically had requirements or reports used to guide areas of implementation in the two surrounding themes of Operational Policies and Procedures and Evaluation and Continuous Improvement. Both of these surrounding themes provided mechanisms for reporting back on federal and state requirements.

Evaluation and continuous improvement. The Evaluation and Continuous Improvement provided insight into the processes and practices used for measuring implementation efforts, either internal or external, as part of the implementation process or outcomes. This theme was interconnected to the Supportive Strategies which were implemented, the reports provided for Operational Policies and Procedures and External Influences, and the Collaborative Implementation Features utilized.

Supportive strategies. The Supportive Strategies contained elements that were utilized internally and externally by ODE's implementation managers to inform and provide support for implementation. The Supportive Strategies contained practices that were measured as part of the Evaluation and Continuous Improvement process and utilized Collaborative Implementation Features as a means to support implementation, and at times were required by Operational Polices and Procedures as part of the process.

Collaborative implementation features. The Collaborative Implementation Features were internal and external elements that supported implementation efforts. These were comprised of the teams, committees, and partnerships that guided decision making and provided feedback to support implementation processses and practices. At times, elements in this theme were required as part of the Operational Policies and Procedures process, but was also guided by Organizational Factors and connected to Supportive Strategies elements. This theme was

discussed across implementation managers as helpful and important to their implementation processes and practices.

Organizational factors. The Organizational Factors were the internal elements that facilitated implementation. Implementation managers with previous implementation experience or training found it easier to transfer these concepts across initiatives or programs, whereas others found implementation of their initiative or program to be a steep learning curve. Those who discussed having a director or leadership with knowledge and support of their initiative or program were able to navigate implementation processes and practices easier. This theme was connected with Collaborative Implementation Features and Operational Policies and Procedures, as elements in these areas provided technical guidance and support for implementation.

Implications

This section presents implications for practice and policy, as well as implications for future research.

Implications for practice and policy. My study provides findings that have implications for practice and policy.

Address institutional and operational infrastructure. ODE should leverage their Equity Stance and Oregon's Equity Lens to actively identify and address the institutional and operational policies, processes, and practices that perpetuate inequities in student outcomes. Based on the findings, areas of focus that should be addressed are the funding approval and structure, and the procurement and grant process.

An initial step to address the student inequities would be to operationalize internal equity training to name and identify belief gaps, inconsistencies in the timing and distribution of funds, and systemic barriers in various initiatives, grants, and programs across the agency, specifically

those that target supports for historically and currently marginalized students. There should be coordinated efforts across the agency with the executive leadership team and implementation managers to examine these inequities and then develop targeted strategies to engage in discourse that interrupts policies and practices and begin to address systemic inequities, eliminate educational barriers and provide equitable outcomes for all students in Oregon's education system.

Supportive leadership. ODE should clearly define the leadership role at different levels within the agency for knowledge and support of implementation of initiatives, grants, and programs. ODE should create accountability for technical and adaptive leadership support and collaborative work with implementation managers to identify and remove obstacles and barriers that hinder the implementation process.

ODE should address aspects of the organizational culture and climate that have created fear and mistrust, while also intentionally building collaboration, cross-functional teaming, and coherence between initiatives and programs and across levels within the organization during each phase of the implementation process. Trust, power differentials and complexities, politics, informal processes and procedures, and "siloing" were mentioned implicitly or explicitly throughout the findings of this study. Research literature has found organizational culture and climate as foundational to reaching effectiveness. ODE leadership can improve its culture and ways of working that facilitate alignment, coherence, capacity, efficiency, trust, and morale across the agency.

Create routines to drive implementation. ODE should develop routines as a formative process for planning, monitoring, improving, and evaluating internal policies and implementation processes and practices. A continuous improvement process that incorporates

elements of both Implementation Science and Improvement Science should be used. ODE's district and school improvement process offers a powerful mechanism that can be incorporated and modeled at the state-level. ODE should create routines to determine which districts are provided support and which districts are doing well.

Use feedback loops and communication protocols. ODE should create internal feedback loops and communication protocols to keep directors and leadership informed about the implementation process, progress, and outcomes. These feedback loops should be conducted as two-way communication so as to also inform implementation managers about updates or factors that may impact their initiatives or programs.

ODE leadership and implementation managers should create a systematic process to internally and externally share final reports and grant reports on successes and challenges of implementation processes, practices, and outcomes across initiatives and programs. These reports will benefit other implementation managers, ODE leadership, and legislators to help inform decisions about future areas for policy, funding, supports, and improvements.

Create agency-wide common terminology. ODE should create agency-wide common terminology, which can be used within the organization and with partners for implementation efforts. Certain key terms were defined for participants from the literature in order to create a baseline of common understanding to efficiently answer the interview questions. ODE could provide implementation managers with formal definitions of the key terms in order to have common understanding between them. It is important to define terms such as initiatives, programs, implementation, practices, and processes.

Develop implementation support teams. ODE should develop and deploy cross-agency implementation teams who are experts in planning, implementing, improving, and evaluating

initiatives and programs. These teams would have deep knowledge in both Implementation Science and Improvement Science practice methodologies. These team would strategize and work closely with implementation managers who are the content specialists by providing input, feedback, resources, and supports throughout the entire implementation process. The team would also assist leadership and implementation managers with alignment and coherence with other initiatives, programs, and projects that are underway.

Ongoing implementation professional learning. ODE should develop extensive implementation onboarding for new employees and ensure current employees are required to have updated training on best practices for implementation. It is important for ODE to consider background training and experience in implementation when hiring and building the capacity and competencies of ODE's implementation managers to effectively execute the work with which they are charged. All implementation managers and leadership involved in implementation should receive training on quality project management methodologies, collaborative technology platforms, coordinated support for implementation planning, guidelines for navigating implementation stages, use of a continuous improvement process, and initiative and program evaluation.

Sustainability and scaling. ODE should consider identifying ways to provide sustainability for initiatives and programs and identify areas for scaling of implementation. ODE may consider partnering and learning from regions within the state or from other states who have had success in these areas. ODE could take advantage of national organizations for implementation and improvement who offer technical support and resources to state education agencies wanting to build capacity in their organizations, personnel, and practices.

Implications for further research. Further research in this topic could build on the strengths and limitations of this study. Four distinct areas to focus for further research are: (a) increase the number of participants, (b) identify and prioritize areas of this study to investigate, (c) replicate the study in other state educational agencies, and (d) expand this study to other organizations and fields. ODE has the opportunity improve upon the implementation processes and practices for initiatives and programs by increasing the number of participants across offices within ODE and through further investigation of areas identified in the findings. The results of this study are specific to the context of ODE and could vary between state to state educational agencies. It would be useful to replicate this study in other state educational agencies to learn about their implementation processes and practices. Lastly, this type of study could be expanded to other organizations and fields to increase the research literature on effective processes and practices for implementation.

Conclusion

This study provided valuable insight into the technical aspects of state-level initiative and program implementation focused on efficiency and effectiveness, while also revealing aspects of the organizational culture that have impacted implementation efforts. Implementation managers must be fully equipped and supported to strategically navigate these complex interconnected systems in order to reach intended outcomes. The leadership, expertise, and passion of implementation managers is inspiring and their implementation processes and practices provide a wealth of information to learn from. It is our shared responsibility and opportunity to learn from and transform the educational system and culture required for equitable outcomes for all of our students.

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APPENDICES

Appendix A

Invitation to Participate

Dear ODE Implementation Manager,

My name is Beth Wigham and I work as an Education Specialist at the Oregon Department of Education (ODE). I am a student in the Doctor of Educational Leadership program at George Fox University in Newberg, Oregon. As a requirement of my program, I am conducting a research study to examine ODE's implementation landscape. I am eager to learn from your experiences with implementing initiatives and/or programs at ODE. The objective of this study is to gain a better understanding of the common implementation practices and processes used across departments within ODE and between implementation manager for various initiatives and programs, as well as how implementation processes and outcomes are evaluated.

This research study will consist of structured interview questions in which there are no right or wrong answers. The questions will include topics such as: (a) experience with implementation of programs or initiatives; (b) practices in implementation; (c) processes for implementation; (d) method for evaluating the process of implementation; and (e) method for evaluating outcomes of initiatives or programs. You may be asked some clarifying or probing questions to gain a deeper insight of implementation and associated challenges.

Your participation in this research study is completely voluntary and you may decline to continue at any time or decline to answer any question at your discretion. The risks associated with this study are minimized by providing a community story and pseudonyms for initiatives and programs, general interview questions as to not reveal identities of participants, and coding of findings. The interviews will be audio-recorded and subsequently transcribed. All the research materials (i.e., audio-recordings, transcripts, and signed consent forms) will be locked in separate, secure locations for a period of three years. I will be the only individual who will have access to these materials. After three years, I will personally destroy all relevant materials and delete the audio recordings. The results of this study may be used for research purposes, such as presentations at professional conferences, academic publications, and future research studies.

I am ready to schedule an interview with you and expect it to last approximately two hours. I am planning to meet with you at a location and time that is convenient for you and quiet enough to conduct a recorded conversation. I would like to present you with a small token of appreciation for your time and participation at the end of the interview.

If you have any questions regarding this research study, please contact me at (503) 480-9430, or my advisor at George Fox University, Dr. Scot Headley, at (503) 554-2836.

Kind regards,

Beth Wigham

Appendix B

Interview Questions

Key terms:
Some common terms used in implementation science that we will refer to during the interview are:

- *Initiatives – the priority efforts or projects that solve a problem or produce changes that result in desired outcomes*
- *Programs – the activities and connections between activities designed to produce a set of desired outcomes*
- *Implementation – a set of specified activities that occur at clear stages with common components that are intentionally implemented*
- *Practices – the methods or techniques used most often to produce results*
- *Processes – a series of actions, decisions, or steps taken in order to achieve a particular outcome*

Background Questions

1. What is your current position? (i.e., Director, Education Specialist, Research Analyst, etc.)
2. How long have you worked at ODE?
3. Since your time at ODE, how many different initiatives, programs, or grants have you been responsible for implementing?
4. While you've been working for ODE, were you provided training on how to implement an initiative or program? [Probe if so: Can you tell me more about it?]
5. Before working at ODE, have you ever been responsible for implementing an initiative or program? [Probe if so: Which have you been responsible for implementing and how many?]
6. Before coming to ODE, have you ever been trained on how to implement an initiative or program?

Description of Initiative or Program

7. How would you describe the essential functions or features of your initiative or program?
8. What type of initiative or program are you implementing? [Probe: Is it federal, state, local? Is it connected to your role or function at the agency? How so?]
9. Is your initiative or program connected to the implementation efforts of other initiatives or programs in the agency? [Probe if so: What ways is it connected or communicated?]
10. What is the intended outcome of the initiative or program?
11. What approach does your program/initiative propose to get these outcomes?
12. Does implementation of your initiative or program require the collection and/or use of data or technology? [Probe if so: What type of data or technology is needed?]

Planning for Implementation

13. What contextual factors do you consider when planning for implementation? For instance, do you consider what organizational, teamwork, and individual functions can help support you?
14. Is there someone knowledgeable that you go to for assisting you in implementation?
15. Do other people play a role in your implementation process? [Probe: Do you use a team approach?] [Probe if so: Are there internal or external people you work with?]

16. How do you go about making key decisions?
17. How do your implementation processes and practices incorporate equity? [Probe if so: Do you use Oregon's Equity Lens? ODE's Equity Stance?]

Support for Implementation

18. Are there any established policies, guidance documents, routines, or processes that you use in implementation? [Probe if so: What are they?] [Probe: Can I get a copy of any documents you use for implementation?]
19. What additional tools, resources or supports have you received for implementation?
20. Has agency leadership been involved in your implementation? [Probe if so: How have they been involved?]
21. Do you feel that agency leadership is knowledgeable and supportive about your initiative or program? [Probe if so: In what ways?]

Evaluation of Effectiveness

22. What elements of your practices and processes would you define as effective?
23. How do you measure that your initiative or program is meeting its expected goals or outcomes?
24. Are you required to report on the outcomes of your initiative or program?
25. Is your performance evaluated based on your implementation processes, practices or outcomes?

Improvement and Innovation

26. How do you review and/or iterate on your implementation process or practices for effectiveness?
27. Do you have a specific improvement cycle model you use? [Probe if so: Could you describe how it works?] [Probe: How do you review your implementation strategies for effectiveness using this cycle?]
28. How do you provide feedback to higher ups on what is working that could inform ODE's policies?
29. Do you use a communication plan or feedback loops as a part of your implementation process?
30. How do you scale up or build upon your implementation processes and practices?

Challenges, Opportunities, and Recommendations

31. Have you experienced any challenges or barriers to implementation? [Probe if so: Are there policies or structures that ODE has in place have been a challenge or barrier?] [Probe if so: What polices or structures might be helpful to you in implementation of your initiative or program?]
32. What could help you in implementation that you don't get, have, or use?
33. What would you recommend or suggest to improve implementation of current or future initiatives or programs at ODE?
34. Is there anything additional you'd like to share about your implementation practices or processes in your work at ODE?

Appendix C

Letter of Consent

Dear ODE Implementation Manager,

My name is Beth Wigham and I work as an Education Specialist at the Oregon Department of Education (ODE) in the Office of Teaching, Learning, and Assessment. I am a student in the Doctor of Educational Leadership program at George Fox University in Newberg, Oregon. As a requirement of my program, I will be conducting a research study and have chosen to examine ODE's implementation landscape. I am eager to learn from your experiences with implementing initiatives and/or programs at ODE. The objective of this study is to gain a better understanding of the common implementation practices and processes used across departments within ODE and between implementation manager for various initiatives and programs, as well as how implementation processes and outcomes are evaluated.

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Your participation in this research study is completely voluntary and you may decline to continue at any time or decline to answer any question at your discretion. The risks associated with this research study are minimized by a providing a community story and pseudonyms for initiatives and programs, general interview questions as to not reveal information about the identities of participants, and coding of findings. The interviews will be audio-recorded and subsequently transcribed. Information obtained from interviews will be analyzed for common themes. All the research materials (i.e., audio-recordings, transcripts, and signed consent forms) will be locked in separate, secure locations for a period of three years. I will be the only individual who will have access to these materials. After three years, I will personally destroy all relevant materials and delete the audio recordings.

The results of this study may be used for research purposes, such as presentations at professional conferences, academic publications, and future research studies. If you have any questions regarding this research study, please contact me at (503) 480-9430, or my advisor at George Fox University, Dr. Scot Headley, at (503) 554-2836.

Please sign below if you understand the purpose of this research study and agree to participate.

Participant signature_____ Date: _____

Researcher signature_____ Date: _____

Appendix D

Institutional Review Board Approval

2/8/2028

GEORGE FOX UNIVERSITY HSRC INITIAL REVIEW QUESTIONNAIRE Page 6

Title: An Examination of Oregon Department of Education's Implementation Landscape

Principal Researcher(s): Beth Wigham

Date application completed: 02/05/19

(The researcher needs to complete the above information on this page)

COMMITTEE FINDING: For Committee Use Only

☑ (1) The proposed research makes adequate provision for safeguarding the health and dignity of the subjects and is therefore approved.

☐ (2) Due to the assessment of risk being questionable or being subject to change, the research must be periodically reviewed by the **HSRC** on a basis throughout the course of the research or until otherwise notified. This requires resubmission of this form, with updated information, for each periodic review.

☐ (3) The proposed research evidences some unnecessary risk to participants and therefore must be revised to remedy the following specific area(s) on non-compliance:

☐ (4) The proposed research contains serious and potentially damaging risks to subjects and is therefore not approved.

Chair or designated member

2/15/19

Date