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The Impact of Professional Development and Administrative Support on the Motivation and Engagement of Caribbean Faculty and Students in Online Programs

By

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THE IMPACT OF PROFESSIONAL DEVELOPMENT AND ADMINISTRATIVE SUPPORT ON THE MOTIVATION AND ENGAGEMENT OF FACULTY AND STUDENTS IN ONLINE PROGRAMS

A Scholarly Research Project

Submitted in Partial Fulfillment of the Requirements for the Degree

Doctor of Education

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ABSTRACT

This study explored the impact of professional development and administrative support on faculty and student motivation and engagement. This pragmatic exploratory mixed-method research employed a combination of quantitative and qualitative methods for data collection, using surveys and semi-structured interviews. The study's findings indicated that professional development is still the most popular instrument for skill delivery and upgrade; it doesn't sufficiently encourage or address the faculty's needs. However, it resulted in the increased use of the hybrid digital instruction model and instructor-student communication and feedback. While participants did increase their use of more student-centered teaching strategies and skills after professional development, there was a decline in the faculty's motivation. In addition, faculty indicated an interest in continuous support such as web training, peer community, and best practices, available in a flexible online environment.

While administrative support components such as policy, technological infrastructure, technical support, and professional development are essential in maintaining the online learning education program, technical support was identified as the lead factor responsible for student motivation and performance. As online distance learning enrollment in Higher education continues to increase globally, more effective avenues of professional development are needed to motivate faculty and keep them current with the skills.

DEDICATION

This study is dedicated to the following people without whom none of this would be possible: to my mother, Veronica Hanson, my children: Nicholas Dixon, Gabrielle Law, and Rachel Vassall who allowed me the time, support, and patience to pursue my academic goals while I juggled family and research. I would also like to thank Haven Rolle, who encouraged me when my spirits were low, and my sister Eva Williams who cheered me towards my goals. Thanks to you all and all my love.

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CHAPTER 1: INTRODUCTION

Statement of the Problem

In 2017, of the 19.7 million students enrolled in courses at degree-granting postsecondary institutions, 6.6 million were enrolled in some form of distance education or online learning course (National Center for Education Statistics (NCES), 2020).

According to Xu et al. (2019), the United States higher education system has seen a steady increase in distance education through online courses in the past two decades. As more colleges offer online education courses each year, more students take them than ever before. Almost two-thirds of college administrators believe that developing online courses is important to their institution's long-term strategy (Xu et al., 2019). These enrollment figures are a significant motivation for colleges and universities globally to adopt distance education, including colleges and universities in the Caribbean. While many higher education institutions in other countries hurried to embrace distance education evolution, some countries in the Caribbean lagged behind due to the high cost of implementation and the lack of the necessary infrastructure due to the topography of some countries.

Caribbean nations or territories are sometimes made up of numerous islands, islets, reefs, and cays that are physically scattered, so digital technologies may be the best way to increase educational services across the region (Boisselle, 2014). However, as most Caribbean territories are still considered developing or under-developed, they lacked the structural and economic capacity to develop the systems necessary to pursue distance education (Boisselle, 2014). Higher education institutions in the developed world and those within the developing Caribbean share

the mandate of promoting higher education as a public good critical to the continued advancement of the region's human capital and economies (Leo-Rhynie & Hamilton, 2007).

The ability of tertiary or higher education institutions to develop their country's human capital is determined by the accessibility of higher education opportunities for its citizens. However, when the population is distributed among several landmasses like it is in the Caribbean island of 'Bird island' (a pseudonym), access to higher education is severely hampered. It is difficult for the college to fulfill its mandate to educate and develop the populace and reduce its dependence on an expatriate workforce. The advent of distance education in that Caribbean island could help overcome topography issues by increasing access to tertiary education for its citizens in the various islands of the archipelago.

'Bird Island" (a pseudonym) has an approximate population of 36,000 scattered across a few habitable islands with only one higher education institution with two campuses and a total student enrollment of 1800 and 40 faculty members. The problem for this institution in pursuing the adoption of distance education is how to successfully implement the program by transitioning its current staff from traditional to online instruction. Therefore, the crux of the problem is how online faculty's professional development and administrative support can motivate them to develop their online teaching skills, so it subsequently motivates and engages students in the program.

Brief Review of the Literature

The ubiquitous use of technology and its global influence have given rise to a new type of learner that demands technology integration in education. These new, non-traditional learners, consisting of working adults with dependents, are a more racially and socio-economically diverse group than the traditional 18- to 24-year-old college students (Department of Education

& Office of Educational Technology, 2017). Unlike traditional learners, non-traditional learners are more interested in educational programs that meet their current employment needs (Johnson et al., 2000; Johnson et al., 2008). Higher education institutions, in response to the needs of these non-traditional learners, higher education commenced offering them part-time instruction and eventually online instruction. However, as enrollment in online programs increased, critics questioned the efficacy of online courses, citing high attrition and questionable learning outcomes (Johnson et al., 2000; Johnson et al., 2008).

The growth in online learning inspired studies into the variables impacting successful learning outcomes revealed that variables such as course design, professional development, administrative support, and faculty's attitude such as acceptance and approval of online learning, was integral to its success (Bolliger & Wasilik, 2009; Brooks, 2003). Studies have also revealed that the student attrition rate for online courses is sometimes five to seven times higher than campus-based programs (Woey et al., 2014). These studies revealed that learners got lost in complex instructional designs, which makes interaction with course content more difficult for the learner. However, a standardized and straightforward course design increases student-to-content interaction and positively impacts online learning experiences (Lee, 2008; Swan, 2001). Another aspect of course design impacting online course success is the absence of the standardization of course design. The study discovered that modules with similar structure and navigation across courses positively impacted students' satisfaction, learning level, and perception of online learning experiences (Dhilla & Sarah, 2017). Therefore, the researchers recommend using a consistent course design as it aids student learning and retrieval of course content (Richardson & Swan, 2003).

The successful implementation of distance education depends on the physical and technological infrastructure, faculty professional development, and a supportive environment for students and faculty. The faculty's attitude and preparedness to design, instruct, and assess in the online format are integral to the adoption and success of distance or online teaching and learning Clay (1999). Clay (1999) explains why some faculty embrace distance education efforts while others resist due to a deficit in knowledge and skill in online teaching.

Reilly et al. (2012) posit that most faculty teach traditionally because that is how they were taught, while their students were exposed early to a plethora of technology and online learning since elementary school. Reilly et al. (2012) explain that faculty development refers to planned activities designed to improve the knowledge, attitudes, and skills essential to the performance of the instructor role. McQuiggan (2016) suggests that the goal of faculty development is to develop and support a dedicated, skilled (competent), and confident faculty to address the instructional needs of the learners. According to the authors, the benefits of faculty development are increased enrollment, student and faculty satisfaction with the online teaching experience, and faculty's increased motivation to teach online.

Research Purpose and Questions

The purpose of this action research study is to examine how professional development and administrative support impact faculty motivation and course design skills and how this subsequently affect student motivation and engagement in online courses. This research intends to test the hypotheses that online faculty's professional development and administrative support can positively impact course design, student motivation, and student engagement in online courses.

The four research questions which guide the study are: 1) What faculty skills, experiences, and attitudes aid or hinder the transition to designing and instructing online?; 2) How can professional development help faculty transition to designing and instructing online?, 3) How can administrative and technological infrastructure support the motivation and success of faculty and students in online programs? and 4) What additional types of support and development does faculty desire to help them continue to develop their online teaching skills?

Significance of the Study

Although there are a few studies on the professional development of online faculty, there are none on the professional development of Caribbean instructors in preparation for online instruction.

This study will benefit higher education administrators in the Caribbean interested in adopting or implementing a distance education program into their institution. It will also assist Caribbean faculty interested in adopting best practices or administrators desirous of revising existing distance learning programs. This study will also benefit training consultants interested in training online faculty and instructional designers interested in aligning design with technology, pedagogy, and content.

Summary

This chapter introduced the study's research problem, provided a brief review of the literature related to the research problem, and presented the study's purpose and research questions before closing with a brief discussion of the significance of the study. Chapter 2 will present a detailed review of the literature related to the study's research problem, purpose, and

questions. Chapter 3 will describe the study's research methodology and methods; Chapter 4 will report and discuss the study's findings; and Chapter 5 will include conclusions, offer implications for practice, make recommendations for future research, and discuss the study's limitations.

CHAPTER 2: LITERATURE REVIEW

Literature Review

Background

Roffe (2004) defines distance education as a teaching method where the student and instructor are physically separated and a combination of technologies, including the internet, are used. However, today's distance education version is an online education that uses computers and the internet as the delivery mechanism, with at least 80% of the course content delivered online (Allen et al., 2011; Shelton et al., 2005).

As institutions globally increase their adoption of distance or online education, faculty with a long history of traditional instruction struggle to transition to online instruction. Many institutions in the Caribbean realized that the successful adoption of their online learning programs was inextricably linked to faculty's attitude and course development competency. So, the challenge for these Caribbean countries is how to successfully transition faculty that have traditionally taught for their entire career to develop, design, and teach online courses successfully. Therefore, the problem is how can professional development and administrative support of online faculty impact student motivation and engagement in online courses.

When implementing online education, administrators should consider aligning their online distance program components with the student-centered Higher Education ecosystem of the US Department of Education. The Higher Education ecosystem could be used to inform

administrative decisions on creating a supportive online learning environment, providing technological support services, and utilizing Learning Management Systems (LMS) to manage the courses. According to the U.S. Department of Education, Office of Educational Technology (2017), the student-centered ecosystem suggests that distance education be aligned with: students' interests, be affordable, yield a return on their investment, use diagnostic and adaptive tools to prepare learners for higher education, have a flexible schedule, access to high-quality resources to assist them in being successful, include communication software and LMS that provide data to help faculty assist students in gaining a meaningful education that applies to life and work/ career while giving learners support and autonomy.

According to Martin et al. (2019a), the implementation of online education occurs in three phases: foundation, development, and maintenance. In the foundation stage, the policy is drafted, which sets the foundation for the operation and integration of the program into the institution's strategic plan. In the development stage, the infrastructure is installed, followed by the maintenance stage, which focuses on ongoing upkeep and upgrades to maintain the reliability and practical functionality of the system.

Administrative Support

Administrative support is integral to the foundation and success of the online distance education program (Mertler, 2019). While content and pedagogy determine the quality of instruction, one should not underestimate the influence of administrative support services such as policy and procedures on faculty behavior and the quality of online teaching and learning (Hammond et al., 2020). Administrative support factors that impact online faculty include instructional technology or infrastructure, technical support, faculty support, scheduling, compensation, and peer community support (Hammond et al., 2020). The program and institutional operational functions can guide the

construction of policy, procedures, and instruction support to reduce any negative impact on online teaching and learning (Hammond et al., 2020).

Policy

Policy is an essential part of institutional or administrative support; a clearly defined distance education policy sets the parameters and expectations for faculty and program support. There are both institutional and course policies necessary to learning. The institutional policies are usually established before implementation and focus on contact hours, financial aid, and transfer policies (Surry et al., 2010). Berge and Schrum (1993) purport that policy is needed to effectively manage the online program and integrate the distance education program into the institutional strategic plan. The authors posit that policy helps institutions decide how the program fits its mission and objectives before resources can be allocated. Martin et al. (2019a) propose that policy should address such things as types of course structure, development, delivery methods, and alignment with the standards of the accreditation body. E-learning policies can also include facilities like professional development, business management innovation, student interaction and engagement, improved access to resources for student-faculty engagement, and technological support (O'Connor, 2014).

While there are broad institutional policies, there are also course policies which include student privacy policies, email, and discussion policies .assignments submission guidelines policies, student code of conduct, and intellectual property right policies (Waterhouse & Rogers, 2004). Other course policies impacting e-learning are student code of conduct policies, including attendance, cheating, plagiarism, and course communication policies that guide student behavior in electronic communications (Waterhouse & Rogers, 2004). Course policies are vital because

they help online students understand what instructors expect of them and provide guidelines for students' activities throughout the course (Waterhouse & Rogers, 2004).

Policy is essential in the online environment since e-learning is often self-directed, and students do not have immediate access to answers in that environment (Waterhouse & Rogers, 2004). Policy determines what gets funded and sets the parameters for daily operations, such as the types of support provided.

Technological Infrastructure

According to Mertler (2019), the technological, infrastructural needs for online programs are usually determined by administrators in consultation with external experts and not with internal stakeholders and users such as faculty. Implementing a distance education program requires a multifaceted technology integration plan that involves purchasing and installing the necessary technological hardware to create an online environment equipped with resources, support, and communication (Al-adwan et al., 2012). The network architecture preferred by most institutions is a centralized network that has a powerful server connected to less powerful computers via cables or wireless.). The infrastructure for e-learning includes technological equipment, hardware, software, internet, extranet, intranet, and LAN networks to provide the reliable bandwidth needed to run the e-learning program (Fares, 2007). This central server handles the institution's primary processing functions and data storage. It handles institutional functions like admissions, marketing, instructional design, development support, technology help desk, professional/faculty development, faculty reward, promotion, incentive structures, and registration (Surry et al., 2010). The infrastructure must provide a reliable and accessible environment for online faculty and students (Salmon, 2004, p. 30). McDougall et al. (2003) posit

that quality online learning includes providing a broad range of complementary student services such as advisory and academic staff via a student portal. Other complementary support services offered to facilitate online learning are online student registration, billing, payment system, an online bookstore, and online library services. The information technology department also provides technical support to faculty and student support (Salmon, 2004).

Learning Management System (LMS)

Integrated into the technological infrastructure is the learning management system (LMS), which provides a platform for managing courses facilitating communication and support for both faculty and students alike. Accessibility and support provided by the LMS can go a long way in making a learning environment conducive to student engagement and success. McDougall et al. (2003) suggest that this e-learning learning platform or LMS should also offer the following electronic support services for students: electronic course materials; access to an online library, manage grading assessment, hosts learning resources, tutor support, facilitate peer-to-peer and peer-instructor communication, accommodate flexible schedule and accessibility. Electronic journals, articles, and text databases; secure access to enrolment details, assignment acknowledgment and return dates, and assessment results; access to general university campus student services; faculty information on departments, courses, programs, policies, and staff details (McDougall et al., 2003).

In addition, the LMS platform should allow students to select information sections to view, such as a personalized handbook, regulations, facilitate conferencing and group communication, an electronic noticeboard for external students, tutorials, timetables, student

assessment, feedback, are elements that should be consistent components in the distance education environment if quality education is to be achieved (McDougall et al., 2003).

Professional Development

Many instructors found the transition from traditional to online teaching unsettling, so institutions needed to find ways to support and assist faculty with the pedagogical shift from teacher-centered to learner-centered instruction (Baran & Correia, 2009). Professional development was the popular choice for training faculty, but each institution varied its approaches and modalities without adopting a standardized model (Martin et al., 2019a). Often, instructors were tasked to teach online without being given sufficient preparation or guidance (Power & Morven-Gould, 2011; Windes & Lesht, 2014). For many instructors, online teaching was a new experience, and they needed support to transform their content, learn how to interact with their students, and utilize the technology (Baran, 2018). To teach effectively online, instructors effectively have to be introduced to the online teaching methodologies (Bailey et al., 2009; Vaill & Testori, 2012) and be allowed to learn best practices for successful online facilitation (Moskal, Thompson, and Futch, 2015 as cited by Baran et al., 2013).

To best meet the needs of instructors, researchers posit that professional development opportunities should focus more on instructors' pedagogical inquiry and their effectiveness as instructors Layne et al. (2015). Institutions should take a holistic approach to professional development instead of focusing only on technical or instructional design skills (Rhode & Krishnamurthi, 2016; Rhode et al., 2017). In a review of professional development programs in higher education, Gregory and Martindale (2016) revealed that professional development is a

mainstay because institutions benefitted from offering it to instructors, especially if it resulted in their improved ability to create successful online instruction.

Levels of Professional Support

Baran and Correia (2014) suggest three levels of professional support needed for online instructors: organization, community, and teaching, and online instructors need all three. At the organization level, the organizational culture is a critical component to faculty support as the organization's perception of e-learning, and its' culture can significantly influence the success of online instruction (Baran & Correia, 2014). Organizational support includes a positive perception of e-learning and has a culture that provides financial incentives for teaching online and provides faculty development that addresses skill gaps (Baran & Correia, 2014; Gayton & McEwen, 2007; Herman, 2012).

At the Community level, support can be provided to faculty through communities of practice or peer support, which are social groups or networks that share evidence-based approaches with their peers and are potent agents in the future of faculty professional development (Baran & Correia, 2014; Becker et al., 2017 ; Stark & Smith, 2016). Knowledge and skills can then be developed using peer learning networks by engaging with more experienced peers in that online environment. Communities of practice enhance faculty development programs by allowing faculty to engage in a deeper understanding of topics by contributing artifacts, procedures, or documentation to the larger field (Bond & Lockee, 2018). Martin et al. (2019a) recommend peer mentoring programs for faculty professional support in higher education. Peer mentors provide faculty with a model of best practices, a person from

whom to seek guidance, and an evaluator of ability using evidence-based performance (Childre & Van Rie, 2015). Some strategies for successfully implementing a faculty mentoring program include: (1) documenting mentoring activities on CVs for promotion; (2) awarding outstanding mentors; (3) and establishing mentoring teams with three types of mentor roles, career mentor, scholarly mentor, and co-mentor, (Martin et al., 2019a). Faculty mentors would be selected from those with high job satisfaction and instructor success (Lunsford et al., 2018; Wasserstein et al., 2007). In addition to peer-mentors, some institutions establish Centers of Teaching and Learning (CTL) to provide continued support and development to faculty (Herman, 2012).

Centers of Teaching and Learning (CTLs) are administrative units in higher education that develop and implement faculty development programs and increase their prevalence (Herman, 2012). In the higher education organizational structure, these CTLs are often situated in the Academic Affairs or Information Technology Support department, and their staff includes instructional designers and instructional technologists who take on four categories of responsibilities: (1) design instructional materials and courses for digital delivery; (2) manage the efforts of faculty, administration, IT, other instructional designers, and others to achieve better student learning; (3) train faculty to leverage technology and implement pedagogy effectively; and (4) support faculty when they run into technical or instructional challenges (Intentional Futures, 2016).

At the 'teaching level' of the faculty support continuum, Baran and Correia (2014) identified several administrative support, including pedagogical, technology, design, and development support. Baran and Correia (2014), also suggest that online instructors learn how to leverage online technologies but this is a challenge for many online instructors who are new to online

teaching and have never taken an online course (Schmidt et al., 2016). An effective way to address this challenge is by creating professional development opportunities that allow first-time online instructors to experience an online learning environment as a student (Baran et al., 2013; Elliott et al., 2015; Sheffield et al., 2015). Institutions can help instructors lacking technological skills by providing teaching assistants to support them in large online courses. Levy (2003) advocates for using professional development to assist instructors in the transition to online distance learning and for providing training and support of students, which, if not undertaken, could have disastrous consequences to the e-learning program.

Other administrative support for online faculty should address class size, faculty compensation, and course schedule, which directly impacts teaching effectiveness (Hammond et al., 2020). However, most institutions increase class size to improve financial gains, which can negatively impact student learning, as research indicate that smaller class sizes experience greater student success (Hammond et al., 2020).

Online Course Design

Effective online course design consists of pedagogical and instructional design principles. The real success of distance education lies not just in the medium of delivery but the very structure of the content.

Pedagogical Theories Guiding Online Instructional Design

Effective distance learning is built upon sound pedagogical or andragogical theories, fundamental to distance learning. According to Trentin (2001), instructional design methodology relies on knowledge of instructional theories, much like conventional education. However, the principles that are focused on in this study include schema theory, multimedia principles, and cognitive load principles that directly impact online course design.

Pedagogical and instructional design principles guide the creation of effective online courses for distance education (Reiser & Dempsey, 2018). Critical elements of these theories that impact the effectiveness of instructional design are the relevance of the course content to prior schema, how multimedia principles impact content delivery, and how to design courses that create a germane load that result in improved memory use and learning. In addition, effective design is further enhanced by integrating authentic assessment and feedback to improve student performance.

Schema Theory

Whether in online or traditional instruction, having pre-requisite knowledge relevant to new content makes learning easier. Reiser and Dempsey (2018) posit that the schema theory supports learning by connecting them to existing schema or memories. Having an existing schema can aid learners in problem-solving, critical thinking, project-based learning, and authentic/real-life assessment. According to Reiser and Dempsey (2018), learners use existing schemas to interpret events and solve problems and then develop new and more complex schemas through experience and learning, so faculty should find a way to create and utilize schema in online course design. Reiser and Dempsey (2018) posit that at the automation level, learners can quickly access their existing schema to make learning easier by reducing their processing capacity. Given this data, faculty should design online courses that integrate opportunities to develop and use current schema to enhance learning.

Multimedia Principles

Multimedia principles are an essential element in e-learning as it influences the learner's interest, attention, motivation, and learning using course design. Therefore, it is important to include multimedia elements from the planning stage of the online course; after the faculty has decided on the course content's relevance and sequence based on the learning outcomes, the multimedia items are integrated into the course guided by the multimedia principles. McDougall et al. (2003) declare that the quality of the learning experiences for learners in distance education depends on the following five criteria: effective asynchronous distance education: student satisfaction, access to desired courses and support, learning effectiveness, cost-effectiveness, and faculty satisfaction**.** McDougall et al. (2003) posit that these criteria are directly impacted by the course materials, staff, delivery system, and support mechanisms. However, in a flexible digital learning model, the lessons contain: interactive course materials consisting of multimedia, digital audio, demonstration, and an LMS that support digital communication between students and instructors and accommodate teaching resources and digital assessments submission and return (McDougall et al. (2003). Effective use of multimedia is achieved by being aware of how the placement, use of text, graphics, and other multimedia elements can either improve or detract from learning (McDougall et al. (2003).

Cognitive Load Theory

According to Reiser and Dempsey (2018), the cognitive load theory refers to the amount of information the working or short-term memory can hold and how the arrangement of information and graphics in an online course impacts students' memory and learning. According to Reiser and Dempsey (2018), learners experience a high cognitive load when there

is too much demand on their working memory and when they do not have the appropriate or automated schemas to understand the learning task.

According to Sweller et al., (1998), working memory limitations suggest that humans experience difficulty with complex reasoning unless most of the elements have been previously stored in long-term memory. This means that pre-existing schemas make learning easier by increasing the working memory available for comprehension and reasoning processes. Reiser and Dempsey (2018) posit that the relationship between complex course design and cognitive load levels impacts the learner's attention and memory (Reiser & Dempsey, 2018). According to Reiser and Dempsey (2018), there are three cognitive load levels: extraneous, intrinsic, and germane (Reiser & Dempsey, 2018). The extraneous cognitive level is a memory overload experienced from complex texts and distracting materials. At the same time, intrinsic load refers to the memory overload resulting from overly complicated graphics (Reiser & Dempsey, 2018). However, the germane load is the design goal. It is the cognitive balance experienced when course designs are relevant and straightforward and do not overwhelm the learners' memory, schema, and attention (Reiser & Dempsey, 2018).

As a result of research in cognitive load, researchers have discovered strategies in course design that could reduce cognitive load in an online course. Sweller et al., (1998) posit that worked examples and partially completed problems that learners could review or finish solving reduced the extraneous cognitive load in instructional materials. This strategy appeared to be very effective in well-structured domains (such as algebra) and in complex fields that are primarily heuristic in nature, such as troubleshooting in engineering (Hilbert et al., 2004). Mayer and Moreno (2003) suggest that when using multimedia for instruction, narration should be used instead of on-screen text or in sync with animation or diagrams so that learners' attention is not

split between two sources of visual input. When using text-based instruction, the split-attention effect can also be reduced by integrating explanations within diagrams instead of requiring learners to mentally integrate text and pictures (Sweller et al., 1998). Given these suggestions, instructors should include worked examples, scaffolds, and other resources to support and facilitate the learner's success.

In selecting assessment for distance education, Reiser and Dempsey (2018) suggest that faculty create and use the online learning environments to engage learners in knowledge construction, facilitate tests of their understanding, and prompt reflection on the knowledge generation process itself (Reiser & Dempsey, 2018). According to Reiser and Dempsey (2018), online learning environments should: engage learners in activities authentic to their discipline, provide collaboration opportunities to engage multiple perspectives, support learners in setting their own goals, regulate and encourage learners to reflect on what and how they are learning. These activities would engage learners' critical thinking skills, relevant to their careers and life in general.

After the faculty has designed the content, selected the best delivery mode, and included authentic assessment, then the element of feedback can be introduced in the design process to stimulate motivation and guide student performance and success (Picciano, 2017).

Curriculum Development for Online Instruction

Although many faculty can transition from traditional to online instruction , the traditional curriculum could not be used without first being adapted for the online learning environment. Chugh et al. (2017) posit that when developing a curriculum for online courses, faculty should focus simultaneously on all the activities that will shape the student's learning experience, such as a planned sequence of interactive learning experiences. The authors suggest

that curriculum and instructional design for distance education are different from conventional instruction because it is more student-centered. The learner's needs are the focus of the whole process, and designing the content, teaching strategies, and means of assessment is central to distance education design. Courses produced for conventional learning cannot be used for distance education because the techniques for designing for distance education require content and course materials that must be accessed asynchronously and include other media, visuals, or other dynamic interactive technology. Mayer and Moreno (2003) suggest that in multimedia instruction, narration, rather than on-screen text, be used with animation or diagrams to avoid splitting learners' attention between two sources of visual input. Lichoro and David (2015) posits that faculty should familiarize themselves with new software and be trained in converting conventional courses into online courses, which is a challenge since they have to factor in student engagement strategies.

Instructional Design

Bourdeau and Bates (1996) postulate that instructional design and effective distance education are inextricably linked. In the traditional education model, the roles of the teacher being the transmitter of knowledge and the student the receiver influenced course design. However, distance education is a learner-centered education model that integrates many forms of media and learner activities involving self-study and self-pacing in a flexible environment (Bourdeau & Bates, 1996).

Trentin (2001) advises instructors or instructional designers to rethink their traditional methodologies when designing an online course. Instead , Bourdeau and Bates (1996) suggest that the activities planned in these instructions should also change focus from conventional

teacher-centered learning to student-centered learning. Trentin suggests that instructors should also be aware of the information and communication technology constraints before planning. The author advises instructors that designing online courses involves two correlational and distinct phases that include both the course design and the communication architecture responsible for the management and development of the learning activities involved in the course. Trentin (2001) posits that course designers must also be aware of limitations regarding student support, time or duration of the course, prerequisites, available technology, or any other issue that may impact the course before commencing design.

Faculty should also remember that although online distance education evolved from integrating many forms of media with the internet, its delivery cost is higher than traditional instruction Trentin (2001). According to Trentin (2001) instructional design methodology relies on knowledge of instructional theories, much like conventional education. To create effective online distance education courses, faculty must ensure that course designs align with sound educational theories and instructional design principles.

Learning Interaction and Engagement

Another critical element to distance education is developing and delivering quality courses using learning activities aligned to specific learning outcomes and objectives. McDougall et al. (2003) posit that one should use a systematic approach and analysis of knowledge and cognitive skills to create well-structured learning experiences and activities aligned with good teaching practices or pedagogical theories. According to Taylor (1999), what matters most in online course design is the inherent characteristics of the instructional medium and the pedagogic efficacy and not the sophisticated graphics and delivery system. McDougall et

al. (2003) suggest that online course material should be interactive and supported by multimedia, feedback, and interaction between learners and faculty.

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Motivation

In all forms of educational delivery, instructors' and students' motivation is integral to its success. As used in this study, motivation refers to having the enthusiasm and drive to participate and persist in an activity. Motivation is necessary for faculty and students in all learning, especially in online education when students and teachers are a part, and student achievement depends on the quality of the course design and usability of the learning environment (Dwijuliani et al., 2021). Faculty motivation is critical in an online learning environment, as faculty has to be enthusiastic to teach, and students must be eager to learn (Dwijuliani et al., 2021). Motivation is intrinsic and extrinsic; intrinsic motivation stems from the students' innate desire to learn, and extrinsic elements like support, encouragement, and feedback play an essential role in impacting student behavior and success (Dwijuliani et al., 2021). Hence, teachers must be creative and innovative to motivate students to achieve the desired learning outcomes by arousing their interest and attention. Improved students' motivation can be achieved when faculty provides: clear achievement goals, capture student interest, create a pleasant learning environment, create relevant assessment, provide feedback on student work, create competition, communication, and collaboration (Dwijuliani et al., 2021).

Student motivation is the driving force that makes students enthusiastic about learning, as those who become bored will not achieve the desired learning outcomes (Dwijuliani et al., 2021). According to Dwijuliani et al. (2021), achievement motivation is the intrinsic motivation that

inspires students to achieve success. Student motivation can be achieved by using technology to teach to the higher domains and creating opportunities for student collaboration.

Faculty Motivation

According to Ibrahim et al. (2019), lack of adequate support from the institution may decrease faculty motivation to teach online and discourage their desire to transition. Implementing distance learning is more effective with motivated faculty (Bolliger & Wasilik, 2009). Other motivating factors for faculty are categorized in their groups: student-related, instructor-related, and institution-related (Bolliger & Wasilik, 2009). Student-related factors that motivate faculty are having a diverse student population and student success and satisfaction expressed in course evaluations. Faculty-related motivating factors occur when faculty are confident, they could produce positive student outcomes (Allen & Seaman, 2007). Another intrinsic motivator for faculty stems from their confidence and interest in using technology (Allen & Seaman, 2007)

Faculty are also motivated by institutional motivators like faculty attitude and perception or e-learning, professional development opportunities, recognition for their work, reduced workload, release time, adequate compensation, promotion, clear policies, and reliable technology and infrastructure (Allen & Seaman, 2007; Simonson, 2019). For many faculty, online course design has increased their workload and responsibilities; decreased workload and release time would allow them time for course development since online course development is time-intensive (Allen & Seaman, 2007; Simonson, 2019). Other institution-related motivators for faculty include adequate compensation, a fair reward, transparent promotion system, tenure, clear policies, and peer and student communications (Allen & Seaman, 2007; Simonson, 2019).

Administrative support can also improve faculty motivation by having a clear and supportive policy for online distance learning, positively impacting faculty perception of online distance learning (Ibrahim et al., 2019). On the contrary, faculty's negative perception of online education could negatively impact the implementation of online distance learning (Tshabala et al., 2014, p. 2014) and a gap in capacity building in online education. Ibrahim et al. (2019) posit that the intrinsic factors that motivate reluctant faculty to adopt distance education are: interest, independent learning, personalized learning, computer self-efficacy, social perception, external expectation, and skill improvement (Ibrahim et al., 2019).

Faculty's intrinsic motivation to teach online is influenced by their personal instructional philosophies, student communication with peers and instructors, perceptions of usefulness, professional support, the availability of technical support, funding, lesson preparation time, institutional infrastructure, the involvement of senior staff, and efficacy. Faculty's motivation to teach online is influenced by their instructional philosophies, cultural, and instructional factors (Allen & Seaman, 2007; Fredericksen et al., 2000; Hartman et al., 2000).

Torrisi-Steele and Drew (2013) posit that faculty are also influenced by their perceptions of usefulness, professional support, technical support, funding, lesson preparation time, institutional infrastructure, student communication with peers and instructors, and involvement of senior staff, and efficacy. However, high perception and usefulness of online learning motivate faculty to integrate technology into their instruction, while limited or absence of technological literacy demotivates them (Ibrahim et al., 2019). Reliable information communication technology, comprehensive technical support, professional development, and technology training are also significant motivators to faculty (Ibrahim et al., 2019). Faculty

found an increased workload resulting from time-intensive planning for online courses demotivating (Ibrahim et al., 2019).

Interaction and Engagement

Student engagement helps students feel connected and creates a sense of community Ganza et al. (2012). So, it is essential for faculty to build activities that enhance engagement and interaction to prevent online students from experiencing boredom and isolation in the learning environment Ganza et al. (2012). Engagement, much like motivation, is achieved through student-centered course design, which includes activities that foster communication and collaboration between students and their peers and instructors. Online faculty must switch between their various roles as facilitator, course designer, course manager, subject matter expert, and mentor to keep students engaged (Martin et al., 2020). Gustafson and Gibbs (2000) suggest that faculty humanize the online course by using new engagement strategies to help students construct meaning. According to Martin and Bolliger (2018), engagement contributes to student learning and satisfaction, which is developed through interaction, so fostering interaction is significant in online learning (Anderson, 2003). Moore et al. (2018), identified three types of interaction inherent in effective online courses: (1) learner-to-learner interaction, (2) learner-to-instructor interaction, and (3) learner-to-content interaction. According to Martin and Bolliger (2018), learner-to-learner interaction is essential for online learning and leads to student engagement. According to Dixson (2010), Gayton and McEwen (2007), learner-to-instructor interaction leads to higher student engagement in online courses. Dixson (2010) and King (2014) posit that consistent interaction with students at the individual and group levels can help set academic expectations among students. Revere and Kovach (2011) and Banna et al. (2015) found that traditional technologies such as discussion boards, chat sessions, blogs, wikis, group

tasks, or peer assessment can promote student-to-student interaction in online courses. Banna et al. (2015) suggest that using videoconferencing, synchronous chatting activities and asynchronous discussion boards activities enhanced student-to-student interaction. Shea et al. (2001) posit that most of the students from their study learned more when discussions constituted most of their course grades.

King (2014) found that students rated thorough and timely instructor feedback beneficial in the learner-instructor engagement. Students also credited timely feedback from faculty for establishing instructor presence, connectedness, engagement, and learning (Martin et al., 2020). Online course facilitation is crucial to online courses (Martin et al., 2020). According to (Dixson, 2010), online instructors should pay special attention to student-instructor interactions because they can affect learning outcomes since students value instructor feedback on their work and credit it for helping them improve their learning process. Therefore, instructors' assessment of student work and participation should use stated grading policy, provide summative feedback, and promptly post grades to be highly motivating to students (McEwen, 2007 as cited by Martin & Bolliger, 2018). Online faculty need to know facilitation strategies to maintain high academic standards (Al-adwan et al., 2012; Williams et al., 2014). Hsiao (2021) identified methods used to facilitate communication in online courses, including providing clear guidelines, rubrics, and examples for online discussions, showing instructor presence by monitoring students' discussion and using any other strategies to facilitate online discussion. Borup et al. (2012) revealed that both students and instructors believed that written feedback was more efficient and organized. Multiple student-instructor communication channels are essential to student engagement; therefore, instructors should use mini videos and

screencasting strategies to increase their visibility and improve pedagogical benefits (Martin & Bolliger, 2018).

Learner-to-content engagement is how the learners intellectually interact with the content and change their understanding and perspectives (Moore et al., 2018). According to Abrami et al. (2011), student-to-content interaction can occur while watching instructional videos, interacting with multimedia, and searching for information. As a result, online instructors are advised to invest sufficient time searching for scholarly reading and interactive instructional materials and designing well-thought-out assessments to encourage student-to-content engagement (Abrami et al., 2011; Banna et al., 2015). Real-world application projects enhance subject mastery and critical thinking skills and foster learner-to-content engagement. Revere and Kovach (2011) recommend that instructors use technology to make course content engaging or interactive to encourage student engagement. Martin and Bolliger (2018) posit that online instructors should promote student engagement and design authentic activities that examine the tasks from different perspectives and use relevant information in the process. Dixson (2010) reports that students identified various activities that made them feel engaged, such as course management system features, effective communication, and course facilitation strategies. However, engagement is not a substitution for instruction, and it is essential to observe the spacing of activities /assignments for learning to occur. Briggs and Alis (2015) posits that it is a challenge to maintain student engagement in online education, unlike traditional education, but the instructor can encourage students' interest by being present, using online discussion, readings, and videos in online courses.

On reviewing research in the higher education context, Chickering and Gamson (1987) proposed a framework of seven principles to ensure students' engagement called: "Seven Principles for Good Practice in Undergraduate Education." According to Chickering and Gamson (1987), the seven principles that will get students engaged in the online instruction are: (1) increase in the contact between student and faculty, (2) provide opportunities for students to work in cooperation, (3) encourage students to use active learning strategies, (4) provide timely feedback on students' academic progression, (5) require students to spend quality time on academic tasks, (6) establish high standards for acceptable academic work, and (7) address different learner needs in the learning process. In online education, keeping learners engaged and motivated is a necessity.

After the infrastructure, policy, and professional development are completed, the distance education program will be ready for its gradual and final rollout. Surry et al. (2010) suggest that before the final rollout of online education, academic standards should be evaluated, and a commitment made to keep the program quality consistent and to ensure program compliance with the general quality and standards of the institution regardless of its delivery mode. In preparation for the final phase of e-learning implementation, Surry et al. (2010) recommends having a timetable to schedule the rollout of the program, and student-centered curriculum design, faculty, and student support, a budget, new or existing personnel to the staffing of the program should be identified and trained to ensure a successful rollout.

Summary

This chapter reviewed relevant literature to address the various aspects of online distance learning implementation, such as administrative support, professional development, pedagogical theories, curriculum, course design, and additional types of support needed for successful programs. The methodology and data collection strategies used for this study will be discussed in the next chapter.

CHAPTER 3: METHODOLOGY

Introduction

This chapter describes the research approach and applicability of the mixed-method methodology while articulating the philosophical view of the pragmatist research approach, data gathering procedure, data analysis, and issues associated with participant confidentiality and research ethics. As mentioned before in the Literature review, online distance education or e-learning can improve access to geographically and economically disadvantaged students even in developing countries with complex topographies. However, the success of online/ distance education both in developed and less developed countries lies in the ability of the faculty to effectively transition to online teaching and create effective courses capable of supporting the needs of 21st-century learners.

The crux to having a successful distance education program lies in faculty's successful attitude and preparation to create effective online courses and provide adequate support and resources to develop and sustain a successful online program. Therefore, this research investigates how professional development and various forms of administrative support can help faculty and students successfully transition from traditional to online teaching and learning.

Research Methodology

This study aims to examine the relationship between professional development and administrative support of faculty and what impact it may have on their motivation and ability to create pedagogically and technologically sound online courses that encourage student engagement and motivation. The choice of methodology for this research is a mixed methods

action research . According to Creswell and Creswell (2018), the mixed-method approach combines qualitative and quantitative collection methods. The premise is that combining more than one data collection method will provide a more comprehensive understanding of the research problem instead of using just one method (Guest & Fleming, 2015). Some of the advantages of a mixed-method approach are that the strength of one approach compensates for the weaknesses in another, it encourages interdisciplinary collaboration and the use of multiple world view/ philosophies, and allows the researcher to select any approach that best addresses their research questions (Creswell & Plano Clark, 2012).

The rationale for selecting the mixed methodology is that the mixed method design is necessary to collect data of a qualitative and quantitative nature to examine how professional development and support can motivate and transition the faculty to teach effectively online and motivate and engage students. This study intends to explore factors that impact faculty's ability to create effective courses such as attitude, skills, knowledge of instructional design principles, administrative, teaching, and community support necessary to sustain faculty's continuous development and performance using multiple data collection methods from both the qualitative and quantitative methodology. The research aims to explore the impact of professional development and administrative support on online faculty and student motivation and engagement.

Research Design

This researcher employs a pragmatic exploratory sequential mixed approach to this action research. Here, the researcher applies the pragmatist worldview or philosophy to the research process. In the pragmatic world view, the pragmatists are not committed to any one system of

philosophy but focus on the research problems and research questions and are willing to use all approaches to understand the problem (Creswell & Creswell, 2018). The pragmatist philosophy is concerned with solutions, and as a philosophical underpinning for mixed methods studies, it focuses attention on the research problem in social science research and uses a pluralistic approach to derive knowledge about the issue (Morgan 2007, Patton 1990, Tashakkori and Teddlie 2010, as cited by Creswell & Creswell, 2018). According to Creswell, pragmatism opens the opportunity for multiple methods, philosophies, assumptions, data collection, and analysis for the mixed-method researcher.

Research Context

Research Setting

Research is set at a community college located in 'Bird Island" (a pseudonym), Caribbean. This college is a state-owned four-year institution offering certificates, associate's degrees, and bachelor's degrees. Most of the degrees offered at this institution have regional accreditation. There are two campuses located on two of the more populated islands of the archipelago. Since the island's population is scattered across a few habitable islands, access to higher education would mean relocation to the other islands that house the college campus or study internationally in Europe or the United States. However, the pandemic changed everything, and online education became the lifeline for many institutions' survival and the solution to extending access to the citizens that lived in the other islands. The college is a statutory body decentralized in its management with two representatives from the Department of Education on the college board. Despite the pseudo-independence in management, the majority of its funding is provided by the government and full-tuition scholarships for its students. The institution is primarily staffed by expatriates whose two-year contracts are renewed based on

performance and recommendations from their Department Chair. Faculty qualifications range from Master's to Doctoral degrees with a minimum of 3 to 5 years, although most of the faculty experience has over five years teaching experience. The prevalent mode of instructional delivery is traditional delivery, as faculty teach the way they were taught.

Participant Recruitment and Selection

Participant recruitment was conducted via email to all faculty members of both campuses requesting them to participate in the study. However, the researcher then settled on eight participants as the research sample. The participants are faculty members who teach both technical and non-technical courses and whose teaching experience ranges from 3 years to five years with no regard to gender demographics. The participants have qualifications that range from Master's to Doctoral degrees, are between the ages of 35-60 years, native speakers of English, and capable of granting permission without representation

Researcher Positionality

The researcher is an outsider with insider experience. While the researcher does not currently work at this institution, the researcher has had over twelve years of experience as a faculty member in this and other higher education institutions in the English -speaking Caribbean. The researcher understands the role of being a faculty member and the duties and responsibilities of this position, the organizational culture, and the ethos of the people. Although passionate about education in the Caribbean, the researcher is open and unbiased towards the study results and desires to uncover the administrative and professional development factors that impact faculty’s ability to teach effectively online.

Ethical Considerations

Before conducting the research, permission was sought from the President of the research site. The administrator and all participants were informed of the general nature of the study and advised that their participation in the survey was voluntary and their decision to withdraw from the study would have no negative consequences on their career or reputation. They were further assured that their data and identity would be kept secure and would not be shared in other studies. Since these data collection occurred online, these documents were delivered via email and de-identified and stored on a secure drive with restricted access.

Research Questions

This research aims to determine how professional development and administrative support of faculty can help them transition to online teaching and how this could impact student motivation and engagement in online courses in the Caribbean.

The Research Questions to be answered are:

1) What faculty skills, experiences, and attitudes aid or hinder the transition to designing and instructing online?

2) How can professional development help faculty transition to designing and instructing online?

3) How can administrative and technological infrastructure support the motivation and success of faculty and students in online programs?

4) What additional types of support does faculty desire to help them continue to develop their online teaching skills?

Research Methods

The choice of methodology for this research is mixed methods. According to Creswell and Creswell (2018), the mixed-method approach combines qualitative and quantitative collection methods.

Survey and Questionnaire

According to Mertler (2019); and Creswell and Creswell (2018), a survey is a collective group of quantitative data collection methods that involves administering a set of questions or statements to a sample of people. They may be administered verbally like an interview, but the data is interpreted numerically although submitted in written form (Creswell & Creswell, 2018). On the other hand, questionnaires are surveys administered in written form where the researcher asks participants a series of questions or statements and returns their responses to the researcher. Surveys and questionnaires allow the researcher to collect varied data types quickly (Johnson, 2008 as cited by Mertler, 2019). The difference between surveys and questionnaires is that although a survey can be administered verbally, the results are numerical. In contrast, the resulting data in a questionnaire can result in a variety of data that is narrative or numerical. The advantage of using surveys and questionnaires is that it allows the researcher to collect various information quickly (Johnson, 2008 as cited by Mertler, 2019). Another merit of the survey method is that the data is easily quantifiable, and rating scales like the Likert scale are highly effective at gathering data on attitudes, perceptions, and opinions (Mertler, 2019).

Qualitative

Interview

Interviews are either structured, semi-structured, or unstructured. In a structured interview, the interviewer begins with an interview guide containing pre-determined questions,

making it consistent and restrictive since the interviewer cannot vary the questions asked during the interview. According to Mertler (2019), open-ended interviews only provide a few broad questions intended to gather various kinds of information from different individuals based on their interpretation of the questions. However, the semi-structured interviews consisted of base questions written in simple, brief, straightforward language and gave the interviewer the option to follow up a response to gain more information (Johnson, 2008; Schwalbach, 2003 as cited by Mertler, 2019).

The advantage of the semi-structured interview methods is that the practitioner can probe further for clarification to some questions or video or audio record the interview with permission. This method is sometimes easier for an interviewee who is more compliant with a conversation-type interview (Creswell & Creswell, 2018). The disadvantage of interviews is that they are time-consuming, and the responses must be transcribed before they are analyzed.

The limitation of this type of data collection is that the respondent's identity does not always remain anonymous, especially if interviews are distributed or collected via email, which compromises the identity of the participants (Mills, 2011 as cited by Mertler, 2019).

Data Collection

The data collection instruments used in this research were surveys and interviews. The surveys were distributed to the participants via an institution email portal and administered on an online application. A semi-structured interview was also conducted with one of the institution's administrators via an online voice communication application.

The data collection occurred in nineteen weeks over three phases: before professional development, post-development implementation, and after development and implementation. After professional development, participants were allowed a semester or twelve weeks to

implement any skills learned and then surveyed afterward to measure the acquisition of any new online teaching and course design skills by participants and how it impacted student motivation and engagement.

The first research method employed was the semi-structured interview of the administrator that was conducted using a voice-over-internet communication app, and the responses were transcribed. This interview was intended to determine the types of support provided by the institution to faculty and students. Secondly, a pre-survey was administered to the faculty online to assess their inventory of skills to determine if they had the pre-requisite schema of technological skills needed to learn more advanced skills in the subsequent in-house professional development.

After the professional development workshop, in Phase two, faculty were allowed twelve weeks to implement any concepts or skills attained from training. Then in Phase three, after the implementation, the faculty were surveyed again to determine the motivation and engagement levels of both students and faculty after professional development. In this study, the quantitative data was be collected using surveys and questionnaires, and the qualitative data were collected using a semi-structured interview.

Qualitative

Interview

A semi-structured interview was conducted with an institution administrator during the first phase of the data collection schedule; to determine what components of administrative support and resources were extended to faculty and students involved in online teaching and learning. In this research, the administrator was asked the following questions in a semi-structured interview

via voice over internet app, with probing questions used where responses were ambiguous or varied from appropriate responses:

1. Do you think a distance learning administration policy is needed to guide and set standards for the faculty and students?
2. What components of online support and resources do you think should be covered by this policy?
3. Does this policy determine which courses are to be adapted to online learning and what structure it takes? Eg. (synchronous, asynchronous, or blended?)
4. What support staff, and services are provided for faculty teaching online?
5. Are there any additional incentives provided for the increase in course planning demands of online instruction?
6. What provisions for continuous development and support are provided for online faculty?
7. What online resources or technological components are provided to assist online students' success?

The responses were coded according to themes and research questions and benchmarked against the ISTE student-centered higher education ecology to align distance education support with the listed components.

Quantitative

Surveys

After the interview in the first phase of data collection, a pre-survey was distributed using email. In the pre-training survey, participants were surveyed to determine if they had the basic information (I.T.) technology knowledge and skills to facilitate learning new and advanced

online teaching skills. This survey was to determine the attitude and receptivity towards adopting distance education as a delivery method. The data was collected and later coded.

In the second phase of the data collection schedule, the institution administered professional development over two weeks period to the faculty. After the institution's e-learning team conducted the in-house professional development, participants were allowed 12 weeks to implement any skill learned from the training before the post-training survey.

In the third phase of the data collection, a post-survey was distributed to participants via email after the 12 weeks of implementation. In this survey, participants determine faculty and students' motivation and engagement after professional development in an attempt to assess the following: were there any noticeable changes in teaching skills or techniques used in online course design or delivery, what were the motivation levels of faculty and students after training and implementation, what was the level of student engagement in the online courses

Data Analysis and Management

After collecting the data using an online platform, the responses were coded and represented using visuals. The semi-structured interview conducted with the administrator was transcribed in a narrative format. According to Creswell and Creswell (2018), qualitative data analysis has a flexible structure that allows the researcher to interpret the data and build from specific to general themes based on inductive reasoning. While the quantitative data collected from the online surveys were analyzed using statistical procedures using graphs and other visuals and was not as susceptible to bias, unlike qualitative methods (Creswell & Creswell, 2018).

Ethical Consideration

Prior to conducting the research, written consent was obtained from the institution's President. All online surveys and questionnaire participants were required to consent online before participation in each data collection instrument. All participants were informed of the general nature of the research and that they were free to discontinue without reprisal or detriment, and they were assured that the data would be de-identified to maintain anonymity. The personal data of all participants are be kept anonymous or confidential throughout all the data collection proceedings. No identifiers are used on any surveys, interviews, or questionnaires. All data were de-identified, coded, and stored in a secure location with restricted access.

Timeline

Data Collection Stages

The research that occurred in the timeline included three phases: Pre-training, Training and Implementation, and Post Training. Phase 1, the pre-training phase, consisted of the semi-structured interview of the administrative support, Pre-survey of staff, and learner participation. In Phase 2- Training and implementation consist of in-house professional development and post-training implementation for the duration of twelve weeks. Afterward, the post-survey was conducted in phase 3.

The timeline for data collection was 19 weeks, inclusive of the implementation period; after the completion of the in-house training, but there was some delay experienced in receiving the final survey responses, which was collected in the fall semester of 2021.

Date/ Timeline	**Procedure**	**Participant/s**	**Completion time**
Phase 1- **(Pre-Training Survey)**	Semi-structured interview about administrative	College administrator	1 week

4/11/2021	support		
	Pre-Survey of staff support and design skills	Online faculty	Two weeks
4/14/2021 4/29/2021	Pre-Survey of learner participation quality	Online faculty	
Phase 2-(Training & Implementation)	Institution (in the house)Professional development delivery	Online faculty	Two weeks
5/10/2021-5/24/2021 5/30/2021-8/30/2021	Post-training implementation	Online faculty	Twelve weeks
Phase 3 (Post-Training Survey) 8/31/2021- 9/15/2021 (1 week delay)	Post Survey of staff support and design skills	Online Faculty	Two weeks =1 week delay **TOTAL = 19 Weeks**
	Post Survey of learner participation quality	Online Faculty	

Figure 1

Data Analysis

After data was collected, they were collated, analyzed, and interpreted according to their respective data type.

Data Collection Types and Analysis

Data Collection Method	**Participant**	**Report**	**Analysis**

	Type		
Semi-structured interview (Qualitative)	E-learning administrator	narrative	Narrative or graphical interpretation
Attitude Inventory (Quantitative)	faculty	Numerical	graph
Questionnaire -Types of Support and Resources desired (Quantitative)	faculty	Numerical	Narrative
Pre-test and post Motivation	Faculty	numerical	Comparative analysis
Survey of student motivation and engagement (quantitative)	Faculty	Pre- and Post analytics data	Comparative analysis of learners' data

Figure 2

Responses from the surveys were coded and organized according to the themes below. These themes were created based on the data needed to answer each of the research questions. Responses that satisfied more than one theme or question were given two sets of codes

Data Coding Structure

Question	**Code**	**Research Questions**	**Themes**
• Traditional and Online Teaching Experience • Attitude towards the Necessity of Online	TES	1) What faculty skills, experiences, and attitudes aid or hinder the transition to designing	**Teaching Experience and Skills (TES)** - teaching experience

learning • Faculty Skill inventory-(Faculty IT skills before Training)		and instructing online?	-Attitude towards -Skills: Pre- training I.T. Skills Inventory
• Types of Admin support provided • Faculty Incentives	AS AS	3) How can administrative and technological infrastructure support the motivation and engagement of faculty and students in online programs?	**Admin. Support** -Types of support provided - Faculty incentive
• Pre and Post Professional Development Motivation levels • Instructional Delivery methods • Instructional Design	PD PD PD	2) How can professional development help faculty transition to designing and instructing online?	▪ **Impact of PD on Faculty Motivation Levels** ▪ Post-training Instructional delivery modes ▪ Post-training Online Teaching Skills
• Student Interaction and Collaboration techniques • Student engagement (assignment	SME/PD SME	3) How can administrative and technological infrastructure support the motivation and engagement of faculty and students in online programs?	• **Student Motivation and Engagement (SME)** -Student Interaction -Student Engagement -student engagement

completion, quality, and completion, log on frequency, response to feedback	SME/PD		due to new course design skills used by faculty after training and implementation
• Post-training support • Pedagogical theories and Online Teaching strategies.	AFS AFS	4) What additional types of support and development does faculty desire to help them continue to develop their online teaching skills?	**Additional Faculty Support -(AS)** -web training - peer communities -pedagogical theories and best practices

Figure 3

Conclusion

In conclusion, the mixed methodology design allowed the researcher to use a variety of instruments, methods, and sources to collect data (Mertler, 2019). According to Mertler (2019) research findings derived from multiple processes, sources, and instruments increased the validity of the study's findings. Even if the data collected proved or disproved the theory, the pragmatist researcher's world view or personal philosophy makes them open to discovering the causes of the issues and using the results to inspire future research (Mertler, 2019).

The data collected may prove or disprove the hypothesis that professional development and varied administrative support can increase faculty and learners' motivation and engagement in online learning.

Summary

This chapter presented the research methodology, context, and methods of this study. The findings of the data collected will be presented and discussed in the next chapter.

CHAPTER 4: RESEARCH FINDINGS AND DISCUSSION

Introduction

This chapter presents the research findings of this action research, which explores how professional development and administrative support impact the motivation and engagement of faculty and students in online programs. This pragmatic, exploratory sequential mixed-methods study tested the hypothesis that professional development and administrative support can improve faculty online course design and teaching skills and positively influence student engagement and motivation in online courses. Four research questions guided the study: 1) What faculty skills, experiences, and attitudes aid or hinder the transition to designing and instructing online? 2) How can professional development help faculty transition to designing and instructing online? 3) How can administrative and technological infrastructure support the motivation and success of faculty and students in online programs, and 4) What additional types of support do faculty desire to help them continue to develop their online teaching skills? This chapter will report and discuss the findings of the surveys and interviews and then synthesize the results and discussion to answer the four research questions.

Findings

The participants of this scholarly research consisted of eight faculty members of a community college located on a ‘Bird Island ‘ (a pseudonym) in the Caribbean. The findings of these surveys were categorized by the following themes: teaching experience, skills and attitudes, administrative support, the impact of professional development on faculty, the impact of professional development on students, and additional faculty support alternatives. Faculty

were surveyed to uncover any possible relationship between professional development and faculty administrative support and if they were any improvements in course design skills, student motivation, and engagement.

Teaching Experience

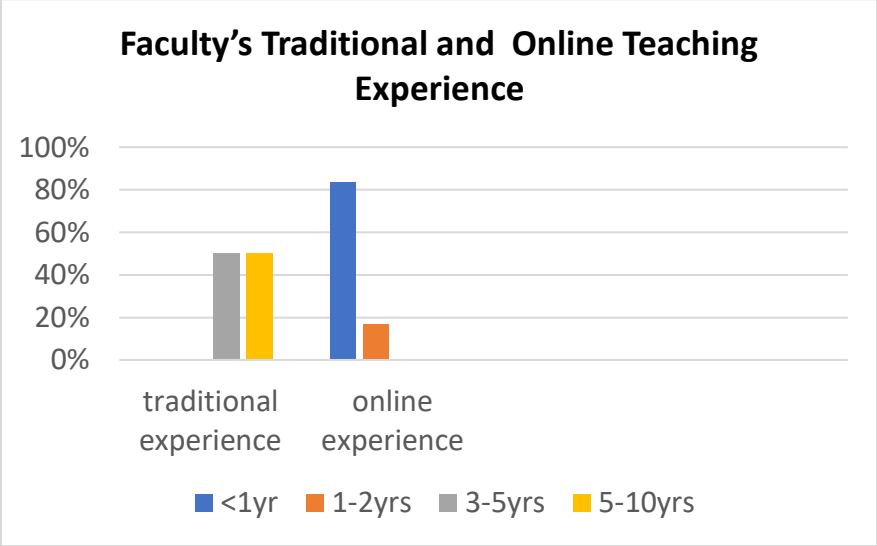

Figure 4

In the above figure, 50% of the participants had three to five years of traditional teaching experience in tertiary institutions, while the remaining participants had 5-10 years of formal teaching experience. However, 80% of the participants have had less than one year of online teaching experience when it comes to teaching online. In comparison, the remaining 20% of participants had 1-2 years of online experience. Overall, it seems the entire faculty has had more experience teaching traditionally than teaching online.

Attitudes and Skills

Attitude

The existing attitude of participants regarding online teaching and learning is essential to their receptivity to learning more about teaching online, as a positive attitude is a critical element in its implementation. In measuring the attitudes of faculty, most of the participants have agreed to the necessity of online teaching and learning. Although sixty-seven percent (67%) strongly agreed to the need for online learning, 33% mildly or reluctantly agreed. Here it would seem that 33% of the faculty surveyed viewed online learning as a temporary solution for the continuation of instructional delivery during the pandemic as faculty unanimously agreed that they desired to return to the traditional model of instructional delivery post-pandemic.

Skills

This survey revealed the participants' pre-existing information technology (I.T.) skills which would be an essential prerequisite for learning more advanced skills to teach effectively online.

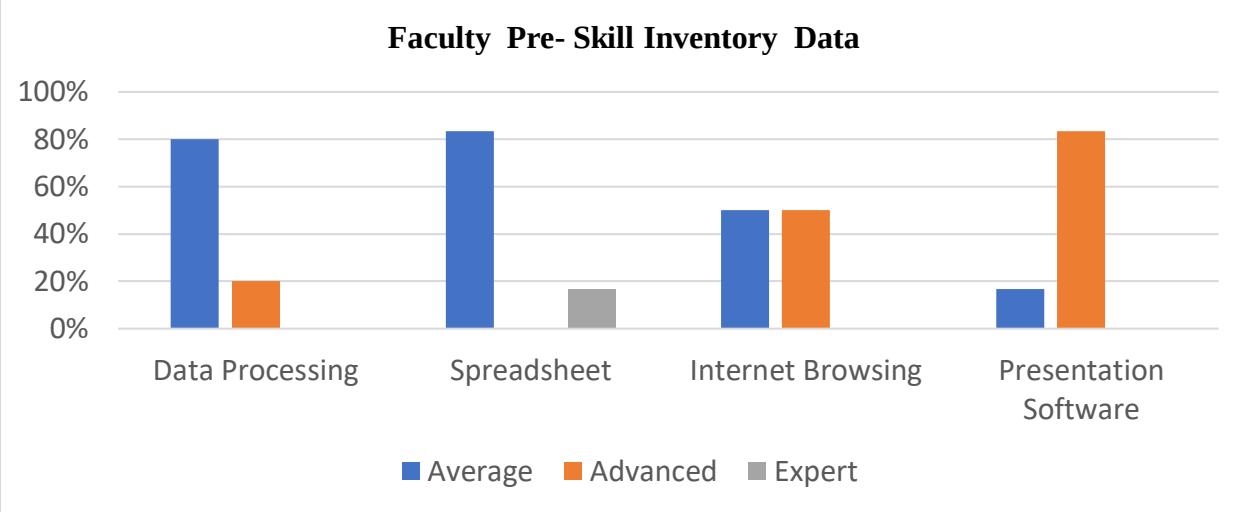

Figure 5

In this figure, more than 80% of the participants reported having an average knowledge and skill level of data processing, spreadsheets, and PowerPoint presentation software, while 17% reported an advanced skill level in data processing. In addition, 50% of the participants reported average skills in internet browsing, while 50% reported advanced skills in this area. These findings suggest that participants surveyed seem to possess the pre-requisite technological skills necessary to learn more advanced skills such as instructional design and other online teaching skills essential to teaching online courses successfully.

Instructional Delivery Methods

Data relevant to the theme of Instructional delivery methods revealed that online instructional delivery before professional development was at 0% asynchronous, 50% synchronous, 35% traditional, and 15% hybrid. It seems faculty teach the way they were taught since they used the digital delivery mode most similar to conventional teaching like synchronous teaching, which offered opportunities to use software for live instructional delivery. The survey also revealed that these participants unanimously agreed to return to the conventional instructional delivery method after the pandemic. It would seem that participants were willing to teach online during the pandemic as an emergency measure but are not fully committed to online distance learning as a permanent solution. In this case, 100 % of the participants above selected to return to traditional instruction in post-pandemic times.

Administrative Support

The semi-structured interview of one of the administrators at the institution revealed the four types of support provided by the administration to faculty and students: policy,

technological infrastructure and support, and professional development. According to the results, the infrastructural support represents the majority of the institution's investment at 60% means the acquisition of computer hardware, equipment, networking, software, technological equipment, internet services, website hosting, and Learning Management system (LMS).In addition, they provided in-house professional development training at 20%, which is mainly focused on teaching technical skills in using the instructional design software and Learning Management System (LMS). Technical Support serves both faculty and students and represents 30% of the administrative support provided, available at an as-needed basis, while the policy framework remaining, which provides the framework for all mentioned above, only represents 10% of administration investment but provides the foundation for the entire program. Despite all the administration support noted, it does not provide financial support in incentives. Faculty are not compensated for additional planning time required for online teaching but are paid regular and overtime rates for hours over 18 contact hours. As distance learning becomes a mainstay, administrators need to understand how to best support online faculty instruction (Nordin & Anthony, 2014; Walters et al., 2017).

Impact of Professional Development on Faculty

Survey findings post-professional development revealed that professional development may have impacted faculty delivery mode, skills, and motivation which may be evident in their instructional design and delivery and faculty motivation.

Instructional delivery

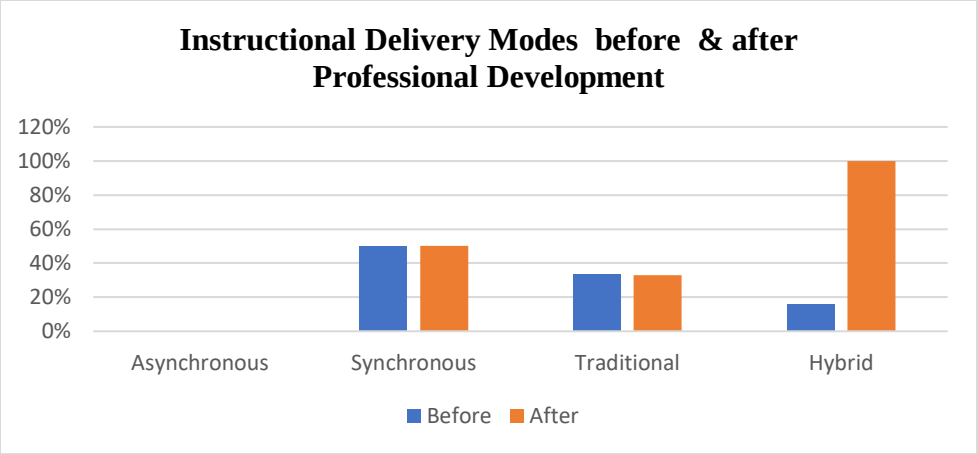

Figure 6

This figure shows a comparative analysis of pre and post-instructional delivery modes. The findings revealed a difference in the types of online instructional delivery performed before and after professional development/training. In this figure, post-professional development asynchronous delivery remained at 0%, while synchronous and traditional delivery remained unchanged at 50% and 33%, respectively. However, the starkest change in instructional delivery was in the hybrid delivery model, which showed an 85% increase after professional development. There was an increase in the hybrid forms of digital delivery after professional development. The findings would indicate that professional development seems to have improved faculty online teaching skills.

Instructional Strategies

Instructional strategies used in online teaching and learning differed from traditional delivery. It is more student-centered and requires faculty to use creative and innovative methods to keep students interacting with the content, peers, and instructors.

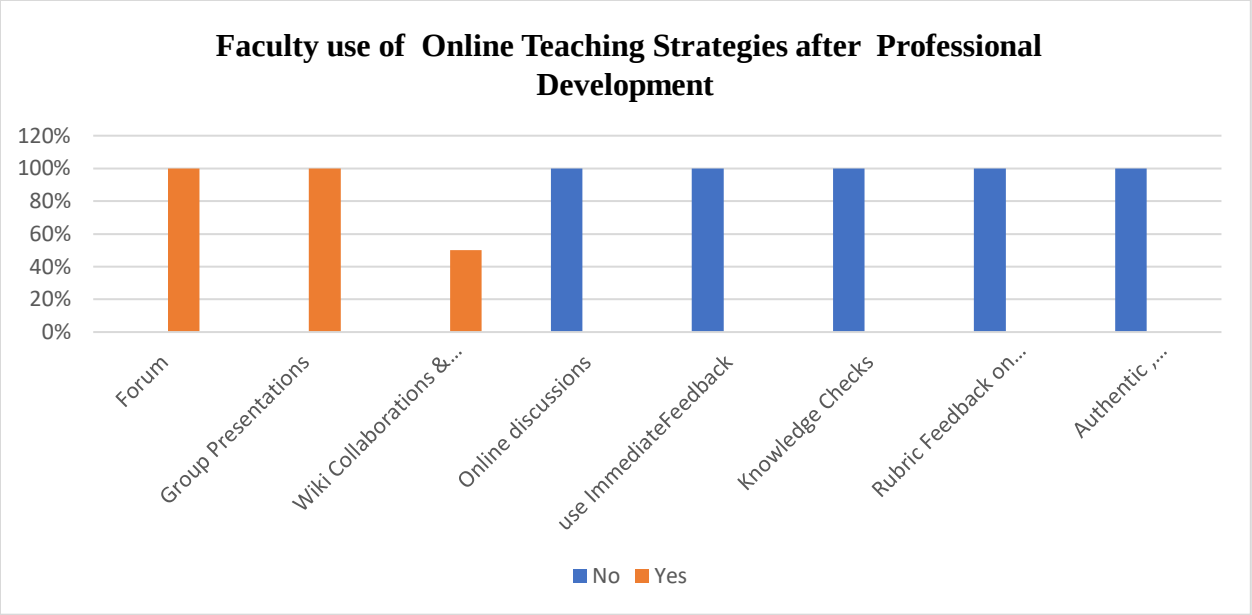

Figure 7

In figure 7, in the data from the post-training survey, participants demonstrated that their use of online strategies like forums and group presentations was used more frequently at 100%. In comparison, wiki was used only 50% of the time for student collaboration activities. However, 100% of the participants indicated that they hadn't used the following online teaching strategies: knowledge checks, rubrics for student feedback on assignments, online discussions, and enough authentic assessment strategies in their online course. This may have been because they were neither trained nor experienced with these techniques. These strategies, if used effectively, could potentially increase student interaction and engagement in the online course. It seemed that professional development did not significantly improve the participants' facilitation ability and use of student-centered and engaging activities.

Faculty Motivation

In this study, participants' motivation levels before and after professional development were compared to determine any changes in their motivational levels.

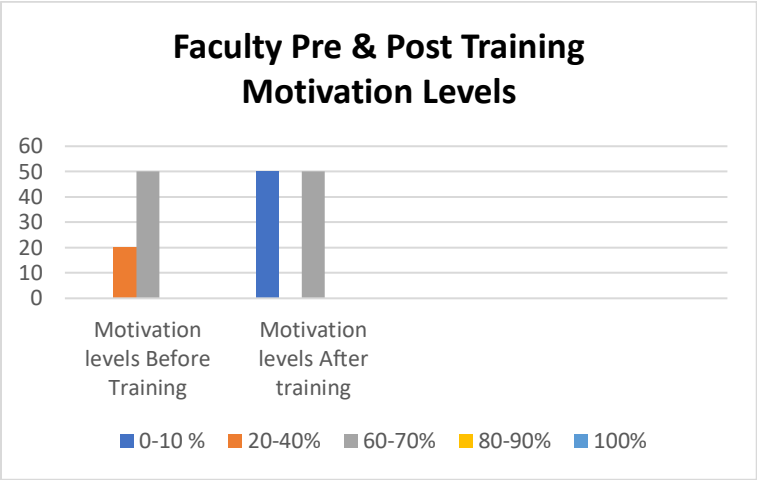

Figure 8

In the graph above Figure 7, the participants' pre-and post-training motivation levels reflected the observation that 20% of the participants were less than 40% motivated before professional development. The remaining 80% of the faculty participants were over 60% motivated to teach online. However, 50% of the faculty participants were less than 10% motivated after training, while the remaining 50% were 60-70% motivated to teach online. Overall, faculty seemed to be less motivated to teach online after professional development. Over 50% of the participants are less motivated to teach online after professional development than before. Participants later indicated that the professional development mainly focused on technical skills such as instructional design using Adobe Captivate rather than general online teaching strategies.

Post Professional Development Knowledge

According to the findings of the post-training survey, it was observed that 50 % of the participants said they did not learn much about cognitive load theory. Still, 100% of the participants knew of the multimedia design theory and the pedagogical principles that impacted online course design. Again, it seemed that professional development may not have covered enough of the pedagogical and design principles to influence online learning design.

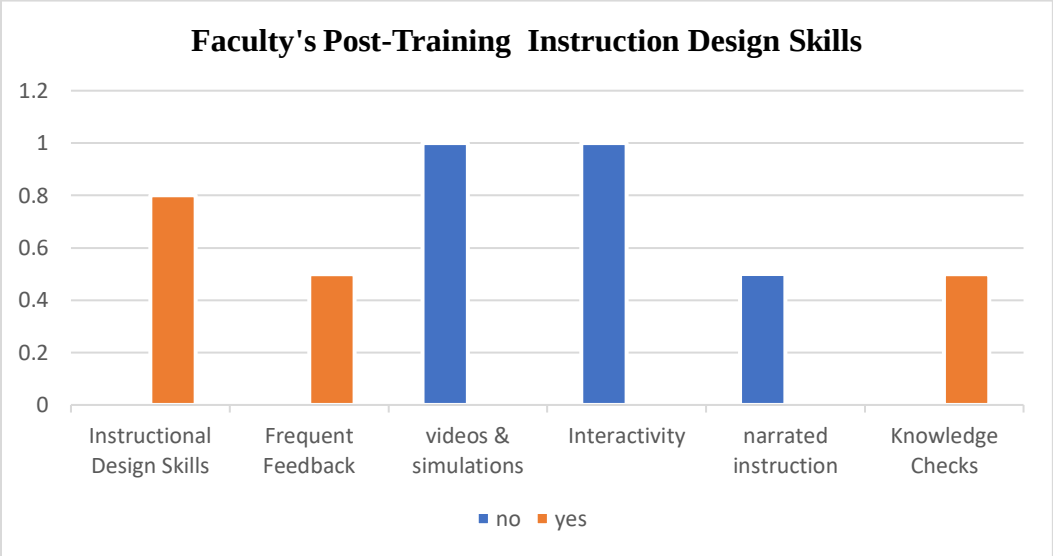

Figure 9

Figure 9 above reflects that in post-professional development, there was an increase in instructional design and online teaching skills, such as 80 % of the participants used instructional design skills at 50% indicated that they used frequent feedback and knowledge checks. However, participants unanimously indicated that they did not use interactivity, video instruction, simulations, and narrated instruction in their online courses. While many instructors took advantage of the new techniques and opportunities made available through online technologies and used them regularly, others relied on the more traditional methods of delivering course content (Osika et al., 2016).

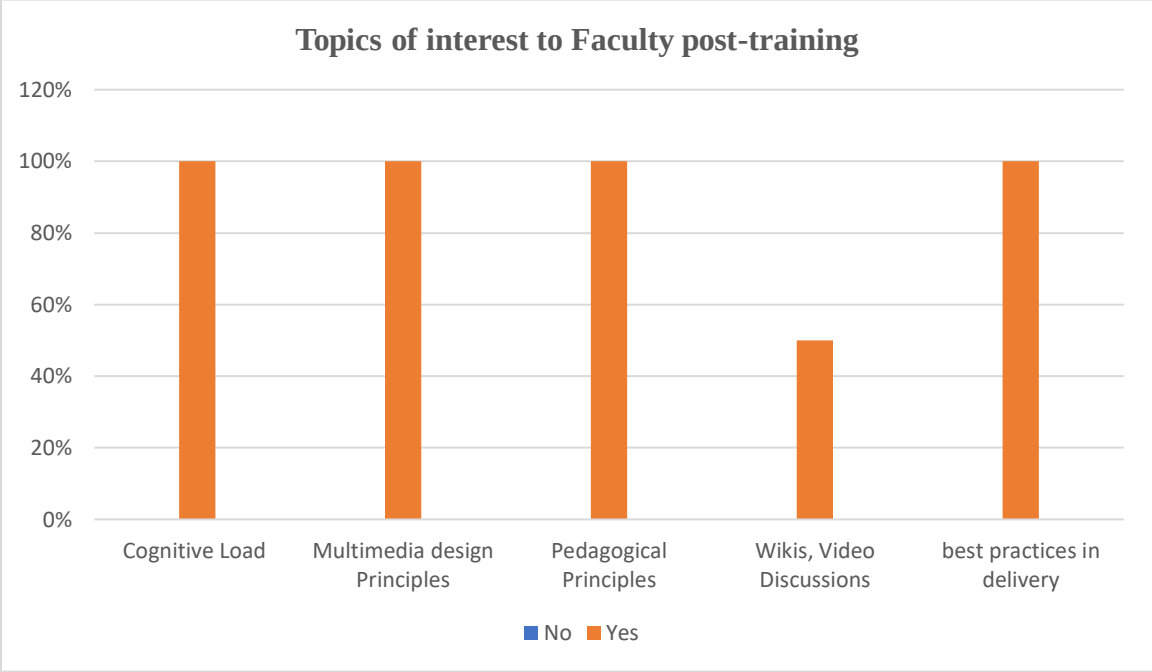

Figure 10

In this figure, after professional development, the faculty indicated additional topics on online teaching practices that they were still interested in knowing more about. In this figure, 50% of the staff expressed interest in knowing more about using wikis or video for discussions. In comparison, 100% of the staff expressed interest in learning more about Multimedia design principles, pedagogical principles that impact online learning, and more about best practices for teaching and learning online. Again, in post-professional development, there seems to be insufficient use of student-centered approaches in online education.

Impact of Professional Development on Students

As faculty become more skilled in online instructional design post-professional development, it is crucial to determine any possible impact that these changes may have on students.

Student Motivation and Engagement

Martin and Bolliger (2018) defined engagement as the student's psychological investment in learning and mastering the course's academic knowledge, skills, or outcomes.

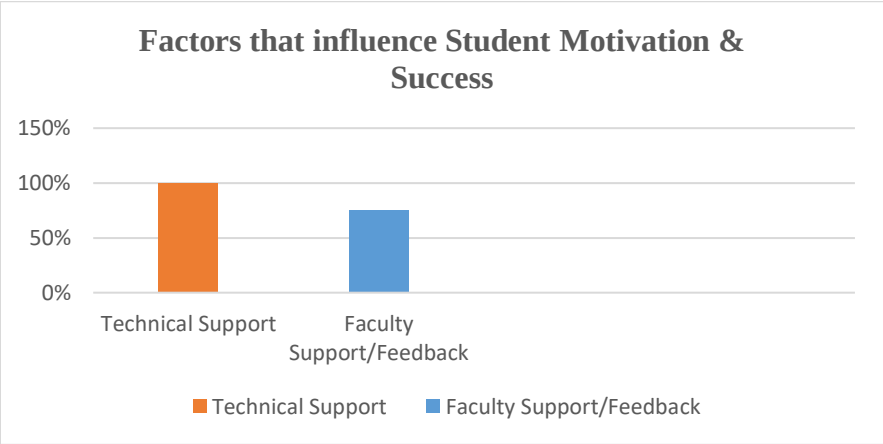

Figure 11

According to the graph, faculty attributed high student motivation to the 100% technical support provided, while the faculty attributed 75% student success and motivation to faculty support. Some students are new to an online learning environment, yet despite their prerequisite technical skills and ability to navigate it, they still expect the online environment to support or enhance their success (Price & Gregory, 2016).

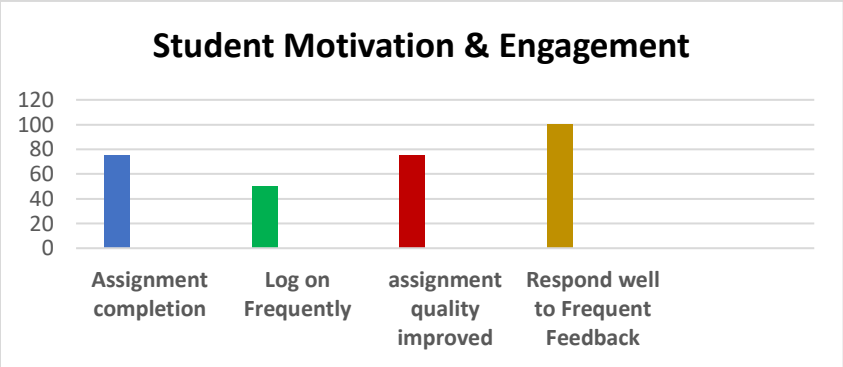

Figure 12

Figure 12 reflects student engagement and motivation using the following criteria: assignment completion and quality, logging-on the frequency, and student response to frequent feedback. As a result of online learning design, 70% of students completed assignments and improved the quality of their assignments. Student engagement was 50%, and students' response to faculty feedback was 100 % in the online learning environment. Faculty feedback seems to have more impact on student motivation and performance than the frequency of logging on.

Student Interaction and Engagement

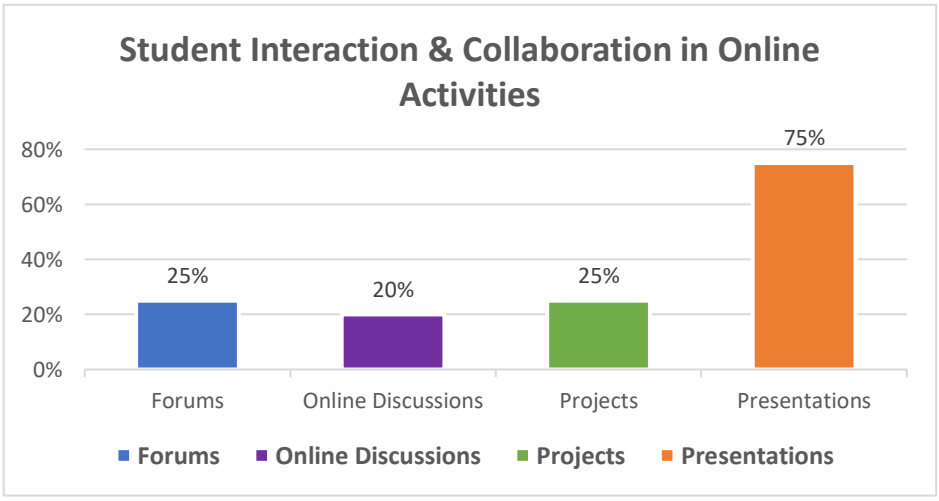

Figure 13

In this study, student interaction and collaboration are determined by interactions with online activities that faculty use, such as student interaction with their peers in discussions and forums and their collaboration with their peers in projects and presentations. In measuring student collaboration, the data reflects that students collaborated in presentations more frequently at 75% than projects at 25%. As for peer-peer interaction, participants indicated that online discussions participation was 20% and forums 25%. Presentations seemed to be the most subscribed assessments, which interestingly enough were also a prevalent assessment model used in the traditional teaching and learning environment. Even more interesting is that the faculty seemed to be using peer-to-peer interaction activities in their online teaching and learning, and the social learning theory is being encouraged by using discussions, forums, and collaboration among students.

Additional Support desired by Faculty

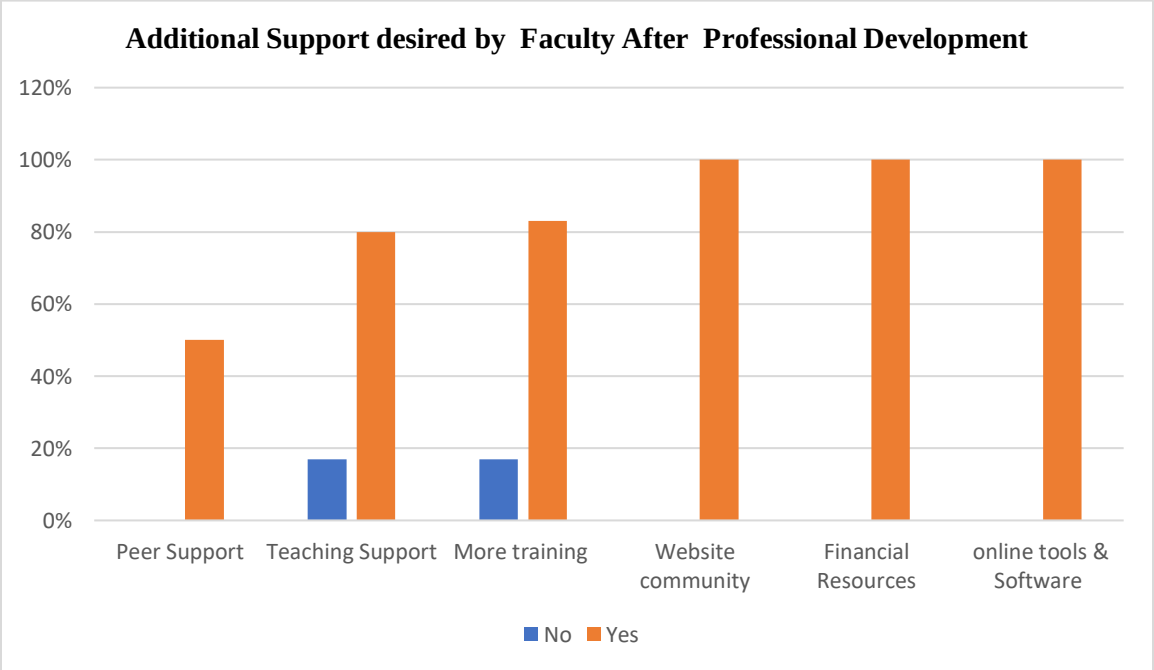

Figure 14

Despite the training received, the participants surveyed expressed a desire for additional support in peer support, teaching support, and continued training. In figure 11, 50 % of faculty participants desired more peer support while 80% desired teaching support and 100% desired more training, website community, financial resources/incentives, and online resources for online teaching and learning.

Discussion

Experience

In the data above, most of the participants had either one-year online teaching experience, while many had 3-5 years of experience in traditional teaching experience. For many instructors, online teaching was a new experience, so they needed support to help them transform their content, learn how to interact with their students, and utilize the technology (Baran, 2018). However, too many times, instructors were asked to teach online without given sufficient preparation or guidance (Power & Morven-Gould, 2011; Windes & Lesht, 2014); so, professional development of faculty is critical for establishing effective distance education and effectively preparing instructors to teach online (Reilly et al., 2012) where they are introduced to online teaching methodologies (Bailey et al., 2009; Vaill & Testori, 2012) and are allowed to learn best practices for successful online facilitation (Moskal, Thompson, and Futch, 2015 as cited by Baran et al., 2013). The development and delivery of effective e-learning courses depended partially on the accumulation of faculty experience, institutional support, and technical support (Visser, 2000). One of the significant barriers to the successful implementation of e-learning was that some faculty lacked understanding of the technology and had no prior experience of online instruction (Surry et al., 2010).

Attitude and Skill

Attitude

The faculty survey revealed that 67% strongly agreed, while 33% reluctantly agreed with the necessity of online distance. However, the participants unanimously agreed to return to traditional instruction after the pandemic, indicating that they viewed e-learning as a temporary measure and not a permanent addition to the institution's strategic plan. Despite their open-mindedness and willingness to participate in the in-house training or professional development to help them enhance their ability to teach and learn online, most faculty members are still desirous of returning to traditional teaching when the pandemic ends. According to Mohr and Shelton (2017), most faculty teach the way they were taught, so it was the intent for professional development to equip them to teach differently and focus more on teaching skills to be effective.

A teacher's attitude towards online learning is critical to how well e-learning is integrated into the curriculum, but the infrastructure support, mentoring, and training provided can improve their attitude (Grove, Strudler, and Odell, 2004; Tallen-Runnels et al., 2006, as cited by Meyer et al., 2012). In this study, faculty readiness is measured by their attitude towards the adoption of online distance learning since the success of online distance education depends on the ability of the faculty to effectively transition to online teaching by creating effective courses capable of supporting the needs of the 21st-century learners. Faculty readiness to teach online is dependent on faculty's attitude towards technology and online learning and their perception of their ability and competence to teach online confidently. Faculty new to online teaching needed to adjust their attitudes towards technology and online teaching to teach online successfully, as students are more likely to have a positive experience when faculty have a positive attitude towards the e-learning mode of course delivery (Martin et al., 2019a). Common barriers to online teaching are

faculty perception and confidence in their ability to teach successfully (Gregory & Martindale, 2016).

Skill

According to the data, most participants had average to expert skills in related information technology, which could help them learn more advanced online teaching and technical skills like those covered in institutional training. Faculty must possess digital fluency to understand how to use the technology in the online environment or context (Becker et al., 2017). In online instructional delivery, faculty need technical skills like browsing the internet and using web-based technology to offer face-to-face content and post-learning materials and assignments on the learning management systems (Albrahim & Fatima, 2020). Having pre-existing schema facilitates learning new knowledge and skills that are an asset to online teaching faculty. In addition to these skills, faculty needed skills and competencies in pedagogical theories, content, design, technological management, instructional skills, and social and communication skills (Albrahim & Fatima, 2020).

Professional Development

Online Instructional delivery Pre and Post Professional Development

Two notable variances in the comparative data analysis were that the pre and post-instructional delivery in synchronous and traditional delivery remained 50% and below. However, an 85% increase in hybrid instructional delivery seems to have indicated improved faculty skills and a transition to more online teaching/delivery. Post-professional development survey revealed the adoption of new online teaching practices and some awareness of pedagogical and multimedia design principles. However, in post-professional development,

participants indicated that there were desirous of learning more online teaching skills and related pedagogical and design theories. Findings from faculty surveys stated that they were interested in accessing additional resources like web-based learning and peer community for continuous learning.

Motivation

Typically, motivation levels improved with training; however, the findings revealed that the motivation levels among post-professional development participants showed that 50% of participants were less motivated than before training. However, institutional professional development objectives are sometimes misaligned with the varied and complex needs of the instructors (Opfer & Pedder, 2011), especially since online instructors have diverse experience levels and backgrounds. Traditional professional development doesn't often work because it focuses more on its objectives than the faculty's needs and experiences (Rhode et al., 2017). Professional development is not a one-size-fits-all but should be adapted to the needs of the faculty to encourage transition red to online instruction (Baran, 2018).

Although typically, professional development programs vary by institution (Baran & Correia, 2009), they usually focus on teaching technical skills rather than improving online teaching practices. In addition, many instructors found the transition from traditional to online teaching environment unsettling, so it is crucial to support and assist faculty's pedagogical shift from teacher-centered to learner-centered instruction (Echols et al., 2018).

Post-training skills and Pedagogical Knowledge

Post-training skill development revealed that participants learned and implemented a few new online teaching strategies in the course design, such as knowledge checks and frequent

feedback. However, other online teaching techniques such as facilitation, interactivity, video, simulations, narrated instruction and other multimedia elements that make a lot of difference to online education were deficient.

Using multimedia applications in online course design enhances student learning, especially when materials are interactive and supported by narration, feedback, and interaction between learners and faculty (McDougall et al., 2003). Multimedia designed for online learning adapts content to various contexts and can also be integrated with other tools in presentations, classroom or laboratory learning, simulations, e-learning, computer games, and virtual reality, to allow learners to process information both in verbal and pictorial forms (Alemdag and Cagiltay, 2018 as cited by Abdulrahaman et al., 2020).

Additional Faculty Support

Despite what participants learned during professional development, there were still pedagogical and online teaching best practices that they were desirous to learn more about. Participants indicated that they wanted to know more about multimedia design principles, pedagogical principles, and best practices for teaching and learning online. Elliott et al. (2015) posit that faculty were more receptive to professional development programs that taught them things they could apply to their context and ones that were self-paced with flexible scheduling. According to these authors, faculty needed training that offered opportunities for self-improvement and networking with peers. What matters in online course design is not the sophisticated graphics and delivery system but the features of the instructional medium and effective teaching (Taylor, 1999 as cited by McDougall et al., 2003).

Administrative Support

In the study, administrators revealed that the types of support they provided for e-learning included: infrastructure, technical support, professional development, and policy. Many previous research has identified administrative support as critical to sound e-learning programs. This includes infrastructure, funding, oversight, and removal of obstacles that hinder a healthy and supported online education program (Meyer et al., 2012). Faculty who teach online need to be assured that they have a reliable infrastructure to support their technological, economic, and emotional needs to confidently take on the challenges of online instruction (Meyer et al., 2012).

According to Mohr and Shelton (2017), professional development is one of the most popular approaches for helping faculty prepare for teaching in an online environment. The consensus of participants identified best practices, professional development, and organizational support, including technical support, as essential for enhancing online teaching and learning (Mohr & Shelton, 2017). Technical support is also critical for faculty and student motivation. Administrators are also aware that student motivation impacts student retention rates, and they constantly adjust curriculum designs, assignment quality, faculty communication, and student feedback to improve student engagement satisfaction and motivation (Price & Gregory, 2016).

Impact of Professional Development on Students

Professional development is intended to improve online faculty's teaching, pedagogical knowledge, and design skills to improve course design to impact students' motivation, engagement, and success.

Student Motivation, Success, and Engagement

Data on student motivation and success identified technical and faculty support as being mainly responsible for their motivation and success. Student motivation and success are inextricably linked to faculty feedback, technical support, course plan, resources, high levels of administrative support, faculty competence, staffing, and quality assurance (Vu et al., 2016). Behavioral tenets that mainly support distance education are positive feedback which motivates students by reinforcing desirable learning behavior (Picciano, 2017; Reiser & Dempsey, 2018). So important is feedback to students that Reiser and Dempsey (2018) recommend that instant and frequent feedback be included in online learning and the gamification activities, included in learning modules to support student performance and in the self-correcting tests hosted on the LMS.

Price and Gregory (2016) asserts that in the online environment, student success and motivation are linked to their existing technical skills, their ability to manage their time and work autonomously, and the provision of a motivating, engaging and supportive learning environment. Technical support represents one of the main motivations for student success as it directly impacts their ability to navigate the learning environment, which is critical to their success.

Student Engagement

The resulting improvement in faculty online teaching skills may have directly impacted student engagement reflected in the log-on frequency, assignment quality and completion, and positive response to frequent feedback. In addition to a course consistency and design, several

studies highlighted the critical role that faculty feedback plays in shaping student satisfaction and producing positive learning outcomes in online environments (Armstrong, 2011; Picciano, 2017; Richardson & Swan, 2003; Swan, 2001). Furthermore, students' impressions of their online learning experiences seemed directly related to the frequency of feedback from the instructor, and more frequent feedback may be correlated with higher levels of student satisfaction. Online students who interacted with their instructors regularly reported higher levels of learning and overall satisfaction with the course (Swan, 2001). In addition, frequent feedback from instructors improves students' sense of self-efficacy, increases their motivation and level of engagement, and improves overall learning outcomes (Bates & Khasawneh, 2007).

Collaboration and Communication

E-learning requires a different approach to pedagogy, especially in individual and group interaction and online assessment (Islam et al., 2015). In this data, faculty encouraged student engagement through participation and collaboration in online activities and authentic assessment/assignments like forums, online discussions, projects, and presentations. According to the findings, students seem to collaborate mainly in presentations but communicate to a lesser extent in forums, online discussions, and projects. According to De Gagne and Walters (2009), effective facilitation and communication strategies for online courses should include discussions, interpersonal communication, and interaction between the teacher and students, thereby enhancing student engagement. The student-course material in online courses is crucial to online learning (Martin et al., 2019b). Williams et al. (2014) cite four general categories to describe faculty competencies needed for higher education online instruction to include : (1) learning and

instruction, (2) communication and interaction, (3) management and administration, and (4) technology.

The online environment needs to have a balance of student-student and teacher-student communication and interaction, along with engaging assignments. As students become more cognitively and socially engaged, the instructor needs to create meaningful outcomes through curriculum design and active facilitation (Price & Gregory, 2016). Facilitating online communications is a critical competency when teaching online (Redmond & Petrea, 2011). Using discussion forums, emails, and chats gives faculty various tools to promote learner–instructor, learner–content, and learner-learner interaction (Moore et al., 2018). In addition, faculty must moderate, participate in, and advance discussions to encourage participation (Darabi et al., 2006). In online courses, faculty apply a variety of active, engaging, and effective communication methods, carry out internal dialogue, and formulate effective responses (Varvel, 2007) to encourage student engagement and interaction.

Moore et al. (2018) identified three types of interaction inherent in effective online courses: (1) learner-to-learner interaction, (2) learner-to-instructor interaction, and (3) learner-to-content interaction. According to Martin and Bolliger (2018), learner-to-learner interaction is extremely valuable for online learning and leads to student engagement. Learner-to-learner interaction is essential for preventing online students from experiencing potential boredom and isolation in the learning environment. It is important to build activities that enhance engagement to help students feel connected and create a sense of community (Martin & Bolliger, 2018). Technologies such as discussion boards, chat sessions, blogs, wikis, group tasks, or peer assessment can promote student-to-student interaction in online courses (Revere & Kovach,

2011; and Banna et al., 2015). Facilitating discussions is a key competency when teaching online (Redmond & Petrea, 2011).

Discussion forums, emails, and chats give educators various tools to promote learner–instructor, learner–content, and learner-learner interaction (Moore et al., 2018). Faculty must moderate, participate in, and advance discussions to encourage participation (Darabi et al., 2006). Faculty should apply a variety of active, engaging, and effective communication methods, carry internal dialogue, and formulate effective responses (Varvel, 2007).” Another way that faculty can increase student motivation and engagement is utilizing the student's innate social tendencies as represented in the community of inquiry framework consisting of a learning experience that combines the three elements of instructional presence as social, cognitive, and teaching presence. This framework forms the basis of student-centered engagements through teacher presence by providing meaningful feedback. The instructor creates meaningful outcomes to further cognitive and social aspects through course content and social presence through discussions and student-student communication.

Faculty can create a consistent online presence by utilizing motivating pedagogical practices using active instructor facilitation, engaging assignments, and student-student interaction (Price & Gregory, 2016). Facilitating discussions is a key competency when teaching online (Redmond & Petrea, 2011). Faculty can use discussion forums, emails, and chats to give educators various tools to promote learner–instructor, learner–content, and learner-learner interaction (Moore et al., 2018). Faculty must moderate, participate in, and advance discussions to encourage participation (Darabi et al., 2006). Faculty should apply a variety of active,

engaging, and effective communication methods, carry out internal dialogue, and formulate effective responses Varvel (2007).

Conclusion

Professional development is crucial to the implementation of distance education, and it can help prepare and transition traditionally trained faculty to teach online. Professional development is most useful when it is integrated into the institution's culture so that faculty can access continued development, peer support, and peer community website so that they can share knowledge, resources, and solutions with their peers. Traditional professional development focused more on technical skills than comprehensively preparing faculty to use effective online teaching techniques like facilitation and resources.

Despite the faculty's willingness to teach online, they seemed unprepared and stuck to digital instructional delivery methods that mimicked traditional instruction. Faculty motivation levels declined after professional development as it may not have fully addressed their needs fully. Instead, participants desired additional support in cognitive load principles and needed more knowledge on other online teaching skills and strategies like frequent feedback, videos and simulations, interactivity, narrated instructions, and knowledge checks. Faculty also expressed interest in knowing more about pedagogical and multimedia design principles, wikis, and best practices and a willingness to have a web-based community of their peers with whom to share knowledge and best practices.

As to how faculty development and administrative support impact student motivation and engagement, student motivation was 78% with an improved assignment and quality and completion and 100% positive response to frequent feedback and technical support. The

faculty's inexperience impacted student collaboration and online communication with online communications such as forums, online discussions, and projects. Learner-to-learner interaction is extremely valuable for online learning and leads to student engagement. Learner-to-learner interaction prevents online students from experiencing potential boredom and isolation in the learning environment, and it helps them feel connected and creates a sense of community (Martin & Bolliger, 2018). Not to discount the importance of professional development and administrative support but establishing an online Center for Innovation in Teaching and Learning (CITL) for Caribbean online faculty could better address the faculty's need for continuous development and 24/7 resources and peer support available whenever they need it.

Summary

In this chapter, the researcher presented and discussed the findings. The findings were analyzed and explained in detail. Each theme was introduced, and its relevance was discussed. In chapter five, there will be a summary of the findings, a discussion of the conclusions, limitations, implications for practice, and recommendations for additional studies.

CHAPTER FIVE

Summary, Recommendations and Conclusion

Introductions

This chapter will summarize the study and the findings of the four research questions, discuss the limitations of this study and conclusions and make recommendations for practice and future research. This study aimed to explore how professional development and administrative support impact online faculty and student engagement and motivation in the Caribbean.

Summary of findings

This research was a pragmatic exploratory sequential mixed design used to achieve the research's purpose and address the research questions. These four research questions guided the study: 1) What faculty skills, experiences, and attitudes aid or hinder the transition to designing and instructing online? 2) How can professional development help faculty transition to designing and instructing online? 3) How can administrative and technological infrastructure support the motivation and success of faculty and students in online programs? and 4) What additional types of support and development does faculty desire to help them continue to develop their online teaching skills?

Research Question 1: What faculty skills, experiences, and attitudes aid or hinder the transition to designing and instructing online?

In the study, the findings indicated that many of the participants had 3-5 years or more of experience in traditional instruction, but they had less than a year of experience in online

teaching. Additional findings revealed in the skill inventory indicated that the participants had pre-requisite information technology skills like web-browsing, word processing, and presentation skills, which gave them the existing schema to learn new instructional and technical skills to teach online. Although 33% of participants reluctantly agreed compared to the 67% full acceptance of online distance learning, the survey revealed that the participants were unanimously eager to return to traditional instruction after the pandemic. So even though the participants had the pre-requisite technological skills and possessed an open attitude and receptivity to online teaching, they did not learn as much about online teaching as they desired.

Research Question 2: How can professional development help faculty transition to designing and instructing online?

Although Professional development was the popular choice for retooling employees in a dynamic institution, findings from the study indicated that it may not have addressed all the participants' pedagogical, design, and skills needs. Post-professional development participants seemed to have implemented some online teaching practices like increasing the use of digital instructional delivery in the hybrid model and using forums, group presentations, and to a lesser extent, wiki collaborations and discussions. However, professional development did not increase faculty motivation as expected, but instead, 50% of the participants were less motivated than before. In the study, professional development has been shown to reflect a modest increase in faculty online teaching skills; there might have been a misalignment with faculty's needs. The study findings revealed that Professional development could negatively affect faculty motivation if it doesn't adequately meet their needs for learning more applicable and practical online teaching and design skills.

Research Question 3: How can administrative and technological infrastructure support the motivation and success of faculty and students in online programs?

According to the results of the semi-structured interview of the administrator: the support provided for online distance learning included policy, technological infrastructure, technical support, and professional development. Despite the administrative support provided by the institution, there was a deficit in motivators like additional compensation and incentive to increase faculty motivation. The data collected in the study reflected that technical support was rated the number one reason for student motivation in the online environment, while faculty support was secondary.

As revealed in this study, after professional development, participants implemented new student-friendly online teaching strategies like frequent communication with students using: feedback using email, comments in the discussion and forums, and varied assessment types. Although professional development improved online teaching skills among faculty, 50% of the participants experienced a significant reduction in motivation after in-house professional development.

Research Question 4: What additional types of support and development does faculty desire to help them continue to develop their online teaching skills?

Post-development survey findings indicated that participants were interested in other forms of support like web development and peer support. After Professional development, participants also identified the need for additional support and knowledge in pedagogical and multimedia design principles and increased training in best practices in online teaching /learning.

Web- Professional Development

Martin et al. (2019) posit that most institutions follow the traditional professional development model instead of offering a wide selection of short, individual training options such as workshops, seminars, webinars, teaching guides, and consultations. In addition, some institutions even invite outside speakers or require instructors to travel for in-service training (Kennedy, 2016; Trust et al., 2016). However, these approaches create a misalignment between the professional development objectives and instructors' varied and complex needs, experience levels, and backgrounds (Opfer & Pedder, 2011). Instead of the traditional professional development previously offered, Reilly et al. (2012) recommend web training as a cost-effective and efficient alternative and peer-communities to connect geographically and demographically diverse faculty members to share knowledge, collaborate and solve common problems.

Recommendations for Practice

Based on the findings of this research, this researcher has four recommendations. Firstly, higher education institutions in the Caribbean should provide additional administrative support in web-based training and peer community that offers continuous training for faculty in technical skills, instructional design principles and pedagogical theories, peer communication, and best practices. Online or web-based training is an economical and flexible option that can be designed to address varying needs of online faculty while peer communities allow faculty across the region to share experiences, knowledge, and best practices, thereby improving online distance education across the Caribbean. However, Reilley et al., (2012) suggests that a virtual format is a more cost-effective and efficient alternative for offering continuous training and establishing learning communities that connect geographically and demographically diverse faculty members

to collaborate and solve common problems. Faculty training should have varied approaches to accommodate faculty needs using online courses, workshops, seminars, webinars, tutorials, teaching guides, and videos or face-to-face demonstrations for immediate application (Martin et al., 2019a).

The second recommendation is that administrators should give additional incentives or financial compensation to faculty for the extra time it takes to develop online courses, which may increase faculty motivation to teach online. Administrative support should provide financial incentives, professional development, and technical support to encourage improved motivation and engagement for faculty. Discounts for the upcoming semester could be offered as an incentive to students to complete each semester.

The third recommendation is for faculty to create courses that offer students more opportunities to interact with content, faculty, and their peers through online discussion, collaboration, narration using various means. These courses should provide authentic and formative assessments like knowledge checks, case studies, rubric feedback on assignments, and other types of interactivity.

Finally, professional development must be ongoing and could best be integrated into the organization's culture and made available online to offer faculty much-needed knowledge of best practices skills on a flexible schedule and as-needed basis. Professional development should be ongoing and flexible and address the varied needs of online faculty. However, the institution’s professional development objectives are sometimes misaligned with the diverse and complex needs of the instructors (Opfer & Pedder, 2011), especially since online instructors have various experience levels and backgrounds. Traditional professional development doesn’t often work because it focuses more on its objectives than the faculty's needs and experiences (Rhode et al.,

2017). Professional development is not a one-size-fits-all but should be adapted to the needs of the faculty to encourage transition red to online instruction (Baran, 2018).

Recommendations for Future Research

Future research possibilities inspired by this study are: the exploration of the effectiveness of online development of faculty, the impact of training on online course development, and the effectiveness /impact of web community on faculty development of online teaching skills and best practices. Another possible future research could be the impact of student-centered online course design on student engagement and performance in the Caribbean.

Limitations

This research was challenging since virtual data collection was new to the participants and the researcher. Amidst the pandemic where faculty had increased responsibility of adapting numerous traditional classes to an online format, there were sometimes delays in responding to some surveys. The researcher hugely overestimated the intended level of participation despite the worldwide pandemic, the distance, and the Caribbean ethos. However, software like Qualtrics improved data design, collection, and analysis and was uniquely adaptable to conducting research virtually. Another limitation of the study was the participants' self-reporting, which sometimes impacted the responses' quality or accuracy. Finally, the sample size was small, which does not facilitate the generalization of these findings.

Conclusions

Based on the data collected during this study, it has been confirmed that professional development is critical to faculty transition from traditional to online delivery. As a result of the training administered by the institution, faculty utilized more avenues of feedback to encourage student participation, although email was the media used with more frequency. Other notable results were reflected in how well students transitioned from traditional to online learning as they could navigate the LMS, upload assignments well, and log on without assistance. Also, student engagement increased as reflected in the frequency they log on and the prompt completion of assignments, etc., based on on-time submission. The participants also reported that students' work quality was consistent and included logic and supportive arguments.

Based on the data collected, although faculty increased the use of digital course delivery methods like hybrid instruction, they were eager to return to traditional teaching after the pandemic. This unanimous desire to return to traditional education may indicate that they only provisionally accepted the use of online learning and may have viewed it as a temporary option instead of a permanent addition to the colleges' strategic plan.

Summary

This chapter discussed the possibilities for applications, and there were recommendations for future research resulting from this research.

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