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Vocational Education Leaders' Perceptions of Institutional Readiness for Online and Blended Learning

Gennette P. Clacken
Walden University

Walden University

College of Education and Human Sciences

This is to certify that the doctoral dissertation by

Gennette Clacken

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Review Committee
Dr. Loren Naffziger, Committee Chairperson, Education Faculty
Dr. Debra Tyrrell, Committee Member, Education Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

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Abstract

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MPhil, Walden University, 2022

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Educational Technology and Design

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Abstract

Recent studies highlight institutional readiness as critical to the successful adoption of online and blended learning (OBL) in higher education; however, limited research in Jamaican vocational institutions presents a risk of implementation failure and reduced return on investment for stakeholders. This basic qualitative study explored how institutional leaders in Jamaican vocational education institutions describe institutional readiness for OBL adoption and implementation. Grounded in facilitating conditions as a construct of the unified theory of acceptance and use of technology and guided by the blended learning adoption framework, the study focused on the readiness of institutional strategy, structure, and support. Semistructured interviews with 12 purposively selected institutional leaders from Jamaican government-funded vocational education institutions offering OBL courses were analyzed using a theoretical analysis approach that integrated *a priori* codes from the conceptual framework with inductively identified categories and themes. Findings indicated that leaders emphasized training and stakeholder buy-in as key OBL strategies while focusing little on OBL policy and governance. Leaders also described institutional OBL structures as multifaceted but needing improvement, OBL support as varied with few incentives, and OBL readiness as dependent on human and resource capacities amid inadequate facilitating conditions. This study facilitated social change as it addressed a gap in the literature and may inform institutional decision-making, policy development, and improvements related to OBL implementation while contributing to national and regional vocational skills development strategies across Jamaica and other Caribbean countries, in alignment with global frameworks.

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Dedication

I dedicate my study to my husband, O’Neil Antonio Jeremy Clacken, who sacrificed much during my doctoral journey.

Acknowledgments

I want to acknowledge the support of Dr Loren Naffziger, whose care and patience helped me overcome many significant obstacles. I would also like to thank Dr. Debbie Tyrrell, whose keen eye and encouraging feedback taught me how to apply qualitative scholarship methods. My student advisor, Chue Vang, ensured I was always on the right path. To my sisterhood of wives who prayed for me, studied with me, and propped me up when I was about to fall. Cheers to you, Nadia Kelly, Kareen Hartley, and Sandra Gardner. Finally, all glory belongs to the Lord of Hosts, who took me on a journey and allowed me to cross to the other side.

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Chapter 1: Introduction to the Study

Readiness is the state of being prepared for something (Junus et al., 2021). It is a critical success factor when technology innovations, such as online and blended learning (OBL), are adopted and implemented in educational settings (Ate et al., 2021; Budur et al., 2021; Suryanti et al., 2021; Suwawi et al., 2021). In OBL, researchers have identified various types and dimensions of readiness, including student readiness, teacher readiness, institutional readiness, infrastructural readiness, and organizational culture readiness (Nwagwu, 2020; Zine et al., 2023). A plethora of literature explains the dimensions and nuances of OBL adoption and implementation readiness relative to teacher and student preparedness (Bokolo et al., 2020a; Lane, 2021). However, there remains a lack of empirical literature focusing on institutional preparedness or readiness for OBL in higher education institutions (HEIs) and what institutional readiness means in various segments of the higher education community (Antwi-Boampong & Bokolo, 2021).

Authors like Venkatesh et al. (2016), Maramba and Mazongonda (2020), and Malik et al. (2023) described institutional readiness as the readiness of the facilitating conditions within an educational institution that enables the successful adoption and implementation of OBL. Other researchers like Zhang et al. (2022) and Hill and Smith (2023) found that institutional readiness for OBL includes the readiness of elements such as institutional strategy, structure, and support. Despite these descriptions of institutional readiness and research findings that highlight its importance to OBL implementation success (Abdullah & Kauser, 2023; Groen et al., 2020), the meaning of institutional readiness, like other forms of OBL readiness, is often contextually situated and constructed (Badiozaman, 2021). Therefore, as educational practitioners in higher education embark on OBL adoption and implementation, they should understand what institutional readiness means in its specific application context, including its application in vocational education (Edalgo, 2022).

In this chapter, I provide an overview of the study by summarizing the background, the problem and purpose statements, and the research question that guided the study. I also summarize the conceptual framework undergirding the research and the methodological approach I used to conduct the study. I outline the scope of the study, including the definitions and assumptions, the scope of delimitations, and the limitations. Finally, I briefly explain the significance of the study.

Background

Online and blended learning is now a permanent feature of how small island developing states of the Caribbean, like Jamaica, facilitate teaching and learning. The impact of the novel coronavirus (COVID-19) on education across the Caribbean during the 2020-2022 period demonstrated the vulnerabilities of traditional face-to-face instruction. COVID-19 also positioned OBL as a valuable risk mitigation and business continuity strategy that educators should embrace (Allert, 2021). Accordingly, Ministries of Education and schools at multiple levels in various Caribbean countries are investing significantly in deploying OBL resources and services to augment and substitute for face-to-face learning (Bleeker & Crowder, 2022). In Jamaica, private sector organizations and multi-laterals such as the United Nations Educational Scientific and Cultural Organization (UNESCO), the International Labor Organization (ILO), and the World

Bank are partnering with ministries, other local authorities, and schools to provide essential equipment, infrastructure, and training to facilitate the move toward OBL and other flexible learning pathways (Barrett-Adams & Hayle, 2021). As the benefits of OBL become more evident to education practitioners and stakeholders, the laissez-faire attitudes once associated with OBL adoption and implementation have now given way to deliberateness and urgency (Cobo-Rendón et al., 2022; Hill & Smith, 2023).

Before the emergence of COVID-19 in 2020, readiness for OBL in many jurisdictions emphasized distributing devices to students and training teachers to integrate relevant technologies into the teaching and learning environment (Bokolo, 2021). In Jamaica, for example, education officials used initiatives such as the Tablet in Schools Program (Johnson, 2016) and the adoption of the ICT Competency Framework for Teachers, developed by UNESCO (see UNESCO, 2011), to prepare the education system for the gradual implementation of OBL. Given the foci at the time, Jamaican authorities gave little attention to other forms of OBL readiness, such as institutional readiness (Thomas-Brown, 2020; Webster & Gardner, 2019).

When COVID-19 emerged, there was a worldwide pivot to emergency remote teaching (Ferri et al., 2020). The preparedness of the island's existing telecom infrastructure became the focus of education officials and stakeholders in Jamaica (Murphy, 2020; The Jamaica Observer, 2020). The Ministry of Education lost contact with many schools, and schools across the island could not account for many students' educational well-being. Many Jamaican students did not have the devices needed to access education via the internet, and many Jamaican communities did not have the infrastructure required to facilitate access to the internet (Williams, 2020). In summary, the Jamaican education system was not ready for the change it was experiencing.

One aspect of Jamaica's education system that suffered significantly during the COVID-19 pandemic was technical and vocational education and training (TVET). As in other countries across the Caribbean region, many Jamaican TVET institutions offering vocational or career education programs at the postsecondary and tertiary levels discontinued operations. The ILO reported that 53% of all TVET institutions across the Caribbean (including Jamaica) could not respond to the shift to emergency remote teaching, as many could not move any aspect of their training into the OBL space (Ndahi, 2020). The ILO cited four main reasons for this dilemma: (a) no learning management system (LMS) existing in the institution or a lack of knowledge about how to use it if it existed; (b) instructors and students not trained in the use of information communication technologies (ICTs); (c) programs and courses not designed for delivery via OBL; and (d) no support services and resources available for teachers and students (Ndahi, 2020). The TVET system in Jamaica and the wider Caribbean lacked student, teacher, and institutional readiness to facilitate remote learning during the pandemic.

As the education sector in Jamaica and other jurisdictions moves away from emergency remote teaching and into full or partial adoption and implementation of OBL, readiness challenges apart from those associated with teachers, students, and infrastructure are taking focus (Lane, 2021; Molchanova et al., 2020; Rahmawati et al., 2021). These include institutional, leadership, and even legislative readiness challenges associated with OBL (Bokayev et al., 2021). Scholars with an interest in this issue of

OBL readiness highlight the importance of education systems demonstrating some level of holistic readiness before and throughout the various stages of OBL implementation (Bokolo, 2021; Groen et al., 2020). This importance justifies the attention now being given to institutional and other forms of OBL readiness.

Institutional readiness is an important aspect of OBL readiness in TVET at the postsecondary and tertiary levels. Apart from being a critical success factor in OBL adoption and implementation, researchers have found that institutional readiness impacts other forms of OBL readiness, including teacher and student readiness (Fianu et al., 2020; Zhang et al., 2020). Institutional readiness also gauges the input of leadership and administration in the OBL adoption and implementation process (Bokolo et al., 2020a), providing a framework for operationalizing OBL in the school setting (Goeman et al., 2021). Researchers also indicate that institutional readiness positively impacts student performance (Abdullah & Kauser, 2023) and provides a good starting point for assessing overall readiness for successful OBL adoption and implementation in HEIs. Therefore, there are benefits in ensuring TVET stakeholders better understand institutional readiness as a phenomenon and what it means to those involved in OBL implementation (Malik et al., 2023; Merriam & Tisdell, 2016).

Gap and Necessity of the Study

Despite the level of OBL adoption and implementation in vocational programs, as well as existing research examining institutional readiness for OBL, researchers have not explored how leaders in Jamaican TVET institutions describe institutional readiness to adopt and implement OBL. This study is essential as research points to a need to better understand institutions' readiness to offer OBL courses and programs, thereby ensuring OBL adoption and implementation success (Bokolo et al., 2020a). Understanding institutional readiness for OBL in Jamaican TVET institutions will facilitate a more strategic approach to OBL adoption and implementation, thereby improving the quality of OBL experiences in vocational education on the island and securing returns on recent investments made in TVET (Gretch & Camilleri, 2020).

Exploring and understanding institutional readiness for OBL is becoming more relevant to the Jamaican TVET context as the island embarks on digitalization in TVET initiatives (Comyn et al., 2021; UNESCO-UNEVOC, 2022). Understanding this aspect of OBL adoption and implementation will help stakeholders in vocational training institutions in Jamaica, and by extension, the Jamaican TVET system, analyze the current level of institutional readiness for the various phases of OBL implementation (Antwi-Boampong & Bokolo, 2022). It will also help stakeholders identify and, where possible, mitigate existing OBL implementation challenges (Dale et al., 2021) and ensure OBL adoption and implementation success (Njuguna, 2022).

Improving the quality of OBL TVET experiences in Jamaica and, by extension, the Caribbean, has significant social change implications. TVET is considered an enabler of economic growth and development in small island developing states like Jamaica and is a strategy for achieving the United Nations Sustainable Development 2030 Goals ([SDGs]; Auta, 2022; UNESCO, 2021). Improving the quality of Jamaica's TVET OBL experiences can increase access to TVET training, reduce training costs for TVET learners and TVET providers, enhance the quality of TVET training, and increase opportunities for inclusion and diversity in TVET (World Bank, UNESCO, & International Labor Organization, 2023). These improvements can positively impact the quality of the Jamaican labor force and result in higher employment and productivity rates (Gretch & Camilleri, 2020). Understanding how institution leaders describe institutional readiness for OBL adoption and implementation in TVET can improve the quality of TVET in Jamaica and, by extension, the Caribbean.

Problem Statement

The problem this study addressed is the lack of understanding about institutional readiness for OBL adoption and implementation in vocational education contexts (Mihai et al., 2021; Rahmawati et al., 2021). Little is known about how those operating in vocational education institutions perceive institutional readiness for OBL adoption and implementation. This issue has created a gap in the literature and affected Jamaican TVET institutions in many ways. Firstly, institutional readiness for OBL is a critical success factor in OBL adoption and implementation at the institutional level (Saintika et al., 2021); not understanding it can lead to implementation failure at the institutional level (Rahmawati et al., 2021). Secondly, researchers have also found that institutional readiness for OBL is a determinant of student and teacher adoption and implementation of OBL (Fianu et al., 2020; Zhang et al., 2020). Thirdly, a lack of knowledge or understanding about OBL institutional readiness can negatively impact an institution’s ability to employ appropriate OBL implementation strategies, deploy relevant infrastructure, or provide the required support mechanisms at the various stages of OBL adoption and implementation (Bokolo et al., 2022; Graham et al., 2013; Mahdi & Wani, 2021). Therefore, the specific problem that this study addressed is the lack of understanding about how institutional leaders describe institutional readiness for OBL adoption and implementation in the Jamaican TVET context.

Over the last 10 years, researchers have examined the meaning of institutional readiness for OBL and its elements and dimensions (Budur et al., 2021; Graham et al., 2013; Piña, 2017; Porter et al., 2016). Other researchers have developed implementation models and protocols for institutional readiness, focusing on aspects such as strategy, support, leadership readiness, and external stakeholder readiness (Alabdaly & Almayali, 2021; Gigliotti, 2020; Mukaram et al., 2021). A few studies have also focused on institutional readiness in TVET (Mahdi & Wani, 2021; Okumu & Kenei, 2022). However, in most cases, researchers conducted these studies in developed nations such as the United States and Malaysia and in developing economies in the Middle East and Africa. There has been little evidence of research conducted about institutional readiness for OBL from a Caribbean perspective, and fewer studies from the Jamaican perspective. There is also no evidence of existing research focusing on understanding institutional readiness for OBL in the Jamaican TVET context.

Exploring how leaders describe institutional OBL readiness in vocational education in Jamaica can yield several benefits. Firstly, understanding institutional readiness for OBL from the perspective of some leaders can assist other Jamaican vocational institution leaders and TVET policymakers in identifying and addressing the institutional readiness needs across the TVET system and in specific TVET institutions (Hill & Smith, 2023). Secondly, addressing the gap in the literature may also benefit other countries comprising the Caribbean Community and Common Market (CARICOM), of which Jamaica is a member. For example, Bleeker and Crowder (2022), in their study of online learning experiences during COVID-19, identified school administration reform as an aspect of OBL readiness that needs development in the Caribbean. Thirdly, engaging in scholarly inquiry about OBL institutional readiness in TVET helps education officials in Jamaica keep abreast of trends in educational technology. Valtonen et al. (2022) highlighted that technology integration and the factors affecting adoption remain among the most popular issues studied in the field. Yildiz et al. (2020), whose findings supported Valtonen et al.'s (2022) conclusions, highlighted that further research into systematic change and management of educational technology integration from various perspectives is needed to improve the quality of academic offerings. Finally, examining this problem of the lack of understanding of institutional readiness for OBL adoption and implementation in TVET helps address established issues affecting educational technology integration (Thompson et al., 2021). The research adds to the discourse about technology and innovation diffusion started by stalwarts like Rogers (2003).

Purpose of the Study

This basic qualitative study explored how institutional leaders in Jamaican vocational education institutions describe the phenomenon of institutional readiness for OBL adoption and implementation. Understanding the perceptions of TVET institution leaders about institutional readiness for OBL may help other TVET stakeholders understand and better facilitate institutional readiness for OBL in their institutions. The knowledge gained from this study may also assist TVET stakeholders in Jamaica and the wider Caribbean with addressing institutional readiness challenges faced in OBL integration in TVET.

Research Questions

In this study, I answer one research question:

RQ1: How do leaders in vocational education institutions in Jamaica describe institutional readiness for OBL adoption and implementation?

Three subquestions supported the research question:

RQ1a: How do leaders in vocational education institutions in Jamaica describe institutional strategy for OBL adoption and implementation?

RQ1b: How do leaders in vocational education institutions in Jamaica describe the institutional structure for OBL adoption and implementation?

RQ1c: How do leaders in vocational education institutions in Jamaica describe institutional support for OBL adoption and implementation?

Conceptual Framework of the Study

The concepts and phenomena that grounded this study included the concept of facilitating conditions and the blended learning adoption framework (BLAF). Facilitating conditions emerged as an element of the unified theory of acceptance and use of technology (UTAUT) developed by Venkatesh et al. (2003). Identified in the UTAUT as a critical success factor of OBL, facilitating conditions represent the level and quality of organizational and technical infrastructure supporting technology adoption and implementation. Graham et al. (2013) used the BLAF to posit that implementing OBL requires three critical considerations at the institutional level. These considerations include institutional strategy, structure, and relevant and robust institutional support systems.

The UTAUT and the BLAF provided a solid conceptual framework for this study. Facilitating conditions, as described by Venkatesh et al. (2003) and Venkatesh et al. (2016), include the elements described in the BLAF (Graham et al., 2013). Together, they provided specific insight into some of the critical success factors influencing OBL adoption and implementation at the institutional level, and they provided a lens through which I could analyze descriptions of institutional readiness for OBL (Zhang et al., 2022). Researchers have extensively applied the UTAUT in studies relating to the acceptance, integration, and adoption of technology innovation in institutions of learning, especially those at postsecondary and tertiary levels (Valtonen et al., 2022). Graham et al.'s (2013) framework provided seminal and substantial foundations to build this study's exploration of the meaning of OBL institutional readiness in vocational contexts, and it provided a valuable perspective from which to approach data collection and analysis. I provide a more detailed description of the framework in Chapter 2 of this study.

This conceptual framework supported the design of this study. While the concept of facilitating conditions situated the study in institutional readiness for adopting and implementing OBL, Graham et al.'s (2013) blended learning adoption framework limited the investigation of institutional readiness to strategy, structure, and support. Additionally, I used the framework to inform the development of the research question and attendant subquestions. I also used the framework to organize the interview protocol and frame the questions I asked each participant. As the study progressed, I used the framework to inform the selection of research participants, organize and code the data I collected, and generate and analyze the themes derived from the data.

Nature of the Study

The specific research design I used in this study was the basic qualitative inquiry, which I selected for four reasons. First, the literature supported using this design when the phenomenon or concept under investigation is novel and there is a desire to learn about the phenomenon in detail (Elliott & Timulak, 2021; Merriam & Tisdell, 2016; Patton, 2015). The studied phenomenon was institutional readiness for OBL adoption and implementation in vocational education, and there was a desire to understand the phenomenon in the context of TVET in Jamaica. Additionally, the research question and dimensions were new to Jamaica's research context, which made the basic qualitative inquiry appropriate. Second, the literature also supported the use of basic qualitative inquiry when the phenomenon or concept is examined based on the perceptions of others (Merriam & Tisdell, 2016). I explored the phenomenon from the perspective of Jamaican TVET institution leaders. Third, the basic qualitative inquiry facilitated a single source of data collection (Elliott & Timulak, 2021; Merriam & Tisdell, 2016). This feature was important as I was attempting to conduct research alone, and the basic qualitative inquiry allowed me to keep the process scalable and manageable. Fourth, the basic qualitative inquiry provided the latitude to examine the concept through my perspectives on the nature of knowledge and reality, which include a constructivist epistemology and a critical realist ontology (see Elliott & Timulak, 2021; Fletcher, 2017; Kahlke, 2014).

Last, the basic qualitative inquiry allowed me to analyze the data collected through the lens of my conceptual framework (see Bogna et al., 2020) and to possibly realize pragmatic outcomes such as social change within my context (see Patton, 2015).

To gather data for this study, I used data collection methods aligned with the basic qualitative inquiry and my purpose for using them. I conducted semistructured individual interviews (see Jacob & Furgeson, 2012; Qu & Dumay, 2011) with principals and other senior-level leaders in Jamaica's postsecondary and tertiary-level vocational education institutions. I used the Zoom® web conferencing tool to facilitate the interviews. I also crafted interview questions based on the principle of facilitating conditions described by Venkatesh et al. (2003) and the elements and dimensions outlined in the BLAF (Graham et al., 2013). I used an interview protocol to ensure the interview experience was relaxed and standardized across participants (Jacob & Furgeson, 2012). I also analyzed the data using the theoretical analysis approach (see Kostere & Kostere, 2021), which facilitates data analysis using *a priori* categories and themes derived from my conceptual framework and the analysis of new and emergent categories and themes based on inductive analysis. Additionally, I used the computer-assisted qualitative data analysis software MAXQDA to facilitate data analysis (Basit, 2003; Rodik & Primorac, 2015). These data collection and analysis approaches provided alignment with my selected study design and helped me arrive at my research outcomes.

Definitions

This section briefly defines the concepts and terminologies germane to this study. I have also described the terms used in the study that have multiple meanings, noting the definitions most appropriate to this study. I also highlight the acronyms and abbreviations most applicable to my research context.

Adoption: The "decision to make full use of an innovation" (Rogers, 2003). Adoption forms part of the early phases of the innovation diffusion process, and while it overlaps with innovation implementation, it generally precedes it (Rogers, 2003). While adoption refers to innovation that can be incremental or radical, as well as technological or non-technological (Kahn, 2018), in the context of this study, innovation adoption is technologically based.

Blended learning: A strategic combination of online and offline instructional strategies, tools, and environments (Im, 2021). It generally includes a blend of face-to-face, in-person instruction with virtual/web-based tools and strategies (Buchner & Plessl, 2022; Graham & Halverson, 2023). The term is also applied to the merging of synchronous and asynchronous learning technologies and approaches (Sadiq & Malik, 2022).

Blended learning adoption framework (BLAF): A framework developed by Graham et al. (2013) and used to analyze the extent to which an educational institution has adopted and implemented blended learning. The BLAF identifies three main types or categories of institutional adoption. Firstly, institutional strategy relates to the overall design of blended learning adoption at the institutional level. The next is the pedagogical, technological, and administrative structure or framework that supports blended learning adoption. The third relates to the technical, pedagogical, and other support that facilitates blended learning adoption.

E-learning: Also called electronic learning, the term e-learning describes learning experiences that are facilitated and supported by electronic technologies and usually without the restrictions imposed by time and space (Lucero et al., 2022).

Facilitating conditions: What one perceives to be the level and quality of the organizational and technical infrastructure supporting the use of a technology or innovation (Ambarwati et al., 2020; Venkatesh et al., 2012). It is considered a key determinant in the acceptance and use of technology (Venkatesh et al., 2012).

Implementation: When an innovation is put into use (Klein & Sorra, 1996; Rogers, 2003; Schneider et al., 2022). Implementation occurs after the adoption of an innovation and before "the routine use of the innovation within an organization" (Klein & Sorra, 1996).

Institutional readiness: The level of preparedness an educational institution demonstrates to adopt and implement online and blended learning (Bokolo et al., 2020a; Saintika et al., 2021). Institutional readiness is also referred to as e-learning readiness or e-readiness, and includes assessing the factors that need to be considered when an organization decides to adopt and implement online and blended learning (Bokolo et al., 2020a; Budur et al., 2021; Suwawi et al., 2021).

Online and blended learning (OBL): The use of online learning, blended learning, or both in an educational institution or place of learning (Philipsen et al., 2022).

Online learning: Learning experiences provided through the use of information communication technologies, usually facilitated by the Internet (Anwar & Zebua, 2022).

Quality Assurance (QA): The systematic implementation of continuous improvement strategies to ensure that OBL meets or exceeds established standards (Wei & Yin, 2024)

Readiness (e-readiness): The state or level of an institution's preparedness to adopt online and blended learning (Bokolo et al., 2020a).

Technical vocational education and training (TVET): An approach to workforce development that focuses on developing technical skills, theoretical knowledge, and workplace-based experience (Owais et al., 2020). The term is also used to describe those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding, and knowledge relating to occupations in various sectors of economic and social life. (UNESCO-IBE, 2013)

Unified theory for acceptance and use of technology (UTAUT): A theory developed by Venkatesh et al. (2003) that identifies key determinants that impact the acceptance and use of technology. These determinants include performance expectancy, effort expectancy, social influence, and facilitating conditions.

Vocational education institution leaders: Personnel in vocational education institutions who are employed to provide leadership and oversight of the institution's operations, including delivering vocational programs (Organisation for Economic Co-operation and Development [OECD], 2021). In the context of my research setting, vocational education institution leaders include people who function in the following positions: principal, institution manager, vice principal, and deputy manager.

Assumptions

Four critical assumptions relating to the topic and audience, the research problem, knowledge generation and creation, and the participants guided this study. Firstly, I assumed that the topic of focus was of interest to the study's target audience: vocational institution leaders, vocational education institution owners and operators, personnel with responsibility for TVET in the Ministry of Education and Youth, and educational practitioners and education stakeholders in general. I made this assumption based on significant policy and financial investments in Jamaica over the last 5 years into advancing OBL in vocational education (HEART/NSTA, 2022a; UNESCO-UNIVOC, 2022). This assumption influenced my topic selection.

The second assumption was that others perceived the identified research problem as an issue in the Jamaican context. The literature around the issue of readiness for OBL identified facilitating conditions supporting OBL implementation as underaddressed in many jurisdictions (Bokolo et al., 2020a). International agencies such as UNESCO and ILO have also acknowledged the problem among Caribbean small island developing states (Ndahi, 2020; UNESCO-UNIVOC, 2022). This assumption influenced my research objective and purpose.

As the study sought to describe the phenomenon from the perspective of a specific target group, the third assumption was that knowledge is constructed within the context of the community and that while reality is observable, it exists independently of human perceptions. I based this assumption on my constructivist epistemology and a critical realist ontology (see Cupchik, 2001; Fletcher, 2017). This assumption about how humans construct and analyze knowledge also guided my use of the qualitative research design and semistructured interviews as the means of data collection. The assumption also informed my use of the theoretical analysis approach to data analysis.

The fourth assumption was that participants would provide accurate, rich, and thick descriptions of the phenomenon under investigation. I assumed this because the prospective participants were leaders and professionals in their contexts, guided by certain professional ethics. I assumed they could also identify the value of the activity in their school operations. Embedded in this assumption was a further assumption that participants who met the selection criteria would be adequately familiar with the operations of their institutions to speak about institutional readiness for OBL adoption and implementation in their institutions. These assumptions about the participants influenced my choice of the interview as the data collection method over other methods such as observation or case study.

Scope and Delimitations

This study explored the phenomenon of institutional readiness for OBL in vocational education in Jamaica through the perspectives of TVET institution leaders at the postsecondary and tertiary levels. These institutions were owned, operated, or funded by the local statutory organization established by the Government of Jamaica to capacitate Jamaica's workforce through TVET skills development. Participants in this study included persons serving in TVET institutions as principals, institution managers, vice principals, and deputy managers. These persons served in TVET institutions that offered or were preparing to offer courses or programs via OBL. All participants in this study served in an institution owned, operated, or funded by the local statutory organization. These eligibility criteria facilitated a homogeneous sample and research validity (see Patino & Ferreira, 2018; Robinson, 2014).

Additionally, my exploration of institutional readiness in this study aligned with the concept of facilitating conditions as described as an element of the UTAUT (see Venkatesh et al., 2003; Venkatesh et al., 2016) and limited to descriptions of institutional strategy, structure, and support (see Graham et al., 2013). While there are other forms and categories of institutional readiness, my focus on institutional strategy, structure, and support facilitated opportunities for potential transferability. These aspects of institutional readiness are the most common in educational institutions, and findings relating to each are likely to be helpful to leaders and institutions similar to those explored in this study.

Limitations

This study faced challenges relating to sample size, access, and bias. At the time of data collection, the statutory organization responsible for TVET in Jamaica owned and operated only 25 institutions island-wide and funded programs in another 73 institutions. This small number of institutions meant that both the size of the research population and the size of the sample were small, which made it difficult to find enough willing participants. To mitigate this, I used a combination of homogenous and snowball sampling approaches to identify potential participants within the population, and I monitored saturation (Barghathi et al., 2021; Butts, 2022).

Secondly, in conducting this study, I faced access challenges. Because of the hectic schedule of the potential participants, some struggled to commit time to the interview activity. This challenge became more pronounced after the passage of Hurricane Beryl in July 2024. The result was widespread damage to school infrastructure across the island, and this added to the workload of potential participants as they engaged in clean-up and restoration activities in their institutions. As a result, they had less time to participate in the study.

Physical distance was also a hindrance as participants who expressed interest in the study lived and worked in communities dispersed across Jamaica. To mitigate these challenges, I used the web conferencing tool Zoom® as the primary interview medium, as it allowed flexibility in scheduling the interviews. I consulted with each participant before scheduling the interviews so they could select the most convenient days and times. Zoom® is very popular in Jamaica, and since the emergence of COVID-19, many Jamaicans have become familiar with its features and functionalities. Additionally, Gray et al. (2020) and Oliffe et al. (2021) have found that online interviews provide greater flexibility and convenience for the participants than face-to-face meetings.

The third limitation was bias. As a former employee of the statutory organization that operated vocational institutions from which I recruited participants, researcher positionality was a limitation of the study. To mitigate this, I used reflexivity strategies such as identity memos and a reflexivity journal to manage my biases and assumptions (Cutcliffe & McKenna, 2004; Houghton et al., 2013; Shenton, 2004). I discuss other limitations that may impact trustworthiness, interpretation, and applicability in Chapter 5.

Significance

The results of this study increased knowledge and provided an opportunity to inform practice and facilitate social change. Firstly, the study advanced knowledge in educational technology integration by increasing understanding of institutional readiness for OBL adoption and implementation in vocational education. Exploring the phenomenon from the viewpoint of institutional leaders also provided an opportunity for other researchers and readers to look at institutional readiness for OBL in TVET from a perspective that is not widely documented. The study also offered insights into institutional readiness for OBL among TVET institutions in Jamaica and, by extension, the Caribbean. This study's findings addressed the literature gap regarding how TVET institution leaders in Jamaica describe institutional readiness for OBL in their context (Bokolo et al., 2020a).

Secondly, the institution leaders recruited to participate in this research can use the findings to inform decisions about better supporting OBL implementation at the institutional level. Doing so will help to bolster the facilitating conditions that assure OBL adoption and implementation success, not just for school administrators but ultimately for teachers and students (Bokolo et al., 2020a). The statutory organization in Jamaica that operates the vocational institutions from which I recruited participants can use the findings of this study to improve the quality of the OBL adoption and implementation experience for students, teachers, and administrators in their other training institutions (25 in total) and the many community-based TVET projects that they fund across the island of Jamaica. This application of the findings can be especially significant as national protocols implemented in response to COVID-19 during the pandemic severely curtailed face-to-face TVET instruction across the island. There is, therefore, a greater need to ensure the success of TVET programs offered blended or online, as OBL is now experiencing greater utilization in TVET in Jamaica.

The findings can also impact social change at the national and regional levels. The statutory organization that owns and funds TVET institutions and initiatives in Jamaica can use the results to inform national policy that can guide institutional adoption and implementation of OBL in all TVET institutions across Jamaica. The government of Jamaica can also use the findings of this study to inform its approach to the global TVET strategy (UNESCO, 2021). In so doing, they can capitalize on OBL in TVET as a way to advance the country's 2030 vision, i.e., Jamaica as the "place of choice to live, work, raise families and do business" (Planning Institute of Jamaica [PIOJ], 2009; p. 7). Countries that make up the Caribbean Community (CARICOM) can use the findings of this study to inform their approaches to implementing OBL in TVET across CARICOM and the wider region.

Summary

In Jamaica, little is known about how institutional leaders describe institutional readiness for OBL adoption and implementation in vocational education. Understanding how Jamaican TVET leaders describe institutional readiness is vital, as this phenomenon is critical to OBL adoption and implementation success. This study used a basic qualitative research design with interviews to gain knowledge about institutional readiness for OBL from leaders in vocational education institutions. The conceptual framework I used to inform data collection and analysis included the UTAUT (Venkatesh et al., 2003; Venkatesh et al., 2016) and the BLAF (Graham et al., 2013), which examined institutional readiness for OBL through the lens of facilitating conditions specific to institutional strategy, structure, and support.

In this chapter, I presented the background of the study, the problem statement, the purpose of the study, the research question, the conceptual framework, and the nature of the study, including the rationale for selecting the proposed research design. I also included a definition of the critical concepts and outlined the major assumptions of the study. I discussed the scope, limitations, and delimitations, as well as the significance of the study. In Chapter 2, I outline my literature search strategy, provide further details on the conceptual framework used, analyze the empirical literature related to the problem of institutional readiness for OBL, and examine the major themes from the literature.

Chapter 2: Literature Review

Although readiness is considered a critical success factor for OBL adoption and implementation (Suwawi et al., 2021), researchers and practitioners have generally focused on teacher and student readiness and have not given much attention to institutional readiness (Bokolo et al., 2020a; Lane, 2021). Despite the lack of attention given to the issue in many jurisdictions, some researchers have found that institutional readiness, while contextual (Badiozaman, 2021), facilitates the creation of the conditions required to enable teacher and student readiness for OBL (Antwi-Boampong, 2020; Fianu et al., 2020) and facilitates successful adoption and implementation by all educational stakeholders (Zhang & Zhu, 2023). Notwithstanding these findings, little is known about how leaders in Jamaican vocational institutions describe institutional readiness for OBL adoption and implementation in TVET. The purpose of this basic qualitative study was to explore how institutional leaders in Jamaican vocational education institutions describe the phenomenon of institutional readiness for OBL adoption and implementation.

Many researchers have validated the relevance of the research problem I have outlined in this study. Mihai et al. (2021) commented on the lack of research on institutional-level adoption and implementation of OBL. Goeman and Dijkstra (2022) also substantiated the lack of research in this area. They argued that the recent increase in the adoption and implementation of OBL among HEIs worldwide has made it necessary for researchers to take institutional readiness for OBL "out of the closet" (p. 39).

The proposed focus on institutional readiness for OBL adoption and implementation from the perspective of institutional leaders is also relevant to practice.

Antwi-Boampong and Bokolo (2021) found that understanding the conditions that facilitate OBL implementation in HEIs was critical to OBL adoption and implementation success. They recommended that institutional leaders and managers approach OBL with an understanding of the factors that influence successful institutional-level adoption and implementation. According to Rahmawati et al. (2021), a lack of knowledge of this vital area of OBL integration can lead to implementation failure.

In this chapter, I summarize the literature search strategy used to conduct the literature review, outline the conceptual framework guiding this study, and justify why I selected the framework. I also discuss the key terms and concepts relating to this study and the main findings from the literature pertaining to these key terms and concepts. I provide a brief historical overview of vocational education in Jamaica and summarize the current state of TVET on the island.

Literature Search Strategy

I utilized various search tools to identify and locate scholarly, peer-reviewed articles to inform this literature review. I primarily used the Thoreau multi-database search tool found in the Walden University Library and the Education Source database accessed through the library. Other databases accessed through the Walden Library were Academic Search Complete, ERIC, APA PsycINFO, Teachers Reference Center, Business Source Complete, and Google Scholar. I also sourced and accessed peer-reviewed articles through my professional organizations: The Institute of Electrical and Electronics Engineers and The Association for Educational Communications and Technology. Most articles selected for this review were published within the last 5 years, except for those articles considered seminal works or those used to provide historical context.

The three main search strategies I utilized were keyword searches, Boolean searches, and reference list checking (Bramer, 2018; Ridley, 2012). I also used the Walden Search Log and the Walden Literature Review Matrix templates to manage my searches and the web-based application Airtable® as a flexible research database tool to facilitate data comparison, analysis, and interpretation. Table 1 summarizes the keywords and Boolean phrases used during the search.

Table 1

Key Search Terms and Phrases

Research Topics	Search Terms or Phrases Used
Management/Institutional Readiness for Online/Blended Learning	*Online education or online learning or distance education or distance learning AND Administration or management or leadership* *Leader* management readiness AND online learning OR e-learning OR distance learning OR blended learning*
Online Blended Learning Adoption Success	*Factors, online blended learning, adoption*
Facilitating Conditions for Online and Blended Learning Success	*Facilitating conditions AND online education OR online learning OR distance education OR distance learning OR e-learning OR blended learning*
Online/Blended Learning in Vocational Education	*Institution* organization* readiness AND online learning OR e-learning OR blended learning AND vocational education OR technical education OR TVET OR Career education*

Note. This table outlines the search terms used in this study in relation to specific research topics and themes.

Conceptual Framework

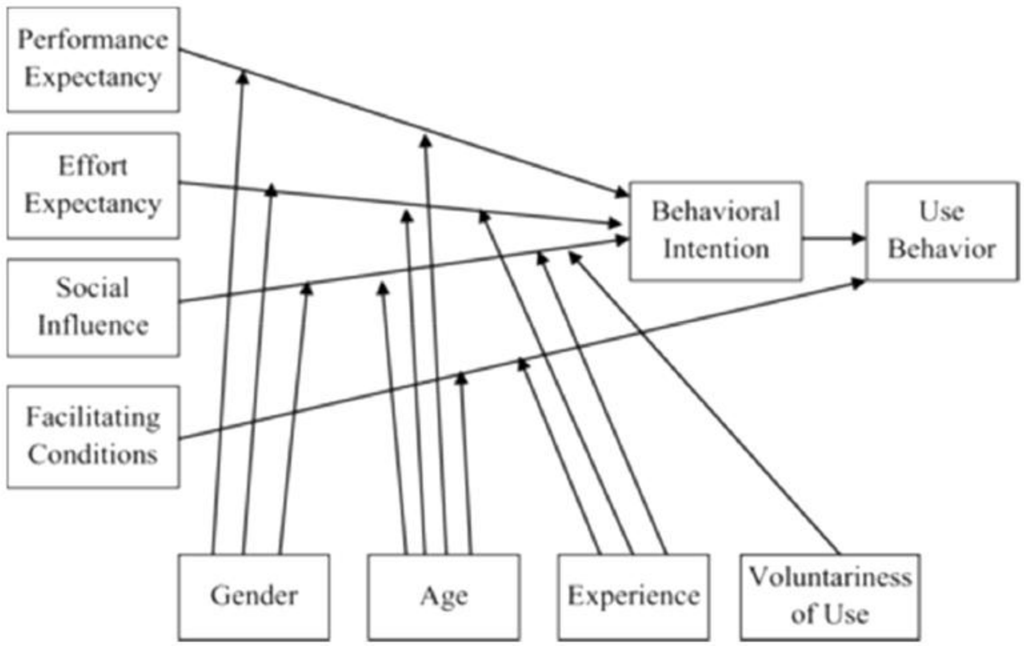
The conceptual framework used in this study is derived from the UTAUT by Venkatesh et al. (2003) and the BLAF by Graham et al. (2013). I selected two concepts for the framework, as there is precedent in the literature that allows for pairing the UTAUT with another model when there is a need to examine OBL adoption and implementation factors (see Apandi & Raman, 2020; Bamoallem & Altarteer, 2022). The UTAUT posits that the successful implementation of any technological innovation depends on facilitating conditions, such as solid organizational systems and required technical infrastructure (Venkatesh et al., 2003; Venkatesh et al., 2012). Without these facilitating conditions, OBL adoption and implementation in educational institutions are at greater risk of failure (Almaiah et al., 2020; Fianu et al., 2020). Graham's framework identifies three facilitating conditions at the institutional level that are critical to successful blended learning adoption and implementation: a clear and effective blended learning strategy, an effective organizational structure, and robust support systems. When these three conditions are in place, faculty and students can better operationalize and benefit from OBL (Bervell & Arkorful, 2020; Li et al., 2022). This section will provide an overview of the UTAUT and BLAF, identify the key concepts from these frameworks relevant to this study, show how empirical studies have applied these concepts, and describe how the concepts are essential to my research.

UTAUT

Human intent to use and the actual use of technology significantly impact technology adoption and implementation in any organization, and these are the principles underlying the UTAUT (Venkatesh et al., 2003; Venkatesh et al., 2016). UTAUT also highlights four key determinants influencing the intention and actual use of technology: performance expectancy, effort expectancy, social influence, and facilitating conditions. Performance expectancy and effort expectancy refer to the perception that utilizing the technology will improve job performance and that the technology is easy to use. Social influence speaks to the impact of others on a person’s intent and use of technology. At the same time, facilitating conditions focus on what one perceives to be the level and quality of the organizational and technical infrastructure supporting the use of the technology. The conceptualizers of the UTAUT further postulated that the four key determinants operate differently based on four key moderators: age, gender, voluntary use of technology, and experience with the technology (Venkatesh et al., 2003; Venkatesh et al., 2012). The fourth determinant, facilitating conditions, is the focus of my discussion about the UTAUT, as it is the most relevant to my research topic. Figure 1 presents a graphical representation of the UTAUT.

Figure 1

The Unified Theory of Acceptance and Use of Technology



Note. Figure reprinted from "Using the UTAUT model to understand students' usage of e-learning systems in developing countries," by M. M. Abbad, 2021. *Education and Information Technologies, 26*(6), p. 7212 (https://doi.org/10.1007/s10639-021-10573-5). Copyright 2021 by Springer Science + Business Media. Reprinted with Permission.

While often overlooked in OBL implementation, the existence or lack of facilitating organizational and infrastructural conditions significantly impacts technology adoption and implementation. Venkatesh et al. (2003) developed the UTAUT based on eight technology adoption theories and models (Bokolo et al., 2021a) and identified facilitating conditions as a major determinant of technology adoption. UTAUT aimed to provide a comprehensive and relevant framework that organizations could use to assess the likelihood of technology implementation success in their contexts and help managers and leaders understand some of the main factors influencing technology use intention and actual use (Venkatesh et al., 2003; Venkatesh et al., 2012).

According to UTAUT, facilitating conditions impact an organization’s actual use of technology, not the intention to use the technology, unlike the other determinants featured in the model (Venkatesh et al., 2003; Venkatesh et al., 2012). In their study of the relationships among facilitating conditions, the voluntariness of use, and actual use behavior relative to LMS usage, Bervell and Arkorful (2020) provided a helpful description of facilitating conditions. They described facilitating conditions as the existence and availability of institutional policy, relevant ICT infrastructure, technical support, and enthusiastic leadership. Maramba and Mazongonda (2020) defined facilitating conditions as institutional and technical support for technology or innovation implementation. It should be noted that the literature around the UTAUT highlights that the levels of existence and availability of facilitating conditions lie mainly in the perceptions of end users, for example, faculty and students (Zhou et al., 2022). As such, it is fair to conclude, as Zhao and Song (2021), that the organization or institution implementing the relevant technology is responsible for establishing these facilitating conditions through their institutional leaders, managers, and administrators.

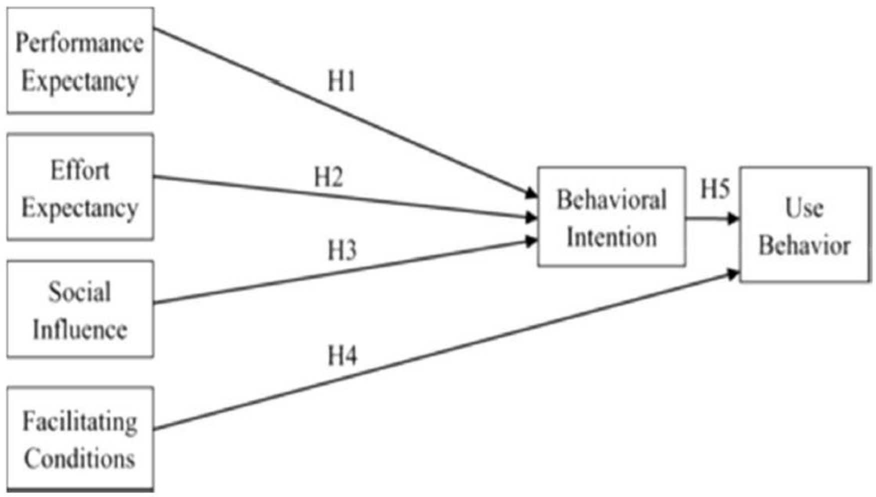
Current literature from economically developing and developed countries substantiates the relationship between facilitating conditions and technology use. Fianu et al. (2020) investigated the factors that influence the use of massive open online courses (MOOCs) by university students in Ghana and found that among the 270 tertiary students surveyed, facilitating conditions significantly impacted students' adoption of MOOCs. Maramba and Mazongonda (2020) also recorded similar findings when they investigated teacher technology use in Zimbabwe. They found that when moderated by voluntariness, the impact of facilitating conditions on technology adoption was even more significant. In a similar study, Bervell and Arkorful (2020) found significant relationships between and among facilitating conditions, the voluntariness of use, and teachers' actual LMS use behavior in Ghana. Bamoallem and Altarteer (2022) realized similar findings in a study of the factors that impact student attitudes to blended learning in Saudi Arabian universities. They found that facilitating conditions significantly and positively impacted student perceptions and attitudes toward blended learning, which is important to this study as it underscores the importance of facilitating conditions to OBL implementation success.

Despite the plethora of empirical research validating the place of facilitating conditions in the UTAUT, note that facilitating conditions are not always featured in empirical studies as significant to technology adoption and implementation. In a recent study conducted among 301 students domiciled in tertiary institutions in Zimbabwe during the 2020 COVID-19 lockdown period, Zhou et al. (2022) found that facilitating conditions did not impact behavioral intention to use virtual learning technologies. Zhou et al. (2022) also found that a lack of alternatives significantly affected the actual use of technology (precipitated by movement restrictions and lockdowns during the first wave of the COVID-19 pandemic). Consequently, the authors proposed adding *pandemics* as a moderating variable to the UTAUT. While there may be some merit to this recommendation, it should be noted that the developers of the UTAUT did not propose facilitating conditions as impacting use intention but rather significantly impacting actual technology or innovation use (Venkatesh et al., 2003; Venkatesh et al., 2012). Any attempt to prove otherwise should be considered a deviation from the model.

Other researchers have validated the UTAUT. In a study of students' usage of e-learning systems in developing countries, Abbad (2021) surveyed 370 undergraduate university students in Jordan and found that the principles espoused in the UTAUT remained valid, even in the context of a pandemic. The finding is represented graphically in Figure 2, where facilitating conditions directly impacted students' use of Moodle in Jordanian universities. These findings support similar results by Ambarwati et al. (2020), whose work examined the role of user habits and facilitating conditions in online learning platform usage. According to Ambarwati et al. (2020), facilitating conditions and user habits significantly influence the intention to use online learning platforms, contradicting the findings of Zhou et al. (2022) about the import of facilitating conditions as well as countering the argument put forth by Venkatesh et al. (2003) that facilitating conditions do not impact behavioral intention. While these findings are drawn from quantitative studies, they align with the findings of Irianto et al. (2023), who identified a relationship between facilitating conditions and successful online course adoption. Irianto et al. (2023) applied the UTAUT in a qualitative investigation of the adoption of massive open online courses in public sector training in Indonesia.

Figure 2

The Impact of Facilitating Conditions on Use Behavior



Note. Figure reprinted from "Using the UTAUT model to understand students' usage of e-learning systems in developing countries," by M. M. Abbad, 2021. *Education and Information Technologies*, *26*(6), p. 7212 (https://doi.org/10.1007/s10639-021-10573-5). Copyright 2021 by Springer Science + Business Media. Reprinted with Permission.

BLAF

Graham et al. (2013) designed the BLAF to demonstrate the institution's or organization's role in creating the facilitating conditions required to support technology use. Considered groundbreaking (Goeman et al., 2021), Graham et al.'s framework proposes that blended learning adoption and implementation at the institutional level span three main stages: awareness and exploration, adoption and early implementation, and mature implementation and growth. The BLAF also suggests three implementation types at each stage, each critical to the overall adoption and implementation success. The first is strategy, focusing on how people define blended learning in an institution, its perceived purpose, issues relating to its design, attendant policies, and forms of advocacy. The second type of implementation focuses on the various organizational frameworks (or structures) that facilitate the adoption and implementation of blended learning. Here, the structures include the governance and management structure of the institution, existing technical infrastructure, and pedagogical and administrative frameworks that facilitate blended learning.

Additionally, matters relating to evaluation, quality assurance, and quality improvements are also considerations regarding structure. The third type of implementation addresses technical, pedagogical, and other types of support, including faculty incentives (Graham et al., 2013). Figure 3 summarizes the stages and categories of implementation that comprise the BLAF. The main implication of the BLAF is that successful OBL implementation is mainly determined by (a) the level of adoption by teachers and students and by the appropriate management of the stages and (b) the types of implementations at the institutional level (Rahmawati et al., 2021b).

Figure 3

The Blended Learning Adoption Framework

Category	Stage 1—Awareness/Exploration	Stage 2—Adoption/Early implementation	Stage 3—Mature implementation/growth
Strategy			
Purpose	Individual faculty/administrators informally identify specific BL benefits	Administrators identify purposes to motivate institutional adoption of BL	Administrative refinement of purposes for continued promotion and funding of BL
Advocacy	Individual faculty and administrators informally advocate	BL formally approved and advocated by university administrators	Formal BL advocacy by university administrators and departments/colleges
Implementation	Individual faculty members implementing BL	Administrators target implementation in high impact areas and among willing faculty	Departments/colleges strategically facilitate wide-spread faculty implementation
Definition	No uniform definition of BL proposed	Initial definition of BL formally proposed	Refined definition of BL formally adopted
Policy	No uniform BL policy in place	Tentative policies adopted and communicated to stakeholders, policies revised as needed	Robust policies in place with little need for revision, high level of community awareness
Structure			
Governance	No official approval or implementation system	Emerging structures primarily to regulate and approve BL courses	Robust structures involving academic unit leaders for strategic decision making
Models	No institutional models established	Identifying and exploring BL Models	General BL models encouraged not enforced
Scheduling	No designation of BL courses as such in course registration/catalog system	Efforts to designate BL courses in registration/catalog system	BL designations or modality metadata available in registration/catalog system
Evaluation	No formal evaluations in place addressing BL learning outcomes	Limited institutional evaluations addressing BL learn-ing outcomes	Evaluation data addressing BL learning outcomes systematically reviewed
Support			
Technical	Primary focus on traditional classroom technological support	Increased focus on BL/online technological support for faculty and students	Well established technological support to address BL/online needs of all stakeholders
Pedagogical	No course development process in place	Experimentation and building of a formal course development process	Robust course development process established and systematically promoted
Incentives	No identified faculty incentive structure for implementation	Exploration of faculty incentive structure for faculty training and course development	Well-established faculty incentive structure for systematic training and implementation

Note. Figure reprinted from "A framework for institutional adoption and implementation of blended learning in higher education," by C. R. Graham, W. Woodfield, and J. B. Harrison, 2013, *The Internet and Higher Education, 18*, p. 7 (https://doi.org/10.1016/j.iheduc.2012.09.003). Copyright 2012 by Elsevier Inc. Reprinted with permission.

Graham et al. (2013) developed the BLAF in response to a need for research that guided higher education institutions in adopting and implementing blended learning strategically (see also Porter et al., 2014). Despite the institutional-level implications raised in Graham et al.'s work, much of the focus of research in OBL adoption and implementation has been on the level of adoption by students and teachers. Researchers have conducted far less research on institutional adoption (Alomari et al., 2020). Bokolo et al. (2020a) highlighted the lack of guiding research specific to institutional-based blended learning implementation in a study examining the factors that impact the administration's readiness to diffuse blended learning. In their research, Bokolo et al. found that using readiness assessment models such as the BLAF provided good indicators of institutional structure, management strategies, resource support, technology infrastructure, and ethical considerations needed for blended learning implementation at the institutional level.

Rahmawati et al. (2021) outlined a similar concern about the lack of research in this area of institutional-level blended learning implementation. They commented on the frequency of blended learning implementation failure due to a limited understanding of institutional implementation strategies and approaches. In their study, Rahmawati et al. applied the BLAF in a university in Indonesia using a case study methodology. The study revealed the importance of strategic implementation initiatives to the success of OBL in HEIs. While the sample size was considerably small (three teachers), the study highlighted the need for the university to create a structure that supported OBL success, an idea that, when considered against other research findings, facilitates extrapolations that may be relevant to similar contexts (McCarthy & Palmer, 2022).

Other investigations have applied and substantiated the value of the BLAF. For example, Zhang et al. (2022) used a quasi-experimental design to implement and evaluate the BLAF in a selected university in China over seven years and across 66 courses. At the end of the study, the researchers found that the systematic use of the BLAF took the selected university to the mature implementation and growth stage within seven years (see Graham et al., 2013). In contrast, Zhang and Zhu (2023), in a quantitative study conducted among 762 students from five Chinese universities, incorporated the BLAF into an already modified community of inquiry (CoI) framework (Shea & Bidjerano, 2010) to create and implement an extended CoI. The CoI was first developed by Garrison et al. (1999) as a model for developing meaningful learning experiences in OBL spaces. Central to Garrison et al.'s model are three elements: social presence, teaching presence, and cognitive presence (Garrison, 2009; Garrison & Arbaugh, 2007). Shea and Bidjerano (2010) later modified the CoI to include learner presence, and Zhang and Zhu (2023) added institutional presence based on principles in the BLAF. Zhang and Zhu used factor analysis and structural equation modeling to realize findings supporting institutional presence integration into the modified CoI. They also found that institutional presence significantly correlated with teaching, learner, and social presence. Zhang and Zhu's findings validate the relevance and strength of the BLAF as an effective tool for successful OBL implementation at the institutional level.

Justification for the Use of the BLAF

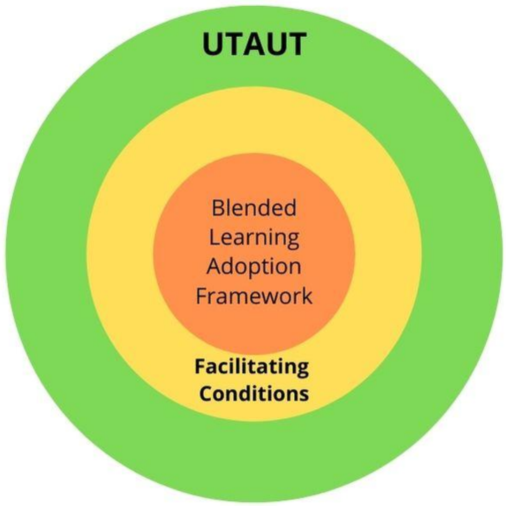
While Graham et al. (2013) developed the BLAF over a decade ago, the framework remains valuable to my research for several reasons. Because of its focus on whole-institution readiness, scholar-practitioners consider the BLAF a multi-layered and comprehensive tool (Porter et al., 2014; Porter et al., 2016), as it examines three types of OBL implementation (strategy, structure, and support) across three stages of adoption (awareness/exploration, early adoption, and mature implementation). Its scope also makes it very applicable to the level of investigation and analysis proposed in this study since my target population is school personnel functioning in leadership roles.

Another advantage of the BLAF is that the research findings that supported the development of the tool have been widely accepted among researchers in the field (Dale et al., 2021; Groen et al., 2020). Many researchers exploring topics similar to my study have referenced these findings and have utilized the BLAF in their studies (see Camilleri & Camilleri, 2022; Chen et al., 2022; Rahmawati et al., 2021; and Suwawi et al., 2021). This recognition and acceptance may be attributable to the level of academic rigor demonstrated by Graham et al. (2013), as evidenced by the use of the qualitative case study design.

Finally, I selected the BLAF because of its alignment with the principles outlined in the UTAUT (see Venkatesh et al., 2003). The concept of facilitating conditions embeds the main elements of the BLAF, which, according to Venkatesh et al. (2003), is a critical determinant of technology acceptance and use. Figure 4 summarizes the convergence of both models.

Figure 4

Theoretical/Conceptual Alignment



Note. Alignment of the BLAF and the UTAUT

Although the BLAF is a valuable tool for assessing the understanding of institutional-level OBL readiness, some may argue that the BLAF is not the most appropriate tool for exploring Jamaica's institutional-level readiness for OBL implementation in vocational education. One could say that the BLAF addresses blended learning and not online learning, that researchers developed the tool for institutions operating in a developed economy, and that the model does not address the peculiarities of vocational education. In response, I highlight three critical characteristics of the model. Firstly, the concept of online learning is inherent in the definition of blended learning (Alqahtani & Rajkhan, 2020). Accordingly, school administrators can apply the framework by Graham et al. (2013) in cases where institutions offer fully online or blended learning options. Secondly, given the model's focus on e-readiness from an institutional perspective, researchers and practitioners can easily apply the principles outlined in the model to various socio-economic contexts. Existing precedence for using the model in the context of HEIs operating in developing economies substantiates its flexibility (Al-Ayed & Al-Tit, 2021; Muhuro & Kang'ethe, 2021). Thirdly, Bokolo et al. (2020b) found that the model is adaptable and suitable for vocational education contexts. As such, researchers can modify elements of the model, where necessary, to suit the specific context in which they will apply the model. That includes any necessary changes required to account for the particular nuances of vocational education. Finally, using the framework can prove helpful in addressing the gap in research on the lack of knowledge and understanding about perceptions of institutional readiness for OBL in Jamaican TVET institutions. (Im, 2021; Mahdi & Wani, 2021).

Literature Review Related to Institutional Readiness for OBL

OBL is a concept often misunderstood in educational settings, both in traditional academia and vocational contexts. In their quantitative study examining teachers' perception of institutional support for OBL, Philipsen et al. (2022) described OBL as a compound term generally referring to two types of e-learning approaches utilized to facilitate teaching, learning, and assessment. E-learning, or electronic learning, began in the 1980s and facilitated learning without the restrictions imposed by time and space (Lucero et al., 2022). Online and blended learning later emerged as two forms of e-learning facilitated by advances in modern technology. Prevailing literature often describes online learning as using internet technology and electronic devices in the teaching and learning process (Sabariah, 2022). Some define blended learning as the combination of face-to-face and online learning (Alqahtani & Rajkhan, 2020). Others have proposed that including 30% to 70% of online learning in the face-to-face setting creates a blended learning environment (Ranjan, 2020). The reality, however, is that OBL is much more complex than described in some of the literature. Philipsen et al. (2022) defined online learning as ICTs and supporting teaching methodologies to facilitate synchronous and asynchronous learning experiences via the Internet. This definition suggests that any examination of online learning should bear in mind the implications raised by using terms such as *teaching methodologies* and *synchronous and asynchronous learning*.

Similar implications surface in other definitions of BL. In a mixed-methods study that determined the status of OBL in vocational studies in South Korea, Im (2021) defined BL as the strategic combination of online and offline instructional strategies, tools, and environments. Cronje's (2020) study supported this definition of BL by highlighting the combination of face-to-face and web-based technology tools, instructional technology, pedagogical approaches, and classroom and job-related activities. These works point to online learning and BL being far more nuanced than simply using the internet to teach or mixing online and face-to-face teaching. Embedded in the definitions are established complexities and nuances grounded in theory and practice; if these are not acknowledged, any attempt at defining OBL will not be beneficial for application (Graham & Halverson, 2023).

Accordingly, this study embraces all the nuances and complexities identified in current literature as those embedded in the term OBL. These nuances and complexities include considerations relative to technology and other infrastructure, pedagogical methods and strategies, the delivery modalities, and the support systems most appropriate for the specific educational context. While BL implies the existence and complementarity of online learning (Philipsen et al., 2022), the two concepts are not interchangeable but, when used together, indicate the presence of both constructs in a single context (Kumar & Selva Ganesh, 2022; Topping et al., 2022). Also, there is precedence in the literature for using OBL as a stand-alone term that covers any configuration or degree of online or blended learning (Blieck et al., 2020; Diep et al., 2019). Ranjan (2020) also supported using OBL as a stand-alone term. Ranjan used an experimental study to compare the effectiveness of face-to-face learning versus online learning versus blended learning in a Bachelor of Education program in India. Ranjan (2020) described a continuous spectrum of learning modes that move from face-to-face to distance learning. In between both modes, he positioned online learning and various types and levels of blended learning, including web-enhanced learning, hybrid learning, converged learning, conflex learning, and computer lab-based or computer-aided instruction. As such, this study refers to OBL as using any form of online or blended learning in a postsecondary or higher education institution. The references also include the nuances and complexities highlighted above.

Apart from the complex nature of the definition, educational practitioners must consider other issues when examining OBL. Recent research suggests that OBL is growing in popularity among various stakeholders, especially since the advent of COVID-19, because of its flexibility (Bordoloi et al., 2021) and its ability to facilitate growth and expansion in the educational sector (Im, 2021). Research also suggests that

OBL is just as effective or modestly more effective than face-to-face instruction (Ranjan, 2020). These findings challenge long-held notions of no significant difference in student performance in face-to-face and OBL modalities (Stevens et al., 2021).

Notwithstanding these benefits, current literature also highlights the challenge many educational institutions face in implementing OBL. Transitioning from face-to-face instruction to OBL can be very difficult (Conklin & Bove, 2021; Cutri & Mena, 2020; Nasution et al., 2021) and requires careful consideration and mitigation of the factors that impede adoption and, ultimately, implementation (Goeman et al., 2021). For example, Cutri and Mena (2020) found in a qualitative study that transitioning from face-to-face to online delivery can create emotional and identity issues and disruptions for faculty. Goeman et al. (2021), in a Delphi study, found that OBL implementation required the consideration of many dimensions at the course, program, and institutional levels. Therefore, OBL is not a simple concept, and successful diffusion requires careful and multi-dimensional considerations at various points in the implementation process.

In the remaining sections of this chapter, I review and synthesize the literature surrounding the factors that impact OBL adoption and implementation. I also closely examine the documented factors that impact institutional readiness for OBL implementation in general and their specific application to vocational education. I briefly outline the history of vocational education in Jamaica and establish the gap in the literature relative to my research topic.

Factors Affecting OBL Implementation

The factors that affect the successful implementation of OBL are as varied as the contexts within which implementation occurs. As no two implementation experiences are exactly alike, the factors impacting these experiences are not identical but are determined by the people engaged in the implementation process and the specific circumstances they face. Despite this, some factors emerged from the literature as typical among postsecondary and tertiary-level institutions in many jurisdictions. Existing literature broadly categorizes these factors as student-related, teacher-related, and institutional-related factors. According to Anglum et al. (2020), these categorizations are in keeping with the established change audiences in educational institutions.

Student-Related Factors

Researchers have found that OBL adoption and implementation success rely heavily on human factors such as student-related characteristics, dimensions, and issues (Alomari et al., 2020). Also called student-related factors, these factors help determine the level of OBL adoption among students and ultimately impact the level of OBL implementation and diffusion school-wide. Researchers have highlighted that student-related factors can be grouped into three main categories: learner characteristics, learner experiences, and external learner influences (Azizi et al., 2020; Chatti & Hadoussa, 2021; Zhang et al., 2020).

Learner Characteristics. According to the literature, learner characteristics are some of the main student-related factors influencing successful OBL implementation in postsecondary and tertiary institutions. Learner characteristics focus on those attitudes and traits that affect how the learner interacts with the learning experience. They include student demographics, commitment, motivation, and knowledge of computer systems (Alqahtani & Rajkhan, 2020). One type of learner characteristic that researchers highlight in the literature is self-efficacy. A concept made popular by Bandura (1977), self-efficacy refers to the belief one has in one's ability to perform in a given context (Taufikin et al., 2021). In a quantitative study conducted among college-level students in Malaysia, Bokolo et al. (2020b) highlighted that students were likelier to utilize OBL tools if they believed they could use the tools required for OBL implementation. Bokolo et al. used a partial least square–structural equation model to analyze student data. They found that students enrolled in HEIs were more likely to accept and use BL if their perceived self-efficacy for BL was high. These findings align with the limited research of this nature emanating from Jamaica. Barclay et al. (2018) found in a quantitative study that student self-efficacy (among other factors) was critical to the success of e-learning adoption among students. While the study conducted by Barclay et al. (2018) is outside of my five-year reference threshold, I have included the findings to show the similarities across the different geo-political jurisdictions.

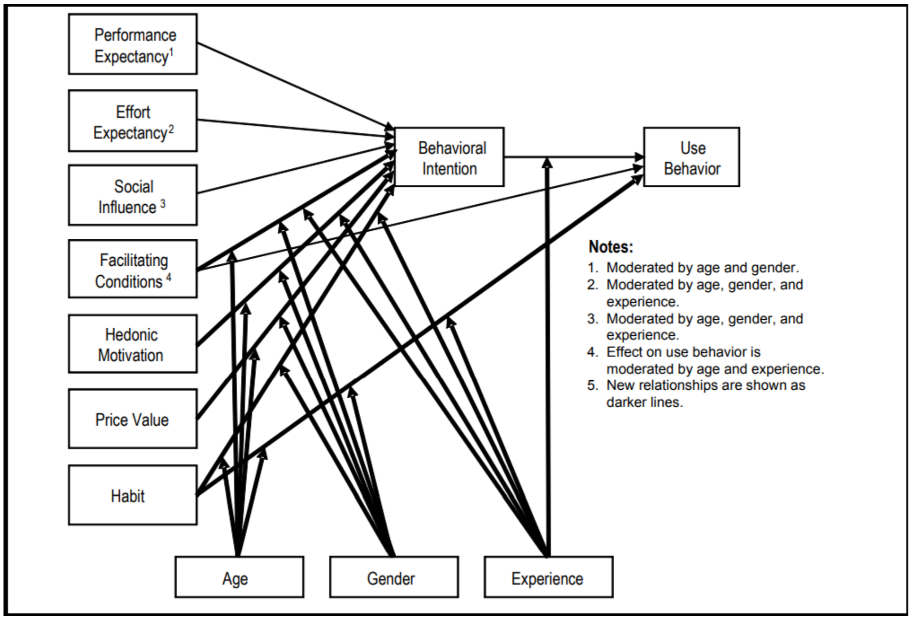
Perceived usefulness and intention to use are other learner characteristics that influence OBL implementations. Perceived usefulness concerns the perceived positive impact students believe OBL will have on their learning experience and learning outcomes (Alomari et al., 2020; Chatti & Hadoussa, 2021). Intention to use speaks to one's willingness or plan to engage with OBL tools and approaches. While intention to use is a learner characteristic that researchers have explored independently (Bokolo, 2020), Al Kurdi et al. (2020) and Alomari et al. (2020) both found that perceived usefulness significantly influenced intention to use. Al Kurdi et al. (2020) also found that students' computer self-efficacy significantly and positively affected their perceived usefulness of e-learning. Al Kurdi et al. (2020) examined the critical success factors that impact student e-learning adoption in the United Arab Emirates, while Alomari et al. (2020) conducted a mixed-method investigation among Kuwaiti faculty and students from public and private HEIs to determine the impact of human dimensions on the effectiveness of LMS use in BL adoption.

Learner Experiences. Learner experiences such as pleasure (hedonic motivation) and ease of use impact OBL adoption and implementation among students. Researchers in the field have identified hedonic motivation as a primary influencing factor among students (Alomari et al., 2020; Azizi et al., 2020). In a quantitative study focusing on BL adoption among medical students, Azizi et al. (2020) found that students who enjoyed their experience with OBL tools and initiatives were likelier to adopt OBL as a part of their everyday learning experience. Alomari et al. (2020) yielded similar results in a mixed-methods study that explored the impact of human dimensions on LMS use in universities in Kuwait. While the study conducted by Alomari et al. (2020) focused on students and faculty, the research context was similar to that of Azizi et al. (2020), which was of a Middle-Eastern developing state. These findings align with the revised UTAUT by Venkatesh et al. (2016), where hedonic motivation was added to the original framework (see Figure 5). In a similar study out of China, Zhang et al. (2020) found that students who considered OBL tools generally easy to use were more willing to engage in

OBL implementation activities. This finding is in keeping with data on the impact of ease of use on OBL implementation highlighted by Azizi et al. (2020).

Figure 5

The Revised Unified Theory of the Acceptance and Use of Technology



Note. Figure reprinted from "Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology," by V. Venkatesh, J.Y. Thong, and X. Xu, 2012, *MIS Quarterly*, p.157-158 (https://doi.org/10.2307/41410412). Copyright 2012 by the Management Information Systems Research Center. Reprinted with permission.

The level of learner engagement in OBL contexts is another experiential factor that encourages OBL adoption among students. Anglum et al. (2020) surveyed and interviewed 43 middle-school mathematics teachers to assess the enablers and barriers to BL adoption. They found that low student engagement was a hindrance to BL adoption.

While some researchers argue that student engagement often depends on the pedagogical experiences created by teachers (Lomer & Palmer, 2023), the findings realized by Groen et al. (2020) also support those highlighted by Anglum et al. (2020). In their case study implemented in a medium-sized Canadian University, Groen et al. (2020) found that students who perceived BL added value to the learning experience were more motivated to participate in BL courses. These findings suggest that students' level of engagement in the OBL process influences how willing they are to adopt and implement OBL.

External Learner Influences. According to the literature, external learner influences such as social pressure impact student intention and actual use of OBL. Firstly, students are often influenced into adoption by their peers. Azizi et al. (2020) and Zhang et al. (2020) highlighted the strength of social influence on student BL adoption or non-adoption. Secondly, teachers influence student adoption of OBL. In a quantitative investigation of the main factors that affect e-learning adoption among tertiary-level students in Saudi Arabia, Chatti and Hadoussa (2021) found that teacher influence significantly impacted OBL adoption among students. Interestingly, their study also found that the influence of classmates did not affect student adoption, a finding Chatti and Hadoussa (2021) noted was not in keeping with findings from similar studies. Teacher influence on student OBL adoption also includes how successful teachers integrate OBL into the teaching-learning experience. According to Groen et al. (2020) and Zhang et al. (2020), this strongly predicts students' intention and actual use of OBL. For example, when faculty require submissions of assignments through an LMS only, students are more likely to adopt LMS use in an OBL environment. However, Lomer and

Palmer (2023) suggested that this kind of integration often impacts use behavior and not necessarily behavioral intentions, as students can feel forced into OBL adoption.

Finally, enabling or facilitating conditions is another important factor influencing students' OBL adoption. Fianu et al.'s (2020) study of the factors that influence students' use of MOOCs in Ghanaian universities found that when institutions provide the required technology infrastructure and relevant support systems, OBL adoption among students is higher. Zhang et al. (2020) realized similar findings in exploring e-learning adoption among Chinese universities.

Teacher-Related Factors

Teacher-related factors also impact OBL adoption and implementation in educational contexts (Alomari et al., 2020). Like student-related factors, researchers generally group these factors into teacher characteristics, teacher experiences, and teacher influences. Because teachers are a critical stakeholder group in any educational institution, researchers have found that teacher-related factors significantly influence the success of OBL adoption and implementation (Antwi-Boampong, 2020; Bryan et al., (2021); Sangeeta & Tandon, 2021).

Teacher Characteristics. Teacher or instructor characteristics are important factors impacting OBL adoption and implementation. One primary characteristic influencing OBL adoption and implementation is teacher efficacy and, by extension, teacher self-efficacy. Research indicates that faculty are more likely to adopt OBL if they can effectively use the technologies and other innovations associated with OBL implementation (Alomari et al., 2020; Suryanti et al., 2021). According to Leacock and

Warrican (2020), teachers' ability to use e-learning technologies (efficacy) challenged the implementation of OBL in the Eastern Caribbean in the early days of COVID-19. Suryanti et al. (2021) realized similar results in a study that assessed the readiness of 209 university teachers in Indonesia to engage in online learning. They found that perceived self-efficacy to engage in online learning positively impacted teacher readiness for online learning adoption.

Another teacher characteristic that influences OBL adoption and implementation is the motivation among faculty to utilize OBL tools and resources in their delivery and attendant academic duties. Leacock and Warrican (2020) observed that faculty unwillingness to adopt OBL could derail OBL implementation significantly. Joshi et al. (2023) highlighted a similar finding in a study investigating the adoption and implementation of e-learning tools before and after COVID-19. In that study, they found that before 2020, OBL implementation in Nepal was weak because of issues such as teacher resistance. They also found that the restrictions of COVID-19 lowered resistance and, by extension, increased OBL adoption among teachers. Joshi et al.'s (2023) work substantiates research conducted by Antwi-Boampong (2020) with university teachers in Ghana. They recommended that institutions adopting OBL should address the factors influencing teacher motivation, given its impact on implementation success.

Emotional readiness to adopt OBL is a third teacher characteristic that impacts successful implementation (Bruggeman et al., 2021). Cutri and Mena (2020) found that faculty often experience affective and identity displacement challenges when transitioning from face-to-face instruction to OBL. They found that faculty's inability to handle these emotional challenges frequently stymied OBL implementation efforts. Zhao and Song (2021) expanded on Cutri and Mena's findings in a study conducted among 123 teachers in higher education institutions in China. They found that teachers identified emotional recognition and support as critical aspects of the support they needed in BL contexts.

Teacher Experiences. Faculty perceptions about the difficulty associated with OBL integration can significantly impact OBL implementation success. In a study among 276 distance education centers across Ghana, Bervell and Arkorful (2020) found that effort expectancy (or perceived ease of use) was a significant determinant of tutor attitudes toward LMS implementation. Similarly, Bokolo (2022) found that among 413 faculty from universities, colleges, and polytechnics in Malaysia, the perceived ease of use of BL significantly impacted teachers' actual use of BL. These findings imply that where teachers perceive OBL implementation will require too much work/effort or believe the technology and associated innovations and systems are difficult to use, OBL adoption will be negatively affected (Sangeeta & Tandon, 2021).

While closely associated with effort expectancy, the perceived impact of OBL implementation on faculty workload is another experiential factor to consider (Antwi-Boampong, 2020), along with the perceived impact on performance (Bokolo et al., 2021a). In a quantitative study among 643 university teachers, Sangeeta and Tandon (2021) found that many faculty from HEIs in India resisted OBL adoption because they believed that implementation increased and complicated their work as academics. This has led to faculty in many HEIs across varying jurisdictions advocating for improved rewards and incentives for OBL use (Adarkwah, 2021; Schophuizen & Kalz, 2020). Researchers found that faculty adoption improved when institutions provided rewards and incentives (Al-Ayed & Al-Tit, 2021; Groen et al., 2020). Faculty's level of performance expectancy is another factor identified as impacting OBL adoption among faculty (Joshi et al., 2023). According to Sangeeta and Tandon (2021), when faculty perceived that OBL could improve their job performance and output, they adopted OBL more readily. It is important to note that Antwi-Boampong (2021) realized similar findings in a study conducted in the developing nation of Ghana, while Bokolo (2022) substantiated the result in the more developed country of Malaysia.

Teacher Influences. Social influences and pressures also influence faculty adoption and implementation of OBL. Both Bokolo (2021) and Bryan et al. (2021) found that peer support and peer pressure influenced faculty adoption of OBL in their respective research contexts. In their study that targeted administrators and faculty in a health science college in Southern Louisiana (United States), Bryan et al. (2021) found that faculty who felt they had the support of their peers or felt left behind in OBL implementation tended to show greater motivation either to adopt or to resist OBL strategies and tools. In contrast, however, Sangeeta and Tandon (2021) found that while teacher peer influence positively impacted adoption behavior, it negatively impacted adoption attitude among teachers.

Institutional pressure also affects faculty adoption. Antwi-Boampong (2021) and Bokolo (2022) found that HEIs used normative and coercive pressures to counter OBL resistance among faculty. These pressures include the application of values and standards (normative) and rules and regulations (coercive). Latif et al. (2020) highlighted that exerting such pressures is a common practice within organizations embarking on technology or innovation diffusion. Additionally, the experiences with OBL adoption during the early stages of the COVID-19 outbreak provide examples of how governmental and parental pressures can influence faculty adoption of OBL (Asvial et al., 2021; Lee et al., 2022; Qiao et al., 2021). Lastly, I have already mentioned the impact of rewards and incentives, which are other forms of institutional pressure (Adarkwah, 2021).

Institutional-Related Factors (Facilitating Conditions)

The discussion about the impact of institutional pressure on faculty OBL adoption provides a suitable launch pad for examining the institutional-related factors that impact OBL adoption and implementation. Institutional-related factors impact OBL adoption and implementation but fall within the remit and responsibility of institutional leaders, managers, and other administrators (Bokolo et al., 2020a). Note here that OBL implementation at the institutional level focuses on change implementation and management (Weiner, 2020). Accordingly, and in keeping with the social change focus of innovation adoption, implementation, and diffusion (see Rogers, 2003), the following discussion occurs within an underlying context of change leadership and management. Based on current research conducted by scholars in the field of OBL, I have organized the discussion around the institutional factors using the categories outlined in the BLAF: strategy, structure, and support (Graham et al., 2013).

Strategy. Strategic planning and leadership are significant factors impacting the success of OBL implementation in HEIs. Researchers in change management and OBL implementation point to the need for a clear strategic direction for OBL if institutions want to succeed in the adoption and implementation stages (Alqahtani & Rajkhan, 2020; Budur et al., 2021). This strategic direction includes a clearly outlined definition of OBL, school vision and mission statements aligned to OBL adoption principles, and institutional policies supporting OBL adoption and implementation (Bokolo et al., 2020a; Zaugg et al., 2021).

Another success factor is an OBL strategic plan driven by school leaders and managers (Bokolo et al., 2020a). According to Fawns et al. (2021), OBL implementation is less likely to succeed if no strategic plan is in place to guide implementation. In comparing two digital education programs at the University of Edinburgh, Fawns et al. found that full institutional adoption was less likely to occur when faculty leads and drives OBL implementation across the institution. More successful implementation models showed leadership and management crafting a plan that assured the inclusion of the various facets and dimensions of OBL diffusion (Bokolo & Noel, 2021). The strategic plan also includes how the institution will manage the change to OBL at all levels (Weiner, 2020).

Beyond the plan, scholars in this area suggest the need for strategic or whole-of-institution commitment if HEIs are to realize OBL adoption and implementation success (Groen et al., 2020; Fawns et al., 2021). This commitment requires the strategic deployment of resources (human and otherwise) needed to support OBL implementation. Bokolo et al. (2020a) supported this argument by pointing out that OBL implementation requires more than what is within the scope and capacity of students and faculty. The

BLAF referenced in the conceptual framework includes these functions of school leadership and management as part of the *strategy* that supports BL implementation (Graham et al., 2013). Graham et al. (2013) and Mihai et al. (2021) both suggested that without an OBL strategy, measuring the level of institutional adoption and implementation is complex.

Structure. Scholars believe a robust institutional framework or infrastructure to support any technology implementation is a critical institutional-related factor (Hertati et al., 2020; LaBelle et al., 2020). Whittingham and Hoffman (2020) describe institutional infrastructure as those aspects of school operation that contribute to the school's functional health without being explicitly related to teaching and learning outcomes. It includes physical and organizational structure, technical infrastructure, and evaluation systems, among other things. According to Bokolo et al. (2022) and Lane (2021), many HEIs implement OBL without the requisite organizational infrastructure. For example, Hill and Smith (2023) found many institutions do not plan for adequate governance and management support when implementing OBL. In many instances, no department or personnel is dedicated to managing the implementation of OBL, nor are OBL implementation models identified and utilized. Additionally, change management efforts to support OBL implementation are either weak or non-existent (Conklin & Bove, 2021), even among school administrators and managers (Lane, 2021).

Technical and technological infrastructure and other hard and soft resources that support OBL are also considered under structure (Al-Ayed & Al-Tit, 2021; Anglum et al., 2020; Azizi et al., 2020). Resources such as a stable LMS, reliable bandwidth, and adequate internet server capabilities are some examples. Acquiring relevant licenses and subscriptions and establishing non-traditional staff roles, such as instructional designers and e-learning developers, support OBL implementation and adoption. Researchers also point to a lack of quality management frameworks and mechanisms to support OBL (Golding & Jackson, 2021; LaBelle et al., 2020; Lane, 2021). These frameworks and tools apply to the management of pedagogical quality and the supporting administrative systems such as program accreditation, human resource recruitment and capacitation, risk management, and business continuity (Khalidi et al., 2021).

Notwithstanding the importance some researchers place on institutional structure for OBL implementation success, a few researchers have found otherwise. The study conducted by Chen et al. (2022) is one example. In their study, Chen et al. tried to determine the factors impacting BL adoption readiness among HEIs in Pakistan. They found that institutional structure had a positive but insignificant relationship with BL implementation. While Chen et al. used the BLAF developed by Graham et al. (2013) to inform a significant portion of the eclectic readiness model used in their study, they did not organically apply the BLAF. For example, Chen et al. evaluated technological infrastructure separately from institutional structure and included BL policies as a part of institutional structure. These modifications may have accounted for the difference in results from other studies concerning the significance of the relationship between institutional structure and BL implementation. In the BLAF, OBL policy is a feature of institutional strategy, and technical infrastructure forms part of the institutional structure (see Graham et al., 2013).

Support. The third category of institutional-related factors that emerge from the literature is the ability of the institution to support the day-to-day implementation of OBL. Researchers have found that the existence of ongoing support mechanisms, such as technical and pedagogical training for students and faculty, facilitates successful OBL implementation (Alqahtani & Rajkhan, 2020; Bartlett & Warren, 2021; Gigliotti, 2020; Groen et al., 2020). In a study exploring the readiness challenges experienced and the response approaches used by Bangladeshi universities during COVID-19, Roy et al. (2021) found that institutions need to provide pedagogical and technical support for teachers and students to support OBL implementation. Lane (2021) also referenced other forms of support, such as online library and registry services and remote access to student counseling services. Antwi-Boampong (2020) has also pointed to the working conditions for faculty and other OBL staff as an important OBL success factor. Working conditions also include the management of the workload of those serving in the OBL environment (Antwi-Boampong, 2020), as well as the rewards and incentives offered to staff who operate in the OBL space (Al-Ayed & Al-Tit, 2021; Groen et al., 2020).

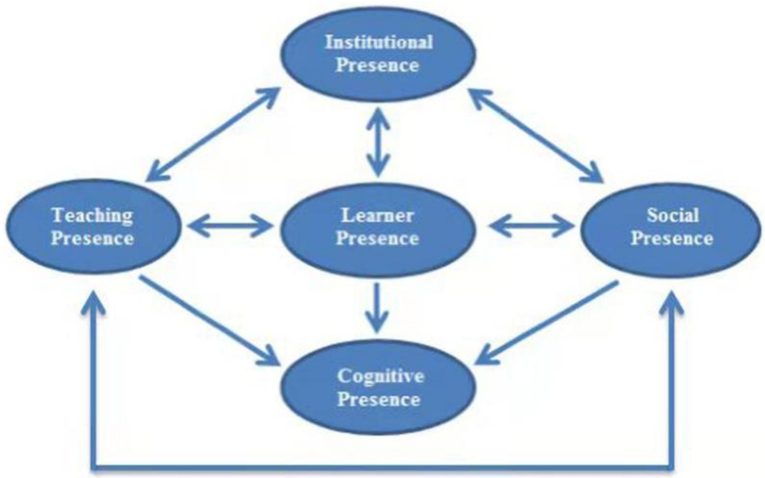
The Importance of Institutional-Related Factors

Of note is that institutional-related factors appear to be the most complex and most encompassing of the three categories of OBL success factors explored so far. While these factors impact implementation at the school level, they also directly and indirectly impact some faculty-related and student-related factors examined earlier. An example is the impact of institutional-related factors on the intention to and actual use of OBL among faculty and students (Ambarwati et al., 2020; Fianu et al., 2020; Zhang et al., 2020). This example demonstrates how institutional-related factors make up the facilitating conditions associated with OBL adoption and implementation (see Rogers, 2003; Zhang et al., 2020). These examples also contradict Venkatesh et al. (2003) and Venkatesh et al. (2016), who argued that facilitating conditions do not impact behavioral intention to use technology innovations but rather the actual use of technology innovations. Zhang et al. suggested that strong facilitating conditions make it easier for students to use OBL systems, which can impact behavioral intentions. Zhang et al.'s findings appear reliable as they employed a quasi-experimental design with a large sample of 14,000 students and 2000 instructors. Dmello et al. (2023) also substantiate their findings by showing that facilitating conditions significantly influence students' intention to use e-learning.

Researchers also suggest that while institutional-related factors are the least researched in comparison to student and teacher-related factors (Mihai et al., 2021), they are gradually emerging as the most important to OBL success (Bokolo et al., 2020a; Fawns et al., 2021). In HEIs, institutional-related OBL factors span the entire gamut of OBL implementation: the strategic (leadership), the tactical (management), and the operational conditions (support) that promote and sustain effective implementation (Mihai et al., 2021; Qiao et al., 2021). As stated, Zhang and Zhu (2023) highlighted the importance of institutional-related factors in their revised CoI framework by adding institutional presence to the original framework developed by Garrison et al. (1999). The revised framework is represented in Figure 6 and supports the argument that HEI leaders and managers should not take institutional-related factors for granted or ignore them when implementing OBL.

Figure 6

The Revised Community of Inquiry Framework



Note. Figure reprinted from "Institutional presence: Toward a further developed Community of Inquiry model integrating institutional functions in online and blended learning environment," by W. Zhang, and C. Zhu, 2023, *Frontiers in Psychology*, *14*, p.8 (https://doi.org/10.3389/fpsyg.2023.1132204). Copyright 2023 by Zhang and Zhu. Reprinted with permission under open access license (CC BY).

To conclude this section, the successful adoption and implementation of OBL in HEIs rely on various factors. Based on the findings from relevant literature, I have categorized these factors as student-related, teacher-related, and institutional-related. While student and teacher-related factors are well-researched, institutional-related factors remain understudied; the literature suggests that these factors are significant as they impact all facets of OBL implementation. This impact includes student and teacher implementation of OBL. Given the findings outlined in the literature and the alignment of those findings with the BLAF, I have categorized institutional-related factors into three types: strategy, structure, and support.

Institutional Readiness for OBL

There is strong advocacy in the literature reviewed for readiness assessments as a precursor to OBL adoption and implementation. Many researchers have recommended that HEIs wishing to adopt and implement OBL successfully should first assess and analyze their implementation contexts and address areas of actual and potential weakness and vulnerability (Ate et al., 2021; Bokolo et al., 2020a; Suwawi et al., 2021). While a bit dated, Al-araibi et al. (2019) defined e-learning readiness or e-readiness as the extent to which an institution is prepared to adopt and implement e-learning. In keeping with my approach to the related literature, I categorize e-learning readiness into three main types: student readiness, teacher readiness, and institution readiness (see Saboowala & Manghirmalani Mishra, 2021; Shakeel et al., 2023; Suwawi et al., 2021). In this section, I focus on institutional readiness for OBL to further advance the related literature review.

Understanding Institutional Readiness

Bokolo et al. (2020a) and Saintika et al. (2021) defined institutional readiness for OBL as the level of preparedness an educational institution demonstrates to adopt and implement OBL. In describing institutional readiness, both Al-araibi et al. (2019) and Suwawi et al. (2021) referenced areas of preparedness that included culture, finance, technology infrastructure, and human resources, among other things. This understanding of institutional readiness is supported and further expanded by Antwi-Boampong and

Bokolo (2021), who noted that institutional readiness for OBL also includes the desire and intention of the institution’s management to adopt and implement OBL.

Researchers also consider institutional readiness a critical success factor for OBL adoption (Antwi-Boampong & Bokolo, 2021; Ate et al., 2021). To support this notion, writers in numerous other studies confirm the high incidence of OBL implementation failure and the importance of readiness assessment as a mitigating strategy (Bokolo et al., 2021b; Budur et al., 2021; Rahmawati et al., 2021). Based on these definitions and descriptions, readers may infer that institutional leaders should demonstrate their desire and intent to adopt OBL by ensuring the preparedness of various areas of school operations.

It is also important to note that many factors that influence the successful implementation of OBL are the indicators used to describe OBL implementation readiness. For example, Chen et al. (2022) referred to the elements of the BLAF as OBL diffusion readiness factors. Also, in a study evaluating the e-learning readiness of public and private tertiary institutions in Indonesia, Saintika et al. (2021) set a precedent for using established e-learning success factors to define and measure e-learning readiness. Additionally, in the last decade, a significant number of models and tools, drawing on some of the factors discussed earlier in this study, have been developed or expanded to assess the OBL readiness of HEIs and their various stakeholders (Antwi-Boampong, 2020; Antwi-Boampong & Bokolo, 2021; Goeman et al., 2021; Küsel et al., 2020; Martin et al. 2020). For example, in a multi-center, cross-sectional study of the readiness to adopt and implement online teaching, Hosny et al. (2021) developed, validated and implemented a readiness tool for medical teachers in Egypt, Saudi Arabia, and Bahrain. The 30-item instrument required teachers to respond to questions regarding self-efficacy, ease of use, effort expectancy, and performance expectancy. Rafiee and Abbasian-Naghneh (2021) extended the technology acceptance model (TAM) developed by Davis (1989) to measure the e-readiness of English language learners in Iran by using factors such as perceived usefulness, perceived ease of use, and perceived enjoyment. It is standard among educational researchers to use the factors that impact OBL success as indicators of institutional and other forms of readiness for OBL adoption and implementation.

Institutional Readiness Models

Over the past twenty years, some researchers who have explored the phenomenon of institutional readiness for OBL have also developed models for assessing institutional preparedness for OBL implementation. Some of these models provided the foundations for further scholarly and practical inquiry, extending what researchers know about institutional readiness for OBL. Examples of these researchers include Mercado (2008), Darab and Montazer (2011), and Graham et al. (2013). As educational contexts and needs change worldwide, other models emerge (Bokolo et al., 2020b; Nwagwu, 2020). Two of the most popular models that appeared in the decade before COVID-19 are the readiness assessment tool for e-learning environment implementation (Mercado, 2008) and the eclectic model for assessing e-learning readiness (Darab & Montazer, 2011). While both models focused on institutional readiness, Mercado’s model included other dimensions, such as student and faculty readiness. Both models also drew from earlier works such as

Anderson (2002) and Khan (2010) and both focused on institutional readiness aspects such as hard infrastructure, soft infrastructure, and what can be called management and support services (Darab & Montazer, 2011; Mercado, 2008). Mercado's model also explored leadership commitment and the presence of an integrated technology culture.

Following the emergence of Mercado's (2008) model and the instrument proposed by Darab and Montazer (2011), Graham et al. (2013) introduced the BLAF. While I have already outlined the details of this model in the conceptual framework, scholars have well documented its impact on more contemporary models (Antwi-Boampong & Bokolo, 2021; Rahmawati et al., 2021). One such example is the readiness to diffuse blended learning model proposed by Bokolo et al. (2020a). This model defines and measures institutional readiness using six variables: institutional structure, resource support, management strategies, technology infrastructure, ethical considerations, and readiness to diffuse blended learning. Patterning the BLAF closely, Bokolo et al.'s model is also similar to Mercado's model in its focus on leadership strategy and action while adding an element relating to ethical considerations such as the ownership and distribution of faculty's intellectual property (Bokolo et al., 2020a).

Other contemporary models exist that do not closely align with the BLAF. The implied model put forward by Nwagwu (2020) is an example of one such model growing in prominence (Junus et al., 2021; Sasere & Makhasane, 2020). Nwagwu (2020) used the model to investigate academic staff e-learning readiness perception of universities in Nigeria. Unlike Bokolo's model, Nwagwu applied their model within the context of HEIs operating in a developing economy and used other assessment dimensions that focused on broader stakeholder involvement, such as student readiness, public/society readiness, and e-learning materials readiness (Nwagwu, 2020). Other works, such as the institutional readiness model created by Goh and Blake (2021), note the deviation from the factors explored in the BLAF. While labeled as an HEI e-readiness model, Goh and Blake's model focused more on the student and teacher-related factors I explored earlier in this review and less on institutional-related factors highlighted in the BLAF.

This subtle deviation from the use of institutional-related factors in what are labeled institutional e-readiness assessment models may be attributable to several factors but does not negate the relevance of the BLAF to this study. Nwagwu (2020) and Goh and Blake (2021) observed that the shift may have resulted from the impact of COVID-19 on OBL readiness perception in HEIs. The shift may also be attributable to a need to apply more contemporary theories to individual contexts, and it could also be attributable to the specific features of the context in which researchers conducted their assessments. For example, there are several instances in the literature where researchers focused on institutional-related factors in countries with low GDPs, while others in more developed countries focused on student-related and teacher-related factors. An excellent example of this is Njuguna (2022), who incorporated more of the elements in the BLAF in their mixed-methods study of the readiness factors that led to OBL implementation success in universities in the developing state of Kenya. In contrast, Goh and Blake (2021) used the higher education e-readiness questionnaire to study institutional e-readiness in Malaysia. Their assessment tool focused on five dimensions: innovativeness, infrastructure, collaboration, student experiences, and flexible learning.

Notwithstanding the examples of deviations from the BLAF principles found in some contemporary e-readiness models and the possible reasons for these deviations, the BLAF remains relevant to this study. Firstly, the BLAF solely focuses on institutional-related factors, which is primary to this study. Secondly, examples cited from the literature applying elements from the BLAF in contexts where HEIs operate in developing countries also justify using the BLAF in my research context. Since Jamaica is a small island developing state, using the BLAF as a framework for understanding institutional readiness for OBL is appropriate. Finally, since researchers have already used institutional readiness models to investigate the phenomenon's meaning in a specified context, using the BLAF provides an opportunity to examine the meaning of institutional OBL readiness in the context of Jamaica's vocational education institutions.

OBL in TVET

Vocational education, also known in the Caribbean as TVET, refers to education and training initiatives focusing on developing knowledge, skills, competencies, and attitudes aligned with labor market needs (Nahamya & Nakawala, 2020). TVET includes the development of general and technical knowledge, skills, and attitudes for a wide range of occupational fields (UNESCO-UNEVOC, 2022) and the development of transferable skills such as critical thinking and innovation, collaboration and communication, and lifelong learning and entrepreneurship (Sunny et al., 2023). These definitions underscore TVET as an essential economic and social development strategy. They also highlight TVET's importance in attaining the United Nations' sustainable development goals four and eight: quality education and life-long learning for all and decent work and economic growth (UNESCO, 2021). The UNESCO strategy for TVET 2022-2029 (UNESCO, 2021) also underscores the importance of TVET to economic growth and development as it prioritizes using TVET to develop skills for individuals to learn, work and live; to develop skills for inclusive and sustainable economies; and to develop skills for inclusive and peaceful societies (UNESCO, 2021; Vieira et al., 2021). Accordingly, the definition of vocational education emphasizes its importance to developing economies and highlights the gravity of the lack of research in the area.

Many researchers have concluded that to keep TVET relevant and sustainable, education stakeholders should take deliberate steps to integrate digitalization tools and strategies like OBL into their TVET ecosystem. According to UNESCO (2021), TVET digitalization is critical to advancing vocational education worldwide and realizing its benefits in individual societies. These benefits include greater access to vocational and career-based training, the provision of flexible learning pathways, and the development of digital competencies among teachers and learners (Gretch & Camilleri, 2020). Hassan et al. (2021) observed that the low integration of OBL and ICT in TVET increased the likelihood that skilled labor produced through TVET will not meet the needs of the 21st-century labor market.

Other researchers, such as Hashim and Hamidon (2022) and Orji et al. (2021), found that using OBL tools and strategies in TVET increased access to learning for many students while reducing the cost. In an investigation of the perception of BL in TVET by Bangladeshi teachers, Orji et al. (2021) found other benefits, including the ability of BL to improve the quality of the TVET learning experience and to facilitate increased diversity and inclusion among TVET students. Additionally, in a study that explored the impact of COVID-19 on TVET in Kenya, Odondi et al. (2022) found that OBL in TVET made vocational education more resilient to external forces. The logic here is that having an improved and sustainable TVET experience, afforded through the integration of OBL, bolsters a country's ability to realize the benefits of having a robust TVET system. For this reason, UNESCO actively supports developing nations in implementing a digital transformation of TVET. This includes support for developing skills relevant in digital economies and integrating online and blended learning in TVET (UNESCO, 2021).

Despite the benefits outlined above, researchers have found that implementing OBL in TVET has been unsuccessful in many jurisdictions. OBL implementation in TVET institutions often faces several challenges, chief among them being the lack of adequate technological infrastructure (Mahdi & Wani, 2021; Ndahi, 2020) and the negative attitudes of TVET stakeholders toward ICT and OBL integration in TVET (Im, 2021). In a mixed-method study of the attitude of 244 Turkish teachers towards OBL technologies in vocational education, Demir et al. (2022) found that participants did not think online learning integration provided many advantages for vocational education. Citing perceived challenges such as the unsuitability for applied lessons, connectivity issues, and weak student attendance and participation, the researchers found that teachers in the study held a negative view of OBL in the TVET context. These findings were also substantiated by Im (2021), who found that instructors in South Korea were hesitant to implement OBL in TVET because of similar reasons highlighted by Demir et al. (2022). Syauqi et al. (2020) also realized similar findings among 56 Indonesian college-level vocational students, where they found students felt that the online vocational educational experience was inferior to the face-to-face experience. These studies highlight the dissonance between the documented benefits of integrating OBL in TVET and the drawbacks of integration perceived or experienced by key stakeholders.

Like the lack of adequate infrastructure and negative human perceptions, the other factors affecting the adoption and implementation of OBL in vocational education are similar to those I discussed earlier in this literature review. Earlier, I used empirical research findings to show three main types of OBL enabling factors: student-related, teacher-related, and institutional-related factors. These categorizations also apply to OBL in TVET. For example, Li et al. (2022) and Shakeel et al. (2023) used quantitative analysis to isolate and highlight the student-related factors that impacted BL implementation in TVET. They yielded similar results to those found in studies focusing on general OBL integration. Still, Shakeel et al. also found a strong correlation between students’ attitudes to OBL in TVET, student preparedness for OBL in TVET, and, by extension, OBL implementation success in TVET. In another study, Bin et al. (2020) highlighted self-efficacy, perceived ease of use, intention to use, and perceived usefulness as factors impacting teacher implementation of OBL in Chinese TVET colleges. These results align with the findings of Bokolo (2022), Joshi et al. (2023), and Suryanti et al. (2021) referenced in a previous section. The importance of facilitating conditions is also featured in the limited literature addressing institutional factors affecting OBL in TVET (Li et al., 2022; Odondi et al., 2022). While not using terms such as strategy, structure, and support, Odondi et al. (2022) found that investment decisions about OBL (strategy), technological infrastructure (structure), and training partnerships with the public and private sectors (support) were critical to OBL diffusion in TVET. These findings are in keeping with research conducted by Bokolo et al. (2020a), Fawns et al. (2021), and Zhang and Zhu (2023). While research in the area is limited, findings related to OBL implementation success in TVET identify similar enabling and readiness factors to those identified for OBL implementation in traditional HEIs. But what factors affect OBL adoption in the Jamaican TVET context?

OBL in Jamaica's Vocational Education System

To facilitate a rounded review of the key concepts and critical literature related to my research topic and main research question and to provide the necessary context for the collection and analysis of data, I offer a short overview of the development of TVET in Jamaica and describe its current state. I also specifically examine the factors influencing OBL implementation in the Jamaican TVET system and discuss the need for more research in the area of OBL in TVET in Jamaica.

History of TVET in Jamaica. Jamaica has had an active relationship with TVET for almost 200 years. The relationship began in the post-emancipation era of 1838 and remains active today with a national budget of 14,874,939,000 Jamaican dollars (JMD) or approximately 97,000,000 United States dollars (USD) in 2022 (HEART/NSTA Trust, 2022a). This relationship, many argue, is marked by three significant historical events: the establishment of the negro education grant in 1834, the opening of the first vocational high school in 1896, and the establishment of a statutory agency responsible for workforce training and development in 1980. Apart from marking time, these three events demonstrate the importance of TVET to Jamaica's national development, and they explain Jamaica's commitment to TVET as a strategy for economic growth.

Jamaica's formal education system began with TVET. After the emancipation of the enslaved Africans who served the Jamaican sugar plantations up to 1838, religious groups in Britain and the government in England created many endowments to educate ex-slaves in the skills required to support the continued sustainability of the existing plantation society. A significant endowment came from the negro education grant (Blair, 2023). King (1999) highlighted that this grant facilitated the development of an education system that would support the existing sugar industry and ensured a continuous flow of skilled labor into the sugar manufacturing and export business that dominated life on the island. This education of ex-slaves marked the beginning of formal education for people of African descent in Jamaica and established an education system closely aligned with workforce development (Coates, 2012). In a review of the historical and social foundations of Jamaica's education system, Thomas-Brown (2020) highlighted that the education system in postemancipation Jamaica was "geared towards helping the former slaves integrate into the colonial economy as a peaceful lower class" (p. 3). The education system developed for formerly enslaved people in postemancipation Jamaica focused on workforce development.

The second significant development in Jamaica's TVET history occurred in 1896 when the British government established the island's first higher-level vocational training institution (Pemberton, 1979). This move was a deviation from the elementary-level education introduced immediately after emancipation. The establishment of the Kingston

Technical High School set precedence for opening other secondary-level vocational training institutions in the following decades. Cowell and Gregory (2019) pointed out that these types of *technical* schools aimed to support the development of commerce and industry. As the demand for these schools and training opportunities increased, the Jamaican government established more schools focusing on developing hard skills for the labor market. By the mid-1900s, Jamaica began to establish tertiary-level vocational training institutions, including institutions capacitating teachers to serve vocational training institutions at the secondary and tertiary levels (Cowell & Gregory, 2019).

The third significant event I highlight is the establishment of the Human Employment and Resource Training Trust and National Training Agency (HEART Trust NTA) in 1982. An act of the Jamaican Parliament established the HEART Trust in response to high levels of unemployment among Jamaica’s youth in the 1970s and 1980s (Mitchell, 2015). The government designed this statutory agency to provide quality and labor market-driven vocational training programs to working-aged Jamaicans (ages 16-65) and to do so based on dedicated funding obtained through direct taxation (HEART NTA, 1982). Today, all private sector entities in Jamaica that pay a wage bill higher than US$93 per month (JMD$14,444) must remit to the HEART Trust three percent (3%) of their annual wage bill (HEART/NSTA, 2020a; ILO, n.d.). The Jamaican government uses this HEART tax to fund TVET programs in colleges and institutions owned and operated by the HEART Trust and TVET programs offered by other government entities and private training providers. As an agent of the Government of Jamaica, the recently renamed HEART National Service and Training Agency Trust (HEART NSTA Trust) also provides quality assurance and policy oversight for all TVET programs and initiatives offered on the island (HEART/NSTA, 2019).

Establishing the HEART Trust signaled a greater government commitment to TVET as a strategy for human capital development in Jamaica and, by extension, the wider Caribbean. In 2022, HEART's total income from taxes and other miscellaneous sources stood at JMD 15,847,385,000 or approximately USD 103,000,000 (HEART/NSTA, 2022a). That same year, student enrollment in HEART-funded programs stood at 112,320 learners, and the total number of persons certified after completion of training was 46,473. According to their strategic plan (2022-2026), the HEART Trust is projecting an increase in enrollment and certification of approximately 40% by the end of the 2026 financial year (HEART/NSTA, 2022b). They hope to accomplish this by increasing the number of TVET programs offered via OBL modalities and tools, among other things (HEART/NSTA, 2022b). HEART NSTA is also projecting for the 2026 period tax revenue inflows of $16.44 billion (JMD) or just under $107,000,000 (USD) (HEART/NSTA, 2022b). This projection is against the reported expenditure for 2022 of JMD 14,874,939 (HEART/NSTA, 2022a). It is clear from the planned investment in TVET that the Jamaican government is committed to vocational education and, by extension, developing the Jamaican labor force.

Current Challenges. Despite the rich history and level of governmental commitment, vocational education in Jamaica faces some significant challenges in the 21st century. The Reform of Education in Jamaica Report (Jamaica Education Transformation Commission; JETC, 2021) highlights four challenges facing TVET in

Jamaica that are most relevant to this study. Chief among these challenges is that TVET suffers from low public perception and status (JETC, 2021). Jamaicans tend to value traditional education above vocational education, which is not uncommon among developing nations (Ochieng & Ngware, 2022) and may be attributable to the colonial history I referenced previously.

This low perception contributes to another challenge highlighted by the JETC Report (2021): Jamaican youth being unattracted to TVET despite its proven positive impact on youth employment. As referenced earlier, enrollment in Jamaican TVET programs funded by the HEART NSTA in 2022 stood at 112,320 learners (HEART/NSTA, 2022a), six percent below the target of 119,350 (HEART/NSTA, 2022a). At the same time, there is significant unemployment and underemployment of Jamaicans aged 15-29 years (Statistical Institute of Jamaica; STATIN, n.d.), an age group representing 42 percent of Jamaica's labor force (JETC, 2021). The regional report on SDG4 for Latin America and the Caribbean, published by UNESCO (2022), also substantiates this reality of low youth engagement in TVET, making it a regional challenge and not just a challenge for Jamaica. According to UNESCO (2022), only seven percent of youth aged 15-24 are enrolled in TVET programs across the entire Caribbean and Latin America.

The JETC report (2021) also referenced the low impact of Jamaica's vast number of TVET institutions and initiatives on the labor shortage Jamaica currently experiences. A report from the Caribbean Policy Research Institute (CAPRI; 2023) indicates that 61 percent of Jamaica's labor force remains untrained or uncertified. Additionally, the JETC

Report (2021) noted that the training programs offered by the TVET institutions on the island are not fully aligned with established labor market needs. Researchers point to this misalignment between the labor market and the trained labor force as a significant factor in the low gross domestic product (GDP) Jamaica is currently experiencing (CAPRI, 2023). Current TVET programs are not meeting Jamaica's labor market needs.

The Way Forward. Online and blended learning (OBL) is featured significantly in the recommended approaches for addressing the abovementioned challenges. The JETC Report (2021) made eleven recommendations for advancing TVET in Jamaica, three of which are most relevant to this study. The first is that TVET should be rebranded and marketed in Jamaica as a viable career option crucial to national development. The second recommendation encourages the government of Jamaica to promote TVET as part of the individual's life-long learning process, and third, the government increases human and financial resources to support distance learning (OBL) in TVET.

These recommendations are in keeping with the UNESCO TVET Strategy 2022-2029 (UNESCO, 2021) and appear in other UNESCO publications. For example, the regional monitoring report of SDG4-Education 2030 (UNESCO, 2022) described TVET as promoting economic development, impacting individual and collective living conditions, and positively influencing national productivity and sustainability. This description underscores the need for rebranding highlighted in the JETC Report (2021). The ILO also advocates for governments of developing societies to mainstream TVET into their life-long learning educational frameworks (International Labor Office & United Nations Educational, Scientific and Cultural Organization, 2021) and consider TVET a facilitator of life-long learning (UNESCO, 2021). Regarding the recommendation for supporting distance learning in TVET, Gretch and Camilleri (2020) have highlighted this as an essential component of the digitalizing in TVET initiative that the ILO is currently pursuing. The JETC (2021) recommendations underscore the importance of OBL adoption and implementation in Jamaica's TVET system. The recommendations also justify why it is crucial to give attention to the factors that enable the success of OBL in TVET, including institutional readiness.

Support for Research in Institutional Readiness for OBL

Researchers have recommended further studies in the area of institutional readiness for OBL. In a case study investigating institutional-level OBL readiness among five European universities, Mihai et al. (2021) indicated that the lack of investigation into institutional-level OBL readiness may be attributable to the slow pace of OBL mainstreaming in some jurisdictions. Okumu and Kenei (2022) highlighted a similar e-learning adoption lag among developing African nations. In their study of the level of institutional readiness to adopt e-learning in Kenya, Okumu and Kenei (2022) suggested the need for more exploration into the e-readiness of HEIs in developing countries. As Caribbean countries struggle with slow internet penetration rates and limited access to ICTs (Bleeker & Crowder, 2022), this study will address a gap in the literature by providing insight into how vocational education leaders in Jamaica perceive institutional-related readiness for OBL adoption and implementation

The available literature also highlighted a need for further research in OBL in TVET. The Latin America and Caribbean Regional Monitoring Report on SDG4

(UNESCO, 2022) highlighted a lack of data and research on TVET in the region, making it difficult to diagnose some of the issues generally associated with TVET. The monitoring report called for greater participation in TVET research in the Caribbean region to improve knowledge management (UNESCO, 2022). This call was made earlier by Allais and Wedekind (2020), who lamented the "paucity of data and research on TVET in many developing contexts" (p. 336) and attributed the dilemma partially to weak administrative systems in TVET and an inadequate research base in many HEIs.

Additionally, some researchers have found that the low perception of TVET in countries like Jamaica (see JETC, 2021) negatively impacts the level and quality of research in the area. In a study that explored the factors affecting e-learning adoption in TVET in Afghanistan, Mahdi and Wani (2021) conducted research in a similar context to Jamaica, where a local authority was responsible for TVET implementation across the country. They also commented on the limited nature of TVET research from developing countries and suggested widening investigation into other locales. Zgraggen (2021) found similar research gaps. Overall, the lack of research in OBL implementation for TVET in developing countries makes my study essential and relevant to Jamaica, the Caribbean region, and other developing countries.

Summary and Conclusion

According to the literature relating to OBL adoption and implementation, three main categories of factors assure OBL success in HEIs, including those institutions offering TVET programs. The categories are student, teacher, and institutional-related factors. Within those factors classified as institutional-related are the facilitating conditions of strategy, structure, and support that significantly impact institutional, teacher, and student adoption and implementation of OBL. How institutional leaders describe institutional readiness in TVET contexts is unknown. Drawing on the perceptions of TVET institution leaders in Jamaica, this study will describe institutional readiness for OBL adoption and implementation in vocational education. This study will extend knowledge in educational technology integration by providing insight into the current understanding and experience of institutional OBL adoption and implementation in Jamaica's TVET system. Findings from the study can inform professional practice at the institutional and organizational levels, thereby facilitating positive social change in the relevant institutions, the parent or funding organization in general, the country, and the Caribbean region.

In this chapter, I explored the BLAF (Graham et al., 2013) within the context of the UTAUT to justify the importance of facilitating conditions in the adoption and implementation of OBL in HEIs. I also discussed the main factors that affect OBL implementation and the readiness for implementation in HEIs in general and HEIs offering vocational programs. I examined the history of vocational education in Jamaica and discussed the local challenges faced by Jamaican authorities with TVET implementation. In this chapter, I also outlined Jamaican authorities' plan for using OBL to advance TVET and realize sustainable development goals. Finally, I reiterated the gap relevant to my research topic and demonstrated how the study is likely to address the gap. In the next chapter, I explore the approaches to data collection, management, and analysis.

Chapter 3: Research Method

This basic qualitative inquiry explored how institutional leaders in Jamaica's vocational education institutions described institutional readiness for OBL adoption and implementation. Although a plethora of empirical studies focuses on e-readiness in general (Ate et al., 2021; Cutri & Mena, 2020; Leacock & Warrican, 2020; Saintika et al., 2021; Suryanti et al., 2021), not many researchers have focused on institutional readiness for OBL adoption and implementation in vocational education (Bokolo et al., 2020a; Rahmawati et al., 2021). Much research exists on the operational readiness of schools for OBL, including the readiness of teachers and students (Bokolo et al., 2022; Ceballos et al., 2021). Fewer investigations have focused on the readiness of the people and systems at the strategic and tactical levels of school management to support OBL implementation (Ate et al., 2021; Lane, 2021). Also, there is little evidence of peer-reviewed research on the issue of institutional-level readiness for OBL in vocational education contextualized to the Caribbean situation (Dottin, 2021). This study aimed to address the gap in the literature specific to institutional readiness for OBL adoption and implementation in TVET institutions in Jamaica, with a particular focus on the facilitating conditions of strategy, structure, and support.

This chapter provides a rationale for selecting the basic qualitative inquiry as my research design and describes my role as a researcher. It also explains my methodology for collecting and analyzing data, including participant selection, instrumentation, collection procedures, and a data analysis plan. I conclude the chapter by discussing trustworthiness and ethical procedures.

Research Design and Rationale

I used one research question to guide the execution of this basic qualitative study, supported by three subquestions (see Agee, 2009).

RQ1: How do leaders in vocational education institutions in Jamaica describe institutional readiness for OBL adoption and implementation?

The subquestions that will support the research question are as follows:

*RQ*1a: How do leaders in vocational education institutions in Jamaica describe institutional strategy for OBL adoption and implementation?

RQ1b: How do leaders in vocational education institutions in Jamaica describe institutional structure for OBL adoption and implementation?

RQ1c: How do leaders in vocational education institutions in Jamaica describe institutional support for OBL adoption and implementation?

The primary phenomenon of interest in this study was institutional readiness for OBL adoption and implementation in vocational education. Although I could have explored the concept from several perspectives (see Bokolo et al., 2020a; Roy et al., 2021; Suwawi et al., 2021), this study gave specific focus to the facilitating conditions (Venkatesh et al., 2003) of institutional strategy, structure, and support (see Graham et al., 2013). I explored Jamaican TVET institution leaders' descriptions of institutional readiness for OBL adoption and implementation in vocational educational institutions. The phenomenon of institutional readiness, described by Venkatesh et al. (2003) as facilitating conditions and its elements of strategy, structure, and support, as defined by

Graham et al. (2013), guided the development of interview questions and the analysis and interpretation of the research findings.

I used the basic qualitative inquiry with semistructured interviews for data collection. I selected this research design because it aligned well with the descriptive nature of my research question, which focused on how institutional leaders in vocational education institutions in Jamaica described institutional readiness for OBL adoption and implementation. According to Elliott and Timulak (2021), the basic qualitative inquiry is an appropriate design for descriptive research questions that explore features, types, and patterns within a phenomenon. I also selected the basic qualitative inquiry because it allowed the examination of institutional readiness for OBL in vocational education from a dialectical constructivist and critical realist perspective (see Elliott & Timulak, 2021; Fletcher, 2017; Kahlke, 2014). Examining the phenomenon from this perspective allowed me to analyze the data collected through interviews against findings documented by other researchers in the field. This design approach is also acceptable for inquiry into relatively novel or understudied phenomena in a specific context (Bogna et al., 2020; Merriam & Tisdell, 2016), such as vocational education in Jamaica. Finally, I selected a basic qualitative design because it facilitated a singular approach to data collection: the interview. As my research focused on the perception of vocational education leaders and I was the only person collecting and analyzing data, the semistructured interview was an appropriate approach as it facilitated the gathering of rich and thick data (Elliott & Timulak, 2021; Merriam & Tisdell, 2016) and was suitable for implementation by one person.

I considered using phenomenology and case study qualitative designs for my research but did not select them because they do not align with other aspects of my proposed study. Phenomenology aligned with my research purpose because I sought to understand institutional readiness in TVET through an inductive approach to data analysis (Creswell & Creswell, 2017). It was also appropriate as it allowed me, as the researcher, to examine the problem through the meaning-making experiences of those living through OBL adoption and implementation (see Patton, 2015). Phenomenology as a research design is also very descriptive and engaging, providing opportunities for detailed descriptions through multiple data sources (Merriam & Tisdell, 2016). Despite these benefits, I decided against using a phenomenological design because it did not align with my research question and subquestions. Phenomenological studies seek to understand the meaning of a unique lived experience as opposed to how persons describe a lived experience. Additionally, phenomenology requires multiple in-depth interviews, and given the nature and volume of the responsibilities associated with institutional leadership, I did not think multiple interviews would be practical for my target participants.

Like phenomenological designs, qualitative case studies facilitate detailed descriptions of a phenomenon (Merriam & Tisdell, 2016) and knowledge creation through inductive approaches (Creswell & Creswell, 2017). A case study design also allows for reliability through triangulation since it utilizes multiple data sources (Yin, 2015). However, case studies are generally bound to a specific setting (Merriam & Tisdell, 2016). If applied to my research context, it would have resulted in a sample size too small to facilitate transferability. Additionally, given that my research focused on the perspectives of institution leaders, there was no need to utilize multiple data collection methods, which is a requirement of the case study design (see Patton, 2015).

I did not consider using quantitative approaches for this study as they did not align with my research purpose and question. In this study, I sought to understand how a specific group of people (institutional leaders) in a particular context (vocational education institutions in Jamaica) described a specific phenomenon (institutional readiness for OBL adoption and implementation). This type of investigation requires gathering, analyzing, and interpreting detailed and rich descriptions, which, according to Patton (2015), quantitative methods do not facilitate. Quantitative methods also did not facilitate my focus on meaning-making from the perspective of my research participants.

I selected the basic qualitative design because it was the most appropriate for this study’s purpose, research question, and context. Like phenomenology and case study designs, the basic qualitative approach allowed for collecting rich, thick data to understand a phenomenon (Merriam & Tisdell, 2016; Patton, 2015). However, unlike phenomenology and case study designs, the basic qualitative approach facilitated a single source of data collection.

Role of the Researcher

In qualitative studies, the researcher is the primary tool of data collection and analysis (Merriam & Tisdell, 2016). As such, the role of the qualitative researcher is critical and complex (Merriam & Tisdell, 2016; Ravitch & Carl, 2019). In this study, I functioned as a researcher conducting a systematic investigation and as a participant in a knowledge-creation process (Burkholder et al., 2016). I selected and applied the research design by formulating and refining the research question to ensure alignment with the research problem and purpose. I also developed and refined the interview protocol I used as the instrument to collect data and guide my interaction with the study participants. Roberts (2020) highlighted the usefulness of the interview protocol in helping novice researchers develop good interview skills and reduce mistakes in actual interviews. Rubin and Rubin (2012) also posited that using an interview protocol helped to standardize the interview process. While the questions in my interview protocol were informed by the work of multiple researchers (i.e., Darab & Montazer, 2011; Graham et al., 2013; Lane, 2021), I developed, adopted, and adapted the questions I asked each participant. I also recruited and selected the study participants using specific criteria and collected, analyzed, and interpreted the interview data. Additionally, I documented the study process and subsequent findings.

As the only person who collected data in this research, I played another significant role in the study: managing bias (see Merriam & Tisdell, 2016; Ravitch & Carl, 2019). Biases can potentially enter at any stage of the qualitative research process (Ravitch & Carl, 2019). I managed bias by employing strategies that promoted reflexivity, collaboration, and rigor (Ravitch & Carl, 2019). I assessed my biases and challenged my assumptions by writing researcher memos and taking field notes. I documented these memos and notes in a reflexive journal and stored them in a secure filing cabinet in my home office. Cox (2012) suggested writing three memos to identify and critically assess bias: a researcher identity memo, a professional identity memo, and a graduate-student researcher memo. I also documented my preunderstanding of the topic to determine my preexisting biases and outline my theoretical and personal expectations of the study (Elliott & Timulak, 2021).

I also used my Walden-assigned dissertation committee feedback to help me manage my biases. Burrington et al. (2020) and Janesick (2021) have suggested that gatekeeping is part of the role of the dissertation committee assigned by a university. Therefore, I worked with my dissertation committee to speedily address any potential challenges with bias. Ravitch and Carl (2019) described this kind of collaboration with my dissertation committee as dialogic engagement and postulated that it facilitates rigor when used along with reflexivity strategies.

I also used various strategies to manage how my participants perceived me in the research process. Although my interview participants were not members of my current work organization, I was employed for 15 years at the same statutory agency as the leaders targeted for this study. Some of the respondents were persons I worked with or socialized with in the past. Also, because I reside in a small island developing state and am one of the few instructional designers on the island, a few respondents were familiar with my work and advocacy in OBL implementation. As such, the potential existed that respondents may have perceived me as an auditor or evaluator and not a researcher interested in perspectives and descriptions. To mitigate this, I reminded participants at the start of each interview that my purpose was to collect data to describe their perceptions of institutional readiness within their context and not to form judgments about them and their work. Also, I used my interview protocol to keep the dialogue between me and the interviewees focused and objective and minimize any temptations to provide commentary on the answers shared by the respondents (Roberts, 2020).

Methodology

This section describes my methodology for conducting the study and achieving the research purpose. This basic qualitative inquiry included semistructued interviews with vocational institution leaders in Jamaica. I provide details below about the approaches used to recruit and select participants, develop the data collection instrument, and collect and analyze data.

Participant Selection and Logic

In keeping with the purpose of the study, I explored institutional readiness for OBL adoption and implementation in vocational education from the perspective of Jamaican TVET institution leaders. The population for this study comprised persons in leadership positions in vocational training institutions owned, operated, or funded by HEART NSTA Trust. As I stated in Chapter 2 of this study, the HEART NSTA Trust is the local statutory organization responsible for capacitating Jamaica’s workforce through technical and vocational skills development. This statutory agency owns and operates 25 training institutions that exclusively offer vocational programs at the postsecondary and tertiary levels. They also fund postsecondary and tertiary-level TVET programs in approximately 73 training institutions across the island. Persons recruited for this study included those employed in training institutions as principals, institution managers, vice principals, and deputy managers.

To determine the participants in this study, I used the homogeneous purposive sampling technique, which, according to Creswell (2012), uses a set of criteria to ensure participants in a sample are comparable. I chose the homogenous purposive sampling technique because it aligned with my study's purpose and facilitated depth and similarity of data (see Palinkas et al., 2015). As institutional readiness for OBL is the purview of school leaders (Gustafson & Haque, 2020), it was appropriate that my study, which focused on this phenomenon, included persons serving in positions representing institutional leadership. According to Khalidi et al. (2021) and Zaugg et al. (2021), institutional leaders are also most likely to determine the type and level of resources allocated to the initiatives relating to strategy, structure, and support for OBL. Additionally, although researchers in focus groups more commonly use homogeneous sampling than with individual qualitative interviews (see Patton, 2015), I selected this sampling approach because it is known to provide a depth of data, narrow variation in the population, and focus more on similarities and commonalities within the population (see Palinkas et al., 2015). Depth of data was essential to my study as I was interested in seeing if the data collected would reveal categories and themes that align with or challenge *a priori* categories and codes derived from my conceptual framework and if new categories and codes would emerge for further consideration.

The institution leaders I selected for this study met the following inclusion criteria. Participants held positions as principals, institution managers, vice principals, or deputy managers in vocational education institutions owned, operated, or funded by the HEART NSTA Trust. The leaders selected for this study also served in a vocational institution offering or preparing to offer online or blended learning programs. The study excluded vocational institution leaders in institutions not owned, operated, or funded by the HEART NSTA Trust. Also excluded from this study were persons serving in vocational institutions that are not offering or preparing to offer online or blended learning programs or courses. These criteria facilitated a homogeneous sample, which Patino and Ferreira (2018) and Robinson (2014) indicated can also facilitate research validity.

To ensure participants met the inclusion criteria, I employed two strategies. I first outlined the eligibility criteria on the participant recruitment flyer, which I initially shared with the research population. This approach allowed interested respondents to determine if they met the requirements before volunteering. Secondly, I confirmed eligibility at the start of the interview by asking participants to respond to the following questions:

1. Do you serve in a vocational educational institution as principal, vice principal, institution manager, or deputy manager?
2. Does your institution offer (or is preparing to offer) vocational programs or courses in the online and blended learning modalities?
3. Is your institution owned, operated, or funded by the HEART NSTA Trust?

I included these questions in my interview protocol (see Appendix A), and only participants who responded yes to all three questions were allowed to continue the interview.

Sample Size

I initially aimed to interview the first 10–12 participants. Still, the sample size for this study ultimately depended on my access to willing and available participants who met the inclusion criteria and when I reached data saturation. Mason (2010) highlighted that there is precedence for using 10 participants in a qualitative study, and Guest et al. (2006) justified using a sample size of 12 if the purpose of the study is to describe the perceptions of a relatively homogeneous sample. According to Merriam and Tisdell (2016), however, the sample size in a qualitative study can be influenced by factors such as the research purpose, the resources available to support the study, and the achievement of data saturation.

Accordingly, access to participants influenced my sample. The total population from which I recruited participants was limited. Additionally, leaders assigned to vocational institutions aligned to the HEART NSTA Trust tended to maintain busy schedules, and some were unwilling or unavailable to participate in the study. Also, some leaders did not meet all the eligibility criteria, as not all institutions affiliated with the HEART NSTA Trust offered OBL courses or programs. To recruit 10 to 12 participants for this study, I also used the snowball sampling approach to identify other potential respondents and invite them to participate.

Secondly, the point at which data saturation occurred influenced my sample size. Fusch and Ness (2015) described data saturation in qualitative research as the point at which no new codes or themes emerge from the collected data. Guest et al. (2006) found that qualitative studies utilizing homogenous sampling approaches typically required 12 participants to arrive at data saturation. Guest et al. (2020) corroborated this finding in later studies. In my research, data saturation occurred after interviewing 12 participants.

Inviting Participants

I received permission from the HEART NSTA Trust to access the research population. I wrote to the organization’s General Manager, requesting permission to interview vocational institution leaders under its purview, and my request was granted. After I received approval from Walden’s IRB to access the research population, I emailed a participant recruitment flyer to the Director of Human Resources in the HEART NSTA Trust, who shared the flyer with the research population. The invitation flyer asked persons interested in participating in the research study to contact me directly via email or telephone. Gaining initial access to research participants through the Department of Human Resources was a standard procedure of the HEART NSTA Trust.

After persons contacted me indicating their interest in participating in the study, I arranged to engage them via telephone to share more details about the study, review the data collection process, and explain the informed consent agreement. In that telephone conversation, I solicited feedback on a mutually agreeable date and time for conducting the interview. I also asked the participants to share the recruitment flyer with other institution leaders who met the inclusion criteria. I provided more details about participant recruitment in the section of this study focusing on Recruitment, Participation, and Data Collection.

Instrumentation

I used a semistructured interview protocol I adapted from Graham et al. (2013) to collect data from my participants. Graham et al. (2013) developed and used the protocol (see Appendix B) in research conducted among six public and private institutions of higher learning. The institutions in their study had developed blended learning policies and were at various stages of blended learning adoption and implementation. Utilizing a case study approach, Graham et al. (2013) used the protocol to interview one employee from each institution who was integral in adopting and implementing blended learning policies at the institutional level.

Graham et al.'s (2013) protocol was appropriate for my study for two main reasons. Firstly, the conceptual framework I used in my research aligned with the BLAF and Graham et al.'s protocol. Secondly, the questions in Graham et al.'s interview protocol explored OBL implementation at the institutional level, focusing on strategy, structure, and support. As such, Graham et al.'s (2013) protocol aligned with my research purpose, question, and subquestions. Accordingly, I sought and subsequently received permission from one of the authors, Professor Charles Graham, to modify and use the interview protocol in my research (see Appendix C).

I modified the protocol that Graham et al. (2013) developed to ensure the instrument aligned fully with my research purpose and question. To make these modifications, I drew from the work of Darab and Montazer (2011) and Lane (2021). Darab and Montazer (2011) used quantitative methodology to implement an instrument measuring the institutional readiness for e-learning in higher education institutions in

Iran. While Darab and Montazer's (2011) study was outside of my five-year threshold for literature included in my research, I found their evaluation model helpful. The model explored added dimensions of institutional structure relative to e-learning adoption and implementation that I could apply to my research context. Accordingly, some of the questions that Graham et al. (2013) developed were modified to include a few dimensions explored by Darab and Montazer (2011): quality assurance and evaluation and technical, pedagogical, and content support. In the section titled *Researcher-Modified Instrument,* I outline the details of the modifications I made to the interview protocol based on the findings of Darab and Montazer (2011). The modifications can also be found in my interview protocol (Appendix A).

Lane (2021), on the other hand, used qualitative approaches to explore how university personnel working in student affairs experienced the implementation of support services for OBL. Lane's (2021) research provided much insight into institutional readiness from the support systems perspective, especially the lack of preparedness of support services staff to assist with OBL implementation. I incorporated principles from Lane's (2021) findings to modify the interview protocol developed by Graham et al. (2013). In the next section, I explore the impact of Lane's (2021) study on the modifications I made to Graham et al.'s (2013) protocol. I have also represented these modifications in Appendix A.

Researcher-Modified Instrument

In keeping with the principles outlined in the BLAF and drawing on the precedent set by Dale et al. (2021) and Bokolo et al. (2020a), I modified the interview protocol used by Graham et al. (2013) to better align it with my research purpose and research question. Firstly, I added questions to the protocol to ensure that important concepts and dimensions not included by Graham et al. (2013) were explored during my data collection process. For example, I added one question relating to the type of technological infrastructure already in place to support OBL implementation and another question regarding the readiness of support services and support staff to meet the needs of teachers and students in the OBL environment. I added these questions based on Darab and Montazer's (2011) and Lane's (2021) findings. I also added one question about the perceptions of existing facilitating conditions and their adequacy to support OBL. This question was directly aligned with the UTAUT and emphasized institutional readiness as a facilitating condition and a determinant of successful OBL adoption and implementation (Ambarwati et al., 2020; Venkatesh et al., 2012).

Secondly, I rephrased other questions in the protocol to ensure greater alignment with my research design and context. For example, I replaced references to *blended learning* with *online and blended learning*, as my potential participants are leaders in vocational institutions that utilize either online or blended learning. Additionally, I replaced references to *faculty* and *students* with references to *instructors* and *trainees*. Instructors and trainees are the terminologies used in the Jamaican TVET environment. I also made some of the questions more open-ended to ensure they provide participants with opportunities to give deep and meaningful responses. Qu and Dumay (2011) highlighted the importance of open-ended questions in the semistructured interview process, as they can create avenues for a broader exploration of the phenomenon.

Thirdly, I made organizational changes to the protocol that Graham et al. (2013) developed to facilitate an effective interview process. I reduced the number of questions from 29 to 16, guided by a recommendation by Jacob and Furgeson (2012) to limit the number of questions asked in qualitative interviews. Also, I used the types of OBL implementation outlined in the BLAF to organize the questions in my interview protocol into three categories: strategy, structure, and support. I made this modification to ensure alignment between the interview protocol and my research question and subquestions. According to Kostere and Kostere (2021), aligning interview and research questions facilitates the analysis of collected data against *a priori* categories and themes.

Lastly, I structured the interview protocol to reflect a data collection activity with three phases: introduction and orientation, the interview, and the closeout. I created these phases to remind me of essential information to share with my participants before and after the interview and to help me feel more relaxed as I executed each interview session (see Merriam & Tisdell, 2016). At the beginning of the protocol, I also included my research question and subquestions as a reminder to myself about the purpose of the interview. I did not share those questions with the participants.

Instrument Sufficiency and Validity

I used two strategies to establish the sufficiency and content validity of the interview protocol. Firstly, I aligned my modified interview protocol to my conceptual framework and research subquestions. This alignment ensured that all questions on the interview protocol, including the background questions, were aligned with my research question. Table 2 summarizes the alignment between my interview questions and my research subquestions. I also demonstrate the alignment in the interview protocol in Appendix A.

Table 2

Alignment of Interview Questions with Research Subquestions

Research Subquestions (RQ1a-c)	Aligned Interview Questions
RQ1a: How do leaders in vocational education institutions in Jamaica describe the institutional strategy for OBL adoption and implementation?	Interview Questions: 4, 5, 6, 7, 8, 16
RQ1b: How do leaders in vocational education institutions in Jamaica describe the institutional structure for OBL adoption and implementation?	Interview Questions: 9, 10, 11, 12, 16
RQ1c: How do leaders in vocational education institutions in Jamaica describe institutional support for OBL adoption and implementation?	Interview Questions: 13, 14, 15, 16

The second strategy I used to establish instrument sufficiency and validity was to ask two experts in the field of OBL research to review my interview protocol and provide feedback. Both experts hold PhDs in educational technology integration and are senior faculty members in recognized tertiary institutions. One reviewer had over 10 years of research experience in information technology studies, and the other had over 20 years of research experience in instructional systems implementation. I asked each expert to review my draft interview protocol and suggest ways to improve the tool given my research purpose and question.

I then used feedback from one expert reviewer to make three improvements to my interview protocol. Firstly, based on the reviewer’s suggestion, I included the purpose of data collection in the introduction and orientation section of the protocol. Accordingly, I shared the study’s purpose with my research participants. Secondly, I reduced the number of interview questions from 21 to 16. I revised the questions in the protocol to achieve an average of four interview questions per research subquestion. Thirdly, I used other literature sources, namely Darab and Montazer (2011) and Lane (2021), to inform the questions in the interview protocol. Before soliciting expert feedback, the interview protocol questions were based only on the work of Graham et al. (2013). The expert reviewer advised that I include questions from multiple sources in the interview protocol to improve credibility and minimize bias in the data collection process.

Pilot Test of Instrument

After aligning my interview protocol to my conceptual framework and implementing the changes suggested by my expert reviewers, I arranged to interview three institution leaders from my e-learning professionals’ network. I invited these individuals to participate in the pilot test because they were leaders in postsecondary and tertiary-level educational institutions offering OBL programs. I also asked them to participate in the pilot test because, given their training and experience in OBL and institutional leadership, I anticipated they would be able to respond authentically to most or all the questions in my revised interview protocol. Notwithstanding their training and experience, I ensured that the participants I invited for the pilot test were not leaders in institutions owned, operated, or funded by the HEART NSTA Trust.

I conducted each interview in the pilot test using the Zoom web-conference software, which made it convenient for my participants. Zoom also allowed me to audio record each interview using the software. After each of the first two interviews, I made minor modifications to selected questions in the interview protocol to ensure that I had each question adequately aligned to their respective element in my conceptual framework and that participants understood what each question was asking of them. I also manually transcribed the interview recordings and uploaded both recordings and transcriptions into the qualitative data analysis software MAXQDA. In MAXQDA, I checked each transcript against the recording to ensure there were no errors in the transcription, and I numbered each paragraph to facilitate easy data management. I also coded each transcript in the data analysis software, using a combination of descriptive and in vivo coding. I also practiced aligning my first cycle codes to *a priori* structural codes derived from my conceptual framework.

I derived four main benefits from conducting the pilot test. Firstly, conducting the pilot test helped me to refine my interview questions further to ensure they would solicit responses that helped me respond to my research question and subquestions. Secondly, conducting the pilot test enabled me to practice my interview and transcription skills. Thirdly, the pilot test experience helped me determine the average duration of the interview experience. This information proved helpful when I was finalizing the *Participant Recruitment Flyer*. Finally, conducting the pilot test enabled me to practice my coding skills and to get more oriented to the data analysis software.

Procedures for Recruitment, Participation, and Data Collection

As stated in the section focusing on *participant selection and logic*, I recruited participants for this study from the pool of TVET institution leaders employed in institutions owned, operated, and funded by the HEART NSTA Trust. The institution leaders I targeted were principals, institution managers, vice principals, and deputy managers. This section details the procedures I used to facilitate recruitment, participation, and data collection.

Recruitment

When I received approval to collect data from Walden University's IRB, I first asked the Director of the Human Resources Department of the HEART NSTA Trust to distribute an invitation flyer to their pool of principals, institution managers, vice principals, and deputy managers. This invitation flyer included my contact information, which individuals accessed to indicate their willingness to participate in the study. Potential participants contacted me via email or via telephone.

Once contacted, I responded to persons within 24 hours of their initial contact and arranged a short telephone conference to discuss the purpose of the study, describe the data collection process, and explain the process for indicating informed consent. I also arranged the interview date and time in that conversation and determined the most convenient interview modality: web conferencing, telephone call, or face-to-face meeting. I also asked the participants to share the recruitment flyer with other institution leaders who meet the inclusion criteria. Within 24 hours after the initial telephone conference, I summarized the conversation, including the decisions and agreements, and shared it with the participant in an email. In the email, I also shared the interview consent form for the participant to read before the interview.

Participation and Data Collection

After I finalized the interview date, time, and modality with each participant and shared the interview consent form via email, I conducted the interview. I used Zoom® as the interview medium. Gray et al. (2020) and Oliffe et al. (2021) outlined that Zoom® provides much flexibility and convenience for qualitative research participants. Using Zoom® also facilitated the interview recording and, by extension, the development of the interview transcripts (Gray et al., 2020), which facilitated data analysis. When using Zoom®, I did not ask participants to turn their cameras on, as I only retained voice recordings for data analysis.

As indicated in a previous section, I organized the data collection activity into three main segments: introductions and orientation, the interview, and the close-out. Organizing the activity this way helped me conduct the interviews confidently and maximize the time spent with the participants. In the introduction and orientation segment, I welcomed the participants and thanked them for agreeing to meet with me. I also established some common ground by briefly commenting on local and topical issues and asked permission to audio record the meeting for review and transcription purposes. In keeping with the guidance provided by Ravitch and Carl (2019), I also shared the research purpose, the reason for collecting data, and a brief context for the interview with each participant. In this segment, I also affirmed informed consent by asking participants to confirm that they had read the interview consent form and were willing to participate in the study.

In the introduction and orientation segment, I also reviewed the inclusion criteria for each participant to mitigate imposters and the ethical protection mechanisms included in the study. I also shared information about the format and length of the interview and indicated that they could stop the interview at any time. I also reviewed the strategies I used to maintain the confidentiality of the information they provided, including the steps taken to store and secure their data (Ravitch & Carl, 2019). This segment of the interview lasted approximately 12 minutes.

After the introduction and orientation segment, I initiated segment two: the interview. Using the model presented by Castillo-Montoya (2016) as a guide, I asked the questions as they appeared in my interview protocol. According to Castillo-Montoya (2016), qualitative interviews consist of four types of questions: introductory, transition, key, and closing. I asked introductory questions to elicit general information from my participants, such as the length of time the institution offered OBL courses. I then asked transition questions to prepare each participant to answer the key questions most closely aligned with the research questions. After asking transition and key questions, I asked one closing question relating to their perception of the readiness of facilitating conditions in their institution to support OBL. According to Castillo-Montoya (2016), closing questions prepare the participant for the end of the interview activity. While asking the interview questions, I took limited notes to capture significant points made by the participant and to note any point that needed follow-up. This segment lasted for approximately 45 to 50 minutes.

After I asked all the interview questions, I debriefed the participant and closed the interview. In this third segment, I indicated that I had completed all my questions and asked the participants if they would like to ask any questions or share anything before the interview ended. In keeping with the guidance provided by Roberts (2020), I also allowed the participant to share insights gained during the interview. I expressed my respect for the participant’s work in OBL and appreciation for the time spent facilitating the interview. Lastly, I shared the postinterview activities and procedures with the participants and the procedures for exiting the study. I also indicated that I would later share a member checking document for them to review and confirm my interpretation of what they shared in the interview. This segment lasted approximately ten minutes, with the entire interview lasting approximately 65 to 75 minutes.

After the Interview. After my first interview, I took steps to support and verify the reliability of the data collection process. First, I made journal and field notes within 12 to 24 hours after the interview. I then manually transcribed the interview recording and checked the transcription against my field and journal notes. I also summarized my understanding and interpretation of the ideas shared in the transcript and used the summary to formulate a member checking document. According to Motulsky (2021), researchers use member checking documents to solicit feedback from research participants about the researcher’s interpretation of the ideas shared in the interview. As I collected data, I shared member-checking documents via email with each participant to verify the collected data (see Shenton, 2004). Birt et al. (2016) also recommended member checking to minimize bias and facilitate credibility and rigor in the qualitative process.

Before conducting my second interview, I sent my first recording, transcript, and member checking document to my dissertation committee. This practice ensured that I got objective feedback on the quality of my interview, transcript, and member checking document before collecting further data. According to Burrington et al. (2020) and Janesick (2021), periodically consulting the dissertation committee is an important quality assurance mechanism in the novice researcher's data collection process, as it allows for corrective action where necessary. After my dissertation committee indicated satisfaction with the quality of my transcription and member-checking document, I proceeded with my data collection activity by executing the other interviews. I also sent the finalized member-checking document to my first participant.

Once I resumed interviewing participants, I sent each participant a member checking document within seven to ten calendar days after each interview. I then asked participants to provide feedback on the member checking document within three to five calendar days after receipt. I also called each participant within 24 hours of sending the member checking document to confirm receipt, and I followed up on day three with an email reminder that feedback was due. If the participant did not return feedback by day five, I called them to confirm they still intend to provide feedback and finalize an agreed date and time for when to expect the feedback. If the participant did not provide feedback by the agreed date and time or within ten days of receiving the member-checking document, I assumed they were comfortable with its contents.

When a participant confirmed the accuracy of the member checking document or the ten days allotted for feedback elapsed without a response, I sent an electronic card to the participant thanking them for participating in the interview and signaling their exit from the study. I emailed the card along with a link to the *Institutional Blended Learning Adoption Checklist* (see Figure 3) developed by Graham et al. (2013).

Data Analysis Plan

Merriam and Tisdell (2016) note that scholars sometimes label the elements of qualitative data analysis with interchangeable and contradictory terms. Notwithstanding, I chose to define my elements using Saldaña’s (2016) description of data units, namely codes, categories, and themes. These elements are in keeping with the aspects of qualitative data analysis identified by Merriam and Tisdell (2016) and Asgarova et al. (2021). As I used the basic qualitative inquiry, a descriptive-interpretive approach to qualitative research, I utilized the theoretical analysis approach to data analysis (Kostere & Kostere, 2021). This approach allowed for data analysis against predetermined or *a priori* structural codes derived from my conceptual framework and inductive analysis that facilitated the emergence of categories and themes.

I began the data analysis by uploading my first transcript into MAXQDA, the qualitative data analysis software I used. I followed Chenail’s (2012) and Kostere and Kostere's (2021) recommendations about initial coding by reading the transcription line-by-line within the software and identifying and highlighting meaning units within the data for later analysis. I coded each meaning unit to reduce the data using descriptive and in vivo coding approaches. I selected this immersive data reduction approach as it took me closest to the data to be analyzed (Bolden, 2015; Williams & Moser, 2019). Also, reducing the sentences and paragraphs to codes was in keeping with Saldaña's (2016) definition of coding and Hsieh and Shannon's (2005) direct content analysis approach, or what Forman and Damschroder (2007) described as qualitative content analysis. I repeated these steps each time I collected data from a participant.

While coding my first transcript in MAXQDA, I created a memo for each code I identified. Each code memo included a description of the code it represented, a brief example for reference, or inclusion or exclusion criteria where necessary (see Saldaña, 2016). Creating code memos allowed me to generate a comprehensive codebook (master code list) later in the data analysis process (Ravitch & Carl, 2019) and develop a final code list that I included in the appendix section of the study (see Appendix D). Saldaña (2016) recommended keeping a codebook, describing it as an analytic tool that researchers use to organize codes into categories and themes.

When I completed coding my first transcript, I shared my coded transcript and codebook with my dissertation committee for review and feedback. Soliciting feedback from my dissertation committee at this stage is in keeping with Burrington et al. (2020) and Janesick's (2021) recommendations. They highlighted the vital role committee members play in guiding the scholar-practitioner and helping to ensure the study is trustworthy.

I coded my other interview transcriptions after my dissertation committee endorsed my first coded transcript and draft codebook. Additionally, I intermittently sent other coded transcripts and updated versions of my code book to my dissertation committee. I made these submissions to ensure my dissertation committee could monitor my progress in the data analysis phase of the study as I went through several rounds of coding, collapsing codes, and organizing codes into categories and themes.

Once I coded all the data collected from my other participants, I sorted and grouped the codes I generated into categories and subcategories of data (see Onwuegbuzie et al., 2016; Saldaña, 2016; Williams & Moser, 2019). Merriam and Tisdell (2016) outline that researchers generate categories by interpreting and reflecting on the meaning units represented in codes. I used the dimensions of institutional readiness explored in my conceptual framework to create structural codes and subcodes and then align each *in* vivo and descriptive code generated with these *a priori* or structural codes and categories. I then used Saldaña's (2016) focused and axial coding processes to analyze the data further. I also created new categories and subcategories for codes not aligned with any *a priori* codes and categories and recorded those new categories in my researcher's memo.

Once I created categories and assigned codes to them, I used comparison and pattern analysis to align categories with themes derived from my analysis (see Bazeley, 2009). I also analyzed relevant data from my researcher memos to help determine what new categories and themes would emerge from the data (Basit, 2003; Rodik & Primorac, 2015). I then analyzed the themes to assess their relevance to the interview and research questions and draw relevant conclusions. I then tested or verified the findings by returning to the data to find evidence supporting or refuting the conclusions (see Forman & Damschroder, 2007). Table 3 provides a sample of how I organized the data to delineate the codes, categories, and themes derived from the data.

Table 3

Sample Chart Showing Data Organized into Codes Categories and Themes

Phase 2: First Cycle Coding		Phase 3: Second Cycle Coding	Phase 4: Theming
Structural Codes	Descriptive and In Vivo Codes with Frequency	Categories	Theme/s
Institutional Definition of OBL (IQ#4)	• OBL as providing access (6) • OBL defined as flexible learning (7)	OBL as making training accessible	Institution Leaders in Vocational Institutions in Jamaica Described Institutional Strategy for OBL as Focused on Training
	• OBL as a mixture of face-to-face and online (4) • OBL is the use of software (4)	OBL as incorporating technology	
Description of OBL implementation strategy utilized (IQ#7)	• Creating and delivering instruction/training (7) • Monitoring training quality (7) • Provide key stakeholders with readiness training (4) • Providing ongoing support (3)	OBL implementation focused on training delivery	

I also examined the data for outliers and discrepant cases in keeping with the best practices highlighted by Merriam and Tisdell (2016) and Patton (2015). Patton (2015) posited that there are no prescribed ways of finding discrepant cases. Still, researchers are responsible for searching for them because of their impact on the researcher’s understanding of a phenomenon (Patton, 2015). As such, I looked for possible outliers and discrepant cases at every stage of the data analysis process and documented and reported on them where necessary (Merriam & Tisdell, 2016).

Issues of Trustworthiness

To ensure that the results of my study were believable, especially among the intended target audience of vocational education leaders, I chose to use the qualitative research evaluative criteria of trustworthiness and authenticity, made popular by Lincoln and Guba (1986). I selected this evaluation framework because it is an output-oriented approach (Patton, 2015), grounded in the constructivist-interpretivist perspectives that undergird my research approach (Schwandt et al., 2007). Also, its grounding in constructivism aligns with the methods faculty predominantly use in vocational education and OBL (Chen & Ling, 2021; Fatimah, 2020). The approach also facilitated additional layers of alignment, allowing me to use several techniques to achieve trustworthiness in the study.

Credibility

Credibility refers to how well the data, their interpretation, and the resulting findings reflect the reality or truth as described by the participants in the study (Merriam & Tisdell, 2016; Patton, 2015). I used the manual verbatim approach to transcribe the interviews to achieve credibility in this study. The manual verbatim approach ensured that I captured the thoughts and ideas expressed by the participants in the way they expressed them (Patton, 2015). The manual transcription approach also helped me get as close as possible to the data and, by extension, helped me identify when I arrived at saturation (Merriam & Tisdell, 2016). I also shared member checking documents with the participants to facilitate the checking and verification of the data. Participants reviewed and confirmed that the views expressed in the member checking documents accurately captured their thoughts and ideas (Shenton, 2004; Yin, 2015). As credibility is considered one of the most important aspects of Lincoln and Guba's (1986) trustworthiness framework, I also bolstered credibility by ensuring that I documented my assumptions and biases in a journal as a way of managing reflexivity and positionality (Barrett et al., 2020; Etherington, 2004; Merriam & Tisdell, 2016).

Transferability

Transferability refers to the extent to which the contents of a qualitative study can be applied in broader contexts while simultaneously maintaining its value in its bounded context (Ravitch & Carl, 2019). I addressed this aspect of trustworthiness in two ways. I used detailed and rich descriptions of the research context to appropriately contextualize the study and help readers compare their situations to it meaningfully. (Amankwaa, 2016; Lincoln & Guba, 1986). I also provided detailed descriptions of the data I collected and my research process, including the steps used in data collection and analysis (Ravitch & Carl, 2019).

Dependability

Dependability addresses whether or not the study is traceable or replicable, whether the findings align with the data collected, and whether the process used to analyze the data is reliable (see Merriam & Tisdell, 2016; Patton, 2015). In this study, I solicited feedback from expert reviewers about the questions in my interview protocol before utilizing the protocol. I also pretested the interview protocol and made journal entries or field notes about its strengths and weaknesses while noting steps to improve it. Merriam and Tisdell (2016) suggested these as promising strategies to ensure dependability. Ravitch and Carl (2019) also indicated that a robust research design addresses dependability. Therefore, I used the resources available through the Walden Center for Research Quality and notes taken during my residency experiences at Walden to ensure that the research design was of the highest quality and correctly aligned with my research question.

I also used available guidelines and checklists to facilitate traceability and reliability in this study. Lincoln and Guba (1986) suggested using an audit trail as the primary strategy for addressing dependability. However, Carcary (2020) suggested that researchers do not extensively use a comprehensive audit trail in qualitative research, and novice researchers do not get much guidance on how to use it. As such, I used the Walden qualitative dissertation checklist as a substitute for the physical and intellectual audit trail (see Carcary, 2020). Using the checklist enabled me to provide my dissertation readers with detailed descriptions of the process I used to arrive at my research findings. I also used the codebook to create activity reports generated from MAXQDA® as a means of documenting my data analysis process. Lastly, to facilitate dependability, I relied on feedback from my dissertation committee to help me establish and maintain an effective research design and process. For example, I shared audio recordings and transcripts with my dissertation committee so they could determine if I managed my coding activities well.

Confirmability

Confirmability generally concerns neutrality and freedom from researcher bias (Patton, 2015; Ravitch & Carl, 2019). To manage bias, I focussed on positionality and reflexivity by using a reflexivity journal to capture my field and journal notes (Lincoln & Guba, 1986). I also created memos and notes in MAXQDA® as I organized and analyzed data and used member checking to ensure that transcriptions captured the thoughts and ideas of participants (Burkholder et al., 2016). Additionally, I provided the reader with a detailed description of the methodology (see Shenton, 2004), and I used the Walden dissertation checklist to help me do this.

Ethical Procedures

While the interview is an effective form of data collection in qualitative research, it can, by nature, be intrusive and create vulnerabilities for both the researcher and the participant (Merriam & Tisdell, 2016; Patton, 2015). As such, Patton (2015) described the interview as an intervention that can both create internal upheavals and facilitate internal healing for the participant. To ensure that I eliminated or mitigated the possibility of harm to my research participants, I employed the ethical framework suggested in Patton's (2015) ethical issues checklist to guide my consideration and implementation of ethical procedures. This framework addressed approval, informed consent, confidentiality, data access and management, and reciprocity. I also used the framework as part of the strategy to ensure the trustworthiness of this study (Merriam & Tisdell, 2016).

Consent and Reciprocity

I obtained approval from the Walden IRB (IRB # 05-16-24-0617168) and a *Partner Organization Agreement* from the managing director of the statutory agency that employs the vocational leaders who participated in this study. Although participation in this study was voluntary, I asked each participant to indicate *informed consent* at the start of each interview. Once I completed each interview and allowed the participant to review and confirm the accuracy of the relevant member checking documents, I sent an electronic greeting card to the participant as a show of appreciation. I also attached to the card an electronic copy of the *Institutional Blended Learning Adoption Checklist* developed by Graham et al. (2013), which they could use to support further implementation of OBL at the institutional level.

Data Confidentiality, Access, and Management

In keeping with my training in protecting human research participants, I used various strategies to ensure the data's confidentiality, access, and security. Before the data collection activity, I explained these strategies to each participant. These strategies included removing details from the transcriptions that could identify the participants, their locations, and their specific institutions (Patton, 2015; Sanjari et al., 2014). I assigned each interviewee a unique identifier consisting of a letter and a number, which I used to identify and refer to them during and after the data collection exercise. I also provided each participant with a member checking document so they could confirm the accuracy of their transcribed data. I stored all data collected electronically in a password-protected and encrypted portable USB drive. Apart from me, only the members of my dissertation committee had access to the data during the dissertation process. Once the dissertation is completed and approved, the collected data will remain on the encrypted portable USB drive and stored away in my home office vault for a period not exceeding five years. After five years, I will permanently delete the data by taking appropriate steps to destroy the USB drive.

Summary

In exploring the perceptions of vocational education leaders about institutional readiness for OBL adoption and implementation, I employed a rigorous data collection and analysis process. I utilized a basic qualitative inquiry to answer the research question, with the data collection method being semistructured interviews. I used homogeneous sampling to select principals, institutional managers, vice principals, and deputy managers from TVET institutions across Jamaica. I used the BLAF developed by Graham et al. (2013) to inform the development of my interview protocol. I also used the theoretical analysis approach to analyze the data collected against *a priori* codes derived from my conceptual framework (Kostere & Kostere, 2021). I also used inductive analysis to facilitate the emergence of categories and themes. I used various strategies to ensure this study's believable results based on qualitative research evaluative criteria of trustworthiness and authenticity (Lincoln & Guba, 1986). I mitigated ethical risks by using positionality and reflexivity strategies, applying reciprocity and informed consent principles, and managing the confidentiality, access, and security of the data collected.

Chapter 4: Results

This basic qualitative study explored how institutional leaders in Jamaican vocational education institutions describe the phenomenon of institutional readiness for OBL adoption and implementation. To accomplish this, I interviewed leaders in Jamaican vocational education institutions about their perceptions of institutional readiness for OBL (see Badiozaman, 2021; Cottrell et al., 1990). I constructed meaning from their perceptions using thematic analysis undergirded by a conceptual framework based on the UTAUT (Venkatesh et al., 2003) and the blended learning adoption framework (Graham et al., 2013). I used the following research question and subquestions to guide the study:

RQ1: How do leaders in vocational education institutions in Jamaica describe institutional readiness for OBL adoption and implementation?

*RQ*1a: How do leaders in vocational education institutions in Jamaica describe institutional strategy for OBL adoption and implementation?

RQ1b: How do leaders in vocational education institutions in Jamaica describe institutional structure for OBL adoption and implementation?

RQ1c: How do leaders in vocational education institutions in Jamaica describe institutional support for OBL adoption and implementation?

In this chapter, I describe the setting of my study and explain the participants' demographics and characteristics. I also report on the data collection and data analysis processes utilized in the research and describe the strategies used to establish trustworthiness. Finally, I explore the outcomes of the data analysis process by explaining the study results.

Pilot Study

Before receiving approval to collect data, I pilot-tested the interview protocol with three institution leaders from my e-learning professionals’ network. I invited these individuals to participate in the pilot test because they were leaders in a Jamaican postsecondary and tertiary-level educational institution offering OBL programs. I also asked them to participate in the pilot test because, given their training and experience in OBL and institutional leadership, I anticipated they would be able to respond authentically to most or all of the questions in my revised interview protocol. Notwithstanding their training and experience, I ensured that the participants I invited for the pilot test were not leaders in institutions owned, operated, or funded by the HEART NSTA Trust.

I conducted each interview in the pilot test using the Zoom web-conferencing software, which made it convenient for my participants. After each of the first two interviews, I made minor modifications to selected questions in the interview protocol to ensure that I had each question adequately aligned to its respective element in my conceptual framework and that participants understood what each question was asking of them. I also manually transcribed the interview recordings and uploaded both recordings and transcriptions into MAXQDA. In MAXQDA, I checked each transcript against the recording to ensure there were no errors and coded each transcript in the software using a combination of descriptive and in vivo coding. I also practiced aligning my first cycle codes to a priori categories derived from my conceptual framework.

I derived four main benefits from conducting the pilot test. Firstly, conducting the pilot test helped me to refine my interview questions further to ensure they would solicit responses that helped me respond to my research question and subquestions. Secondly, conducting the pilot test enabled me to practice my interview and transcription skills. Thirdly, the pilot test experience helped me determine the average duration of the interview experience. This information proved helpful when I was finalizing the participant recruitment flyer. Finally, conducting the pilot test enabled me to practice my coding skills and to get more oriented with the data analysis software.

Setting

I conducted the study among Jamaican vocational education leaders serving in training institutions owned, operated, or funded by the HEART NSTA Trust. I recruited participants through the HEART NSTA Trust, as the organization agreed to act as my partner organization in the data collection process. I interviewed participants using Zoom® on dates and times most convenient to them. The interviews lasted approximately 45–65 minutes each, and I conducted the interviews from June 12, 2024, to October 1, 2024.

Shortly after I began data collection, Jamaica suffered the effects of Hurricane Beryl on July 3, 2024, which approached the island at Category 4 hurricane strength. The result was a massive power and telecommunications supply disruption for most Jamaicans, spanning as long as eight weeks. This occurrence impacted my study negatively, as many persons in my population were either without power or internet connectivity for a protracted period. Additionally, potential participants who retained power and connectivity or had them restored shortly after the hurricane also had to manage post-hurricane cleanup and repairs at their training institutions. As such, they had less time to participate in the study. The weeks immediately following Hurricane Beryl were also characterized by numerous power outages and unstable internet connectivity for those sections of the island with power. Two participants, for example, had to complete their interviews in two sessions due to power outage interruptions. The impact of the hurricane on normal operations across the island significantly lengthened the time I took to collect the data, as potential and committed participants were largely unavailable in the weeks immediately following the hurricane's passage.

Demographics

The characteristics of my research participants helped me achieve a homogeneous population sample. Twelve vocational education institution leaders participated in my research study, and at the time I conducted the interviews, each participant met the eligibility criteria. I invited participants from the six geographic and administrative regions established by the HEART NSTA Trust. Each region included several vocational institutions spread across geographical divisions known in Jamaica as parishes. Participants in the study represented all regions except Region Two, with 50% of participants serving in institutions located in urban or metropolitan areas. Among the sample, three participants were male, and the remaining nine were female. Participants in the study served in institutions that offered OBL programs or courses for between four and seven years. Two-thirds of the participants served in institutions owned and operated by the HEART NSTA Trust, with the remaining four participants serving in institutions owned by other entities but partly funded by the HEART NSTA Trust. Among the individuals leading institutions funded by the Trust, one participant was a leader in a vocational education institution serving students with cognitive and other disabilities.

I did not share all the demographic information collected during the study because the population was small, and I wanted to ensure no participant was inadvertently identified (see Connelly, 2013). I outline in Table 4 the pertinent demographic information collected in this study.

Table 4

Demographics of Participants

	Gender		Location of institution			Status with HEART	
Alias	Male	Female	Urban or metropolitan	Rural	Years in OBL	Owned and operated	Funded
P1	x		x		7	x	
P2		X	x		4		x
P3		X	x		>4	x	
P4		X		x	5	x	
P5		X		x	>4	x	
P6		X		x	>4	x	
P7		X		x	6	x	
P8	x			x	>4	x	
P9		X	x		4		x
P10		X	x		--[a]		x
P11	x			x	4	x	
P12		X	x		>4		x
Total	3	9	6	6		8	4

Note. This table outlines the relevant demographic information about each participant in the study. [a] P10 could not indicate when the institution started to offer OBL courses or programs.

Data Collection

I received IRB approval on May 16, 2024 (IRB # 05-16-24-0617168) and began data collection soon afterward. For this basic qualitative study, I collected data from one source: participant interviews. While I had indications of interest from 15 vocational education institutional leaders, because of competing schedules and the impact of Hurricane Beryl on school operations, only 12 institution leaders could participate.

Interviews

Interviews commenced on June 21, 2024, and concluded on October 1, 2024. I conducted interviews via Zoom® from my home office, with participants accessing the Zoom® room from physical locations of their choice and convenience. I also used Zoom® to capture the audio recording of each interview, and there was no deviation from the data collection plan outlined in Chapter 3.

After I conducted the first interview, I transcribed the data, created a transcript summary, and submitted all files to my dissertation committee for review. Once I received feedback and endorsement from my dissertation committee, I scheduled and conducted the other interviews. Between July 22 and October 1, I conducted one interview per week, on average, each lasting 45 to 65 minutes. After each interview, I made journal notes about the interview experience, my reflections on specific points made by the participants, and any biases or assumptions I identified in my thinking about the interview. I recorded these in my reflexivity journal, which I kept physically. Reflecting on my journal entries, I observed that the entries became longer as I conducted more interviews. I also noticed that interviews conducted during the workday were shorter than those conducted after the participants' workday had ended. I attributed this difference in interview duration to the participants being more relaxed and less distracted at the end of the workday. Table 5 provides excerpts from my reflexivity journal and demonstrates the development of my post-interview reflections over time.

Member Checking

After conducting each interview, I summarized the transcript for member-checking purposes, highlighting the significant points and direct responses to each interview question. I then emailed the member-checking document to the participant for them to review and confirm that it was a true reflection of the essence of their responses. Participants had a maximum of 10 days to respond to the member checking request, after which I sent them a “thank you” card and a copy of the Blended Learning Adoption Checklist developed by Graham et al. (2013). Only four participants responded to the member checking request, although no participant objected during the interview.

Table 5

Excerpts from Reflexive Journal

Participant	Excerpts
1	I think my first interview went very well. It was managed well, the questions yielded good answers, and my respondent had a reflection opportunity. If there's one thing I would change is my giggling or laughing in response to a few of the participant's answers. Listening to it on the recording I felt it was a bit disrespectful.
2	Participant 2 manages an institution that offers vocational programs to persons with various types of disabilities. The issues raised by Participant 2 relating to the use and misuse of technology by the disabled are issues I had not considered before. During the interview, I kept thinking that this is an area that needs more research, that is, the implementation of OBL in institutions for the disabled. One of the other issues that stood out for me is the extent to which independent institutions who are funded by the umbrella organization benefit from strategies, structure, and support mechanisms existing in the umbrella organization. It appears that institutions owned and operated by the umbrella organization are at a greater institutional readiness advantage than those institutions just funded by the organization.
3	The frustration that came in that moment was overwhelming. I had struggled to finalize this interview date and time and one appointment was already missed by the participant. So when during the squall I was asked to stop and resume a few days later I was devastated. At that moment I felt as though this was the worst news I could ever hear. Upon reflection, I realized that when Participant 3 requested the adjournment, for a brief moment I was unwilling to entertain it I wanted to say "no we will not stop" and I almost did. How do I manage these feelings that the elements are fighting my research efforts? How do I ensure that these internal frustrations never spill out in front of my participants? This I think needs a little more investigation.
6	The response to the final question about the adequacy of facilitating conditions to support OBL amused me. They described the question as "political". That was funny and I wondered if I laughed a little too much when they said it. The other thing that surprised me was the response itself. Based on all they told me was in place up to that point I anticipated them saying the institution was ready. Instead, they said they were not ready to offer more skill-based programs via OBL. They even suggested there was doubt they were ever going to be ready and justified the sentiment with the suggestion that OBL is not for training programs focusing on hard vocational skills.
7	One thing that struck me about this interview was the sense I got that COVID forced them into full implementation of OBL. While the sentiment was not surprising, expected even, something about how the participant described OBL implementation before and after COVID-19 gave me that feeling of "gazelle intensity". Hmmm…That's a new word for me in this context: "feeling". That is something to explore: the emotional impact of participant responses on the qualitative researcher. I wonder if there's a study on that?

Note. This table provides excerpts from the reflection at the end of selected interviews.

Data Analysis

I used the principles and procedures for qualitative data analysis recommended by Saldaña (2016) to analyze the data in my study. I adopted Saldaña's (2016) approaches because they were easy to understand, practical, and provided clear guidance on how to move analysis from initial coding to developing themes. The data analysis process I used included four significant phases: preparing the data, first-cycle coding, second-cycle coding, and theming the data. In this section, I briefly outline that process.

I transcribed the data and prepared member-checking documents in the first phase of data analysis. After each interview, I transcribed the Zoom® audio recordings verbatim to stay close to the participants' words and ensure I captured every thought they expressed. I anonymized each transcript by replacing participants' names with aliases like P1 or P2. Then, I created interview summaries in tabular format, which I emailed to participants for member checking.

In the second phase, I began the first cycle of coding. I used MAXQDA to create structural codes and subcodes aligned with my interview protocol, which helped me organize the data and prepare for analytical coding. As I coded each transcript line by line, I applied descriptive and in vivo coding to identify meaningful data excerpts, aligning each code with the relevant structural code. I also created additional structural codes for unique or emotional responses. This phase resulted in about 400 codes and over 1,000 coded interview segments.

I began second-cycle coding in the third phase of data analysis. I reviewed all the codes I created, organizing and analyzing them by interview questions to better manage the volume of data. Using the tools and features of MAXQDA, I grouped similar codes into categories and subcategories, collapsed redundant codes, and visualized patterns. I repeatedly used focused and axial coding to refine my data set, reducing the number of codes and developing categories.

In the fourth phase, I themed the data. I returned to my refined codes, categories, and the relationships I identified to create themes that directly addressed my research question and subquestions. I examined patterns, frequencies, and meaningful phrases to construct themes that reflected the essence of what the data revealed. Appendix F provides detailed descriptions of the phases of data analysis, as well as figures and tables that provide examples of the outcomes of each phase.

To aid in the various coding phases, I used MAXQDA to help me organize and analyze the data (see Engdawork et al., 2024). I also developed a codebook to help me refine my codes and better understand the relationships between and among the data sets as I moved through each coding cycle (see DeCuir-Gunby et al., 2011).

At the end of the data analysis, I arrived at 54 codes organized into 19 categories. These categories resulted in seven themes. Table 6 summarizes the final themes and categories derived from the data analysis process. Appendix G lists all the codes, categories, and themes derived from the data set.

Table 6

Summary of Themes from Data Analysis

Theme	Categories grouped with the theme
1. Institution leaders in vocational institutions in Jamaica described institutional strategy for OBL as focused on training.	OBL as making training accessible OBL as incorporating technology OBL implementation focused on training delivery
2. Institution leaders in vocational institutions in Jamaica described institutional strategy for OBL as prioritizing stakeholder buy-in.	Multi-faceted approach to communicating OBL vision and purpose Deliberate OBL buy-in strategies employed Key internal stakeholders champion OBL
3. Institution leaders in vocational institutions in Jamaica described institutional strategy for OBL as not prioritizing policy and governance.	OBL definition non-existent or inaccessible OBL not clearly reflected in mission and vision statements Mixed views about OBL policy and its adequacy
4. Institution leaders in vocational institutions in Jamaica described institutional structure for OBL as adequate, multifaceted, and requiring improvement.	OBL resources available but more needed Organizational structure to support OBL in most institutions Varied and holistic processes in place Mix of QA strategies not specific to OBL
5. Institution leaders in vocational institutions in Jamaica described institutional support as varied with specific OBL incentives non-existent.	Three types of OBL user support Support staff somewhat prepared No incentive for OBL
6. Institution leaders in vocational institutions in Jamaica described institutional readiness for OBL as the readiness of people and resources.	IR as people readiness Readiness of Resources and Systems
7. Institution leaders in vocational institutions in Jamaica described facilitating conditions as inadequate.	OBL facilitating conditions generally inadequate

Outliers and Discrepant Cases

My data analysis yielded no discrepant cases, but a few participants (P9, P10, & P11) shared responses to specific interview questions that could be considered outliers. While the data collected in those instances did not help me to determine the factors that influenced the differences in the responses, it is important to note that both P9 and P10 were leaders in institutions that the HEART NSTA Trust funded, while P11 led a HEART-owned institution. Notwithstanding, I identified and analyzed the outliers related to the research question and subquestions to add depth and rigor to my analysis. I discuss outliers and their implications for my study in the results section of this chapter.

Evidence of Trustworthiness

To ensure my study met the requirements for trustworthiness, I employed several strategies to assure credibility, transferability, dependability, and confirmability (see Lincoln & Guba, 1986). As outlined in Chapter 3, my output-driven strategies facilitated the constructivist-interpretivist perspectives that undergirded my research approach (Schwandt et al., 2007). As such, I also grounded the strategies I used in the principles of the creation of knowledge through collaboration, alignment of practice to principles and established procedures, the use of rich and thick descriptions, and the commitment to reflection and reflexivity.

Credibility

I established credibility by ensuring that the data collected, interpreted, and reported represented the reality or truth as represented by my research participants (see Merriam & Tisdell, 2016; Patton, 2015). After each interview, I used the manual-verbatim approach to transcribe the data, ensuring I captured the thoughts and ideas as the participants expressed them. I then summarized the answers to each interview question and shared the summaries with the relevant participants in a member-checking document (see sample in Appendix F, Figure F17).

I allowed participants to review the member-checking document and confirm the summaries' accuracy. I also shared a sample of my member checking documents with my Dissertation Committee early in the data collection process so they could provide feedback and guidance if necessary. To manage my assumptions and biases, I kept a reflexivity journal and made entries after every interview (see Table 5).

Transferability

I utilized three main strategies to ensure that the contents of my study can be applied in broader contexts while maintaining its value in its specific and bounded context (see Ravitch & Carl, 2019). Firstly, I utilized a purposive sampling approach to select my research participants. Using purposive sampling helped me collect rich and thick responses strongly aligned with my research focus and clearly defined my study's applicability boundaries (see Lincoln & Guba, 1986; Saldaña, 2016).

Secondly, I described the research setting and participant demographics in rich detail. Sharing the details ensured that despite using a homogenous sample, I clearly outlined the nuances and dimensions of the research context, enabling readers to compare their situations with it and assess the extent to which the findings may apply to their context. (see Amankwaa, 2016; Lincoln & Guba, 1986). I also provided detailed descriptions of my data collection and analysis processes (see Ravitch & Carl, 2019), including, where possible, tables and figures to demonstrate how I moved through the various stages of the data analysis process.

Thirdly, I used comparative analysis in the data analysis phases of my study to facilitate transferability. I used *a priori* codes, categories, and concepts derived from my conceptual framework to analyze and interpret the data. Doing this makes it easier for my readers to assess the relevance of my findings to other and similar situations (see Miles & Huberman, 1994; Saldaña, 2016).

Dependability

I utilized three strategies to ensure that my study was dependable. To ensure my study was traceable and replicable, I described in detail my research process, including the methods used to select the participants and collect and analyze data. I made all my research data accessible to my Dissertation committee for review and feedback. I also utilized the Walden qualitative dissertation checklist as a substitute for an audit trail (see Carcary, 2020).

To ensure the process I used to analyze the data was reliable, I utilized an interview protocol aligned with my research design and research question (see Merriam & Tisdell, 2016). I also ensured that experts identified from my review of related literature reviewed my interview protocol. Additionally, I used the principles and procedures for qualitative data analysis outlined by Saldaña (2016), providing evidence of my process through detailed descriptions and using figures and tables.

I used detailed descriptions and excerpts from my data to demonstrate that my findings aligned with the data I collected (Shenton, 2004). I also submitted my coded transcripts and codebook to my dissertation committee for review and feedback. Finally, I utilized my reflexive journal to capture my thoughts, assumptions, and biases as they surfaced through the data collection, analysis, and reporting processes.

Confirmability

I employed three main strategies to mitigate bias and engender neutrality in my study. I maintained a reflexivity journal and created analytic memos in MAXQDA as I researched to ensure that I did not allow my opinions, assumptions, and biases to influence my findings. I used verbatim transcriptions and member checking to ensure I remained close to the participant responses and did not insert my perspectives into the data. Thirdly, I used detailed descriptions of my methodology to ensure that my process was transparent and open to scrutiny.

Results

In this section, I explore the results derived from the data analysis activities. I have organized the results by research question, starting with the three subquestions and ending with the main research question. In each instance, I explored the themes constructed from the data to answer each research question and the meaning codes and categories aligned to those themes. I also developed code trees and excerpts from participant interviews to represent and support the findings visually.

RQ1a: Description of Institutional Strategy for OBL

RQ1a focused on how leaders in Jamaica’s vocational education institutions describe the readiness of their institutional strategy for OBL adoption and implementation. To address this question, vocational leaders reflected on aspects of OBL implementation strategy at the institutional level, such as the definition of OBL in their institution, the policies to support OBL adoption and implementation, and the approaches used to implement OBL. Through qualitative data analysis, I determined that three themes answered this subquestion. These themes form the basis of the discussion that follows.

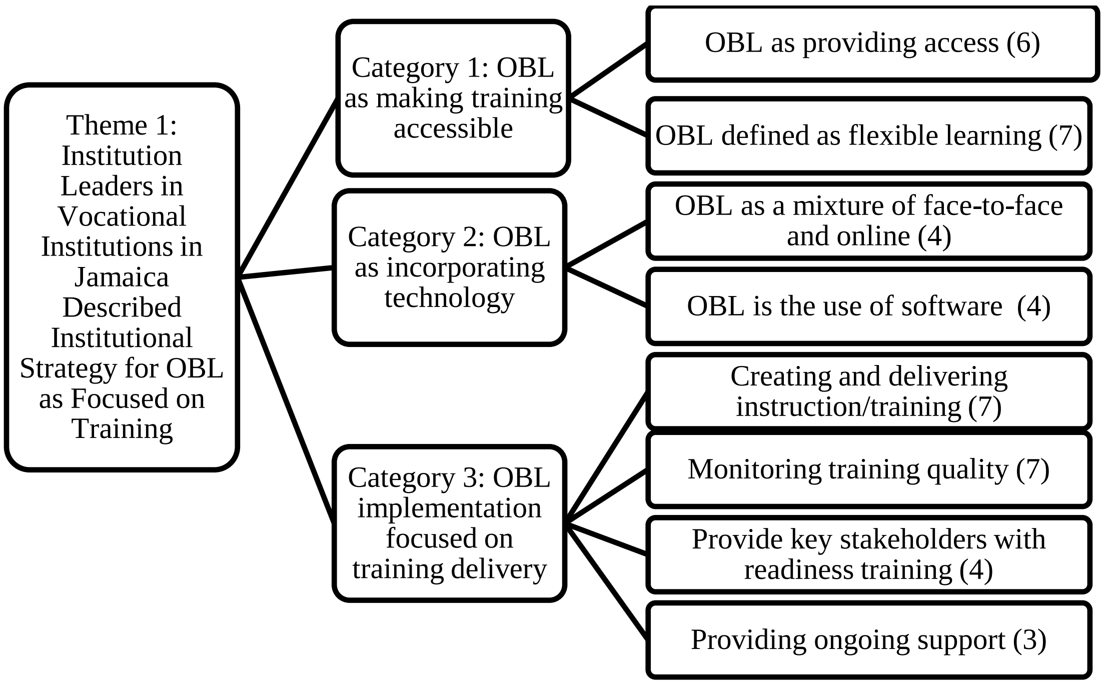
Theme 1: Institution Leaders in Vocational Institutions in Jamaica Described Institutional Strategy for OBL as Focused on Training

The first theme to answer RQ1a was that institution leaders in vocational institutions in Jamaica described institutional strategy as being focused on training. This theme was constructed by analyzing three categories and eight codes relating to how institutions defined OBL and the steps taken when implementing OBL courses and programs. Figure 7 shows the categories and codes aligned to this theme.

OBL as Making Training Accessible. The first category that contributed to this theme was OBL as making training accessible. Nine participants contributed to this category, consisting of two codes: OBL as providing access and OBL as flexibility in learning. Six participants (P4, P7, P8, P9, P11, & P12) referenced increased access to vocational training as they described the institution's definition of OBL. For example, P7, P8, and P11 spoke about reaching students by transcending physical, technological, and other educational barriers. According to P7, OBL is "a means of reaching persons wherever they are." Other participants defined OBL as convenience in learning (P9) and meeting students differentiated learning needs (P4).

Figure 7

Code Tree for Theme 1 Categories and Codes



The vocational institution leaders also defined OBL as flexible learning. Seven participants (P2, P4, P5, P6, P8, P9, & P12) commented on the opportunities for flexibility in learning provided through OBL. For example, P2 stated that flexibility was marketed as a benefit when the institution promotes its OBL courses. P5 and P12 also emphasized OBL as flexible learning by pointing out that OBL provides options for persons who prefer not to come into the physical space to access training and assessment. According to P12, "It's a tool they can use at home and to get their learning readiness for examination," and P5 supported the perspective by stating, "persons don't have to come to the campus any at all." Another aspect of flexible learning that participants commented on was remote teaching (P6 & P8), which involved the use of technology and other resources to mitigate learning disruptions.

OBL as Incorporating Technology. The second category that aligned with the theme was OBL as incorporating technology. Sixty percent of the participants included technology integration in teaching as part of their institution's definition of OBL (P1, P3, P5, P6, P8, P10, & P11). They defined OBL as a mixture of face-to-face teaching strategies and online technologies (P1, P3, P5, & P10) and suggested it was better to offer the practical components of their vocational courses face-to-face (P1, P3, & P10). P5 commented on the use of video technology in capturing students' practical activities by pointing out that "the online portion of [vocational instruction] will require [student] to submit activities or videos of them carrying out things."

Other participants defined OBL as the use of various software to facilitate learning. According to P11, OBL "is training and assessment conducted utilizing virtual platforms." P6 and P8 provided a list of software tools in their definition of OBL, including WebEx, Google Meet, Zoom, Microsoft Teams, and Moodle. P1 commented that embedded in the definition of OBL is a range of approaches, including offering courses and programs via the tools to support full online implementation.

OBL Implementation Focused on Training Delivery. The third category associated with the theme was OBL implementation focused on training delivery. Eighty-three percent of participants contributed to this category. In describing the strategy used to implement OBL in their institution, 10 of the 12 participants outlined activities relating to training delivery. Most participants described their OBL implementation strategy as creating and delivering instruction (P1, P3, P4, P9, P10, P11, & P12). Three participants spoke about developing courses or repurposing and digitizing content and assessment (P1, P3, & P11), and two highlighted the scheduling and delivery of training courses (P4 & P9). Others, like P10 and P12, described their OBL strategy by identifying their training delivery tools. When asked to describe the OBL implementation strategy used in their institution, P10 reported using Google and Zoom. P12 responded similarly by pointing out, “We use a Google Classroom, that’s what the student and the instructors use.”

Another implementation strategy that participants shared was providing key stakeholders with OBL readiness training or orientation. Participants described providing training for faculty in using the relevant OBL technologies and training them to repurpose content for online delivery (P1, P3, P4, & P7). P4 and P7 also emphasized training for academic supervisors, while P7 and P11 underscored training and orientation of trainees.

Monitoring training quality and customer service was another aspect of the OBL implementation strategy described by many participants (P1, P5, P7, P8, P10, P11, & P12). P10 and P11 reported they monitored facilitators to ensure they provided quality student training. P1 and P12 highlighted tracking students’ attendance and performance as part of the OBL implementation strategy, including marking attendance registers electronically. P7 and P10 extended their response to include the management of customer service complaints, as they indicated it was an essential aspect of their OBL implementation strategy. Additionally, a pattern of using WhatsApp as a tool to monitor the quality of OBL implementation emerged among some interviewees. P5, P8, and P11 used WhatsApp to monitor course participation and collect feedback about various aspects of OBL course implementation.

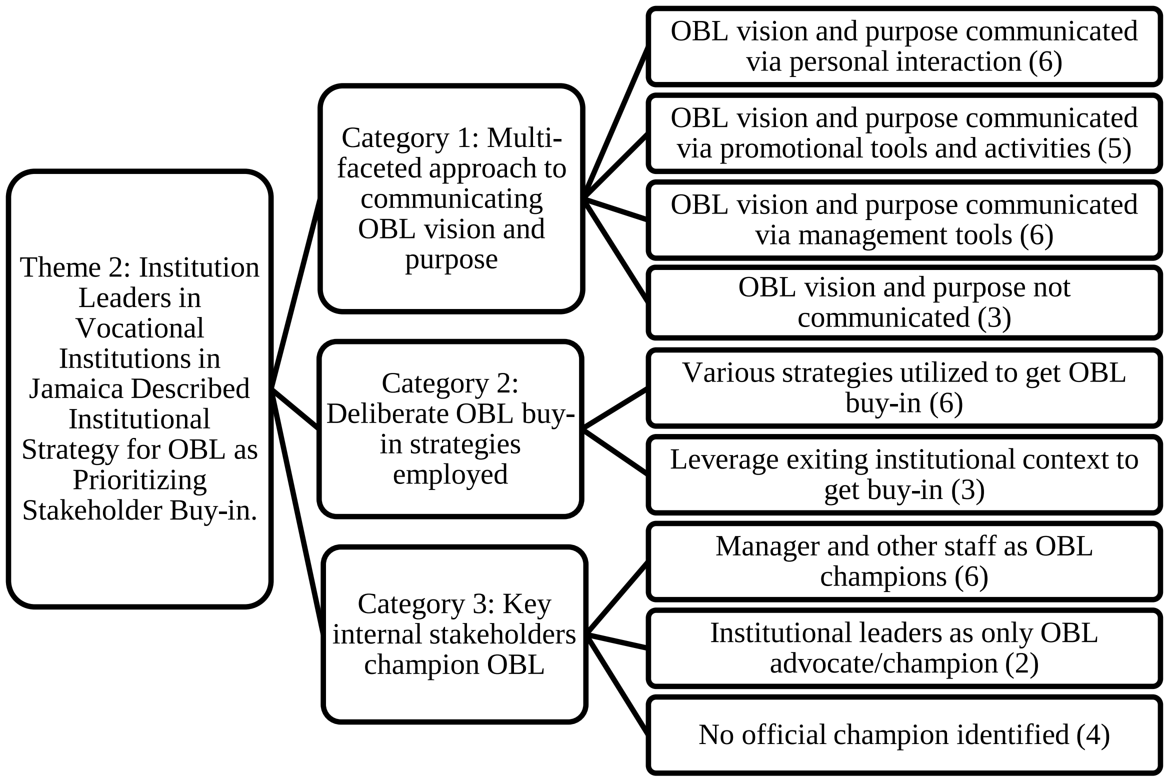
Few participants emphasized providing ongoing training support as part of the OBL implementation strategy in their institutions. P4, P5, and P7 shared that OBL implementation included ensuring staff was accessible to trainees. This accessibility included ensuring that faculty had network access and that a lab technician was in the institution (P4, P5, & P7). For these participants, OBL implementation also included ensuring that training materials were accessible to trainees and that ongoing communication support was provided to both students and staff. Overall, the definition of OBL and the OBL implementation strategy described by the participants focused on various aspects of training delivery.

Theme 2: Institution Leaders in Vocational Institutions in Jamaica Described Institutional Strategy for OBL as Prioritizing Stakeholder Buy-in.

The second theme associated with RQ1a is institution leaders in vocational institutions in Jamaica described institutional strategy for OBL as prioritizing stakeholder buy-in. As outlined in Figure 8, three categories and nine codes informed the formulation of this theme. I derived the codes from participants’ responses about how they communicated OBL’s vision and purpose, what strategies they used to garner OBL stakeholder buy-in, and who advocated or championed OBL in their institution. The discussion of those results follows.

Figure 8

Code Tree for Theme 2 Codes and Categories



Multifaceted Approach to Communicating OBL's Vision and Purpose. The first category for this theme was a multifaceted approach to communicating OBL vision and purpose, and 75% of the participants interviewed contributed to this category (P3, P4, P6, P7, P8, P9, P11, & P12). Those institution leaders shared that they employed a variety of approaches in communicating the institution's vision and purpose for OBL to customers and stakeholders. According to the participants, they communicated their institution's OBL vision and purpose through personal interactions, promotional activities, and management tools. Only a few participants indicated that their institution did not actively or clearly communicate its vision and purpose for OBL (P1, P2, & P10).

In expounding on using personal interactions as a strategy for sharing the institution's OBL vision and purpose, most participants described using meetings as the primary medium of communication (P6, P7, P8, P9, P11, & P12). For example, P7 outlined various types of meetings used to communicate their institution's OBL vision and purpose, including management, staff, and quality assurance meetings. P11 also indicated they relied on "routine meetings" to communicate the advantages of OBL implementation for the institution.

Other participants described using other forms of personal interaction to communicate their institution's OBL vision and purpose. For instance, P3, P5, and P8 explained that they used annual stakeholder consultation sessions to share the vision and purpose with wider stakeholder groups. According to P3 and P7, the vision and purpose were also shared when conducting orientation for new students (P3) and implementing recruitment drives to attract new students (P3 & P7). Lastly, P9 reported sharing the OBL vision and purpose with potential students when they walked in or called into the institution for information.

Participants also reported communicating the vision and purpose for OBL by using various management tools (P1, P3, P5, P6, P7, & P8). One such tool was a standardized vision and mission statement used across several institutions. Shortly after COVID-19 emerged, institutions "were advised that going forward, all institutions will share the same mission and vision of HEART" (P3 & P5). Participants also used emails and other forms of notifications, such as newsletters, to communicate the vision and purpose of OBL (P6 & P8). Additionally, P1 noted that the vision and purpose for OBL were communicated using policy, specifically a “training inclusion policy” (P1) implemented at the organizational level.

Participants also used promotional tools and activities to communicate their institution’s OBL vision and purpose (P1, P4, P7, P8, & P12). P4, P7, and P12 indicated that the institution shared its vision and purpose for OBL on promotional flyers to market OBL programs and courses. Participants also used announcements in the form of noticeboards, emails, and student WhatsApp groups to share their institution’s OBL vision and purpose with stakeholders (P8) and notices delivered in public settings such as at church (P12).

It is important to note that a few participants felt that the vision and purpose for OBL were either not communicated at all or not strategically developed to facilitate their clear communication (P1, P2, & P10). Both P2 and P10 indicated that the institution did not share the vision and purpose of OBL. According to P10, “I’ve never communicated the vision or purpose for the online, because as I told you, we have not done much when it comes to that section of it.” On the other hand, P1 suggested that although the institution made some efforts to communicate its OBL vision and purpose, it did not craft the message effectively.

Deliberate Buy-in Strategies Employed. Deliberate buy-in strategies employed is another category associated with Theme 2, which consists of two codes derived from the contributions of nine participants. The first code highlighted that participants employed various strategies to encourage faculty and student buy-in for OBL (P4, P5, P6, P7, P8, & P11). For example, participants reported that they emphasized the benefits of OBL adoption and implementation in gaining buy-in (P4, P5, P7, P8, & P11). One participant also indicated that they encouraged OBL buy-in by providing faculty with needed resources to implement OBL, such as strong internet bandwidth at the institution and the retrofitting of workspaces to accommodate OBL (P8). Another strategy to get student buy-in was to promote OBL programs and courses to persons more inclined or equipped to pursue vocational training via online modalities (P6).

Other participants outlined leveraging existing institutional contexts to facilitate OBL buy-in (P1, P2, & P3). For P1 and P3, the COVID-19 experience “kicked the [OBL] door open,” facilitating faculty and student engagement with OBL as it forced persons to adopt OBL. P2 indicated that OBL buy-in was greater in subject areas that were more “theoretical.” Consequently, OBL adoption in those courses was more encouraged in their institution. Lastly, P3 reported that they leveraged faculty demographics in their institution to encourage OBL buy-in, as younger faculty with greater levels of OBL acceptance replaced the cohort of retired faculty, who were more resistant to OBL.

Key Internal Stakeholders Champion OBL. The third category comprising Theme 2 was key internal stakeholders champion OBL. Eight participants in this study (67%) identified an OBL advocate or champion in their institution (P4, P5, P6, P7, P8, P9, P10, & P11). Over half of those participants indicated that OBL advocacy, promotion, and championing were shared responsibilities between the institution manager and other staff (P4, P5, P6, P7, & P8). Those other staff included personnel such as the

Program Coordinator (P7 & P8), the Head of Programs (P6), and the Admissions Officer (P5). Participant 7, for example, identified themselves and a Program Coordinator as “promoting and championing online training” in the institution. In support of this finding, only two participants identified themselves (institution leader) as the main or only OBL champion (P9 & P11), and P10 identified a HEART NSTA liaison as the OBL champion in their HEART-funded institution.

However, in contrast to the eight participants referenced above, four said no one advocated or championed OBL in their institution (P1, P2, P3, & P12). When asked to identify their institution’s OBL champion, P1 retorted, “To be honest, I can’t say there is a champion.” P3 also shared that they could not identify a champion in their institution.

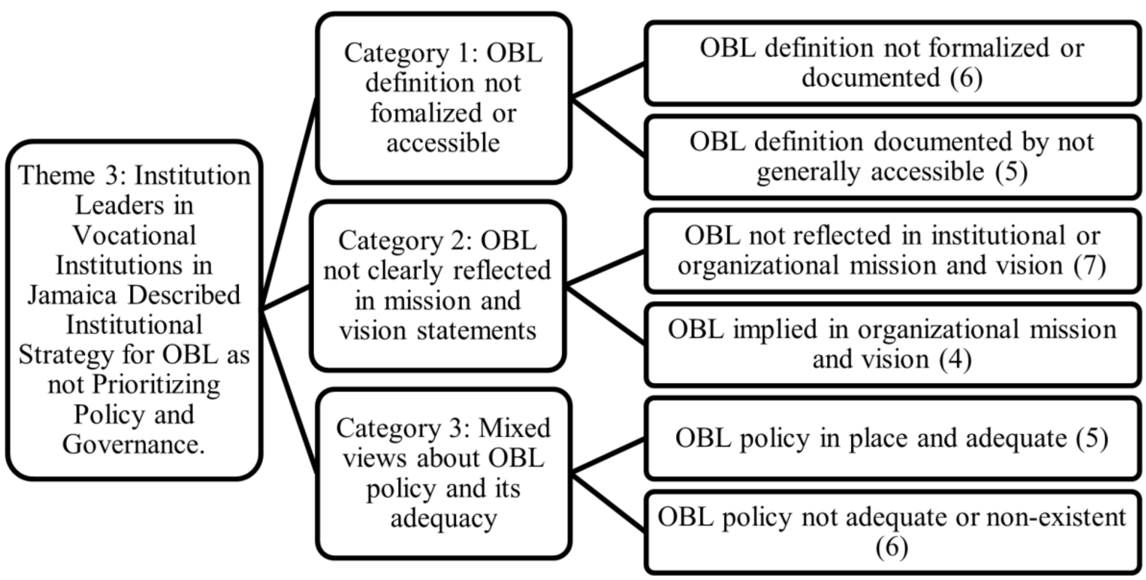
Theme 3: Institution Leaders in Vocational Institutions in Jamaica Described Institutional Strategy for OBL as Not Prioritizing Policy and Governance.

Another theme that emerged in response to RQ1a was that the institutional strategy for OBL adoption and implementation did not prioritize policy and governance. As outlined in Figure 9, three categories constituted this theme, along with six codes. The paragraphs that follow expound on the analysis of these categories and codes.

OBL Definition Not Formalized or Accessible. The first category that informed Theme 3 was OBL definition was not formalized or accessible in most institutions. The first code included in this category was OBL definition not formalized or documented (P2, P4, P7, P9, P11, & P12). When asked where persons could find the institution’s definition of OBL, P2, P4, and P9 indicated that their institution had no formal or documented definition. According to P4, “I just made that [OBL definition] up just for myself, from my understanding, so it is not that it is written anywhere." Similarly, P7 and P11 expressed uncertainty about the existence of an OBL definition at the institutional and organizational levels, highlighting that, "I don't think that it is documented, or if it is, I don't know where I would point someone [to it]" (P11). Lastly, when asked about the status of the OBL definition used in the institution, P12 indicated the definition could be found "on the internet," suggesting the definition as it appeared in internet search engines.

Figure 9

Code Tree for Theme 3 Categories and Codes



The other code that contributed to this category was OBL definition documented but not generally accessible. I formulated this code based on the responses of five participants (P1, P3, P5, P6, & P8). These participants reported that their institutions had a documented definition of OBL, but it was inaccessible to some stakeholders. P1 and P5 indicated that a definition of OBL existed at the organizational level but did not confirm its adoption at the institutional level. Other participants explained that the institution's policy and procedural manual defined OBL (P3, P6, & P8). However, they also outlined the manual was not readily available to students and other stakeholders (P6 & P8).

Interestingly, a few participants expressed uncertainty when describing where persons could find the definition of OBL in their institutions. When asked, P1 said, "I think the organization would have developed a definition." P6 responded similarly, "I think it [OBL definition] should be in our PPM [Policy and Procedural Manual]." In reflecting on the location of the institution's OBL definition, P10 said, "I think online, they would also find it."

OBL Not Clearly Reflected in Mission and Vision Statements. The second category that comprised Theme 3 was OBL not clearly reflected in mission and vision statements. Eleven participants contributed to this category. Of that number, seven participants indicated that OBL was not reflected in the mission and vision statements at the institutional and organizational levels (P2, P3, P5, P6, P8, P9, & P10). P2, P9, and P10 reported that their institution's mission and vision did not reflect OBL, with P2 and P9 outlining that their institution's mission and vision statements existed before the institution started offering OBL. P3, P5, P6, & P8 also shared the perspective that the organization's mission and vision statements did not reflect OBL.

Despite these reports, the perspectives differed among other participants. Four participants indicated that the organizational mission and vision statements included OBL, but the references to it were implied (P4, P7, P11, & P12). For example, when asked if the institution's or organization's mission and vision statements reflected OBL, P4 responded, "I don't think it is spelled out, thinking about the mission and the vision, but it incorporates it. It would have incorporated the online approach." Despite the differences in perspective, the overwhelming view of the participants was that the institutions and organization's mission and vision statements did not reflect OBL.

Mixed Views About OBL Policy and its Adequacy. The final category that contributed to this theme was mixed views about OBL policy and its adequacy, with 11 of the 12 participants contributing to this category. Participants shared differing and opposing perspectives when asked to respond to the adequacy of their institution's existing OBL policy to support implementation. Approximately 40% of participants indicated that their institution had an OBL policy in place, and it was adequate (P3, P4, P6, P7, & P12) as it guided OBL implementation and met their specific implementation needs (P4, P7, & P12). One participant (P3) also reported that the OBL policy used by the institution was adequate because the institution constantly reviewed and refined it. At the same time, another participant (P6) remarked that they had received no complaints about the policy.

In contrast, the majority of participants (50%) reported that the OBL policy utilized in their institution was not adequate or nonexistent (P1, P2, P5, P8, P9, & P10). Of this number, participants in institutions that utilized a policy felt it was inadequate because it did not provide enough specific guidance for OBL implementation (P1 & P8). Another participant indicated it did not address the needs and challenges of the institution

(P5), and P2, P9, and P10 reported that their institution's implementation of OBL was not supported or guided by any policy.

P11's response emerged as an outlier in this category as they could not respond to the question about OBL policy and its adequacy. They reported not being sufficiently familiar with the policy utilized in their institution to assess its adequacy. Accordingly, the participants were almost evenly divided in their perceptions about the existence and adequacy of an OBL policy in their institutions.

RQ1b: Description of Institutional Structure for OBL

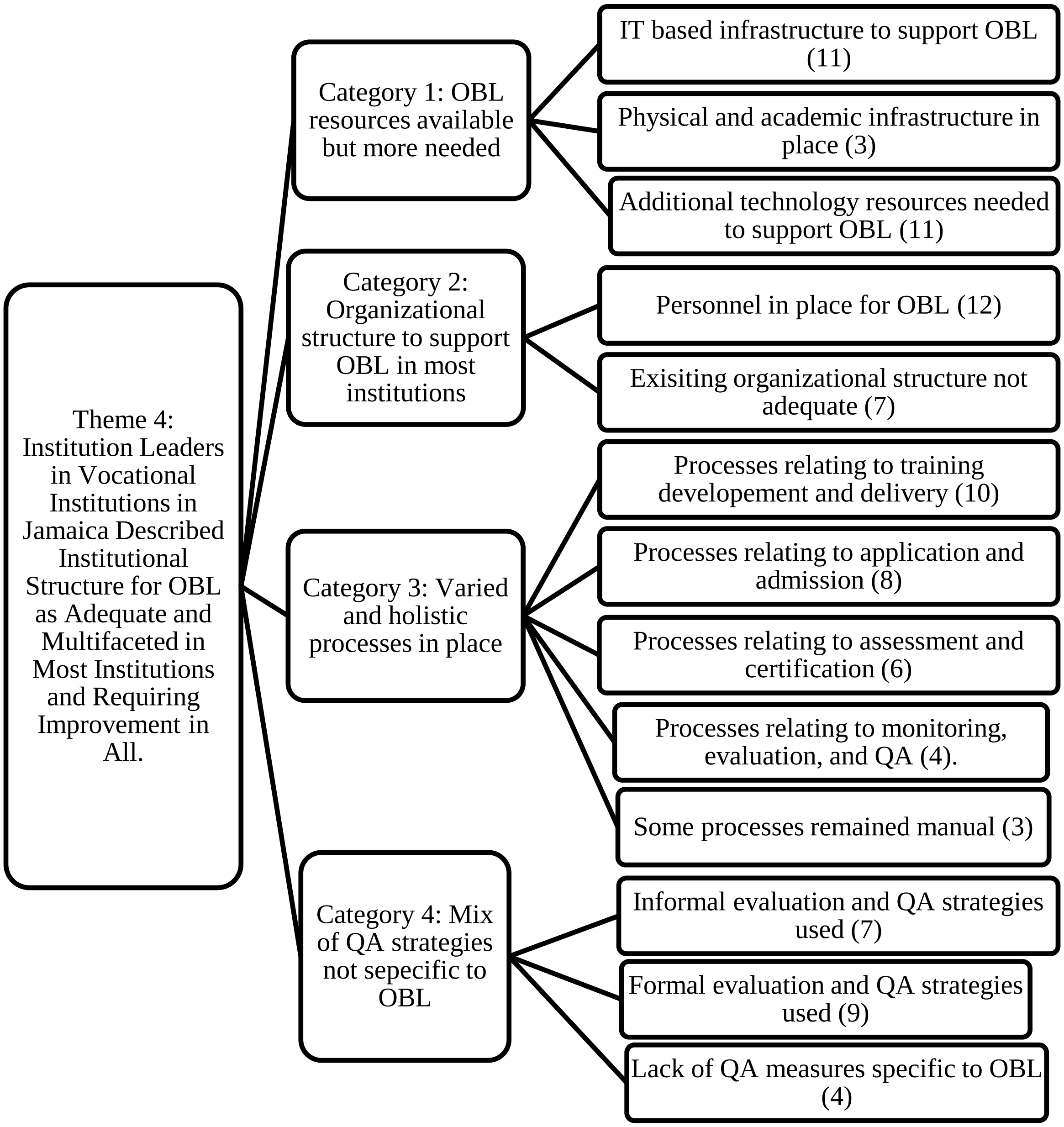
RQ1b focused on how leaders in Jamaica's vocational education institutions describe the readiness of their institutional structure to support OBL adoption and implementation. To address this question, vocational leaders reflected on aspects of institutional structure relating to technological infrastructure, organizational structure, institutional processes, and quality assurance. I determined that one theme answered this subquestion from deductive and inductive analysis. This theme forms the basis of the discussion that follows.

Theme 4: Institution Leaders in Vocational Institutions in Jamaica Described Institutional Structure for OBL as Adequate, Multifaceted, and Requiring Improvement.

The next theme to emerge answered RQ1b and highlighted the perception held by vocational institution leaders in Jamaica that institutional structure for OBL was adequate and multifaceted in most institutions and required improvement. I constructed this theme by analyzing the four categories and thirteen codes shown in Figure 10.

Figure 10

Code Tree for Theme 4 Categories and Codes



OBL Resources Available but More Needed. The first category for Theme 4 was OBL resources available but more needed, and all 12 participants contributed to this category. Participants were asked to describe the technological infrastructure in place to support OBL in their institutions and indicate what resources were needed, if any. In response, all participants stated that they had some level of technological infrastructure in place to support OBL.

All participants, except P12, indicated they had computer-based hardware to support OBL adoption and implementation in their institutions. This hardware included laptops, desktop computers, and tablets. P2, P4, P8, and P11 also shared that their institutions had at least one smartboard, and P11 also shared they had a large television, which they utilized for OBL purposes. All participants indicated they had an LMS or teleconferencing solution, such as Moodle, Zoom, Webex, or Google Classroom, and most institution leaders highlighted that there was adequate internet connectivity and bandwidth in their institutions (P2, P3, P4, P6, P9, P11, & P12). Additionally, six leaders mentioned having a computer lab in place (P1, P2, P4, P7, P8, & P11), with one leader indicated having a STEAM lab (P8) and another a digital animation lab (P1).

Apart from the technological infrastructure, P1, P2, and P7 also shared that they had physical and academic infrastructure to support OBL. Both P1 and P7 highlighted that they had library resources available for OBL students to use on campus. Additionally, P2 pointed out that students had access to "a resource multipurpose room in addition to the lab."

Despite the existence of basic and advanced technologies in the institutions, all participants, except P10, consistently indicated needing additional technology resources to support OBL. Firstly, some participants wanted to expand the existing infrastructure to serve more students (P3, P4, P6, P7, & P8). When asked to expound, P4 explained, “Our lab can only house 25 computers right now, and sometimes we would want to have bigger classes.” Other participants shared the need to accommodate students with economic and other challenges that impacted OBL access (P2 & P9), and a few others outlined that having additional technology resources would give them greater control over the OBL experience (P5 & P11). For example, P5 indicated that some faculty members used their personal and private licenses and subscriptions to some technology tools to facilitate OBL classes, leaving the institution without control of these tools. Lastly, a few participants outlined needing lab facilities established or improved to better serve staff and students (P4, P7, & P12), and others, like P1, desired advanced tools like AI simulators to enhance the quality of vocational offerings in the virtual space. P6 summarized the collective viewpoint well by indicating, “We always need more.”

Organizational Structure to Support OBL in Most Institutions. The second category aligned with Theme 4 was an organizational structure supporting OBL in most institutions. The category consists of two codes, the first being personnel in place for OBL and the second being that the organizational structure is inadequate. All participants in the study contributed to this category.

All participants, except P1, indicated that someone in their institution was responsible for OBL. Many participants (P3, P5, P7, P8, & P11) identified the program coordinator as responsible. The institution manager followed that role, with P9, P10, and P12 identified as the institution’s *de facto* manager of OBL. Participants also named other personnel, such as teachers (P2), senior instructors (P4), and training supervisors (P6), as having responsibility for OBL in the institution.

Eight participants (P3, P4, P5, P7, P8, P9, P10, & P12) shared that their institution had someone to implement OBL daily activities. The lab technician was the most frequently named OBL implementor (P3, P5, P7, & 10), with the institution manager identified in institutions without named OBL implementers (P9, P10, & P12). This was the case with P9, who managed a HEART-funded institution with only a manager and administrative assistant on staff. P8 also identified the media resource officer as the primary OBL implementor, and P4 indicated that all staff had some oversight for OBL day-to-day implementation.

Ten participants (P1, P2, P3, P4, P6, P7, P8, P9, P11, & P12) shared that specific individuals were accountable for OBL implementation. Of those 10, seven participants (P1, P3, P7, P8, P9, P11, & P12) identified the institution manager as the person most accountable. P2 and P4 identified teachers and the training department, while P6 indicated all staff members were accountable. It is important to note that P9 and P12 indicated that in their institutions, they were the implementors, the persons responsible, and the persons accountable for OBL. Additionally, three participants (P3, P7, & P8) indicated that they had an established or informal institutional structure that supported OBL implementation. They identified at least three persons in the institution to implement, manage, and own OBL. Most institution leaders generally identified at least two persons who provided oversight and support to OBL implementation.

Although most participants described having personnel to support OBL implementation in their institutions, almost 60% did not think what existed was adequate (P1, P2, P4, P9, P10, P11, & P12). P1 described a centralized structure existing at the organizational level that created many bureaucratic challenges when the institution needed help. P9, P10, and P12 asserted that their institutions had no one specifically responsible for OBL implementation apart from them, and P2, P9, and P10 also indicated that the institutions had no supporting organizational structure or chart. Lastly, P11 stated that they needed additional OBL staff in their institution in the form of a lab technician.

Varied and Holistic Processes in Place. The third category in theme four highlighted varied and holistic processes to support OBL in the institutions. I constructed this category by analyzing four codes drawn from the descriptions of the processes in place to support OBL adoption and implementation. All participants contributed to this category.

Ten of the 12 participants indicated that their institutions had processes relating to training development and delivery, the first code in the category. These included processes regarding orientation and training for staff and students (P1, P2, P3, P4, P6, P8, P9, & P11) and processes relating to instruction or training delivery (P1 & P12). Participants also shared about processes pertaining to planning training interventions (P4 & P11) and preparing content for delivery (P3, P4 & P7). P4, P5, and P7 also highlighted processes relating to timetabling of courses or classes.

The second code from the category focused on the participants' descriptions of processes relating to applications and admissions. Eight participants contributed to this code. Participants described processes relating to student application for OBL courses and programs (P3, P8, P9, P11, & P12), noting that prospective students could apply for OBL courses using an online portal. Once applications were processed, relevant personnel initiated admission procedures via a training management system (P1, P6, P8, P10, & P11).

Processes relating to assessment and certification was the third code in the category. Responses from six participants (P1, P6, P7, P8, P9, & P10) formulated this code with participants indicating that their institution had processes to support the assessment and certification of OBL courses and programs. According to P6, "We have those processes implemented, and it goes right up to when they are assessed and exit the program."

The final code in the category was monitoring, evaluation, and quality assurance processes. In responding to the interview question, only four participants (P3, P7, P9, & P11) described processes in place in their institutions to facilitate monitoring, evaluation, and quality assurance of OBL programs and courses. P7, for example, described how various personnel on the team work together to monitor OBL classes. P3 outlined that they conducted periodic evaluations to get feedback on OBL courses and programs.

While all 12 participants shared aspects of their institutional processes that supported OBL, a few highlighted that some processes relevant to OBL implementation remained manual. According to P2, class registers, lesson plans, and grades were monitored offline in their institution. Additionally, “Even though [students] will submit assignments, the assignments are printed and are kept” (P2). Another example came from P3, who indicated that instructors submitted their claims manually. In speaking about institutional processes in general, P5 stated that they implemented OBL because of COVID-19, but since then, the institution has done little to streamline its processes around OBL implementation. Additionally, P10 emerged as an outlier, as they were the only participant who identified equipment procurement and maintenance and staff recruitment as processes supporting OBL in their institution.

A Mix of QA Strategies Not Specific to OBL. The final category contributing to theme four was a mixture of QA strategies not specific to OBL. During data collection, participants reflected on the mechanisms used to evaluate the effectiveness of OBL courses and programs in their institutions. The responses from all 12 interviewees revealed that institutions used formal or informal strategies to ensure the quality of courses and programs delivered via OBL. Still, these strategies were not specific to OBL implementation.

Seven participants described informal strategies used in their institutions to ensure the quality of OBL. P6, P8, and P11 explained that they used classroom checks to monitor OBL quality. According to P11, these random checks are conducted regularly and generally performed by training supervisors. Similarly, to determine if OBL courses or programs were working as they should, P5 and P10 monitored feedback provided in students’ WhatsApp groups. P2 and P11 mentioned reviewing student performance results. Additionally, P9 indicated that technology evaluation was another informal approach used in their institution to monitor the effectiveness of OBL courses and programs.

Formal evaluation and QA strategies was another code explored in theme four. Nine participants contributed to this code by describing the quality assurance and evaluation strategies officially used in OBL implementation in their institutions. The most popular strategy was program evaluation (P1, P3, P4, P5, P6, P7, P8, P11, & P12). According to P6, "all programs that are online or face-to-face are evaluated on a quarterly basis." The participants also reported that these evaluations are standardized instruments developed by the organization and implemented in the various institutions. P12 explained, "HEART sends instruments. . . . So we use them to evaluate what is happening." Participants also mentioned using instructor evaluations (P8) and andragogical supervision (P5, P7, & P11). P7 also explained a strategy they called online monitoring that utilized a "checklist and a feedback form" that supervisors use to monitor the online training platform.

A few participants commented on the lack of quality assurance mechanisms specific to OBL. According to P3, the program evaluation used across the organization "is not an evaluation that speaks specifically about online or blended learning" but a general assessment of program delivery. P1 shared similar views, describing the program evaluation instrument as a tool focusing on aspects of delivery, such as training materials and the classroom, but not on aspects specific to OBL.

Additionally, two of the 12 participants indicated they did not utilize formal evaluation strategies. According to P2, "We have never really evaluated the effectiveness of the classes that are held online.” P10 shared a similar experience when, upon being asked, they indicated, “I’ve never set up an official one, an official program evaluation.” P9 emerged as an outlier in the analysis of this category as they were the only participant who identified training and assessment audits as a mechanism for evaluating OBL quality. Admittedly, they acknowledged that they did not implement program evaluations in their institution but noted that the organization periodically audited activities relating to training and assessment.

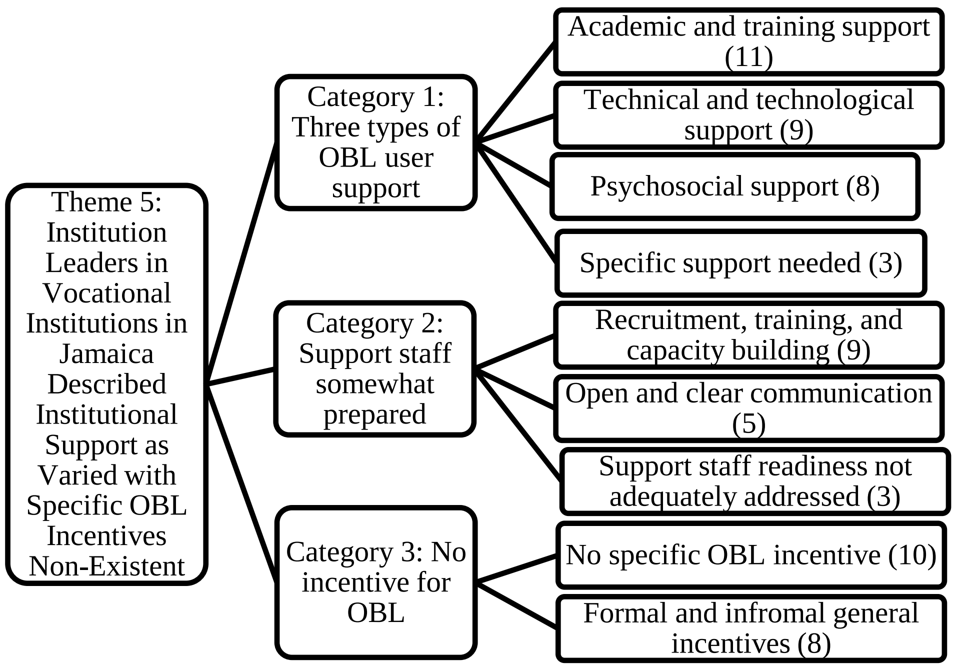
RQ1c: Description of Institutional Support for OBL

RQ1c focused on how leaders in Jamaica’s vocational education institutions described institutional support for OBL adoption and implementation. To address this question, vocational leaders reflected on some of the mechanisms used by institutions to provide support for OBL implementation. The data derived from nine codes revealed three categories and one theme. The following discussion explores the theme and its attendant categories and codes.

Theme 5: Institution Leaders in Vocational Institutions in Jamaica Described Institutional Support as Varied with Specific OBL Incentives Non-Existent

Figure 11

Code Tree for Theme 5 Categories and Codes



Theme 5 emerged from analyzing participants' reflections on the types of support available to trainees and faculty in the OBL environment, the readiness of support services and staff, and the incentives offered to OBL instructors and support staff. Figure 11 summarizes the categories and codes aligned with Theme 5.

Three Types of OBL User Support. Three codes facilitated the formulation of the category: three types of OBL user support. The first code was academic and training support, and 11 participants contributed to this code. According to the participants, their vocational education institutions provided two main types of academic support: instructor training support and library resources. When asked to describe the kind of support available to OBL faculty, seven participants (P1, P2, P5, P9, P10, P11, & P12) described providing training for teachers and instructors. P9, who managed a HEART-funded institution, and P11, who managed a HEART-owned institution, reported that the HEART NSTA Trust provided ongoing training and shared best practices relevant to OBL instruction. Besides instructor support, eight participants (P1, P3, P4, P5, P6, P7, P8, & P11) reported that their institutions provided library resources to students accessing OBL courses. This provision included access to online databases.

Participants also mentioned other academic and training support offered to OBL students and instructors. Support included the provision of training materials (P1 & P8), support from academic managers (P5 & P7), and academic peer support (P7). Mention was also made of student training (P9), reading support (P10), and face-to-face instruction whenever a student was not managing in the online environment (P6).

The second type of support that participants described was technical and technological support. Nine participants contributed to this code and described such support as providing access to devices and help desk support. Some participants (P1, P8, & P10) shared that they make devices such as laptops and tablets available to students and instructors who need devices to access the OBL environment. Others mentioned that they have dedicated staff in their institutions who provide technical support and troubleshooting services to OBL users in need (P1, P3, P4, P5, & P7). P5, P11, and P12 also pointed out that technical and technological support exists at the organizational level as centralized departments serve across institutions to meet needs as they arise.

The third type of OBL support that participants described was psychosocial support. Eight of the 12 participants mentioned offering psychosocial support to their students and instructors who operate in the OBL environment. Among the types of psychosocial support participants mentioned were emotional and counseling support (P2, P7, P12), career guidance (P3, P5), and religious support (P9). Additionally, beyond the general psychosocial support (P8, P11), one participant outlined that OBL students are offered boarding support at their institution. According to P8:

> For the trainees, what we have done . . . if you don't have the device, you can come to me at the institution, be on campus. If it is that there is a challenge with you leaving at 9:00 [PM], we will provide the accommodation for you overnight, and then you leave the following day.

In describing the types of OBL support available in their institution, some participants advocated for improvement in specific kinds of support. For example, P2 and P9 indicated no help desk support was available in their institution. Both these leaders served in HEART-funded institutions. Additionally, P6 shared that their institution did not provide psychosocial support to students as they did not have trained personnel.

Support Staff Somewhat Prepared. The second category in Theme 5 was support staff somewhat prepared. The category emerged from the reflections of 11 participants and consisted of three codes. The codes represented the participants' reflections on strategies to ensure support staff and services were ready to facilitate OBL faculty and students. The code recruitment, training, and capacity building represented a common pattern that emerged from the data provided by nine participants. Eight participants (P2, P3, P4, P5, P6, P8, P9, P11) indicated that they provided training for their support staff in various aspects of OBL support. P2 noted that in their institution, even persons who served as shadows to autistic children were trained to provide support for OBL. Similarly, P4 shared, "Even the person like the janitor and the office attendant are exposed to utilizing online learning." Two participants (P3 and P6) also mentioned including support staff in student training and orientation activities for OBL. According to P3, this strategy helps the students become familiar with the support staff and their various roles and responsibilities.

Apart from training, three participants (P3, P7, P8) shared that they capacitated the support staff with the tools they needed to support OBL faculty and students. According to P8, these resources include infrastructural and human resources. P7 shared a similar sentiment who, at the time of the interview, was in the process of procuring a closed user group phone for the institution's Lab Technician. Lastly, one participant (P4) indicated that a strategy used in their institution was to ensure they included responsibilities relating to OBL support in the respective job descriptions of their support staff. According to P4, this practice helps support staff to understand their roles better.

The second code in the category represents another strategy described by participants: open and transparent communication. Five participants contributed to this code: P4, P5, P7, P8, and P10. These participants reported using information sharing and engagement sessions to help support staff prepare for OBL faculty and students. According to P7, "There is nothing that is kept a secret . . . Everybody is aware of these [student] groups; they are aware of which groups are online." In extending the conversation about support staff readiness, P4, and P10 outlined that they use discussion meetings to keep their support team aware of their role in OBL implementation. According to P4, "They are often briefed . . . We meet, and we have discussions, and they are aware of what it is that they need to do."

Although most institutions tried to prepare support staff for OBL adoption and implementation, a few participants shared that their institutions did not adequately address the support staff's readiness. P2, for example, consistently highlighted in the interview that they had no support staff at the institution. Consequently, providing OBL support was the responsibility of the institution manager. P12 shared a similar experience. When asked if their institution had support staff for OBL faculty and students, P12 remarked, "No, ma'am. That's a big no. Very big." P1 also commented on the need to improve the readiness of support staff and services for OBL implementation by stating:

> I don't think we can say that we have a focused approach to even start to consider an evaluation or an assessment of if they [support staff] are ready… we ensure that the instructors are trained as much as they can, and the facilities are provided, but I would have to admit that we are really not focused on the issue of readiness.

No Incentive for OBL. The final category in Theme 5 is no incentive for OBL. This category encapsulates the participants' descriptions of the incentives provided to OBL instructors and support staff. Two codes comprised this category, reflecting the perspectives and experiences of all 12 participants.

Participant interviews revealed that faculty and support staff received no specific incentive for their work in the OBL context. Ten participants (P1, P2, P3, P4, P5, P6, P9, P10, P11, & P12) contributed to the code no specific OBL incentive, and all reported that their institutions offered no incentives or rewards for OBL. When asked what incentives they provided to OBL faculty, P1 remarked, “Nada, zip, zero. There is no particular incentive for that.” Participants 9, 10, and 12 further explained that as HEART-funded institutions, they could not afford to offer OBL faculty and staff any incentives. Participants in HEART-owned or operated institutions shared that they give general incentives to OBL staff (P1, P2, P3, P4, P5, & P6); “there is no separate incentive for them [OBL staff]” (P4).

The second code in the category, formal and informal general incentives, is closely associated with the previous code. According to the eight participants who contributed to this code (P2, P3, P4, P5, P6, P7, P8, & P11), faculty and support staff are generally incentivized in several ways for work done. In some institutions, leaders use informal approaches such as implementing flexible work schedules to incentivize faculty and staff for good performance (P2, P7, P8. P11).

Staff recognition activities at the institutional level are also considered informal performance incentives. Participants shared about employing such initiatives as the “staff of the quarter” and “instructor of the quarter” (P8) and implementing a staff recognition board, where the photos of high-performing staff are posted (P7). According to P7, “We will put up their photos and highlight what they would have done. Send emails throughout the system to encourage them and to motivate them.”

Participants also described using formal incentives to motivate staff for work done in general. Six participants highlighted using an organization-wide performance incentive program (P3, P4, P5, P6, P7, & P8). Participants in HEART-owned or operated institutions stated that administrators match performance against previously set targets for a specific period. If staff members score above a certain percentile, they get a percentage of their annual salary as an incentive (P3, P4, P6, P7, & P8).

Participants also described using other formal strategies to incentivize performance, such as designating an “instructor of the year” at the organizational level (P2, P6) or the “instructional service award” (P6) given to high-performing instructors across the entire organization. P2 also spoke about providing training opportunities to deserving members of the team. In summary, participants indicated that while faculty and staff receive incentives for overall good performance, neither the institution nor the organization offers any specific incentives for work in the OBL environment.

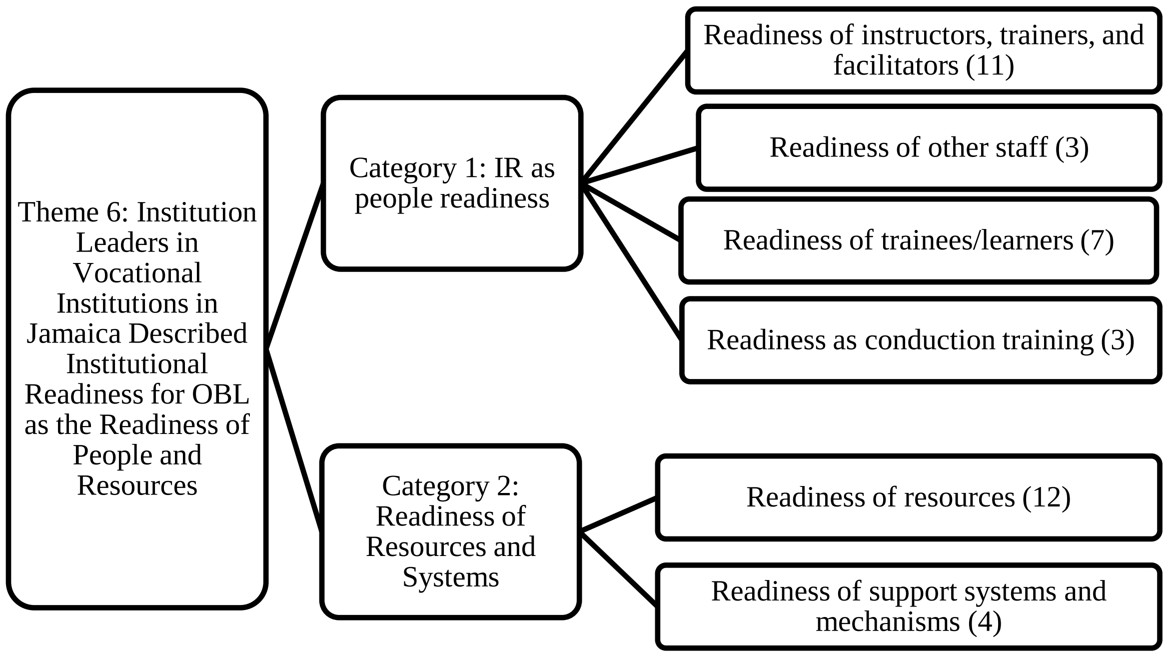
RQ1: Description of Institutional Readiness for OBL

RQ1 focused on how leaders in Jamaica’s vocational education institutions describe institutional readiness for OBL adoption and implementation. To address this question, vocational leaders reflected on the meaning of institutional readiness and their perceptions of the readiness of OBL facilitating conditions in their institutions. Nine codes, three categories, and two themes answered this research question. The following discussion explores the themes and their attendant categories and codes.

Theme 6: Institution Leaders in Vocational Institutions in Jamaica Described Institutional Readiness for OBL as the Readiness of People and Resources

Figure 12

Code Tree for Theme 6 Categories and Codes



I constructed Theme 6 after analyzing participants' reflections on their understanding of institutional readiness for OBL and how they defined the concept for others. Two categories and five codes made up this theme. Figure 12 summarizes the categories and codes aligned with the theme.

Institutional Readiness as People Readiness. The first category, comprising Theme 6, is institutional readiness as people readiness. Eleven participants contributed to this category. When asked to define or describe what institutional readiness for OBL means in their context, all the participants, except P12, emphasized the readiness of the institution’s staff. Eleven participants (P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, & P11) indicated that institutional readiness for OBL meant the readiness of instructors, trainers, or facilitators. According to P5, “Readiness is ensuring that the instructors are properly equipped.” P3 shared a similar perspective, hinging the readiness of others on instructor readiness. According to P3, institutional readiness is “to ensure that the instructors who will be delivering the course are able to manipulate the system, in order to ensure that everybody understands what is expected when delivering the online course.” In addition, three participants highlighted the readiness of other categories of staff, namely, assessors (P1), IT personnel and technical support staff (P2), and the readiness of managers and supervisors (P6).

Participants also highlighted the readiness of trainees or learners in their definition of institutional readiness for OBL. Five participants (P1, P3, P7, P9, & P10) referenced the readiness of learners to navigate and use the relevant OBL technologies and tools. P3 stated that institutional readiness is “Ensuring that the participants are able to participate and understand how to navigate the platform.” P5 and P6 also mentioned the readiness of learners’ state of mind to adopt OBL as part of the definition of institutional readiness. According to P5, “Readiness is ensuring that . . . trainees are ready in regard to mindset.” P6 expanded on this viewpoint by explaining that “the students themselves would have to be prepared to make the switch from face-to-face to online.”

Another code aligned to the category is readiness as conducting training. Three participants contributed to this code, emphasizing that institutional readiness for OBL means conducting training for teachers and students. According to P5, “Readiness is ensuring that… training is conducted in the use of the delivery.” P9 and P10 verbalized similar perspectives, with P9 commenting, “For the institution to be ready, they would have to have training.”

Readiness of Resources and Systems. The second category comprising theme 6 was the readiness of resources and systems. Participants consistently highlighted the readiness of resources in their definition or description of institutional readiness for OBL, with all 12 participants commenting on this issue. For example, all participants emphasized physical and IT infrastructure readiness in their description of institutional readiness. Nine participants (P1, P2, P3, P6, P7, P8, P9, P10, & P11) mentioned resources such as computer labs, laptops, desktops, and access points. Participants also mentioned soft infrastructure such as connectivity, bandwidth, and software as part of institutional readiness (P1, P3, P4, P6, P7, P11, & P12), with P12 commenting, “You have to have internet connectivity. You must have that.”

Participants also mentioned other types of resources as part of the institutional readiness construct. For instance, four participants (P1, P3, P5, & P9) included the readiness of content resources and training materials. Access to reliable electricity was another resource referenced (P6 & P10). According to P10, having reliable electricity was an important aspect of readiness “Because you have to have electricity to basically go online.”

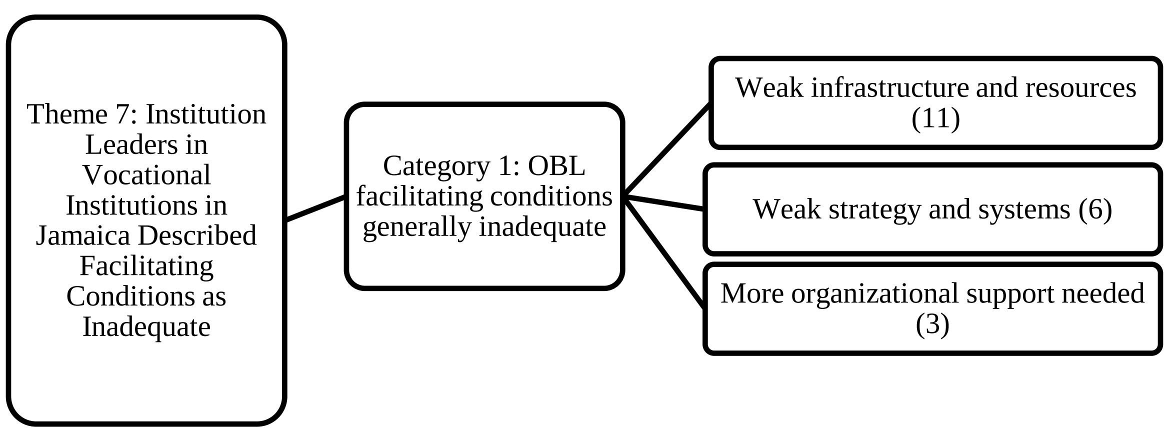
Some participants also highlighted the readiness of support systems and mechanisms in their descriptions of institutional readiness for OBL. P2, for example, mentioned the readiness of the institution's budget and back-end ICT support as part of their description. Similarly, P7 highlighted the readiness of tier-one technical support. Institutional planning was referenced by P8 as an element of readiness, commenting that "proper planning must be in place in order for [OBL] to operate effectively . . ." Finally, P11 included monitoring the OBL environment as an aspect of institutional readiness.

Theme 7: Institution Leaders in Vocational Institutions in Jamaica Described Facilitating Conditions as Inadequate

The second theme associated with RQ1 is institution leaders in vocational institutions in Jamaica described facilitating conditions as inadequate. As outlined in Figure 13, one category and three codes informed the formulation of this theme. I derived the codes from participants' perceptions of the facilitating conditions in their institutions and the ability of those conditions to support OBL implementation. The discussion of those results follows.

Figure 13

Code Tree for Theme 7 Categories and Codes



OBL facilitating conditions generally inadequate. All participants, except P8, shared the perception that OBL facilitating conditions in their institutions were generally inadequate. In analyzing the participants' perceptions, I identified three codes associated with the category. The first code was weak infrastructure and resources. Seven participants (P1, P4, P5, P6, P7, P9, and P11) contributed to the code by asserting that relevant infrastructure and resources to support OBL in their institutions were not current and, in some respects, inadequate. When asked to comment on the readiness of facilitating conditions in their institution, P11 pointed out, "I don't think we are anywhere ready for a full-scale approach." P4 supported this perspective of inadequate resources by pointing out, "We have one small lab, … we have 16 programs." Participants like P6 suggested the institution was not ready to deliver vocational or 'hard' skills online.

I captured the second reason participants considered facilitating conditions inadequate in the code: weak strategy and systems. Six participants contributed to this code (P1, P2, P7, P9, P10 & P11), outlining some areas for improvement. P1 and P2 shared that a policy to guide OBL implementation in the institution was lacking. Others commented that their institution's OBL strategy needed improvement (P7 & P10).

Thirdly, a few participants (P2, P7, & P12) raised the need for more support from the organization, especially in areas of budgetary (P2 & P12) and infrastructure (P7) support. P2 and P12 are HEART-funded institutions, while P7 is HEART-owned. In general, most participants in the study felt that their institutions' facilitating conditions could not adequately support OBL adoption and implementation.

Summary

This basic qualitative study explored how institutional leaders in Jamaican vocational education institutions describe institutional readiness for OBL adoption and implementation. Based on data analysis, seven themes emerged to answer the study's research questions. The key finding for RQ1a was that Jamaican vocational institution leaders described their OBL adoption and implementation strategies as primarily focused on training and stakeholder buy-in. At the same time, they indicated they did not prioritize OBL policy and governance. For RQ1b, I found that Jamaican vocational institution leaders described institutional structures as generally adequate and multifaceted and needing improvement, especially in areas related to OBL staffing and OBL quality assurance. For RQ1c, I found that Jamaican vocational institution leaders described institutional support for OBL as including various support mechanisms for students and staff, with specific staff incentives lacking. The key finding for RQ1 was that Jamaican vocational institution leaders framed institutional readiness for OBL in relation to people and resource readiness and described OBL facilitating conditions in their institutions as inadequate. Concerning the conceptual framework, the results highlight strengths and gaps in institutional readiness of OBL adoption and implementation, emphasizing the need for strategic enhancement in governance, support systems, and infrastructure.

In Chapter 5, I discuss my interpretations of the key findings in relation to the research question and subquestions and my conceptual framework. I also discuss the implications of the findings for theory and practice and provide recommendations for future research and application.

Chapter 5: Discussion, Conclusions, and Recommendations

This basic qualitative study explored how institutional leaders in Jamaican vocational education institutions describe the phenomenon of institutional readiness for OBL adoption and implementation. A review of the related literature found that while institutional readiness is a critical success factor for OBL adoption and implementation (Fawns et al., 2021; Zhang & Zhu, 2023), the phenomenon remains significantly understudied (Ali & Georgiou, 2024; Mihai et al., 2021). I used semistructured interviews to collect data from 12 Jamaican vocational education institution leaders. I conducted the study to help TVET stakeholders in my country understand and better facilitate institutional readiness for OBL in vocational institutions (Antwi-Boampong & Bokolo, 2022; Dale et al., 2021; Njuguna, 2022). I also conducted the study to fill the knowledge gap pertaining to the meaning and perception of institutional readiness for OBL in the specific context of vocational education in Jamaica (see Badiozaman, 2021).

In Chapter 4, I reported on seven key findings from my analysis of the categories and codes I constructed from the collected data. The key findings related to RQ1a were that institution leaders in vocational institutions in Jamaica described institutional strategy for OBL adoption and implementation as focused on training and stakeholder buy-in and did not prioritize OBL policy and governance. The key finding related to RQ1b was that institution leaders in vocational institutions in Jamaica described institutional structure for OBL adoption and implementation as adequate, multifaceted, and requiring improvement. The key finding related to RQ1c was that institution leaders in vocational institutions in Jamaica described institutional support for OBL adoption and implementation as varied and lacking specific OBL incentives. Finally, the key findings related to RQ1 were that institution leaders in vocational institutions in Jamaica described institutional readiness for OBL adoption and implementation as people and resource readiness and characterized by inadequate facilitating conditions.

In this chapter, I interpret my key findings relative to the conceptual framework and literature review outlined in Chapter 2. I also outline the limitations of my study, recommendations for future research, and the implications of my study for social change and practice in OBL. I close the chapter by reiterating my study's key essence or meaning.

Interpretations of Findings

In this study, I analyzed institutional readiness for OBL adoption and implementation through a framework that included facilitating conditions (Venkatesh et al., 2003) and the BLAF (Graham et al., 2013). Avoiding generalizations was important in this study as qualitative methodology prioritizes transferability, facilitated by thick descriptive data about the context (Lincoln & Guba, 1986). Additionally, data were collected from participants in a specific context and setting, making the results highly contextual and specific to experiences shared by those participants (Merriam & Tisdell, 2016). Finally, the small sample size used in this study does not facilitate generalizations; instead, it extrapolates to allow for the interpretation of the findings beyond this study without negating the context from which the findings were derived (Patton, 2015). After applying inductive and deductive qualitative analysis, I determined that my findings primarily confirm, extend, and contradict current and empirical literature on institutional readiness for OBL adoption and implementation. I interpret these results in relation to the themes explored in Chapter 4 and organized by my research question and subquestions.

RQ1a: Description of Institutional Strategy Readiness for OBL

In a review of the literature on institutional readiness for OBL adoption and implementation specific to strategy, Graham and Halverson (2023), Philipsen et al. (2022), and Sabariah (2022) indicated that there was a general tendency among educators and other educational stakeholders to narrow the concept of OBL readiness to technology and training delivery and not focus on other nuances and dimensions. The findings of this study confirm the current literature as participants described OBL and OBL implementation strategy primarily in terms of training delivery and the technology used to support training delivery. Participants' descriptions of OBL adoption and implementation strategy focused on acquiring relevant hardware and software, creating training experiences and materials, and training learners, instructors, and other staff to operate in the OBL environment.

In research that focused on other dimensions of OBL readiness, scholars such as Bokolo and Noel (2021), Budur et al. (2021), and Hill and Smith (2023) highlighted a lack of governance and management support for OBL adoption and implementation at the institutional level. This lack included the need for strategic direction and leadership (Budur et al., 2021; Hill & Smith, 2023) and strategic planning to support implementation (Bokolo & Noel, 2021; Fawns et al., 2021; LaBelle et al., 2020). Zaugg et al. (2021) also highlighted a lack of a clear definition for OBL and aligned mission and vision statements to support OBL adoption and implementation. Bervell and Arkorful (2020) also noted a lack of relevant policies supporting OBL adoption and implementation.

The responses from the participants in my study confirmed the findings in the literature relating to OBL and the lack of a strategic framework. From the data analysis, my participants did not prioritize OBL governance and policy matters as part of their OBL adoption and implementation strategy. In most cases, participants indicated that no formal or documented definition for OBL existed in their institution, and where it did, it was mainly inaccessible to stakeholders. Additionally, participants reported that OBL was not clearly reflected in the institution’s or the organization’s mission and vision statements, with most indicating that OBL was not reflected at all. Additionally, most participants noted that OBL policy was inadequate or nonexistent in their institution. The finding that OBL institutional readiness strategy focused on training delivery and technology may also indicate a limited understanding of the nuances and dimensions of institutional strategy for OBL adoption and implementation and highlights weaknesses in OBL institutional readiness, confirming the findings of Graham and Halverson (2023), Philipsen et al. (2022), and Sabariah (2022).

Graham et al. (2013) and Joshi et al. (2023) highlighted the importance of stakeholder buy-in initiatives to OBL implementation success. These scholars outlined that stakeholder involvement should be encouraged during OBL adoption and implementation as it indicates mature implementation and growth of OBL (Graham et al., 2013; Joshi et al., 2023). The data analyzed in this study confirm the findings in my literature review, as they indicated that participants and their institutions took deliberate steps to garner stakeholder buy-in for OBL. These steps included employing various strategies and tools when communicating the vision and purpose for OBL implementation to stakeholders. The efforts made by participants to prioritize stakeholder buy-in for OBL confirm the OBL adoption and implementation approach outlined by Graham et al. (2013) and Joshi et al. (2023).

The findings for RQ1a also confirmed readiness descriptions in the conceptual framework. Participants in this study described institutional strategy readiness in ways that matched stage one of the BLAF, which focuses on awareness and exploring OBL. According to Graham et al. (2013), OBL implementation primarily at the level of faculty and students, informal advocacy of OBL among stakeholders, and a lack of a clear and holistic OBL definition and policy characterize OBL at stage one.

RQ1b: Description of Institutional Structure Readiness for OBL

Regarding OBL institutional structure readiness, LaBelle et al. (2020) and Lane (2021) highlighted the crucial role of technological and organizational infrastructure in successfully adopting and implementing OBL. Hill and Smith (2023) also supported this finding. Their study found an institutional commitment to providing relevant OBL technology, but there was a lack of personnel to support OBL implementation. Golding and Jackson (2021) also highlighted a lack of quality management frameworks to undergird OBL adoption and implementation.

The findings in this study confirmed some of the conclusions of the current literature, as participants described having access to the required physical and technological infrastructure to implement OBL adequately in their institutions. Also, most participants perceived that the organizational structure in the institutions did not adequately support OBL despite having personnel in place for OBL implementation, and they felt that the evaluation and quality assurance mechanisms were not specific to OBL, which confirmed the findings in the literature. Participants also viewed the existing institutional processes as adequate to support OBL, disconfirming the findings in the literature review. The findings in the study relating to institutional structure may point to participants' narrow perceptions of institutional structure for OBL, focusing mainly on physical and technological infrastructure and again confirming the narrowed perspective of OBL readiness found by Graham and Halverson (2023), Philipsen et al. (2022), and Sabariah (2022).

Additionally, the findings in the study relating to RQ1b confirmed the description of institutional structure readiness provided in stage two of the BLAF: early adoption and implementation. According to Graham et al. (2013), stage two of the BLAF highlights an emerging structure to facilitate OBL, including emerging physical, technological, and organizational infrastructure. This stage also features limited institutional evaluation of OBL quality.

RQ1c: Description of Institutional Support Readiness for OBL

Researchers such as Bartlett and Warren (2021) and Lane (2021) have found a need to provide adequate, ongoing, and a variety of support mechanisms when implementing OBL. Alqahtani and Rajkhan (2020) and Roy et al. (2021) realized similar findings in studies highlighting the lack of technical and pedagogical support for teachers and students in OBL contexts. Other forms of support, such as library and counseling support, were found to be weak in OBL settings examined by Lane (2021), along with a need for incentives and rewards for OBL staff in research contexts investigated by Adarkwah (2021), Al-Ayed and Al-Tit (2021), and Groen et al. (2020).

My study's findings on institutional support readiness for OBL generally disconfirm the current literature. Most participants in this study described supporting OBL students and staff in their institutions in various ways. These types of support included academic and pedagogical support, technical and technological support, and psychosocial support. Participants also shared that in most institutions, support staff were ready for OBL implementation, disconfirming Lane's findings (2021). Despite these disconfirmations, participants' descriptions of the lack of rewards and incentives specific to OBL confirmed the findings of Adarkwah (2021), Al-Ayed and Al-Tit (2021), and Groen et al. (2020).

The findings for RQ1c confirmed readiness descriptions in two stages of the BLAF. Participants' descriptions of the availability of support mechanisms and the readiness of support staff confirmed descriptions of institutional support readiness in stage two. In this stage, there is an increased focus on technological support for faculty and students and emerging academic and pedagogical support. On the other hand, participants' descriptions of a lack of faculty and staff incentives aligned with stage one of the BLAF. In stage one, there is no incentive mechanism for OBL (Graham et al., 2013).

RQ1: Description of Institutional Readiness for OBL

According to Antwi-Boampong and Bokolo (2021), Saintika et al. (2021), and Suwawi et al. (2021), the meaning of institutional readiness for OBL was multifaceted and comprehensive. It focused on the level of preparedness of an institution for OBL in areas such as culture, finance, human and technological resources, and management's intention to adopt and implement (Antwi-Boampong & Bokolo, 2021; Suwawi et al., 2021). To provide further precision to the definition, Graham et al. (2013) described institutional readiness as the readiness of an institution's strategy, structure, and support systems for OBL. In this study, participants' descriptions of the meaning of institutional readiness disconfirmed the descriptions highlighted in the literature review. According to the participants, institutional readiness meant the readiness of people and resources. This meaning included the readiness of teachers, students, and technology. The definitions and descriptions of institutional readiness shared by the participants generally did not include elements related to institutional strategy and some elements related to institutional structure, such as the existence of OBL quality management frameworks and adequate human resources for OBL.

Researchers like Ate et al. (2021), Bokolo et al. (2021b), and Rahmawati et al. (2021) also found that institutional readiness was a critical success factor in overall OBL adoption and implementation, without which OBL implementation was likely to fail. Works published by Budur et al. (2021) and Rahmawati et al. (2021) support these findings along with the principles outlined in the BLAF (Graham et al., 2013) and the UTAUT (Venkatesh et al., 2016). According to Budur et al. (2021) and Rahmawati et al.

(2021), OBL strategy, structure, and support readiness were essential elements of overall OBL readiness. Additionally, according to the principles outlined in the UTAUT and the BLAF, facilitating conditions, as measured by the readiness of strategy, structure, and support, determined the extent to which OBL was successfully adopted and implemented.

Analysis of participant data confirmed and expanded on findings from the literature review and conceptual framework. Participants generally viewed facilitating conditions for OBL in Jamaican vocational institutions as inadequate, a perception aligned with their descriptions of institutional strategy, structure, and support. The study also added new insights by exploring the perceptions of OBL institutional readiness within vocational education in Jamaica, a phenomenon not previously studied in that context.

Limitations of the Study

In the context of qualitative research, limitations relate to the constraints experienced during the research process that may impact the results (trustworthiness) or the interpretation and applicability (transferability) of the study's findings (Merriam & Tisdell, 2016). In this study, I identified a few limitations relating to credibility, dependability, and transferability. In this section, I briefly explore these limitations.

Two limitations to the credibility of this study were participants' use of language and the time of day of some interviews. Jamaicans tend to be high-context language users who embed meaning in language features such as tone of voice, syntax, and local references. As such, the report on the findings may not fully represent a few aspects of the participants' experiences and meanings. Secondly, for a few participants, the time of day they participated in interviews resulted in them providing less detailed responses to some questions. This occurrence was especially true for participants who agreed to interviews during work hours. To mitigate these limitations, I used member checking to verify participant meaning and encouraged participants to interview during the late afternoons and early evenings.

The fact that I used only one data collection method, semistructured interviews, may challenge the dependability of this study (Merriam & Tisdell, 2016). Future studies in this area may benefit from additional methods, such as case study analysis or focus group interviews, to increase the depth of findings. Another challenge to dependability was the lack of peer-reviewed articles about institutional readiness for OBL contextualized to Jamaica. This challenge meant I could not align my findings with locally contextualized research (Lincoln & Guba, 1986). To mitigate this, I used gray literature where possible to explain the local context of the study and member checking to validate my interpretations of the meanings garnered from each participant. I also relied on my dissertation committee to monitor my research process in lieu of a formal audit trail.

This study’s research sample included only 12 vocational institution leaders in Jamaica employed by the HEART NSTA Trust, a statutory organization. As such, the findings may have limited transferability to other educational contexts. Additionally, the study did not include institutional leaders from all six operational regions designated by the HEART NSTA Trust. There was no representative in the sample from region two.

Also, the range of experiences shared by participants was higher among leaders from HEART-funded institutions than those owned and operated by the HEART NSTA Trust.

Finally, another potential limitation was participant bias, which potentially challenged confirmability. In this study, participants' perceptions of infrastructure readiness influenced their perceptions of institutional readiness. To mitigate this, I carefully explained the other dimensions of institutional readiness to each participant during the interview.

Recommendations

I recommend further research based on the study's results and limitations. The first recommendation relates to RQ1a and the finding that institutional leaders in vocational institutions in Jamaica described institutional strategy for OBL as focused on training and stakeholder buy-in and not on OBL policy and governance. Researchers need to conduct more studies to understand what OBL means to institutional leaders in vocational institutions and how they define and apply the concept at the institution's strategic, tactical, and operational levels. Understanding what OBL means to institutional leaders may provide a greater understanding of why the perception of institutional strategy readiness for OBL lacks focus on governance and policy.

The second recommendation relates to RQ1b and the finding that institutional leaders in vocational institutions in Jamaica described institutional structure for OBL as adequate, multifaceted, and requiring improvement. Scholars could research to ascertain the perception of faculty and students about the readiness of vocational institutions' infrastructure to support OBL. Research in this area may provide deeper insights into the experiences of faculty and students with current institutional infrastructure, confirm, contradict, or extend the perceptions of institutional leaders, and help determine specific areas for enhancements and improvements.

The third recommendation relates to RQ1c and the finding that institutional leaders in vocational institutions in Jamaica described institutional support for OBL as varied, with specific OBL incentives nonexistent. Future research could examine the impact of institutional incentives specific to OBL on faculty engagement and effectiveness. Research in this area may inform institutional and organizational policy about OBL incentives, deepen understanding about improving faculty buy-in, engagement, and effectiveness around OBL, and lead to improved student performance.

Another recommendation from this study relates to RQ1 and the finding that institutional leaders in vocational institutions in Jamaica described institutional readiness for OBL as the readiness of people and resources with the readiness of facilitating conditions for OBL described as inadequate. Given this finding, additional research exploring the key barriers to institutional readiness for OBL in Jamaican vocational institutions could help provide a deeper understanding of the perception that facilitating conditions are inadequate. Such a study could also help strengthen institutional readiness from an operational and policy perspective and improve student access to and experience in vocational education.

The last recommendation relates to the limitations of this study. I conducted this study in Jamaica with a small sample of 12 leaders in vocational education institutions owned, operated, or funded by the HEART NSTA Trust. I conducted the study utilizing semistructured interviews as the only data collection method. Given these limitations, future researchers can repeat the study with a larger sample population to facilitate greater transferability. Future researchers should consider using strategies to make the sample more representative and increase the sample size, especially for participants who serve in institutions funded and not owned by the HEART NSTA Trust.

To facilitate more significant levels of transferability, future studies in institutional readiness for OBL in Jamaica could include other vocational institutions offering OBL at the postsecondary and tertiary levels, not just institutions affiliated with the HEART NSTA Trust. Researchers can also repeat the study using other qualitative designs to enhance credibility and dependability. For example, they could replicate the study using a case design to enable the use of thick, rich descriptions and to verify the findings through triangulation.

Implications

This study may contribute to positive social change in several ways. First, at the individual level, this study addressed a general gap in the literature regarding institutional readiness for OBL and how vocational institution leaders in Jamaica described institutional readiness for OBL in their specific context. The findings of the study may also inform decision-making at the institutional level. Institutional leaders can use these findings to improve institutional readiness for OBL, specifically by focusing on facilitating conditions or improving general OBL adoption and implementation strategies.

At the organizational level, senior personnel in the HEART NSTA Trust may use the findings of this study to inform OBL quality improvements in the other 17 institutions owned and operated by the organization and the other 69 institutions funded by the Trust. These quality improvements may address weaknesses identified relating to OBL governance and policy at the institutional level, as well as other implementation weaknesses or challenges highlighted in the findings of this study. Based on the findings of this study, quality improvements explored at the organizational level may also trigger and facilitate OBL quality improvement in the wider vocational education sector in Jamaica and across the Caribbean.

The study may also advance knowledge in educational technology integration. Understanding institutional readiness for OBL adoption and implementation in the Jamaican vocational education context may help deepen understanding of institutional readiness for OBL in general. Other researchers may find an opportunity to examine institutional readiness from a perspective that remains underexplored in the literature.

This study may also have methodological, theoretical, and empirical implications. Firstly, as a basic qualitative study, the findings underscore the value of qualitative interviews in facilitating the collection of rich, thick data. The findings also point to the appropriateness of the methodology for inquiry into relatively novel or understudied phenomena in a specific context. The findings also indicate the appropriateness of the method used as a precursor for studies utilizing other qualitative methodologies for deeper investigation into a phenomenon. Secondly, the findings of this study contribute to the academic discourse on institutional readiness and educational change, especially in the context of OBL in vocational education. Focusing on institutional readiness for OBL, this study connects leadership, change management, and OBL theories. The study also provides a point of convergence for the UTAUT and the BLAF by focusing on facilitating conditions. Thirdly, this study adds to the literature surrounding OBL in TVET. The findings of this study confirm, disconfirm, and expand results in other related studies, validating my findings and substantiating some of the conclusions of similar and related works. The study also provides valuable insight into OBL in vocational education in the Jamaican local context, expanding available literature to include findings from a small island developing state in the Caribbean.

Another contribution that this study makes to positive social change is improved professional practice. The study provides insights that institutional leaders in Jamaican vocational institutions can use to improve the quality of OBL readiness at the institutional level. The findings emphasize the need for greater focus on OBL implementation strategy and addressing weaknesses in institutional infrastructure and resources, OBL attendant processes, and OBL quality assurance. The findings also support the need for stronger OBL support systems, especially those related to OBL rewards and incentives. Informing practice in these ways facilitates growth and development among institution leaders, increases institutional readiness for OBL, increases engagement and performance among faculty and staff, and improves student performance and certification.

Conclusion

This study used basic qualitative methodology to influence social change by exploring how institutional leaders in Jamaican vocational education institutions describe the phenomenon of institutional readiness for OBL adoption and implementation. The study is significant because while institutional readiness is a critical success factor in online and blended learning adoption and implementation, its meaning is primarily contextually situated and constructed. The study provides meaningful insights into the meaning of institutional readiness for OBL, as seen through the perceptions and contextual realities of vocational institutional leaders in Jamaica.

The study resulted in several key findings that emphasized a perceived lack of institutional readiness for further adoption and implementation of OBL. The findings also highlighted the need to implement mitigating strategies at the institutional and organizational levels. Despite certain limitations, including a small sample size and using only one data collection method, the study's contributions are significant, highlighting areas for further exploration.

Future studies could expand on these findings by examining institutional readiness for OBL from the perspective of faculty and students, exploring the barriers to institutional readiness in vocational institutions, and widening the research population to include leaders in vocational education institutions not aligned to or affiliated with the HEART NSTA Trust. In the final analysis, this study seeks to effect social change by addressing a gap in the literature, influencing policy and practice at various levels, advancing qualitative research as a trustworthy method of scholarly inquiry, and ultimately improving the teaching and learning experience for all stakeholders.

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Appendix A: Interview Protocol

FOR INTERVIEWER ONLY	
Research Topic:	Vocational Education Leaders' Perceptions of Institutional Readiness for Online and Blended Learning
Research Question:	How do institutional leaders in vocational education institutions in Jamaica describe institutional readiness for OBL adoption and implementation? **Subquestions:** *RQ1a*: How do leaders in vocational education institutions in Jamaica describe the institutional strategy for OBL adoption and implementation? *RQ1b*: How do leaders in vocational education institutions in Jamaica describe the institutional structure for OBL adoption and implementation? *RQ1c*: How do leaders in vocational education institutions in Jamaica describe institutional support for OBL adoption and implementation?

SEGMENT/STAGE 1 - GREETINGS/INTRODUCTIONS/PURPOSE

A. Greet the participant

- Re-introduce self.
- Thank him/her for agreeing to participate in the interview.
- Ask how he/she is doing?
- Establish some common ground if necessary (comment on weather/environment/prevailing social issue)

Explain the research purpose and why I am collecting data from the participants.

This researcher is exploring how institution leaders in Jamaican vocational education institutions describe institutional readiness for online and blended learning adoption and implementation. I am collecting data to fill a knowledge gap: the lack of understanding about how institutional leaders describe institutional readiness for OBL adoption and implementation in the Jamaican TVET context. As such, I am not in the interview to form judgments about you, your work, or your institution. Instead, my role is to collect data that may help me realize my research purpose. Do you understand? (Wait for response)

Before we move on, **may I have your permission to audio record the interview** for review and transcription purposes (*wait for participant to give permission).* Also kindly **indicate if you have read and understood the interview consent form**? (*wait for participant to confirm. If they have not read the form, go through the form with them*). **Do you consent to participate in this study**? (*Participant must say yes for the interview to continue*)

I want to confirm that you have met the inclusion criteria for participation in this study. As such, kindly respond to the following questions by indicating *yes* or *no*.

1. Do you serve in an educational institution as principal, vice principal, institution manager, or deputy manager?
2. Does your institution offer (or is preparing to offer) vocational programs or courses in the online and blended learning modalities?
3. Is your institution owned, operated, or funded by the HEART NSTA Trust?

SEGMENT/STAGE 2 – ORIENTATION TO THE INTERVIEW PROCESS

A. Explain the format of the interview and the expected duration.

   The interview will consist of four main sections: a section in which I ask you general questions and then three other sections in which I focus on aspects of institutional readiness relating to strategy, structure, and support. After I have asked all the interview questions, I will allow you to share any additional information you would like to give. Then, I will outline the post-interview activities. I expect the interview to last 60 to 70 minutes.

B. Explain the ethical protection mechanisms.

C. You can choose to stop the interview at any time. Also, I need to let you know that the discussion will be recorded for transcription purposes, and a summary of our conversation will be shared with you for verification later. Do you have any questions?

   Do you agree to be interviewed for this study? (Yes or No answer for recording)

D. For the purposes of this study, online and blended learning refers to the use of online learning, blended learning, or both in an educational institution or place of learning (Philipsen et al., 2022). It includes the instructional strategies, tools, and environments that facilitate the adoption and implementation of this approach to learning and instruction.

SEGMENT/STAGE 3 – THE INTERVIEW

<table>
<tr><th>BLAF Category and Research/Sub Question/s</th><th>Questions</th></tr>
<tr><td colspan="2">Introductory Questions</td></tr>
<tr><td>General Questions</td><td>1. How did your institution get started in online and blended learning? (Background)
- How long has your institution been offering online and blended learning courses or programs?

2. What steps did you and your team take to prepare for the implementation of online and blended learning at your institution? (Background)

3. What do you know about institutional readiness for online and blended learning? (Background)
- How would you define institutional readiness for online and blended learning adoption and implementation?
- Briefly describe what institutional readiness looks like in your institution.</td></tr>
<tr><td colspan="2">Questions Aligned to the Conceptual Framework</td></tr>
<tr><td>BLAF: Strategy

RQ1a: How do leaders in vocational education institutions in Jamaica describe the institutional strategy for OBL adoption and implementation?</td><td>4. How does your institution define online and blended learning for its members and stakeholders? (Background/ Strategy - Definition) [Graham et al., 2013]
- Where can the definition be found?

5. How has the vision/purpose for online and blended learning been communicated to the members and stakeholders of the institution? (Vision/Plan) [Graham et al., 2013]
- To what extent is online and blended learning reflected in your institution’s mission, vision, and values?

6. How would you describe the adequacy of your institution’s online and blended learning policy to support adoption and implementation in your institution? (Policy) [Darab & Montazer, 2011; Graham et al., 2013]</td></tr>
</table>

	7. Describe the strategy you are using to implement online and blended learning across your institution. **(Implementation Strategy) [Graham et al., 2013]** - How did you come by the strategy you are using? - What strategy are you using to get buy-in for online and blended learning from faculty and students? 8. Who is advocating/promoting/championing online and blended learning in your institution? Tell me what that looks like. **(Leadership/Advocacy) [Graham et al., 2013]**
BLAF: Structure ***RQ1b*: How do leaders in vocational education institutions in Jamaica describe the institutional structure for OBL adoption and implementation?**	9. Describe the technological infrastructure currently in place to support online and blended learning in your institution. **(Physical/technological Infrastructure) [Darab & Montazer, 2011; Graham et al., 2013]** - Are there any technology tools or equipment that are needed? 10. How does your organizational structure support online and blended learning in your institution? **(Governance) [Graham et al., 2013]** - What does your organization structure look like for online and blended learning? - Who is responsible for the day-to-day implementation of online and blended in your institution? - Who has ownership of online and blended courses in your institution, and why? 11. What institutional processes are in place to support online and blended learning implementation? 12. What mechanisms are in place to evaluate the effectiveness of online and blended learning in your institution? **(Evaluation) [Darab & Montazer, 2011; Graham et al., 2013]** - How do you ensure online and blended learning works as you intended?
BLAF: Support ***RQ1c*: How do leaders in vocational**	13. What types of support are available for trainees and instructors who operate in the online and blended environment? (**Technical/Pedagogical/Content Support)**

education institutions in Jamaica describe institutional support for OBL adoption and implementation?	**[Darab & Montazer, 2011; Graham et al., 2013; Lane 2021]** - Technical - Online Pedagogical/Teaching - Content (e.g. library) - Psycho-social 14. How do you ensure your support services and support staff are ready to meet the needs of your instructors and trainees operating in the online and blended learning environment? (**Admin staff support**) [**Lane, 2021]** 15. What incentives do you offer to instructors or support staff who facilitate or support trainees in the online and blended learning environment? **(Incentive)** [**Graham et al., 2013]**
UTAUT: Facilitating Conditions	16. From where you sit as a TVET institutional leader, how well do you believe your institution's infrastructure and resources are able to facilitate online and blended learning? **(Venkatesh et al., 2016)** - How well do you believe your implementation strategy, institutional structure, and support systems facilitate your purpose for online and blended learning? - Give reasons for your answer.

SEGMENT/STAGE 4 – THE INTERVIEW CLOSEOUT

A. Request for Additional Information – I have completed all the questions I had intended to ask you. Is there anything else you would like to share with me before we finish this interview? Is there any question that I have asked that you would like to extend your response?

B. Show Respect – If there is nothing further, I want to close by expressing my gratitude to you for sharing your thoughts and ideas with me. I want you to know that I respect the views you shared with me today, and nothing shared will be taken for granted. As a practitioner, your experience and expertise are valuable to the knowledge-building and knowledge-sharing process. Everything shared with me will inform my findings in the final analysis.

C. Next Steps - Once I close the interview, I will review the recording and transcribe our discussion. With your permission, I will email you a summary of our conversation highlighting the key points in seven days. At this point, I kindly ask that you review the summary and reply via email indicating your endorsement that what has been captured is an accurate and true reflection of our conversation. If you have any challenges with what is presented, kindly contact me via email, and I will arrange for us to meet and resolve any matter of concern. Please be assured that anything you do not want to be represented in the study will be removed at your request. If you do not provide feedback in 5-7 days after receipt, I will assume you are comfortable with the content of the summary.

D. Close – Again, I thank you for your participation, and I look forward to the impact of your interview on my research findings. We will keep in touch.

Appendix B: Blended Learning Adoption Framework Interview Protocol

Extracted from Graham, C. R., Woodfield, W., & Harrison, J. B. (2013). A framework for institutional adoption and implementation of blended learning in higher education. The internet and higher education, 18, 4-14.

1. Introduction– quickly explain purpose of the study is to better understand the policy and issues surrounding the adoption and implementation of BL at their institution.
2. General questions
    a) How does your institution define blended or hybrid learning?
    b) How did BL get started at your institution?
    c) What issues and challenges have you faced in trying to implement BL at your institution?
    d) What is the primary purpose for adopting BL at your institution? (related to improved pedagogy, increased flexibility for students/faculty, reduced costs, etc.)
3. Strategy
    a) Vision/Plan
        i. Who is driving/promoting the BL initiatives on campus?
        ii. Has the vision/purpose for BL been communicated to the campus community? If so how?
        iii. Does your institution have explicit written policies surrounding blended learning? If so, would you be willing to share them with me.
    b) Implementation strategy

i. Do you have a strategy for implementing BL across your institution? If so, what does it involve?

ii. Do you have a strategy for getting buy-in for faculty and department adoption of BL practices?

iii. Do you have a strategy for measuring progress of your implementation?

iv. How have external constraints such as accreditation affected institutional decisions around blended learning?

4. Structure

a) Institutional policy structure

i. Models—Does the institution have a specific model or architectures that have been adopted for blended learning? If so, explain.

ii. Course development—Does the institution have a course development model for blended learning courses? What does the course development process look like?

iii. Recruitment—How do faculty become interested in and pursue teaching a blended learning course?

iv. Scheduling—How are blended learning courses planned and scheduled?

v. Catalog—Can students see whether a course is blended in the catalog? If so, what does it look like to them? How do blended learning sections of a course look different from traditional sections?

b) Comparison to F2F and online courses

    i. Ownership—Where does ownership for blended learning courses reside? (within the academic departments, with a teaching and learning center, with an online learning or continuing education unit, etc.)
    ii. Are the learning outcomes or competencies the same for blended learning courses as their equivalent courses in the traditional format?
    iii. Instructors—Do the same instructors teach them?
    iv. Student–teacher ratios—How do student–teacher ratio expectations compare between F2F and BL courses?
    v. Assessments—Are students evaluated/assessed the same way in blended learning courses as they are in traditional courses?
    vi. Faculty load—Do BL courses use a different faculty load structure than F2F courses? (e.g., seat hours vs. merit-based progression)

c) Incentive structure

    i. Faculty incentives—Do you offer any incentives to faculty who implement blended learning? If so, what are they (e.g. tenure incentives, funding, equipment, weighing blended learning courses more heavily than regular classes in measuring teaching load)?

d) Physical/Technological infrastructure

    i. What additional technical infrastructure, if any, has been needed to support the blended learning initiative? (libraries, academic services,)

e) Evaluation of implementation

i. What institutional-level evaluations are in place to look at the desired outcomes for blended learning institution wide?

ii. Do you currently have students or professors report the types of blended learning they utilize in their classes?

iii. Do you currently ask students and/or professors to report the level of access, flexibility, and/or quality of blended learning? How?

5. Support

a) Faculty professional development

i. What technological and pedagogical support is available for professors who have decided to teach in a blended learning format?

ii. Have you conducted any training for professors regarding how to adopt blended learning in their pedagogy? Please describe.

iii. If you held initial training, have you had any subsequent seminars or forums for professors to provide updates and/or best practices? Please describe.

iv. Are there plans to increase this support in the future? What are they?

b) Student support

i. What support is needed for students enrolled in BL courses?

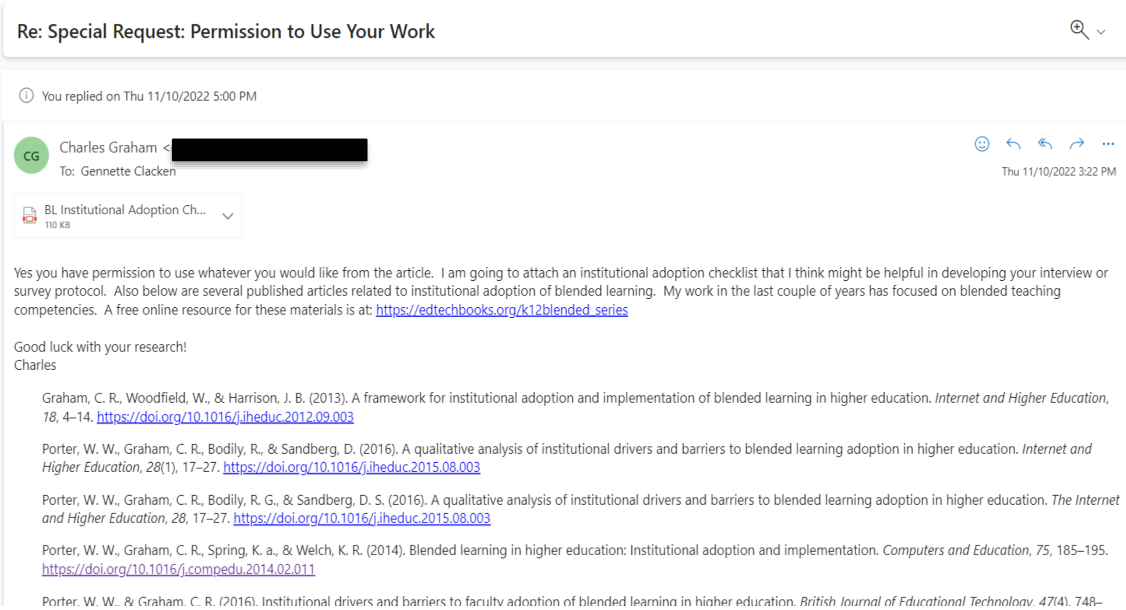
ii. What support is available for students in BL courses?

6. Final questions

a) Any additional institutional issues related to blended learning that you think are relevant to our conversation? If so, please share.

7. Thanks for participating.

Appendix C: Permission Letter from Charles Graham Ph.D.



Re: Special Request: Permission to Use Your Work

You replied on Thu 11/10/2022 5:00 PM

CG Charles Graham <[redacted]

To: Gennette Clacken

Thu 11/10/2022 3:22 PM

BL Institutional Adoption Ch...
110 KB

Yes you have permission to use whatever you would like from the article. I am going to attach an institutional adoption checklist that I think might be helpful in developing your interview or survey protocol. Also below are several published articles related to institutional adoption of blended learning. My work in the last couple of years has focused on blended teaching competencies. A free online resource for these materials is at: https://edtechbooks.org/k12blended_series

Good luck with your research!
Charles

Graham, C. R., Woodfield, W., & Harrison, J. B. (2013). A framework for institutional adoption and implementation of blended learning in higher education. *Internet and Higher Education, 18*, 4–14. https://doi.org/10.1016/j.iheduc.2012.09.003

Porter, W. W., Graham, C. R., Bodily, R., & Sandberg, D. (2016). A qualitative analysis of institutional drivers and barriers to blended learning adoption in higher education. *Internet and Higher Education*, *28*(1), 17–27. https://doi.org/10.1016/j.iheduc.2015.08.003

Porter, W. W., Graham, C. R., Bodily, R. G., & Sandberg, D. S. (2016). A qualitative analysis of institutional drivers and barriers to blended learning adoption in higher education. *The Internet and Higher Education*, *28*, 17–27. https://doi.org/10.1016/j.iheduc.2015.08.003

Porter, W. W., Graham, C. R., Spring, K. a., & Welch, K. R. (2014). Blended learning in higher education: Institutional adoption and implementation. *Computers and Education*, *75*, 185–195. https://doi.org/10.1016/j.compedu.2014.02.011

Porter, W. W., & Graham, C. R. (2016). Institutional drivers and barriers to faculty adoption of blended learning in higher education. *British Journal of Educational Technology*, *47*(4), 748–

Appendix D: Master Codebook

Codes Labels	Code Definitions and Descriptions
Academic and training support	The institution provides academic and training support to instructors and trainees in the OBL environment
Additional technology resources needed to support OBL	The perception that the institution is in need of additional technology resources to successfully implement OBL
Creating and delivering instruction/training	The design, development and delivery of the learning experience (instruction) is part of the institution's OBL implementation strategy
Existing organizational structure not adequate	The perception that the organizational structure (org chart) in the institution is not adequate to support OBL.
Formal and informal general incentives	Formal and informal incentives are given to faculty and staff that perform well generally; noting specific to OBL.
Formal evaluation and QA strategies used	The institution utilizes established/formalized institutional and organizational tools, procedures and strategies to evaluate, and quality assure OBL
Informal evaluation and QA strategies used	The institution leader utilizes informal strategies to evaluate, and quality assure OBL such as troubleshooting problems, random class checks, and following up feedback provided in teacher/student WhatsApp groups.
Institutional Leader as only OBL advocate/champion	Only the institution leader champions/advocates/promotes OBL throughout the institution
IT based infrastructure to support OBL (11)	The institutions reported having IT based infrastructure in place to support OBL implementation
Lack of QA measures specific to OBL (4)	The institution has limited or no mechanism in place to evaluate or quality assure OBL specifically
Leverage exiting institutional context to get buy-in	Institutional contextual realities are used to encourage stakeholder acceptance of and/or commitment to OBL (e.g. replacing retired faculty with younger tech savvy faculty)
Manager and other staff as OBL champions	The institution manager and/or other named members of staff identified as OBL champions within the institution
Monitoring training quality	The institution uses strategies to quality assure what happens in OBL environment and provide good customer service to students
More organizational support needed (3)	The perception held among institution leaders that more support is needed from the organization to facilitate the readiness of facilitating conditions to support OBL adoption and implementation
No official champion identified	No one is championing OBL in the institutional. This lack of champion/advocate ranges from having no one playing that role officially to no one doing it at all.
No specific OBL Incentive	No incentive specifically given for work done in the OBL environment. Incentives that are offered are offered for work done in general

Codes Labels	Code Definitions and Descriptions
OBL as Flexible learning	A definition of OBL that emphasizes flexibility especially for persons separated from the institution by factors such as distance, time and circumstances.
OBL as a mixture of face-to-face and online	OBL is defined as a combination of face-to-face and online instruction. Additionally, there is the perception that OBL is offering the theoretical aspects of a course/program in the online environment while the practical aspects of the course/program are offered face to face.
OBL as providing access	The perception that OBL is a way of providing greater access to skills training
OBL definition documented but not generally accessible	OBL is defined by the institution and found in various places such as student handbook, Policy and Procedural Manual, and other documents, and on social media but some most times these places are not accessible to public
OBL Definition not formalized or documented	The institution's definition of OBL is not documented/published for persons to access or if it exists, there is uncertainty about where to access it.
OBL implied in organizational mission and vision (4)	Vision and purpose for OBL implicitly reflected at the organizational level; not explicit stated
OBL is the use of software	The perception that OBL is the use of various software to facilitate learning
OBL not reflected in institutional or organizational mission and vision	Perception that the vision and purpose for OBL is not reflected in the organizational/institutional mission, vision, and values
OBL policy in place and adequate	The institution OBL policy exists and is perceived as adequate and secures the trust of those who have to interact/use with it.
OBL policy not adequate or non-existent	The perception that the institution's OBL policy was not adequate to serve the institution or reported have not been in place
OBL vision and purpose communicated via personal interaction	OBL vision and purpose communicated through in person interaction such as meetings, stakeholder consultation, etc.
OBL vision and purpose communicated via promotional tools and activities	OBL vision and purpose communicated through marketing and promotion tools and activities such as flyers, announcements, noticeboards etc.
OBL vision and purpose not communicated	OBL vision and purpose not communicated to members and stakeholders
OBL vision and purpose via management tools	OBL vision and purpose communicated through management tools such as performance objectives, emails, and institutional documents
Open and clear communication	Open and clear communication is used as a strategy to prepare administrative/support staff to facilitate trainees and instructors in the OBL environment
Personnel in place for OBL	The institution has at least one person identified to oversee the implementation of OBL.

Codes Labels	Code Definitions and Descriptions
Physical and academic infrastructure in place	The institutions reported having physical and academic resources in place to support OBL adoption and implementation
Processes relating to application and admissions	To support OBL adoption and implementation the institution has processes in place that facilitate student recruitment and admissions
Processes relating to assessment and certification	To support OBL adoption and implementation the institution has processes in place that facilitate assessment and certification
Processes relating to monitoring, evaluation and quality assurance	To support OBL adoption and implementation the institution has processes in place that facilitate monitoring, evaluation and quality assurance
Processes relating to training development and delivery	To support OBL adoption and implementation the institution has processes in place that facilitate training development and delivery
Provide key stakeholders with readiness training	Readiness training/orientation is provided to stakeholders as part of the OBL implementation strategy
Provide ongoing support	The institution provides ongoing support to stakeholders as part of the OBL implementation strategy
Psychosocial support	The institution provides psychosocial and welfare support to instructors and trainees in the OBL environment
Readiness as conducting training	Institutional readiness perceived as conducting training for instructors and trainees
Readiness of instructors, trainers and facilitators	Institution leaders define institutional readiness as the readiness of the instructional staff (other wise known as teachers, instructors, trainers or facilitators) to support OBL adoption and implementation
Readiness of other staff	Institution leaders define institutional readiness as the readiness of other types/categories of staff (E.g. technical support staff, assessors and training managers) to support OBL adoption and implementation
Readiness of resources	Institution leaders define institutional readiness as the readiness of the physical and technological tools and resources needed to support OBL adoption and implementation
Readiness of support systems and mechanisms	Institution leaders define institutional readiness as the readiness as the readiness of institutional support systems and mechanisms for OBL implementation
Readiness of trainees/learners	Readiness of trainees/students to operate in the OBL environment is considered part of institutional readiness
Recruitment, training and capacitation	Recruitment, training, and capacitation are used as strategies to prepare administrative/support staff to facilitate trainees and instructors in the OBL environment
Some processes remained manual	Some of the processes used in the institution to support OBL are manual offline processes (E.g. marking of student registers and submission of teaching claims by faculty).

Codes Labels	Code Definitions and Descriptions
Specific support needed	The perception that improvements are needed in specific types of support such as help desk support and psychosocial support.
Support staff readiness not adequately addressed	The perception that the readiness of support staff was not adequately addressed in their institution
Technical and technological support	The institution provides technical and technological support to instructors and trainees in the OBL environment
Various strategies utilized to get OBL buy-in	Institution leaders use a variety of strategies to get faculty, staff, and students to buy-in or adopt OBL (e.g. providing OBL resources, and emphasizing OBL benefits)
Weak infrastructure and resources	The perception held by some institution leaders that relevant infrastructure and resources to support OBL in their institution were inadequate
Weak strategy and systems	The perception held by some institution leaders that implementation strategies and systems existing in the institution to support OBL were inadequate

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Appendix F: Details of the Phases of Data Analysis

Phase 1: Preparing the Data

After each interview ended, I transcribed the audio recording generated by Zoom® using the verbatim approach. I used the verbatim interview transcription approach to remain as close to the interview experience and data as possible and to ensure that I excluded no thought or idea expressed by the participants from the data corpus. Halcomb and Davidson (2006) justified using a verbatim approach to transcription if the researcher wants to get close to the data. In this phase, I was careful to remove the names of the participants from the transcripts and replace them with aliases such as P1 for participant one and P2 for participant 2 to maintain confidentiality.

After conducting each interview, I created an interview summary for member-checking purposes. The document summarized the participant responses for each question, highlighting the significant points made and direct responses to the question. The summarized responses were presented in tabular form so the participant could easily align the summary of each response they provided to the relevant question asked (Figure H19 provides an example of the tables created). After generating each summary, I emailed it to the participant for them to review and confirm that it was a true reflection of the essence of their responses. Participants had a maximum of 10 days to respond to the member-checking request, after which I sent them a thank you card and a copy of the Blended Learning Adoption Checklist developed by Graham et al. (2013). Only four participants responded to the member checking request, although no participant objected during the interview.

Figure F17

Excerpt from Member Checking Document Sent to Participants

#	Interview Questions	Summary of Participant Responses
1	How did your institution get started in online and blended learning?	The institution started with online and blended learning (OBL) for various reasons. Before COVID, it was necessary to expand training, make training more accessible, decrease costs, and facilitate digitalization. COVID accelerated OBL in the institution as the lack of physical connection challenged face-to-face (F2F) instruction. Post-COVID, the institution also faced a decline in the appetite for F2F training and a lack of availability of quality instructors in the F2F mode. The institution has been offering OBL courses/programs for approximately seven years (2017/2018).
2	What steps did you and your team take to prepare for the implementation of online and blended learning at your institution?	As the institution implemented greater levels of OBL during COVID several steps were taken to prepare for implementation: content was repurposed, faculty and staff were provided with the necessary resources, learning resources such as library resources were provided, administrative and quality assurance mechanisms were put in place, and policies and procedures were revised. The institution also provided orientation for the students/trainees and marketed the programs to be offered via OBL.

Note. This figure provides a sample of how interview summaries were created and formatted.

After participants confirmed the interview summary or after the 10 days for review had elapsed, I uploaded the transcript and transcript summary into MAXQDA, preparing for the subsequent analysis phases. I also double-checked the accuracy of the transcript against the recording to ensure that the transcription was error-free. Double-checking the transcripts also helped me to get reacquainted with the data collected from each participant, given the time that would have elapsed between the interview and uploading the transcript into MAXQDA.

Phase 2: First-Cycle Coding

In first-cycle coding, I used three coding methods: a) structural coding, b) analytical coding involving descriptive and in vivo coding, and c) refinement of the analytical codes to align with the structural codes. Before coding the interviews, I used the features in MAXQDA to create structural codes and subcodes based on the content and concepts from the interview protocol and, by extension, the conceptual framework. I created these structural codes and subcodes to easily organize, retrieve, and apply the analytical codes I would later create from my interview transcripts. According to Saldaña (2016), researchers use structural codes to label and index chunks of data for organizational and access purposes, and their use is appropriate for studies utilizing a semistructured interview protocol. Accordingly, the structural codes I created closely aligned with the content and organization of the questions in the interview protocol. For example, I created a code called *IQ 1-3: Background* and corresponding sub-codes, which I labeled *Factors Influencing OBL (IQ#1), OBL Implementation Steps (IQ#2)*, and *Description of IR (IQ#3)*. These codes corresponded directly to questions 1-3 in my interview protocol. Figures H20 and H21 demonstrate how the interview protocol and the list of structural codes I created in MAXQDA are related.

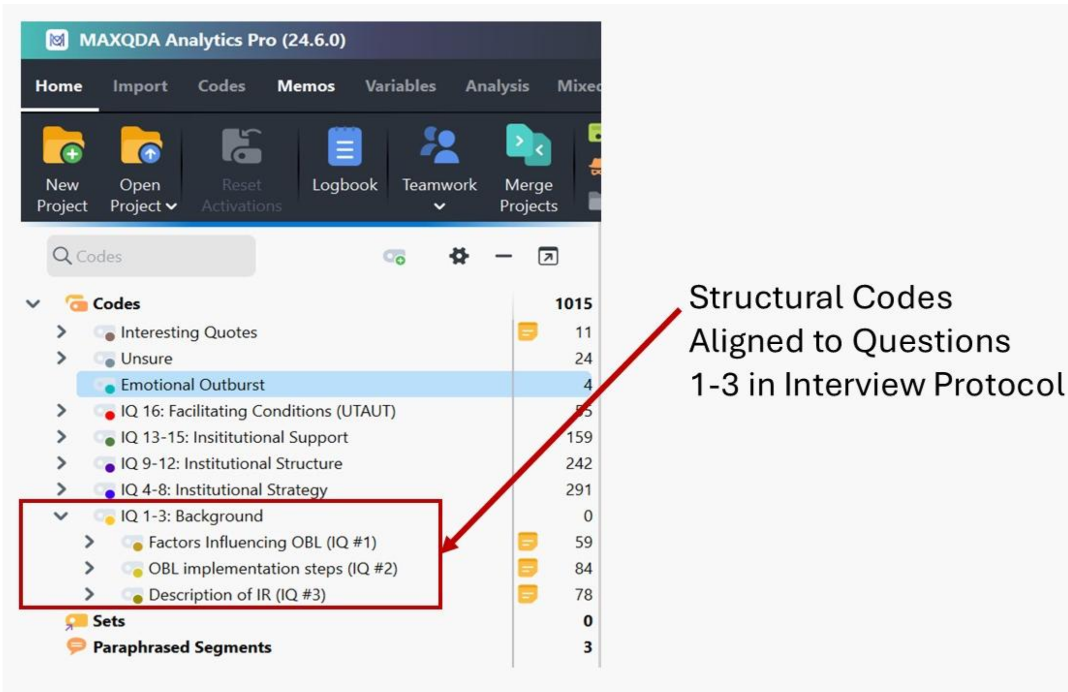
Figure F18

Excerpt from Interview Protocol Showing Sample of Content and Structure of My Interview Questions

General Questions	1. How did your institution get started in online and blended learning? **(Background)** - How long has your institution been offering online and blended learning courses or programs? 2. What steps did you and your team take to prepare for the implementation of online and blended learning at your institution? **(Background)** 3. What do you know about institutional readiness for online and blended learning? (**Background**) - How would you define institutional readiness for online and blended learning adoption and implementation? - Briefly describe what institutional readiness looks like in your institution.
Questions Aligned to the Conceptual Framework	
BLAF: Strategy ***RQ1a*: How do leaders in vocational education institutions in Jamaica describe the institutional strategy for OBL adoption and implementation?**	**4.** How does your institution define online and blended learning for its members and stakeholders? **(Background/ Strategy - Definition) [Graham et al., 2013]** - Where can the definition be found? **5.** How has the vision/purpose for online and blended learning been communicated to the members and stakeholders of the institution? **(Vision/Plan) [Graham et al., 2013]** - To what extent is online and blended learning reflected in your institution's mission, vision, and values? 6. How would you describe the adequacy of your institution's online and blended learning policy to support adoption and implementation in your institution? **(Policy) [Darab & Montazer, 2011; Graham et al., 2013]**

Figure F19

Structural Codes Created in MAXQDA

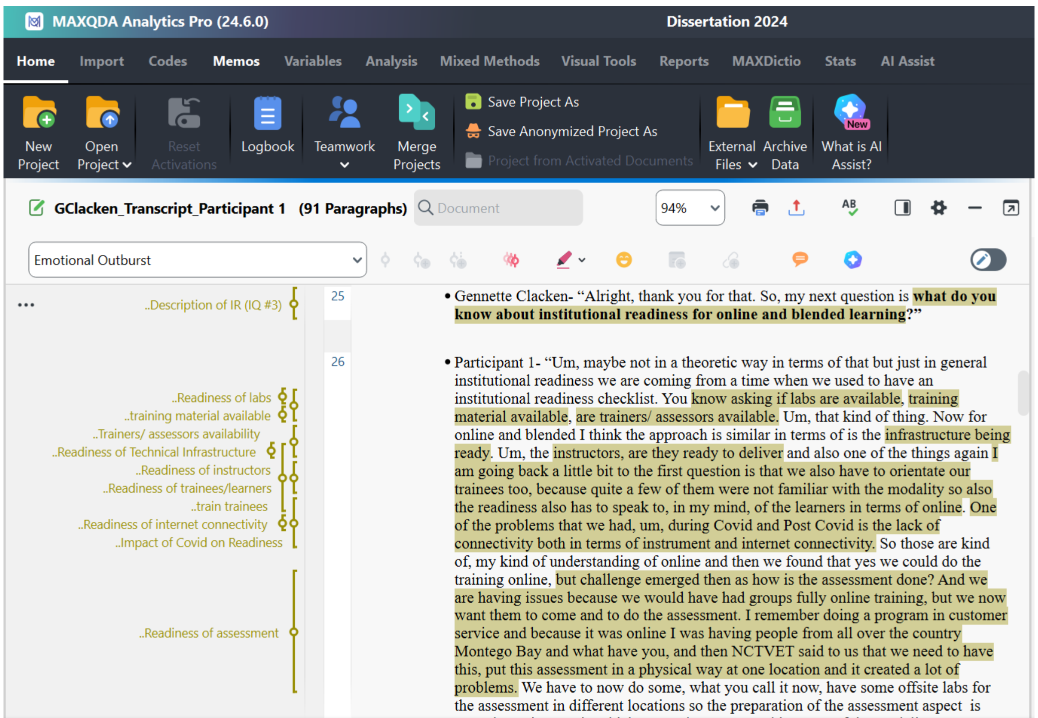


Although I did not plan to utilize structural codes in MAXQDA as part of my initial coding methods, there are three main reasons I created them before I started to code my interviews. Firstly, as I immersed myself in the data I collected and the principles of qualitative data analysis, I anticipated that I would create many codes from my transcripts and would need a mechanism to manage those codes. Qualitative data collection often results in rich, thick data (Elliott & Timulak, 2021; Merriam & Tisdell, 2016), and as a novice researcher, I wanted to ensure that I did not become overwhelmed with the volume of codes I would create from the interview transcripts. Secondly, I found precedence for using structural codes as part of the first-cycle coding activities when using MAXQDA (see Engdawork et al., 2024; Santos et al., 2021; Scheidt et al., 2018), and that made me confident that employing their use was a good idea. Thirdly, I wanted to make the coding experience less cumbersome as possible. As a novice researcher working alone, I tried to use coding strategies that would help simplify my coding experience. Given the process for creating codes in MAXQDA, I surmised that creating structural codes before coding the transcripts would make organizing my codes easier than doing so after coding the transcripts. Creating the structural codes first was also in keeping with Saldaña's (2016) description of how structural codes are applied. The reader should note that structural coding "both codes and initially categorizes the data corpus" (Saldaña, 2016; p.98). However, my use of structural codes in first-cycle coding was primarily organizational and not analytical.

After I created the structural codes, I then coded each transcript individually and aligned those codes to the structural codes previously created. As indicated in Chapter 3, I read each transcript line by line within the software and identified, highlighted, and coded meaning units within the data. In this phase of first-cycle coding, I used two approaches to analytical coding: descriptive coding and in vivo coding. Saldaña (2016) recommended descriptive coding for novice researchers, especially those using qualitative analysis software. There were also occasions where the actual words of the participants were more appropriate to be used to represent meaning units. On those occasions, I used *in vivo* coding to condense the data. Figure H22 shows how I highlighted and coded excerpts from an interview transcript within the software, where the labels on the left represent the names of the codes given to the highlight interview segments on the right.

Figure F20

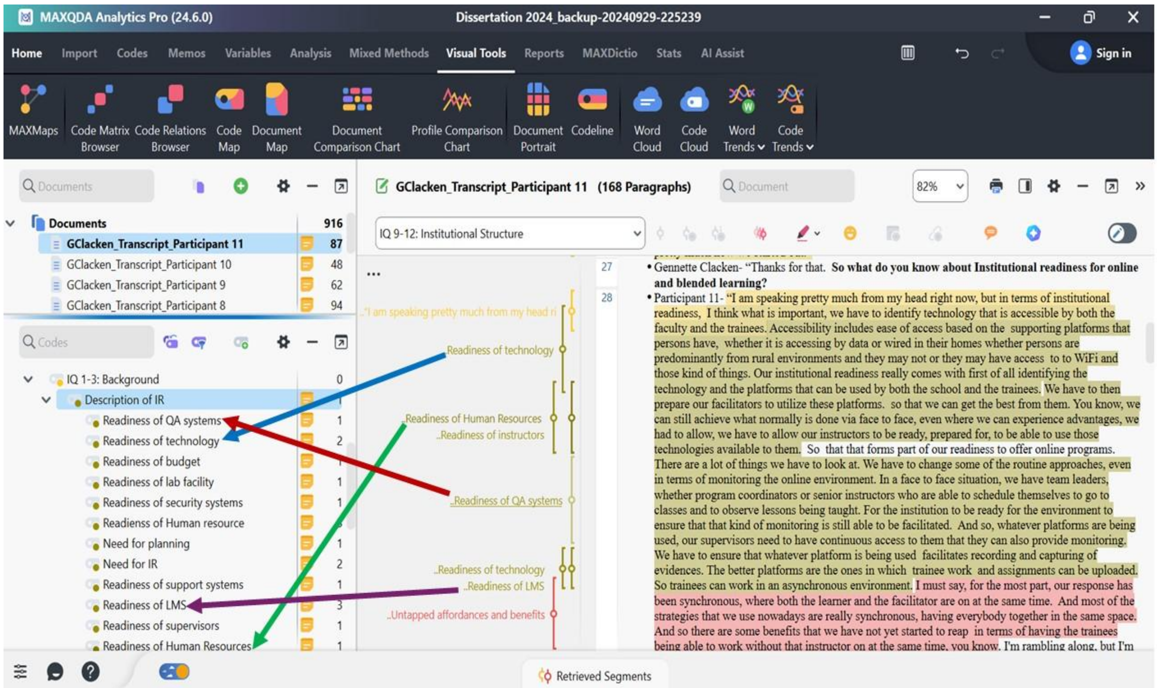
Example of Descriptive Codes Created in MAXQDA



After creating each code in a transcript, I aligned it to its corresponding structural code or subcode to keep the data organized. As stated earlier in this section, I aligned each structural code to an interview question. As such, I aligned the codes I generated from the participant responses to each question to the structural code relating to that question. Figure H23 shows how I used the software tools to align codes in the transcript to the structural codes I created at the start of the coding process.

Figure F21

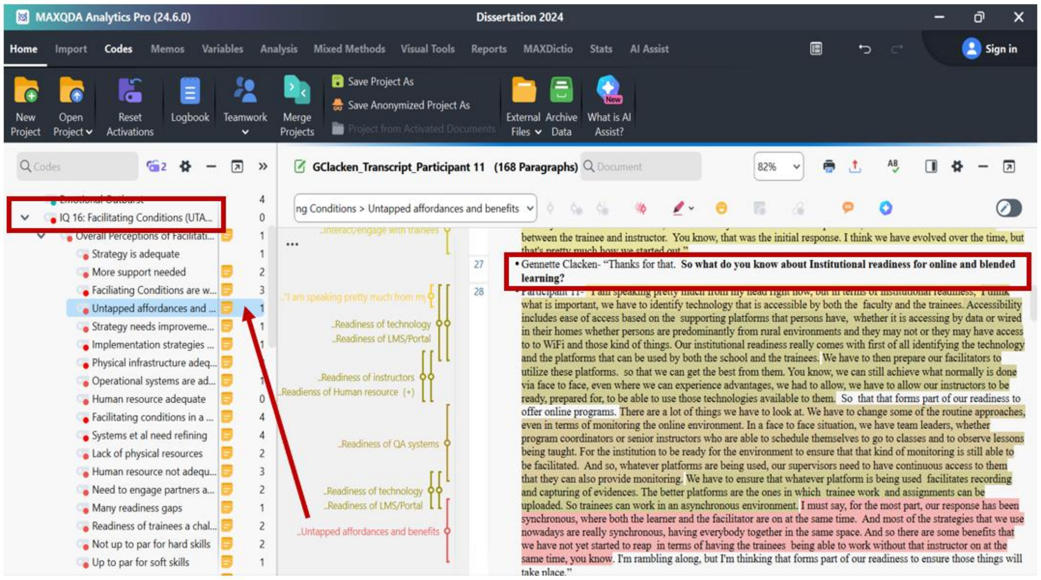
Examples of Descriptive and Other Codes Aligned to Structural Codes



Where participant responses to one question resulted in codes applicable to another, I aligned those codes to the structural codes for both questions or the most appropriate ones. For example, in responding to question 3, P11 made a critical comment about the underutilized benefits and affordances of OBL. I aligned the code generated from that comment to the structural code relating to question 16, which asked about the general readiness of facilitating conditions in the institution for OBL (see Figure H24).

Figure F22

Aligning Codes from Transcripts to the Most Appropriate Structural Codes



In first-cycle coding, I also created other structural codes to organize codes I made that did not directly relate to existing structural codes but represented a unit of meaning I wanted to note for later analysis. For example, I created a structural code called *emotional outbursts*, under which I placed emotionally charged utterances made by participants, such as, “Oh God!” or “Ah, they can’t afford.” I also created a structural code called *Interesting Quotes* to capture interesting expressions made by the participants and a code called *Unsure* for meaning units that did not relate directly to the interview questions but revealed a vital thought or idea.

I applied these first-cycle coding strategies to all 12 interview transcripts. At the end of the initial coding, I created approximately 400 codes from over 1000 coded interview segments or excerpts. After completing the first coding cycle, I submitted all my coded transcripts to my Dissertation Committee for review and feedback.

Phase 3: Second Cycle Coding

I began my second-cycle coding activities by reviewing the codes I created for each question I asked in my interview. Unlike first-cycle coding, where data analysis was undertaken interview by interview, I decided to examine all the codes I created for each interview question to manage the many codes and coded segments I had created. This approach is in keeping with Saldaña's (2016) description of the goals of second-cycle coding: reorganizing and condensing the data set.

Having decided to approach second-cycle coding question by question, I then determined the order in which I would analyze the questions and their corresponding codes. Rädiker and Kuckartz (2020) advised researchers who use MAXQDA to determine the order of the codes to be examined based on their importance to the research question. They posited that researchers should do this to keep data analysis focused on the research question and maximize time. Ordering the analysis this way was not difficult because I had already used structural codes to organize my analytical codes and could easily explore my analytical codes in groups based on my interview questions. Table J1 outlines the order in which I processed my codes based on their importance to my research question and subquestions.

Table F7

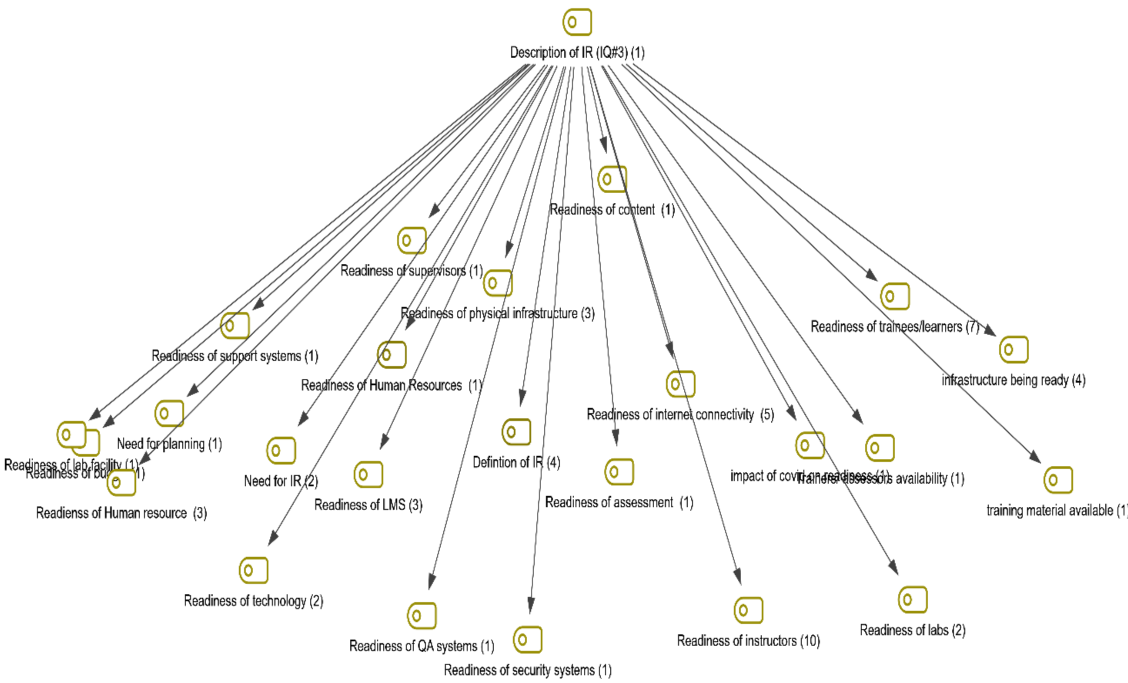
Code Processing Order Relative to the Importance of Code to Research Question

Order of Analysis	Interview Question/s (IQ) Related to Code	Focus of Interview Question	Research Question Alignment
1	IQ 4, 5, 6, 7, 8	Description of various aspects of Institutional Readiness related to strategy	RQ1a
2	IQ 9, 10, 11, 12	Description of various aspects of Institutional Readiness related to structure	RQ1b
3	IQ 13, 14, 15	Description of various aspects of Institutional Readiness related to support	RQ1c
4	IQ 3	Definition of Institutional Readiness	RQ1
5	IQ 16	Description of Institutional Readiness in the Specific Context	RQ1

Next, I used the *Creative Coding Tool* in MAXQDA to generate visual representations of the codes associated with each question to begin the focused coding process. Saldaña (2016) recommended focused coding for almost all types of qualitative analysis as it facilitates categorizing coded data based on thematic or conceptual similarity or difference. Because I utilized homogenous purposive sampling to select my participants, I felt that using focused coding in my second cycle coding activities would help me quickly identify areas of common convergence or divergence in the data set. Figure H25 provides an example of the software-generated visual tool representing the codes associated with an interview question. At the top of the image is the structural code representing the corresponding question from the interview protocol, followed by arrows leading to the related analytical codes created from the analysis of the interview transcripts.

Figure F23

Visual Representation of Descriptive et al. Codes Aligned to an Interview Question



After creating the visual representation, I removed the arrows that linked each code to the corresponding structural code so that I could look at the data without any visual biases or hindrances (see Figure H26). I then grouped my codes based on the similarities and differences in the essence and meaning of each code. Where codes overlapped (i.e., they had different labels but had the same meaning), I collapsed or merged them to avoid redundancy. Next, I labeled each group of codes based on the meaning of the codes in the group, and these labels became my data categories or subcategories. I named categories and subcategories using a mixture of *a priori* and emergent category labels. Figures H26 to H28 show my progress from descriptive et al. codes to categories and subcategories.

Figure F24

Example of Descriptive et al. Codes (Arrows Removed)

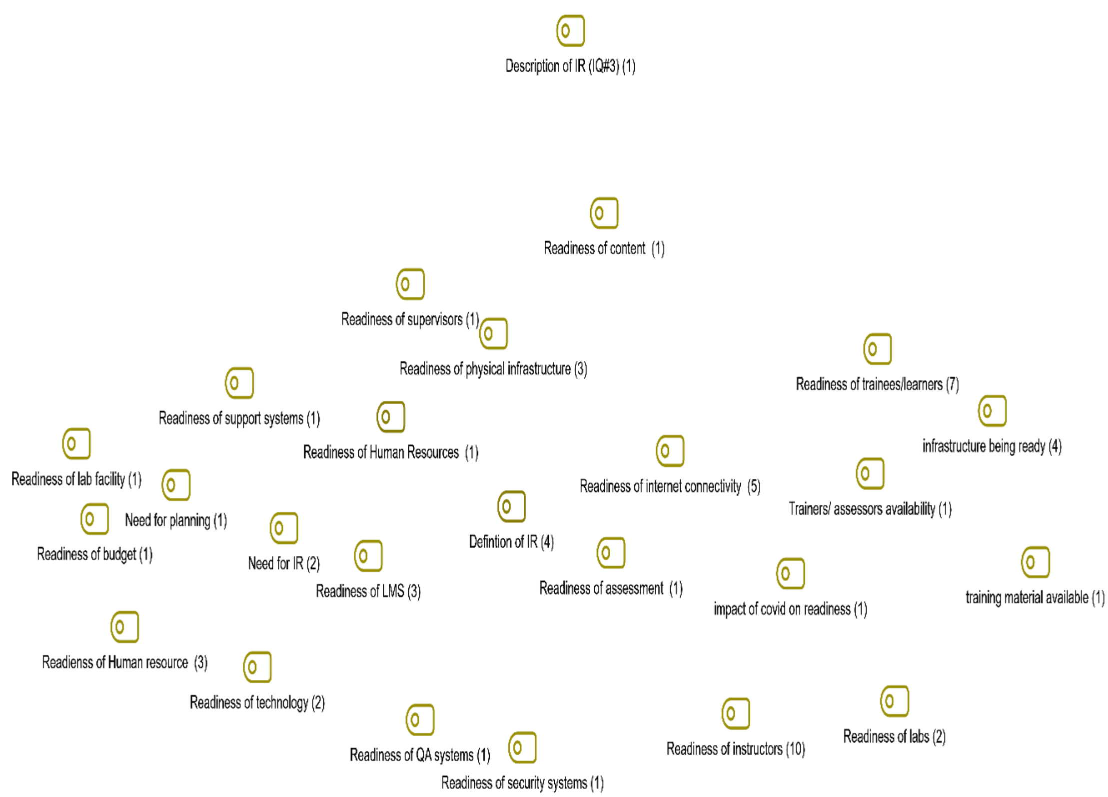


Figure F25

Example of Grouped Codes

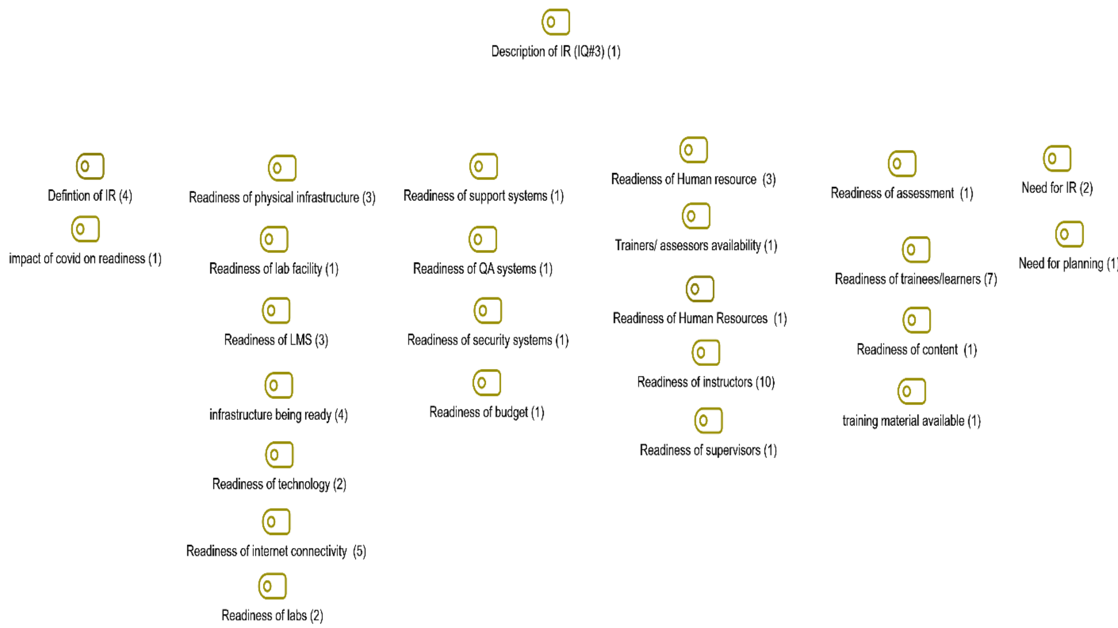
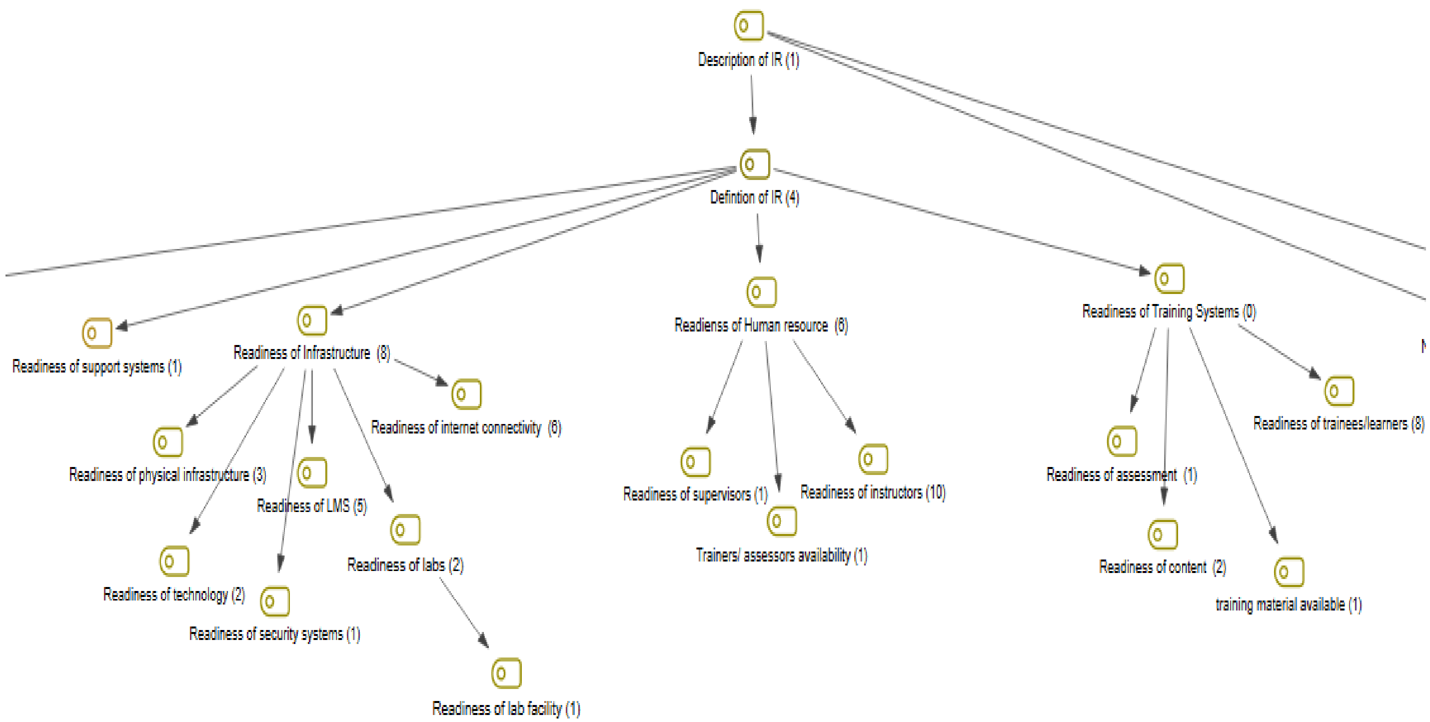


Figure F26

Example of Categorized Codes

IQ #3 - Description/Defintion of Institutional Readiness for OBL



After categorizing my data, I continued to use the focused coding approach to organize my data into groups of more frequent or significant codes. According to Saldaña (2016), researchers can use focused coding to highlight the codes that capture the key patterns in the analysis and identify the less significant codes they can eliminate from the data analysis. To identify those significant codes, I utilized the *Code Matrix Browser* in MAXQDA to visually represent the frequency of the codes that appeared in each category or subcategory. Figure H29 shows how MAXQDA captured the frequency patterns for the codes associated with one interview question. In the image, the first column lists the categories identified in the data set for the interview question relating to the description of institutional readiness. The remaining columns represent participant responses in each interview transcript. Figure H29 shows that all 12 participants described institutional readiness in relation to infrastructure readiness, but only three participants spoke about strategic readiness.

Figure F27

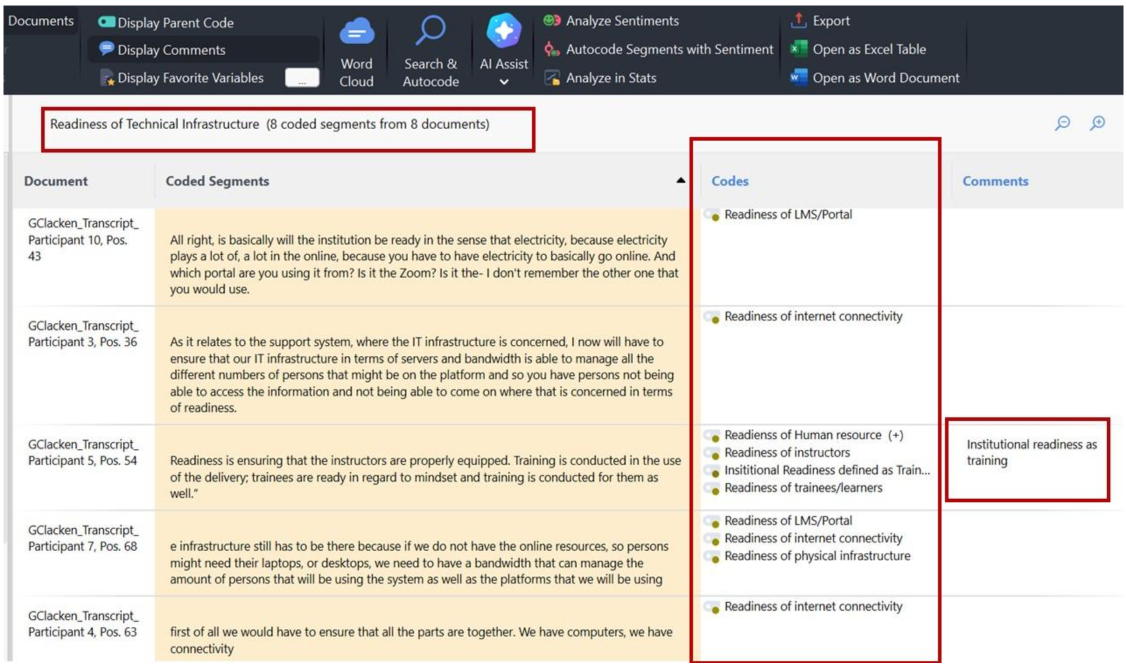
Example of Key Code Frequency Patterns in MAXQDA

After completing the focused coding activities, I initiated the axial coding phase of my second coding cycle to clean and reassemble my data set and identify relationships in the data (see Saldaña, 2016). According to Chakraborty and Dehlinger (2009), axial coding establishes relationships between categories and subcategories. Researchers also use axial coding to refine a category's properties and dimensions (Saldaña, 2016). At this point, I re-examined the coded excerpts related to the categories identified in the previous step. I did so to identify any relationships between and among meaning units within excerpts and other codes and categories. I also used the comment feature in MAXQDA to record my thoughts about any relationships I identified. By examining these relationships, I could align the data to my *a priori* and emergent categories. Figure H30 demonstrates how I used the *Smart Coding Tool* in MAXQDA to identify and examine the relationship among codes. In this example, I examined the coded interview segments relating to the Readiness of Technical Infrastructure category and identified other codes embedded in each segment. I also used the comment feature to note any other relationships I identified.

After completing the axial coding phase, I ended up with 378 codes. To condense my codes further I repeated the focused and axial coding activities a few more times to create broader categories and codes while at the same time refine the meaning associated with each category and code. After the additional rounds of focused and axial coding I was able to reduce the number of codes to 54 and the number of categories to 19. Once I had completed refining my categories and codes, I moved to phase four of the process where I created themes.

Figure F28

Example of Axial Coding



Phase 4: Theming the Data

After I concluded second-cycle coding, I created themes from the data. According to Saldaña (2016), themes result from qualitative coding, categorizing, and analytically reflecting on the data. Researchers do not discover themes but create them by interacting with the data (Saldaña, 2016). As such, theming demonstrates the knowledge-creation aspects of qualitative inquiry. After the second coding cycle, I re-examined the refined categories, codes, coded interview segments, and the relationships I identified between and among them to formulate the themes that answered my research question and subquestions. I looked for frequencies, similarities, differences, and missing data (see

Ryan & Bernard, 2003). I also looked for additional patterns and relationships in the data and ways to further condense the data into phrases and sentences that captured the essences and meanings that emerged from my analysis. I then used these phrases and sentences to formulate themes. Appendix G provides the full list of codes, categories and themes I created from the data. It shows how I moved my data analysis from codes to categories and themes.

Appendix G: List of Codes, Categories, and Themes

Table G8

From Codes to Categories to Themes

Phase 2: First Cycle Coding		Phase 3: Second Cycle Coding	Phase 4: Theming
Structural Codes	Descriptive and In Vivo Codes with Frequency	Categories	Theme/s
Institutional Definition of OBL (IQ#4)	• OBL as providing access (6) • OBL defined as flexible learning (7) • OBL as a mixture of face-to-face and online (4) • OBL is the use of software (4)	OBL as making training accessible OBL as incorporating technology	Institution Leaders in Vocational Institutions in Jamaica Described Institutional Strategy for OBL as Focused on Training
Description of OBL implementation strategy utilized (IQ#7)	• Creating and delivering instruction/training (7) • Monitoring training quality (7) • Provide key stakeholders with readiness training (4) • Providing ongoing support (3)	OBL implementation focused on training delivery	
How OBL vision/purpose has been communicated (IQ#5)	• OBL vision and purpose communicated via personal interaction (6) • OBL vision and purpose communicated via promotional tools and activities (5) • OBL vision and purpose communicated via management tools (6) • OBL vision and purpose not communicated (3)	Multi-faceted approach to communicating OBL vision and purpose	Institution Leaders in Vocational Institutions in Jamaica Described Institutional Strategy for OBL as Prioritizing Stakeholder Buy-in
Description of OBL implementation strategy utilized (IQ#7)	• Various strategies utilized to get OBL buy-in (6)	Deliberate OBL buy-in strategies employed	

Phase 2: First Cycle Coding		Phase 3: Second Cycle Coding	Phase 4: Theming
Structural Codes	Descriptive and In Vivo Codes with Frequency	Categories	Theme/s
	• Leverage exiting institutional context to get buy-in (3)		
OBL championing in the institution (IQ#8)	• Manager and other staff as OBL champions (6) • Institutional leaders as only OBL advocate/champion (2) • No official champion identified (4)	Key internal stakeholders champion OBL	
Institutional Definition of OBL (IQ#4)	• OBL definition not formalized or documented (6) • OBL definition documented by not generally accessible (5) •	OBL definition non-existent or inaccessible	Institution Leaders in Vocational Institutions in Jamaica Described Institutional Strategy for OBL as not Prioritizing Policy and Governance.
How OBL vision/purpose has been communicated (IQ#5)	• OBL not reflected in institutional or organizational mission and vision (7) • OBL implied in organizational mission and vision (4) •	OBL not clearly reflected in mission and vision statements	
Adequacy of the institutional OBL policy (IQ#6)	• OBL policy in place and adequate (5) • OBL policy not adequate or non-existent (6)	Mixed views about OBL policy and its adequacy	
Description of Existing/Needed Technology Infrastructure (IQ#9)	• IT based infrastructure to support OBL (11) • Physical and academic infrastructure in place (3) • Additional technology resources needed to support OBL (11) •	OBL resources available but more needed	Institution Leaders in Vocational Institutions in Jamaica Described Institutional Structure for OBL as Adequate, Multifaceted and Requiring Improvement.
Organizational structure in place for OBL (IQ#10)	• Personnel in place for OBL (12)	Organizational structure to support OBL in most institutions	

Phase 2: First Cycle Coding		Phase 3: Second Cycle Coding	Phase 4: Theming
Structural Codes	Descriptive and In Vivo Codes with Frequency	Categories	Theme/s
Institutional Processes to Support OBL (IQ#11)	• Existing organizational structure not adequate (7) • • Processes relating to training development and delivery (10) • Processes relating to application and admission (8) • Processes relating to assessment and certification (6) • Processes relating to monitoring, evaluation, and QA (4). • Some processes remained manual (3)	Varied and holistic processes in place	
Mechanisms for OBL Quality Assurance (IQ#12)	• Informal evaluation and QA strategies used (7) • Formal evaluation and QA strategies used (9) • Lack of QA measures specific to OBL (4)	Mix of QA strategies not specific to OBL	
Available support for OBL Users (IQ#13)	• Academic and training support (11) • Technical and technological support (9) • Psychosocial support (8) • Specific support needed (3) •	Three types of OBL user support	Institution Leaders in Vocational Institutions in Jamaica Described Institutional Support as Varied with Specific OBL Incentives Non-Existent
Readiness of support services and staff (IQ#14)	• Recruitment, training, and capacity building (9) • Open and clear communication (5) • Support staff readiness not adequately addressed (3)	Support staff somewhat prepared	

Phase 2: First Cycle Coding		Phase 3: Second Cycle Coding	Phase 4: Theming
Structural Codes	Descriptive and In Vivo Codes with Frequency	Categories	Theme/s
Incentives for OBL faculty and support staff (IQ#15)	• No specific OBL incentive (10) • Formal and informal general incentives (8)	No incentive for OBL	
Description/definition of Institutional Readiness (IQ #3)	• Readiness of Resources and Systems • Readiness of other staff (3) • Readiness of trainees/learners (7) • Readiness as conducting training (3) • Readiness of resources (12) • Readiness of support systems and mechanisms (4)	IR as people readiness Readiness of Resources and Systems	Institution Leaders in Vocational Institutions in Jamaica Described Institutional Readiness for OBL as the Readiness of People and Resources
IQ 16: Facilitating Conditions (UTAUT)	• Weak infrastructure and resources (11) • Weak strategy and systems (6) • More organizational support needed (3)	OBL facilitating conditions generally inadequate	Institution Leaders in Vocational Institutions in Jamaica Described Facilitating Conditions in Institutions as Inadequate