



Exploring Knowledge Development for Sustaining the Intellectual Capital of Technical and Vocational Education and Training leadership Research: A Qualitative Study At a Global South University

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Abstract: A Caribbean University in the Global South is committed to sustaining Technical and Vocational Education and Training (TVET) "Leadership" research as it remains a crucial driver for leading social and economic transformation in the aftermath of the COVID-19 global pandemic. This exploratory study aims to examine the extent to which a "TVET Leadership" focus exists in research titles of final projects/theses from this University's Leadership in TVET and Workforce Development graduate programs and explore directions for future knowledge development. Using content analysis, these final research projects/theses' titles were thematically categorized that revealed a lot more emphasis on such themes as TVET stakeholder perceptions, pedagogy, and youth participation than "Leadership." These findings will resonate with local "TVET" research supervisors and supervisees in the Global South at a premiere Caribbean university in knowing what research has been done in their chosen field in avoiding duplication of efforts and knowing what remains to be researched. The study findings will also contribute to the limited scholarly literature from the Caribbean in the Global South on knowledge development in TVET "Leadership" research

INTRODUCTION

Technical and Vocational Education and Training (TVET) remains a critical driver to social and economic recovery, especially in the aftermath of COVID-19 global pandemic to include the Caribbean region of the Global South (Blair et al., 2020; Government of Jamaica, 2018; Levin et al., 2024; OECD, 2020; Shi & Bangpan, 2022; UNESCO, 2022). By definition, this study refers to TVET as comprising education, training and skills development relating to a wide range of occupational fields, production, services and livelihoods (UNESCO, 2015). Leaders in charge of TVET programs and institutions are challenged with ensuring that graduates of their programs are equipped with the skills and competencies that are responsive to the new digital economy, Post-COVID-19 (Odjo et al., 2024; Pelletier et al. 2021; World Economic Forum, 2022). As a small island developing state (Stiftung, 2024), Jamaica's 2030 vision statement emphasizes

the building of the capacity of school leaders to achieve effective and sustainable school based management practices (NCEL, 2019).

However, to achieve these noble outcomes effectively, educational leaders, including those from TVET, must engage in research and consult relevant data to determine the extent to which their programs are responding to societal and workforce demands. Leadership styles vary widely to include instructional, participatory, transformational, and transactional. Among the latter, transactional, transformational leadership is particularly effective for leaders in championing change (Plummer, 2023). The current study provides insight into TVET “leadership” research conducted by postgraduate students as aspiring TVET leaders in addressing local and regional challenges in their fields.

A leading Caribbean University ranked among the world’s top 100 Universities (UWI St. Augustine, 2024) has included in its mission statement to create knowledge and drive innovation for positive transformation of the Caribbean and the wider world (UWI Mona Campus, 2023). Much of this knowledge creation is accessed through its library homepages for each of the University’s five regional campuses which include online thesis and journal databases with indexes to physically held collections (University of the West Indies, 2024a). Through its Library Liaison Programme, University librarians are committed to sustaining research “leadership” and collaborating with postgraduate research supervisors to support the research and information needs of their supervisees across a range of disciplines including TVET and Workforce Development (University of the West Indies, 2023). For example, they host a TVET/WFD LibGuide with up-to-date digital resources provided by assigned TVET research supervisors and accessible from the Library Homepage (University of the West Indies, 2023). Librarians also host weekly virtual reading rooms (VRRs) for library reading and writing hours directed by students enrolled in the University’s School of Education, Leadership in TVET and Workforce Development (L/TVET/WFD) postgraduate programmes, which have been shown to be effective in supporting supervised postgraduate research (Ferdinand-James et al., 2023).

The L/TVET/WFD programs have been offered since 2012 at two of the five campuses of this Caribbean University out of a need to develop a cadre of leaders to design and manage TVET programs, which are currently in great demand throughout the Caribbean in the Global South. These leaders include managers and coordinators of skills training programs in government ministries, NGOs, and educators interested in upward mobility within TVET systems (The University of the West Indies, Mona, 2023a). The northernmost campus of this premiere University offers the Master of Arts (MA), Master of Philosophy (MPhil), and Doctor of Philosophy (PhD) in L/TVET/WFD, while its southernmost campus only offers the MA degree. Notably, these programs were among the first to be offered in the Caribbean region in developing leadership capacity for TVET/WFD towards sustaining the social and economic development both at the local and regional levels. The move to offer the latter programs is in keeping with this top-ranked Caribbean University’s commitment to regional development through education and training (The University of the West Indies, Mona, 2023a).

This research was conducted from the first author’s perspective as a research supervisor of L/TVET/WFD participants based at the University’s northernmost campus.

She observed that their research rarely focused on “TVET leadership” (including workforce development in the current study) but rather on the pedagogical context within the TVET classroom. While the latter helps to address TVET pedagogical enhancements in preparing students for the workforce, the more challenging leadership tasks of designing, managing, marketing, financing and sustaining TVET programmes appear to be understudied as future TVET leaders. The Caribbean scholarly literature rarely addresses the issue of sustaining the intellectual capital of TVET “leadership” research. Thus, the authors of this exploratory study aimed to investigate the extent to which a TVET “Leadership” focus was present in the research titles of postgraduate final project/thesis for L/TVET/WFD graduate programmes and explore directions for future knowledge development to sustain the intellectual capital of TVET “leadership” research. This work will make a significant contribution to mentors and supervisors of Caribbean “TVET” research at this premiere Global South University for informing other Caribbean universities of what research has been done in their chosen field, avoiding duplication of efforts, and knowing what remains to be researched. This study will also contribute to closing the gap in the scientific literature on knowledge development in Caribbean “Leadership” research in the Southern Countries.

THEORETICAL SUPPORT

Intellectual Capital

Researchers have undertaken various approaches to conceptualize intellectual capital (IC). Nahapiet and Ghoshal define IC as a combination of knowledge and the capacity to acquire knowledge (Nahapiet & Ghoshal, 1998). Additionally Asiaei & Jusoh (2015) explore the multifaceted relationship between IC and components such as human resources, databases, information technology, operational processes, customer relationships, brand identity, trust, and organizational culture. In the context of Higher Education Institutions (HEIs), IC encompasses all intangible or non-physical assets of an organization, including systems, resources for innovation, trademarks, the implicit knowledge and skills of its workforce, inherent strengths and capabilities, societal recognition, and the network of partners and their connections (Ramrez & Gordillo, 2014). Furthermore, in light of the current digital transformation trajectory in both higher education and industry Post-COVID-19, it is imperative to integrate intellectual capital (IC) exploration with TVET leadership and knowledge development. This integration affords the aligning of leadership practices with robust knowledge development processes to sustain intellectual capital in the evolving landscape of education and industry (Gradim et al. 2022; Pelletier et al., 2021; Radaelli 2011).

TVET “Leadership” Research And Knowledge Development

Research within the realm of TVET leadership reflects ongoing innovation and leadership training in responding to the digital transformation characterizing education across the globe (UNESCO, 2021; World Economic Forum, 2022). A 2018 TVET governance report by the British Council revealed that TVET institutional leaders in the study, to include those from England, South Africa, Nigeria and Vietnam, were grappling

with similar issues of funding, management capacity and employer engagement in managing change and trying to make provision more responsive to demand (Graham et al., 2018). In addition, a trends mapping study coordinated by a key global TVET leader, UNESCO-UNEVOC, indicated that fostering “intrapreneurship” in leading quality TVET was as an innovative emerging best practice in responding to digital transformation disruption prompted by the COVID-19 pandemic (Ganter de Otero, 2019). While *entrepreneurship* is mainly linked to micro-enterprises, “intrapreneurship” is operationalised mostly in medium-large businesses with the intrapreneur using creative ideas to innovate within these businesses for increasing their competitive advantage (Rahman et al., 2022).

In recognizing the needs of TVET institutional leaders as shown in research, key TVET international organizations have engaged in the necessary training to better equip TVET institutional leaders for their responsibilities. The commonwealth of learning recently hosted an open and distance learning program for TVET institutional leaders from Kenya and Nigeria, totalling 96 participants. The purpose of the program was to develop strategic and high-level operational capabilities of designated TVET personnel to lead initiatives for the uptake of digital learning and teaching technologies within their institutions” (Commonwealth of Learning 2024). Similarly, started in 2016, the annual UNESCO-UNEVOC TVET Leadership Program equips participants (over 700 to date) with the skills and tools to effectively manage TVET institutions by focusing on four key areas: Vision for Change, Knowledge for Change, Skills for Change, and Proposal and Action Plan for Change (UNESCO-UNEVOC International Center, 2023). It is evident from the literature that developing leadership skills and knowledge is an underlying characteristic for sustaining practice, policy and research in TVET leadership.

Knowledge has been referred to as a corpus of material that may have been accumulated over centuries but begins with data collection of raw data or hard statistics that are sifted accordingly using information technology to include retrieval systems (Kidwell et al., 2000; Letcher, 2003). Knowledge also encompasses an employee's knowledge and insights and may be used in decision-making processes (Sadeghi Boroujerdi et al., 2020), as done with those in leadership, who likened knowledge to building blocks that enhance our ability to create and disseminate knowledge to others as we amass and possess more knowledge (Al-Hawamdeh, 2003). Therefore, knowledge development processes involve a combination of strategies for knowledge creation, adoption, distribution, review and revision (Bhatt, 2000). Knowledge creation and adoption may be sufficient to form a knowledge development cycle at the individual level. However, knowledge distribution, review, and revision within the organization become crucial for converting individual knowledge to organizational knowledge such as previously mentioned in the role of the “intrapreneur” as innovator within the organization (Bhatt, 2000; Rahman et al., 2022).

Related research by Öberg and Lundberg (2022) proffered that universities' involvement in knowledge development has traditionally been characterized by a linear process of spinning out research ideas for subsequent commercialization or in broader collaborative roles in more recent times. For example, this premiere Caribbean University's southernmost campus research on Anthuriums resulted in a collaborated

breeding program with a commercial cut-flowers entity for pedigree varieties of anthuriums for trade (The University of the West Indies, 2024b). Knowledge development is paramount to higher education systems for fostering innovation and influencing overall productivity as demonstrated by the premiere Caribbean university it was ranked among the top 1.5% of world-class universities and research institutions by the Times Higher Education World University Rankings for 2022 (The University of the West Indies, 2024c; Vila et al., 2012).

Thus, sustaining intellectual capital in TVET relies heavily on effective leadership practices combined with robust knowledge development processes. As such, TVET leaders are pivotal to fostering knowledge development amidst change and complexity, strategic planning and execution, and employing collaborative leadership strategies essential for sustaining TVET leadership intellectual capital (Ahmad, 2015; Badenhorst & Radile, 2018; Chinien, 2009; Plummer, 2023; Sharma & Pandher, 2019). Such knowledge development and advancement require a knowledge culture environment informed by its same theory. Knowledge culture theory builds on organizational culture research that includes an emphasis on understanding, valuing, and committing to knowledge management within the organization. Further, knowledge culture theory places much value on learning and creativity, allowing for spontaneous internalizing and reflection of knowledge to inform innovation. These tenets resonate with universities as academic institutions of learning and research (Baskerville & Dulipovici, 2006; Millar, 2013; Miller et al., 2016; Öberg & Lundberg, 2022). By engaging in research and synthesizing their findings, researchers worldwide (to include TVET leaders) can offer evidence-based insights and recommendations to facilitate ongoing enhancement of leadership/mentoring practices and the overall quality and relevance of TVET programs worldwide. The latter is essential for growth levels in innovation, sharing scientific discoveries with companies via knowledge hubs, providing valuable expertise, and cultivating skilled professionals (Tun & Juchhelková, 2022; Gulzar, 2023).

Furthermore, research and innovation in TVET are critical in helping to achieve the sustainable development goals, particularly in relation to SDG4 and its related targets: ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. The programme has a target of ensuring equal access for all women and men to affordable and quality technical, vocational and higher education, including university. The programme also targets to substantially increase the number of youth and adults with relevant skills, including technical and vocational skills, for employment, decent work and entrepreneurship and simultaneously targets to eliminate gender gaps in education and ensure equal access to all levels of vocational education and training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations. (Huebler, 2022).

The literature review of TVET “leadership” research highlights the need to sustain such intellectual capital to advance knowledge and innovation in TVET. Furthermore, without such intellectual investment by TVET program leaders, it will become outdated and irrelevant to the current digital transformation in the workforce and economy locally, regionally and internationally. Key themes in the literature review for this descriptive study

that will guide the indication of the focal phenomenon of “TVET Leadership” include the following: Fostering lifelong learning in program planning; Managing Change and Complexity in a digitally enabled TVET environment; Leading responsiveness to workforce demands in TVET programs; Managing TVET programs for sustainability, inclusion and financial stability; Building capacity for transformational leadership in TVET and its promotion; Leadership strategies to strengthen TVET-industry partnerships; Advancing innovation in managing TVET curricula for entrepreneurship, intrapreneurship and greening; and Ensuring quality in leading TVET program delivery.

It is against this backdrop that the current study investigates, for the first time, the extent to which a “TVET Leadership” focus is present in the final project/thesis research titles of graduate students from L/TVET/WFD master’s programmes at leading Caribbean Universities and explores possible future directions for knowledge development to sustain the intellectual capital of TVET “Leadership” research. The following overarching research questions and sub-questions guide the study: To what extent is a “TVET Leadership” focus present in the final project research titles in TVET “Leadership” programmes at leading Caribbean Universities and exploration of possible future directions for knowledge development in “TVET Leadership” research? Given this breadth of focus, what are the explorations of future directions for knowledge development in TVET “Leadership” research in L/TVET/WFD master’s programmes at leading Caribbean Universities? The answers to these questions will be useful to the supervisors and supervised participants of this Caribbean University’s “TVET” research in knowing what research has been done in their chosen field to avoid duplication of efforts and to know what remains to be researched and to fill the gaps in the global scientific literature for such research. In addition, the intellectual capital of the “TVET Leadership” research at the master’s level will be retained to inform the further development of TVET policy, practice and research at this leading University.

METHOD

The purpose of this research study was to describe to what extent a TVET “leadership” focus exists in research titles of graduating students’ final projects/theses from a premiere Caribbean University’s L/TVET/WFD graduate programs and explore possible directions for future knowledge development for sustaining the intellectual capital of TVET “Leadership” research. Purposive sampling was used in requesting and collecting extant final research project titles data from the University’s Schools of Education departments that offer graduate programs in Leadership in TVET and Workforce Development at its northernmost (offers both Master’s and MPhil/PhD) and southernmost (only offers Master’s) campuses. However, only master’s research titles were received from the northernmost Campus (2014- 2021) and the same is true for the southernmost campus (2013-2023) that only offers the L/TVET/WFD MA degree. A search through the University’s theses databases using this information did not show many of the graduating theses’ titles and on further inquiry, it was revealed that the databases are not fully up-to-date. Nevertheless, the final research project titles’ data was already in the public domain, so approval from the University’s Research Ethics Committee was not necessary.

Content analysis was employed to thematically categorize these research titles according to “area of interest” and “outcome” to a greater extent that inform the TVET “leadership” study phenomenon than “research strategy”, which is given lesser attention, but still in accordance with title components for research studies (Laerd Dissertation 2012). The “area of interest” is the broad theme within the study title. For example, a study titled, “Perceptions of Varied “TVET” Stakeholders at Two Selected High Schools in Urban Jamaica”, would have “Stakeholder Perceptions of TVET” as its broad theme. In contrast, the “outcome” highlights an aspect of the study that is theoretically, empirically, or practically driven such as in generating “theory” or understanding “lessons learnt” from implementing a new curriculum or technology. The “research strategy” includes the type of research design or methodology referenced in the study title such as quantitative, qualitative, or mixed methods design (Creswell, 2013; Laerd Dissertation, 2012).

Analyzing the phenomenon of a TVET “leadership” focus in the research titles data was done in keeping with the recommendation by Stokes (2003): “Whenever you need quantitative values relating to the occurrence of particular phenomena in texts, content analysis is the best method to adopt. The first research question initially guided the objective of the content analysis to identify a TVET “leadership” focus or phenomenon in research titles. In vivo coding (reflects what is in text) was used to capture the “area of interest” in the research titles in an iterative process to avoid overlapping in codes (Arshad, Ahlan, & Ibrahim, 2013). The second and third authors reviewed the latter for accuracy in helping to establish dependability, credibility and trustworthiness of the study data (Patton, 2014). The emerging categories, themes, and patterns were further reduced to better manage the data. For example, titles that contained a reference to the readiness or any type of preparation for the workforce (e.g., on-the-job training) had “workforce preparation” as its final area of interest. The frequency counts of these thematic “areas of interest”, “outcomes”, and “research strategies” given in these research titles are presented in numerical summary tables as is customary for content analysis (Stokes, 2003).

RESULT AND DISCUSSION

Research Question (1): To what extent does a TVET “leadership” focus exists in research titles of final research projects from a premiere Caribbean University’s L/TVET/WFD master’s programs?

Leadership focus is an important part that needs to be considered and studied further. Leadership will greatly affect the performance of the education sector, where good education depends greatly on how organized and consistent the leader is in running the educational institution. Education will run according to direction and the quality of education will be greatly influenced by the direction given. Researchers obtained data for leadership focus with a sample size of $N = 100$, which was able to provide a picture of the leadership focus in final research project titles. The Leadership Focus on the northernmost and southernmost campuses of the University of the Caribbean can be seen in Table 1.

Table 1. MA TVET Research Project Titles and “Outcome” Components for 2013-2023 with “Leadership” focus at a Caribbean University’s Northernmost and Southernmost campuses (N=100)

Northernmost Campus TVET “Leadership” Focus in Research Project Titles	Outcome	TVET “Leadership” Focus Frequency Count
Food & Beverage Staff Perception of Organizational Culture and its Influence on Morale	Not clearly stated	1
Fire Brigade University Graduate and Non-Graduate Senior Officers’ Leadership Styles: Experience of Sub-Officers at a Fire Station in Kingston	Not clearly stated	1
The Effects of School Resource Officers (S.R.O’s) on Criminal Activities at a Prominent High School in the Parish of St. Mary	Note clearly stated	1
Assessing the Impact of TVET Financing Models on the Delivery of Programmes at HEART Trust/ NTA Training Centres in Kingston	Impact Assessment	1
Evaluation of Capacity Building Strategies for Extension Officers in Rural Agricultural Development Authority (RADA)	Evaluation	1
Technical And Vocational Education in National Development: Principals’ Perspectives	Not clearly stated	1
Sub-Total		7
Southernmost Campus TVET “Leadership” Focus in Research Project Titles		
Skill Transfer in Use of Force and Conflict Management Among Supplemental Police Officers	Not clearly stated	1
An Assessment of Industry Leaders' Level of Satisfaction With Graduates Trained for the Food Industry in Trinidad and Tobago	Satisfaction Assessment	1
Administrators' and Teachers' Perception of School Discipline Strategies at A Denominational School in Central Trinidad	Not clearly stated	1
Sub-Total		3
Final Total		10

The results in Table 1 show that only 10 (10%) of the 100 research project titles accepted into the study’s content analysis had a direct focus on TVET “leadership.” The northernmost campus had slightly more than double (7 out of 47) the southernmost campus’ research project titles (3 out of 53) with a TVET “leadership” focus but were still very limited in terms of representation. Nonetheless, the latter covered financing models for TVET, conflict management skills, leaders’ satisfaction with TVET graduates’ performance. The final results reflect several broad themes in the TVET “leadership” literature that require further knowledge development from a Global South, Caribbean perspective (Ganter de Otero. 2019; Graham et al., 2018; Öberg & Lundberg 2022; Ramirez & Gordillo 2014). In particular, there is a lack of representation of Inclusion, Lifelong Learning, Digital Transformation, Innovation, and Sustainability, which would make TVET programs more responsive to community and labor market needs as represented in the literature (Huebler, 2022; Tun & Juchhelková, 2022; Gulzar, 2023; Plummer, 2023). Similarly, minimal inclusion was evident for the “outcome” component findings of the studies in the research project titles: two for the northernmost campus and one for the southernmost campus out of 10 research titles with a TVET “leadership” focus. These minimal results highlight the need to structure TVET research study titles to highlight

theoretically, empirically, or practically driven aspects of the study (e.g., lessons learned) in line with best practices in the world education literature.

Table 2. Accumulated Frequencies on “Area of Interest” and “Outcome” Components “MA TVET” Research Project Titles for 2014-2021 at a Caribbean University’s Northernmost Campus (n=47)

Northernmost Campus “Area of Interest” in Research Project Title Themes	Outcome	Broad “Area of Interest” Accumulated Frequencies
Employability Skills for the Workforce in TVET	Development Of Employability Skills	5
ICT Integration in TVET and Delivery During Pedagogy, Competency-Based Education, and Assessment in TVET	Not clearly stated	4
	Not clearly stated	4
Quality Assurance, Vocational Qualifications, Compliance and TVET Sector Body	Not clearly stated	4
Career Pathing in TVET	Not clearly stated	4
TVET Workforce Prep, Practice, and Experiences	Not clearly stated	3
Entrepreneurship and TVET Skills Transfer	Not clearly stated	3
Curriculum Development/Implementation and Green TVET	Implementation	3
TVET Mainstreaming, Stigma, and Occupational Challenges	Not clearly stated	3
TVET Teacher Preparation, Professionalism, and Licensing	Not clearly stated	2
Gender and Youth Participation in TVET	Not clearly stated	2
TVET Stakeholder Perceptions	Not clearly stated	1
Final Total		40

*The difference of 7 in total is accounted for in the 7 TVET “leadership” focus research titles in Table 1

Aside from the 7 research titles with a TVET “leadership” focus, the remaining 40 research titles for the Northernmost campus had a varied but relevant focus on TVET. As shown in Table 2, just over 20 or 50% of these titles are almost evenly distributed with a focus on employability skills (5), ICT integration (4), pedagogy and assessment (4), quality assurance (4) and career pathing (4) in TVET. While the individual research titles are combined into these broader “areas of interest” to manage the data, many of them included “students” in the original titles, not necessarily targeting TVET administrators and leaders. The least “areas of interests” in the research titles for Northernmost campus had a focus on stakeholder perceptions (1), teacher preparation (2), and gender and youth participation (2) in TVET. The latter results identify gaps to be addressed by MA “TVET Leadership” students in conducting future research to involve TVET leaders, who are pivotal to fostering knowledge development for effecting change in today’s dynamic TVET educational and working environments. Such research will be beneficial in sustaining the intellectual capital of TVET “Leadership” research that resonates with the related literature (Ahmad, 2015; Badenhorst & Radile, 2018; Plummer, 2023; Sharma & Pandher, 2019). Data for accumulated frequencies on “Area of Interest” and “Outcome” components in “MA TVET” research project titles for 2013-2023 At a Caribbean University’s Southernmost campus (N=53) can be seen in Table 3.

Table 3. Accumulated Frequencies on “Area of Interest” and “Outcome” Components in “MA TVET” Research Project Titles for 2013-2023 at a Caribbean University’s Southernmost Campus (N=53)

Southernmost Campus “Area of Interest” in Research Project Title Themes	Outcome	Broad “Area of Interest” Accumulated Frequencies
TVET Workforce Prep, Practice, and Experiences	Case Study (1)	10
Gender and Youth Participation in TVET	Not clearly stated	5
Career Pathing in TVET	Not clearly stated	4
Caribbean Vocational Qualification (CVQ) Implementation	Not clearly stated	3
Student Attrition, Completion, and Tracing Graduates	Not clearly stated	3
TVET Stakeholder Perceptions	Not clearly stated	3
Quality Assurance, Vocational Qualifications, Compliance and TVET Sector Body	Not clearly stated	3
Entrepreneurship and TVET Skills Transfer	Not clearly stated	3
Employability Skills for the Workforce in TVET	Not clearly stated	2
TVET-Industry Partnership and Apprenticeship	Not clearly stated	2
ICT Integration in TVET and Delivery During COVID-19	Not clearly stated	2
TVET Teacher Preparation, Professionalism, and Licensing	Not clearly stated	2
Prior Learning Recognition and Assessment	Implementation	2
Student Well-Being in TVET: Discipline and Diet	Not clearly stated	2
Pedagogy, Competency-Based Education, and Assessment in TVET	Not clearly stated	2
Curriculum Development/Implementation and Green TVET	Not clearly stated	1
TVET Mainstreaming, Stigma, and Occupational Challenges	Not clearly stated	1
* Final Total		50

*The difference of 3 in total is accounted for in the 3 TVET “leadership” focus research titles in Table 1.

Apart from the three (3) research project titles with a TVET “leadership” focus, the remaining 50 for the Southernmost campus had a varied but relevant focus on TVET slightly different to the Northernmost campus. As shown in Table 3, the more dominant “areas of interest” in the Southernmost campus’ research project titles is “TVET Workforce Prep, Practice, and Experiences” (10 out of 50) followed by “Gender and Youth Participation in TVET” (5) and “Career Pathing in TVET” (4). A noticeable shift in the less dominant TVET research focus at the Southernmost campus included the following broad “areas of interest” almost evenly distributed: “Caribbean Vocational Qualification (CVQ) Implementation” (3); “TVET-Industry Partnership and Apprenticeship” (2); “Prior Learning Recognition and Assessment” (2); and “Student Well-Being in TVET: Discipline and Diet” (2). The least “areas of interest” in the Southernmost campus’ research project titles are “Curriculum Development/Implementation and Green TVET” (1); and “TVET Mainstreaming, Stigma, and Occupational Challenges” (1). While the individual research titles are combined into these broader “areas of interest” to manage the data, many of them included “students” in the original titles, not necessarily targeting TVET administrators and leaders. This shift in results for the Southernmost campus widens the scope of TVET research done, but also points to a similar need as in the Northernmost campus for exploring possible future directions for knowledge development on TVET “leadership”

research. Identifying these gaps is in keeping with knowledge development processes that require review of and building on existing knowledge to create new knowledge concomitant with the scholarly literature (Al-Hawamdeh 2003; Bhatt 2000). This research that has been conducted also observes how the Accumulation of Frequency in “Research Strategy” in the Research Project Title “MA TVET” for the years 2013-2023 at the Caribbean University with a total of N = 100 which can be seen in Table 4.

Table 4. Accumulated Frequencies on “Research Strategy” in “MA TVET” Research Project Titles for 2013-2023 at a Caribbean University (N=100)

Broad “Research Strategy” in Research Project Titles	Northernmost Campus Frequencies	Southernmost Campus Frequencies
Qualitative	1	2
Quantitative	0	0
Mixed Methods	0	0
Not Clearly Stated	46	41
Final Total	47	53

The “research strategy” component in all the research project titles (100) is presented in an aggregate form as the TVET “leadership” focus in them is given more prominence in keeping with the central phenomenon for the current study. Most telling in Table 4 is the lack of clarity or even absence of the “research strategy” component in the research project titles for both the Northernmost (46 out of 47) and Southernmost (41 out of 53) campuses, representing a decade or research since the inception of the MA “TVET Leadership” programs (The University of the West Indies, Mona, 2023a). While terms such as investigation, exploration, and examination are used in these research project titles, these seldom indicate what research design or strategy (e.g., qualitative, quantitative, mixed methods or case study) was used to carry out the study as shown in Table 4. The latter result may be systemic and not at the individual student level given the extent of this study finding and certainly warrants the attention of the leaders of the MA “TVET Leadership” programs for both the Northernmost and Southernmost campuses. Including the “research strategy” in future research titles would benefit the program’s research supervisors and supervisees for structuring these titles in keeping with best practices in making them more complete as noted in the scholarly literature (Creswell, 2013; Laerd Dissertation, 2012).

Research Question (2): Given the extent of this focus, what is the exploration of possible future directions for knowledge development in TVET “leadership” research at a premiere Caribbean University?

The very limited extent (10/100 or 10%) of the TVET “leadership” focus in research project titles in Table 1 suggests that there is much scope for further knowledge development for such research. To avoid duplication of efforts, knowledge collaboration between the Northernmost and Southernmost campuses on dominant and least dominant areas of interest in research project titles can open the door for exploring future directions for research. As shown in Table 1, there is an absence of “inclusion” (to accommodate persons with disabilities), digital transformation, and sustainability in “MA TVET

Leadership” research project titles with regard to leading TVET programs. In addition, the relevant research done is very limited with only one (1) study representative of financing models (1), capacity-building strategies (1), organizational culture (1), leadership styles (1), and industry leaders’ satisfaction with TVET graduates (1). Similarly, as shown in Tables 2 and 3, there is an under-representation in the areas of interest for “TVET-Industry Partnership and Apprenticeship”; TVET Mainstreaming; Professionalising TVET; and TVET Stigma that are integral to sustaining TVET programs. The latter gap analysis strategy reflects the knowledge culture theory used for this study in valuing learning and research as advocated by Universities such as the top-ranked premiere University in the Caribbean (Baskerville & Dulipovici 2006; Öberg & Lundberg 2022, 293; The UWI Mona Campus, Jamaica, West Indies 2023, 3). Moreover, in scoping directions for future knowledge development for TVET “leadership” research, sufficient emphasis should be placed on the “outcome” component (e.g., implementation, assessment, and evaluation of study phenomenon) as these are seldom included in the 100 research project titles analyzed as shown in Tables 1, 2, and 3. Similarly, inclusion of the research strategy or design is also very limited in project research titles as shown in Tables 1, 2, and 3 and makes the research titles appear incomplete when compared to best practices in the scholarly related literature (Creswell, 2013; Laerd Dissertation, 2012).

The description that has been presented can be understood more briefly where based on the current literature and to the very limited extent to which the focus of TVET “leadership” is in the title of the MA research project “TVET Leadership” (See Tables 1, 2 and 3), the following possible focuses are suggested for future knowledge development depending on the needs at the Northernmost and Southernmost campuses of a leading Caribbean University - namely Fostering lifelong learning in planning TVET programmes; Managing Change and Complexity in a digitally enabled TVET environment; Leading responses to workforce demands in TVET programmes; Managing TVET programmes for sustainability, inclusion and financial stability; Building capacity for transformational leadership in TVET and its promotion; Leadership strategies to strengthen TVET-industry partnerships; Advancing innovation in managing TVET curricula for entrepreneurship, intrapreneurship and greening; Ensuring quality in leading TVET programme delivery.

CONCLUSION

The study results lead to concluding that the TVET “Leadership” research focus in the MA “TVET Leadership” research project titles need much strengthening, which can be achieved with further knowledge development to close the gaps identified. If achieved, the implications will include helping to sustain the intellectual capital of TVET “leadership” research for informing policy, practice, and research. Policy makers can consider making it a requirement for graduate students in leadership programs to focus on an aspect of leadership in their final research projects for sustaining intellectual capital to include “TVET leadership” research. Practitioners in leadership can also foster a “knowledge” culture in their organizations and institutions that places value on learning and innovation as building blocks for furthering research. Researchers who supervise “leadership” graduate students to include TVET can encourage them to focus their research

on the outcome levels such as implementation, assessment, or evaluation of leadership systems accordingly. In synthesizing their findings, researchers (to include TVET leaders) can offer evidence-based insights and recommendations for informing leadership decisions. Further research is recommended on this topic in other disciplines at both the master's and doctoral levels to identify the extent of "leadership" focus in graduate students "leadership" research as the current study is limited to the MA "TVET Leadership" offered by the top-ranked Caribbean University in the Global South

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