Approaches to the Preparation of Students for the World of Work: Views of Administrators from Postsecondary Institutions in Trinidad and Tobago

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Abstract

Preparing postsecondary students in Trinidad and Tobago for the world of work, with its constant changes in technology, globalisation, and labour markets, is a complex undertaking and largely the task of Postsecondary Institutions (PSIs). Shortfalls in important areas like flexibility, entrepreneurship, reskilling and requisite knowhow, could result from inadequate approaches to worker preparation. The views of PSI administrators are key in ascertaining how PSIs approach the provision of relevant skills, attitudes, and knowledge given the challenging, dynamic, and multidimensional nature of the world of work. Against this background, a qualitative collective case study was employed to critically explore the views of administrators on the approaches to postsecondary world of work preparations in Trinidad and Tobago. Interviews of nine (9) administrators from five (5) key postsecondary institutions were conducted. Directed content analysis, eclectic approaches and pattern coding were used in data reduction. The findings of the study revealed commendable strengths on approaches of postsecondary institutions, such as the provision of authentic learning opportunities and technology integration. Conversely, administrators noted challenges in the form of a prevailing exam culture and limited resources, among others. Advancing a comprehensive approach to postsecondary world of work preparation requires systemic improvement for overall development of students.

Keywords: world of work preparation; postsecondary education and training; postsecondary institutions; administrators' views; Trinidad and Tobago

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Background

In response to the challenges posed by the constant changes and unpredictability in the world of work, attempts to prepare postsecondary students in Trinidad and Tobago (T&T) involved the establishment of postsecondary institutions (PSIs), policies, programmes, and other initiatives. The University of Trinidad and Tobago (UTT), the College of Science, Technology and Applied Arts of Trinidad and Tobago (COSTAAT) and the National Training Agency of Trinidad and Tobago (NTATT) were specifically formed to strengthen links between education and the world of work. Also, consecutive governments have subsidized tuition through programmes like the Government Assistance for Tuition Expense (GATE) and the award of scholarships.

While these initiatives have had some successes, challenges persisted in efforts to prepare postsecondary students for the world of work. Globalisation, rapid technological advancements, changing labour markets, disappearing jobs, tensions in employer-employee relations and an increased demand for soft-skills, have placed added pressures on countries to produce a more efficient and effective workforce. In T&T, particular difficulties consist of mismatches between the requirements of the world of work and existing educational policies and practices, high brain-drain rates, employers' dissatisfaction about postsecondary graduates' workplace competence, and a shortfall in labour requirements for economic diversification (Khadan & Ruprah, 2016). Against this backdrop, PSIs in T&T are expected to provide competent leaders, trained staff, relevant curricula and pedagogy, modernized infrastructure, financial resources, and stakeholder support (Jameson-Charles, 2012) in their world of work preparation.

According to Carruthers (2006), "The knowledge-based, global economy… demand[s] substantially improved opportunities for education and training beyond high school" (p. iv). Thus, PSIs' education and training have attempted to up their ante by incorporating requisite

technological skills, knowledge, and competencies for the work environment (Swanson, 1982). Postsecondary education emerged as the "engine" of economies (Hunt & Tierney, 2006, p. 1) that yielded benefits to everyone (Carnevale, 2016). In Finland, Norway, Switzerland, Austria, Germany, and the UK, tertiary institutions mushroomed in the last 30-40 years, resulting in the emergence of the "Knowledge Revolution" (Grubb, 2003, p. 3).

With the high quality of programmes offered in PSIs, including those in T&T, many employers have come to use PSIs' credentials to gauge employee competence, however, employers today are finding it difficult to match such credentials with job requirements as there are great variations between institutions (Carnevale, 2016). Employers often complain about unprepared postsecondary graduates who lack necessary social and technical skills for the workplace (Employers Consultative Association of Trinidad and Tobago, 2019). Such concerns should not be ignored as T&T, a small developing nation desirous of breaking free from the constraints of its colonial past, needs a competent labour force to foster a vibrant economy (George & Lewis, 2011).

Unfortunately, T&T has inherited an historically flawed educational system that, despite major reforms, persists as stratified in the quality of its schooling provision, thus raising questions of equity. Against this backdrop, PSIs in T&T endeavour to equip graduates for employment in both the national and international arenas. It may come as no surprise, then, that the quality of education for human resource development continues to bedevil current efforts (De Lisle et al., 2010), and educational institutions in many cases tend to "stunt the development of many of our future adults" (Hackett, 2005, p. 1). In this light, T&T's education sector, with its competitive and hierarchical structures, appears to be undermining efforts towards developing a high-quality postsecondary system.

T&T's postsecondary education system can be commended for its alignment horizontally (PSIs to PSIs) and vertically (PSIs to the world of work) and in its focus on the development of the working public. In spite of these strengths, however, De Lisle et al. (2010) caution that: "Trinidad and Tobago… runs the risk of producing a low-quality and unequal work force, incapable of innovation, production and creativity" (p. 6). In addition to inherited flaws, existing inefficiencies could be attributed to an existing culture of ambivalence, where accepted subpar practices prevent consistent adherence to global standards (Farrell, 2017).

Additionally, a focus on certification detracts from preparing students for the changing world of work (Bass & Good, 2004). Highlighting the academic stream and prestigious subjects, like Mathematics and Sciences (Winch & Gingell, 2008) can drive PSIs to focus on preparing students for examinations rather than to function in a world beyond the classroom (Platt, 1970). Unfortunately, some PSIs fail to achieve the correct balance by myopically focusing on academic achievement. Emphasis on general objectives and learning outcomes of postsecondary curricula in T&T is required to reduce any excessive focus on teaching to the test. Notably, educators should

eschew praxis where "modes of formal assessment and evaluation are too narrowly defined and do not capture the range of outcomes desired; a situation compounded by teaching to the test which results in a narrowing of the taught curriculum" (European Union [EU], 2012, p. 26). The challenge for T&T is to free itself from the obsession with examinations and embrace an approach to postsecondary education for the development of a holistic individual.

Nonetheless, compared to other countries in the Caribbean, T&T's postsecondary education system is well developed, as the high income earned from the oil-based economy has facilitated significant financial investments. Notwithstanding a drop in Global Human Capital Index from 87 out of 137 in 2017, T&T has been able to maintain a high-level of higher education and training (World Economic Forum [WEF], 2017). T&T has in the past been above the median in Latin America and the Caribbean region in the Global Competitiveness Index (GCI), with a rank of 66 out of 125 countries (Artana et al., 2007). Investment in education seems to be yielding benefits, but closer scrutiny is required as executives in T&T ranked poor work ethic in the labour force as the biggest problem in conducting business; they also expressed concern about the inadequately educated workforce (WEF, 2017).

In sum, successive T&T governments have responded admirably to developmental needs of the working populace. However, challenges continue to manifest in relation to mismatches in the labour force, employment issues, complaints about skills-gaps, rapidly changing technology and increased globalisation as well as stakeholder concerns about the adequacy of postsecondary preparations for work. Such a situation has revealed the need to ascertain the present 'state of play' with respect to preparation for the world of work and to focus on the institutions (PSIs) specifically set up for that task. While a more comprehensive investigation was conducted (Bitu, 2022), this article is delimited to one of the most important sources of data: that of PSI administrators. As directors, they occupy a privileged vantage point and their views provide valuable current data on the matter of the preparation of students for the world of work by PSIs in Trinidad and Tobago.

For the sample of this study, administrators from five (5) PSIs were selected. The first PSI is a TVET oriented institution with a focus towards workforce development for T&T's energy sector; the second PSI is a TVET institution with multiple community-based sites, aimed at addressing the needs of the socially disadvantaged; the third PSI provided TVET and academic programmes for workforce development; the fourth PSI has a TVET and academic mandate towards a concentration on programmes for entrepreneurial development; the fifth PSI is a well-established traditional academic institution. All the institutions have tremendous value in workforce and human resource development in T&T and possess overall importance for national development.

Purpose of the Study

The purpose of this research is to critically explore the approaches to the preparation of students for the world of work by PSIs in Trinidad and Tobago through the study of PSI administrators' views. Insights gained for preparing students for the world of work should have sufficient transferability across operational contexts and provide recommendations for educational reform for the PSIs in the study.

Literature Review

Preparing postsecondary students for an unpredictable world of work requires a variety of approaches from PSIs as higher-order cognitive, interpersonal, and socioemotional skills (World Bank, 2018) are needed to cope with workplace uncertainties. "Highly skilled workers in the modern context are people who have received a good general education and who have then entered an occupation in which a range of specialised, but related skills are required" (Winch & Gingell, 2004, p. 6). Herein lies an educational philosophy with inherent connections between pedagogical content and essential practices for the development of a productive citizen. PSIs are thus expected to keep the education system in touch with the rapid changes in the world of work and thus make a meaningful contribution to society.

Expectations of PSIs

Evaluation of the labour market is needed to improve the response of PSIs to global technological pressures on the world of work (WEF, 2016, p. 3). For example, PSIs must prepare millennials for work in the digital age (Hershatter & Epstein, 2010). Such a situation requires that PSIs, in developing their staff and programmes, would be mindful of rapid changes occurring in the workplace, as "current technological trends are bringing about an unprecedented rate of change in the core curriculum content of many academic fields" (WEF, 2016, p. 20). PSIs in T&T can examine and adopt the strengths of international models, such as, the German dual system (EU, 2016).

The Caribbean region needs workers "who have the skills for experimentation, data gathering, problem solving, group work, decision making, and risk taking… think like entrepreneurs and become flexible and multi-skilled" (Lochan, 2000, p. xi). Three (3) factors appear necessary if such workers are to emerge from the education system. Firstly, planning must be done with reference to theories related to the Caribbean colonial context. Secondly, an examination of the entire education system is needed. Finally, sociocultural factors which can either facilitate or hinder entrepreneurial and indigenous industries must be addressed if the education system is to be aligned to the requirements of preparing the Caribbean individual for the world of work

(Lochan, 2000). Attention to these issues requires a multidimensional approach if educational efforts in the Caribbean are to produce the "Ideal Caribbean Citizen" (CARICOM, 2014, p. 35).

Curriculum

Curriculum can be defined as "a desired goal or set of values that can be activated through a development process, culminating in experiences for learners" (Wiles & Bondi, 2015, p. 5). In this sense, curriculum at the postsecondary level would ideally involve experiences as part of the developmental process to prepare students for the world of work. To this end, alignment of curriculum to occupational needs for economic and social development is critical. A curriculum is foundational in promoting sustainable growth through the quality development of the human resource by way of "sound and accessible education…as central to the achievement of social equity" (Curriculum Planning and Development Division, 2003, p. viii). Teaching and learning as part of curriculum delivery therefore need to be high-quality for all in society to have access to dignified and sustainable work.

Teaching and Learning

Effective pedagogy can promote employability, which according to the CBI (Confederation of Business Industries) is "a set of attributes, skills and knowledge that the labour market participants possess to ensure they have the capability of being effective in the workplace" (CBI, 2010, p, 8). Hard and soft skills, as curriculum outcomes, can also be developed through work-related activities, case studies, individual presentations, and team-related tasks in a student-centred classroom (Griffiths-Watson, 2001).

T&T needs to develop its human resource potential through meaningful learning and relevant schooling practices (World Bank, 2018). Nettleford (2007) claimed that Eric Williams (the first prime minister of T&T) valued education as an avenue for people, emerging from a colonial past, to improve the quality of their lives. In like manner, Dewey (1938) saw education as progressive with schools nurturing values and ideals in addition to the technical requirements for operating in the workplace. Dewey espoused a pragmatist philosophy whereby a hands-on approach to learning was valued in which people learned by engaging in practical activities. Piaget (1952), Vygotsky (1986), and Bruner (1960) all suggest that approaches to knowledge construction best facilitated cognitive development through real-life activities in conjunction with strategies that targeted various learning styles.

A constructivist approach (Geldenhuys, 2006) to teaching and learning, in conjunction with behaviourism (Schunk, 2004), multiple intelligences (Gardner, 1983), differentiated instruction (Tomlinson, 2014) and authentic assessment can provide postsecondary educators with an array of theories and strategies for world of work preparation. Teaching and learning approaches, like collaborative learning (Thomas, 1992), alternative assessments, problem solving and transversal skills, such as, planning, communicating, and evaluating (Winch, 2013), are all part of a successful

workshop/classroom (Subran, 2013). Perhaps, integration of the academic and TVET tracks to produce a worker who can manage a new work environment, be all-round, and employable, is a sensible approach to educational reform (McLean & Lai, 2011) and more relevant to postsecondary world of work preparations.

Knowledge and Skills development

Knowledge development at the postsecondary level is critical in assisting students to become employable. T&T's labour market landscape requires that postsecondary students possess broad knowledge with basic disciplines, such as, Mathematics, English, Science, and History. Students also need to have specialized knowledge related to specific areas or fields, such as information technology, and engineering. This kind of knowledge supplements tacit knowledge and enhances the overall knowledge needed for innovation and creation in the world of work (Lewis, 2013). A student-centred approach for a harmonization of postsecondary education and the needs of countries and economies should therefore be adopted (Kushida, 2015).

Skills development can make postsecondary graduates more employable as "The quality of the skills graduates bring to their work is more important than simply the number of people in the workforce holding qualifications" (Earle, 2010, p. 1). PSIs have a responsibility to provide students with the necessary skills for the workplace, especially as the WEF (2016) disturbingly reported that most education systems at all levels provide "highly siloed training and continue a number of 20th century practices that are hindering progress on today's talent and labour market issues" (p. 32). For this problem to be minimized PSIs must have appropriate skills-based training that is focused on "combining technical and high-quality skills with core abilities for learning, employability and communication" (United Nations Development Programme, [UNDP], 2015, p. 21).

Given the demand for a versatile worker, Education 4.0 (technology integration in the teaching and learning process) emerged as an imperative at the postsecondary level (James, 2019). Postsecondary education is therefore expected to provide students with learning and innovation skills, digital literacy skills, and career and life skills necessary for the 21st century (Trilling & Fadel, 2009). In particular, the EU (2010) noted that education systems should promote "innovative and equitable approaches such as flexible learning pathways and focus on developing essential skills as well as intellectual and job-specific skills" (p. 4). With this view in mind, skills development and innovation are closely linked to developing an employable individual.

Stakeholders in postsecondary education have a responsibility to "ensure that the population has the appropriate skills-base combining technical and high-quality skills with core abilities for learning, employability and communicating" (UNDP 2015, p. 21). Partnerships with stakeholders for staff professional development would help educators explore "the existing pedagogic conceptions and beliefs and upgrade the current knowledge-base related to teaching and learning"

(Sahlberg, 2006, p. 12). For this purpose, teacher professional development through scholarships with government and other stakeholders is vital in developing countries like T&T (Brown, 2009) as there are limited incentives for educators to develop themselves professionally. More systemic collaborations and an integrated approach with PSIs and stakeholders in T&T would be beneficial. One example of a strong integrated approach is the Silicon Valley Ecosystem (Kushida, 2015). Business organizations and PSIs in Silicon Valley created a collaborative environment involving start-up firms, innovative business models, and leadership in high-tech areas.

Administrators as Leaders

PSI administrators, an important category among stakeholders, have the responsibility for managing internal operations to meet the needs of external environments. As leaders, administrators are expected to provide opportunities to promote deep learning cultures so that postsecondary students can maximise their learning potential (Richardson, 2016). Administrators' leadership is critical for overseeing programmes, managing resources, supervising adjustment measures, and making sensible decisions to maximize the intended outcomes and minimize any problems associated with practice.

Administrators in PSIs play a pivotal role in the operationalization of educational policy for world of work preparations. "Educational leaders are not simply faced with making sense of policy from above, but also [must take heed of] the demands and aspirations from those below" (Bell & Stevenson, 2006, p. 19). This intermediate position of administrators is critical to the success of PSIs, given their multiple responsibilities. Administrators should therefore have a sense of self-determinism and operate with an inherent autonomy when interpreting and overseeing the implementation of education policy based on their past experiences as administrators (Capra & Luisi, 2014).

Having to deal with multiple policy directives and varied institutional scenarios, administrators are presented formidable challenges which should not be underestimated as, "a failure to fully understand the complex ways in which policy shapes and is shaped by leadership, [is a failure] to adequately explain the actions and practices of leaders at both the organizational and operational levels" (Bell & Stevenson, 2006, p. 8). So, while on the one hand trying to observe policy directives, administrators can have challenges with limited time (Cheung & Man Wong, 2012), resources, personnel, and technical expertise.

In T&T's context there are several internal and external challenges facing postsecondary administrators. Internally, they must overcome limited resources, historically low returns on postsecondary education (Artana et al., 2007), elitist education beliefs (De Lisle, 2009), and the bureaucracy associated with being state-financed institutions. Administrators are also tasked with maintaining a modernized curriculum and sustaining teacher development. Externally, they must deal with, globalisation, changing technologies, political change linked to discontinuity, and yet

preserve seamless vertical and horizontal alignment to the education system (De Lisle et al., 2010). To address these issues, careful thought is needed to prioritize certain challenges, while simultaneously addressing contextual modifications (Wang, 2010). James (2014) highlighted a bottom-top model of leadership, where collaboration is valued and effective for dealing with problems (internal and external) that confront PSIs.

Methodology

Research Question

How do administrators view postsecondary institutions' approaches to preparing students for the world of work?

Design

A qualitative collective case study approach was employed as it facilitates the exploration of an issue in multiple settings (Stake, 2006). The study involved inductive reasoning, an iterative process and was richly descriptive (Denzin & Lincoln, 2011) as the researchers explored the views held by administrators from five (5) PSIs in T&T on preparing students for the world of work.

The PSIs were purposefully selected (Stake, 2006) based on the following criteria. Firstly, the authors identified the PSIs that had the highest enrolment figures in T&T for their respective areas. Secondly, the PSIs, based on their programme offerings, were considered important in terms of workforce and national development. Finally, the PSIs had to have diverse backgrounds in terms of their mandates, programmes, and focus so the authors could examine world of work preparations in varied contexts. Adhering to ethical principles, approvals were sought and obtained from PSIs' relevant Institutional Review Boards.

The interviews were conducted with the constructionist expectation (Crotty, 1998) that administrators' views on their institutions' approaches to preparing students for the world of work were constructed, based on personal and professional experiences. This epistemological assumption informed the researchers in the collection, interpretation, and analysis of interview data. Because of their years' experience, the administrators would provide current and past details and ideas about world of work preparations within and beyond the contexts of various PSIs, providing fodder for critical exploration. Semi-structured interviews of nine (9) participants from five (5) major PSIs in T&T (see Table 1) were employed to allow for probing questions to reveal broader and deeper explanations of the issue (Hays & Singh, 2012).

Table 1
Participants

Type of Data	Institutions	Administrators	Age-range
Administrators Interviews	Industrial PSI	Admin A	60-70
	TVET PSI	Admin B	30-40
	Community College PSI	Admin C	50-60
	Entrepreneurial PSI	Admin D	40-50
		Admin E	30-40
		Admin F	30-40
		Admin G	40-50
	Traditional Academic PSI	Admin H	50-60
		Admin I	40-50

The information gleaned from interviews of administrators was interpreted as part of the data reduction process to address the research question (Creswell, 2013). Directed Content Analysis was employed in analysing the data (Hsieh & Shannon, 2005). Eclectic (first cycle) and pattern (second cycle) coding were used to further reduce the data for presentation and discussion in a thematic and comparative format.

Limitations constitute the timeframe (within a 1-year period, ending in 2019) and specific contexts in which data were collected so that findings, though not generalizable, have transferability.

Findings

The findings from analysis of administrators' views on PSIs' approaches to the preparation of students for the world of work are discussed under the themes: *Overarching Influential Factors, Meaningful Curriculum* and *Adopt a Progressive Approach*.

Overarching influential factors

Overarching Influential Factors, emerged from the codes (quantified), *Stakeholder Partnerships (22), Various Alignments (33), Political Influence (6), Challenging Policy Issues (12), Weak Linkages (10), Limited Resources (14),* and *Staff Challenges (13),* reflecting major issues affecting the approaches to postsecondary world of work preparations.

Stakeholder Partnerships, which emerged from the interviews of administrators from Industrial PSI, TVET PSI, Entrepreneurial PSI, and Traditional Academic PSI, capture examples of partnerships in local and international business and industry, as Admin I (Entrepreneurial PSI) stated, "We engage with our stakeholders on a great level." In like manner, *Various Alignments*, highlights several administrators' views on the vertical alignment of PSIs' practices to the

workplace. Admin A (Industrial PSI), Admin F (Entrepreneurial PSI) and Admin G (Entrepreneurial PSI) opined that their PSIs, linked to the needs of industries, facilitated a clear path towards national development and was captured by Admin C's (Community College PSI) statement, "we are trying to meet [employers'] needs". Admin B explained that TVET PSI provided opportunities for people who were not able to acquire other types of certification, "they want to be certified so that the job can now acknowledge… them". These positive views point to the significance of synergistic connections in approaches to world of work preparations.

Conversely, administrators highlighted the complicated and taxing contexts in which their PSIs function. *Political Influence* signals the indirect impact of political and administrative pressures on PSIs' operations. For example, Admin D, from the government financed Entrepreneurial PSI, thought that governmental manoeuvres hindered policy and practice in the institution: "It is very hard to sustain traction and sustain engagement…. it changes ever so often because of the politics". *Challenging Policy Issues*, aptly expressed by Administrator D (Entrepreneurial PSI) "there are no policies on the world of work", reflects concerns of postsecondary administrators about weak policy guidance. *Weak Linkages* between the needs of the labour market and PSIs' practices was revealed by Administrators from Community College PSI, Entrepreneurial PSI, and Traditional Academic PSI; as the latter stated, "We are producing lawyers [and] doctors who are struggling to find a job." *Limited Resources* underlines administrators' concerns about the lack of resources for postsecondary world of work preparations. Admin E, for example, stated that "resources are always an issue" affecting Entrepreneurial PSI's ability to fulfil governments' mandate to stimulate entrepreneurial activity. *Staff Challenges* summarizes views relating to staff competence as succinctly expressed by Admin A (Industrial PSI): "the greater the skill of a teacher the better the product". These issues facing administrators do present formidable hurdles for management to overcome.

Meaningful curriculum

Meaningful Curriculum captured administrators' views on issues affecting curriculum delivery as part of world of work preparations. Codes that led to this theme are: *Authentic Learning Opportunities (16), Skills Development (19), Technology Integration (13), Students' Holistic Development (16), Need for Meaningful Curriculum (14), Knowledge Development (5), Time Constraints (4), Exam Culture (6)* and *Unacceptable Work Ethic (10).*

Generally, commendable practices were recounted by administrators. *Authentic Learning* reveals administrators' views about teaching and learning approaches within PSIs. For example, Admin F said Entrepreneurial PSI had "A lot of the practical projects, like in mechanical engineering". Likewise, Admin G (Entrepreneurial PSI) explained, "companies hire our students during internship programmes." *Skills Development* highlights skills training for the world of work. Admin A (Industrial PSI) underlined, not only the value of TVET in the provision of industry-relevant, but also, relational skills as he said, "we do all of the technical things, we also do the personal things through a life skills programme." Admin H (Traditional Academic PSI) cautioned

however, "[PSIs] may not be able to meet every need of every single employer". *Technology Integration* identifies several administrators' views on technology in curriculum delivery. In one example, Admin B stated that TVET PSI's novel "mobile training unit" was key to exposing rural communities to technology. While Admin C (Community College PSI) opined, "In terms of technology we are comparable to all other institutions and may be surpassing some". *Students' Holistic Development* refers to preparing well-rounded graduates. Several administrators highlighted how they helped students to become all-round workers or "to be multiskilled" (Admin B - TVET PSI).

Amidst the constructive approaches there were significant lacunae. *Need for Meaningful Curriculum* captures views from administrators on the value of synchronising curriculum content with requirements of the labour market. Notably, Admin H opined that Traditional Academic PSI was "slow to change curricula", signalling the need for more decisive curriculum reform. *Knowledge Development* reveals administrators' concerns about the quantity and quality of PSIs' knowledge-based learnings. Admin G for instance, indicated that Entrepreneurial PSI was guilty of knowledge-content overload: "I think we pushing too much… content too fast". *Time Constraints* for world of work preparations highlights the limited time allocated for related initiatives, as Admin I (Traditional Academic PSI) stated, "I don't think that we have the time". *Exam Culture* encapsulates the view of some administrators about the challenge of excessive exam-driven focus on academics. For instance, Admin J (TVET PSI) articulated: "We have been concentrating too much on just academics." *Unacceptable Work Ethic* signals administrators' concerns about some students' poor attitude towards work as voiced by Admin F (Entrepreneurial PSI): "I think [poor work ethic] is a cultural factor." All in all, Meaningful Curriculum for the World of Work encompasses building on existing strengths and attending to recognizable gaps.

Adopt a progressive approach

Adopt a Progressive Approach summarises administrators' views about forward-thinking initiatives and practices for world of work preparations. Codes that led to this theme are: *Need for Good Leadership (12), Innovation for Job Creation (7), Recognition of the Need for Research (9), Concerns about Promoting Diversification (8),* and *Encourage Entrepreneurship (7).*

The significance of constructive vision and purposeful agency was captured by the views of administrators. *Need for Good Leadership,* underscores the importance of sound guidance. Admin A (Industrial PSI) points out that "Nobody to the best of my knowledge has called all the leading executives from industry, from education, and business, to have a chat about what we really need." *Innovation for Job Creation* highlights efforts to develop students' innovative capacities, as aptly captured by Admin C (Community College PSI): "we are trying to develop… creativity". *Recognition of the Need for Research* refers to the importance of research as informing programmes and courses for the world of work. Admin A boasted, "We are always engaged in research to know what is happening across the world". Conversely, Admin G revealed the

challenge of finding time in Entrepreneurial PSI for research, as she said, "[Academic staff] need time to…do research." *Concerns about Promoting Diversification* captures matters raised about encouraging diversification. Admin C (Community College PSI) and Admin G (Entrepreneurial PSI) offered alternative avenues for economic development, such as, "agriculture", "tourism" and "shipbuilding". *Encourage Entrepreneurship* focuses on efforts to promote entrepreneurship with Admin C saying Community College PSI was "training [students] not just to… become employed, but to be an employer". The views expressed by administrators all amount to avenues for tapping into the creative potential of individuals as essential in world of work preparation.

Discussion

The theoretical framework drew upon literature pertaining to approaches in teaching and learning, educational leadership, systems theory and sociological insights into Caribbean contexts and citizenship. The following discussion reprises the findings in relation to the literature.

Contextual Issues

Overarching Influential Factors faced Administrators in their PSIs with regard to approaches for world of work preparations.

Administrators identified the existence and importance of *Stakeholder Partnerships*, but a clear workforce development plan could enhance industry-PSI relationships. The Silicon Valley Ecosystem model (Kushida, 2015) provides a useful reference for building and establishing symbiotic partnerships among stakeholders through government support, sectoral services, postsecondary clusters linked to industries and quality human resource management.

Administrators' views on *Various Alignments* warranted greater recognition for experiential approaches as that inherent to TVET (United Nations Educational Scientific and Cultural Organization, [UNESCO], 2016). A hands-on approach facilitates connection between the uniqueness of individuals and the needs of the world of work. In an era of disappearing jobs, students need to adapt and spot opportunities for self-employment. Promoting entrepreneurship requires that postsecondary activities, courses, and programmes play to the strengths of the learners, through a student-centred approach (UNDP, 2015).

Administrators had challenges with *Political Influence*. Most PSIs in T&T enjoy heavy government finance. However, the views of administrators confirm frustrations encountered when political views of the day form the basis for institutional and national decisions. For effective postsecondary world of work preparations, successive governments would do well to foster and maintain an ecosystem for the constructive and sustainable interaction of all stakeholders (Kushida, 2015).

Challenging Policy Issues highlighted the need to address the disruptive potential of inappropriate and absent policies (Bell & Stevenson, 2006) on postsecondary world of work preparations. Deficiencies and approaches to policymaking in T&T can have a counter-productive effect in postsecondary world of work preparations.

Administrators' concerns about *Weak Linkages* highlight the problematic nature of ambiguities in workforce development policies relating to the roles of PSIs in national development. Education systems need to remove siloed training approaches among PSIs for development of a labour force (WEF, 2016) that meets the needs of the country.

Limited Resources for delivery of programmes and other world of work initiatives negatively affect human agency. Maximizing the use of available resources for qualitative development and life enhancement requires an alternative view of human capacity (Capra & Luisi, 2014). Government should play a critical role in creating a conducive environment where there is a periodic exchange of staff from business parks and academia, as this can have utility for addressing the needs of various industries in a low-cost manner (Kushida, 2015).

Staff Challenges ironically reflect a problem associated with world of work preparation wherein the very outputs of PSIs, as institutions earmarked for workforce development, become misaligned to the requirements of the workplace. Concerns about teacher training for academic staff suggest that PSIs in T&T need to provide industry-relevant professional development for higher quality world of work preparations (UNESCO, 2016).

Curriculum for World of Work Preparation

A Meaningful Curriculum operates through a seamless and integrated education system (De Lisle, et al., 2010) and avoids the pitfalls of individualized compartments. Only through alignment from kindergarten to postsecondary levels can the needs of all sectors in the T&T economy be met while producing globally marketable students.

Administrators' views on *Authentic Learning* suggest that the external environment is having positive influence on world of work preparations. Constructivist approaches (Geldenhuys, 2006) demonstrate the value of the workplace as sites for continuous learning in real-world situations (EU, 2016). An integrated ecosystem involving PSIs, industries, sectoral services, and the government, increases opportunities for such experiential learning (Kushida, 2015).

Many administrators held that their PSIs focused on the *Skills Development* needed for meeting the demands of the Fourth IR (WEF, 2016) and for producing the ideal Caribbean citizen (CARICOM, 2014). Within *Skills Development* there is value in the integration of TVET and academic disciplinary areas (McLean & Lai, 2011) rather than an obsession with passing theory-based examinations. An enhanced education framework, though greater collaboration among stakeholders, is necessary to redirect the education system towards holistic learning.

Some administrators felt that *Technology Integration* initiatives were limited and needed to expand to cater for millennial learners (Hershatter & Epstein, 2010). Attempts at technology integration in PSIs are commendable, but a greater effort is needed to meet the technological requirements of the ultra-fast Fourth IR (Carnevale, 2016). Too often technology integration is plagued by poor infrastructure, ignorance about contextual issues and a lack of monitoring and evaluation, all of which make the integration process subpar when it comes to world of work preparations.

Students' Holistic Development at the postsecondary level requires coordination among PSIs, industries, government entities and between TVET and academic disciplines (McLean & Lai, 2011) especially since worker flexibility is essential for the changing world of work (UNDP, 2015).

Knowledge Development is optimal within a context of holistic growth through well-planned experiential learning activities (Dewey, 1938) that integrate skills, attitudes, and competencies, rather than an approach to knowledge development at the expense of skills training. Postsecondary education can enhance the knowledge-based economy (Carruthers, 2006), but the way forward is to harness the strengths of T&T's human resource to develop indigenous knowledge-based avenues for social, economic, and national development (George & Lewis, 2011).

Time Constraints represent one part of a wider array of challenges facing administrators and their PSIs given the importance of world of work initiatives (Cheung & Man-Wong, 2012). Reconceptualization of education and training is needed as PSIs end up spending much time on preparing students to pass tests at the expense of preparation for life (Bass & Good, 2004). Change in teaching and learning, from the traditional *Exam Culture* with its emphasis on passing examinations, is desperately needed so that PSIs' could focus more on producing team-players, creative thinkers, and versatile workers.

Some administrators felt that students' *Unacceptable Work Ethic* was negatively affecting their educational performance. The problem of students' negative attitude towards work can be connected to an apathy and tolerance for mediocrity (Farrell, 2017) and could be linked to T&T's history as a colonial society. This poor work ethic should not be ignored (WEF, 2017) as employers want workers to exhibit positive attitudes (CBI, 2010). A major shift in educating and training, that focuses on life-skills development (Trilling & Fadel, 2009) is required to address such a problem.

Progressiveness

A call to Adopt a Progressive Approach (Richardson, 2016) in T&T's context requires an understanding of the intention of policy for the purpose of implementation (Bell & Stevenson, 2006). Fostering innovation and creativity (UNDP, 2015) requires filling the *Need for Good Leadership* as T&T "runs the risk of producing a low-quality and unequal work force" (De Lisle et al., 2010, p.6). Focus on passing exams (Bass & Good, 2004) rather than producing liberal and innovative individuals, places creativity in the background. Promoting university-industry

research links (Kushida, 2015) follows from a *Recognition of the Need for Research* to serve mutual interests advantageous for anticipating workforce needs.

Innovation for Job Creation in PSIs can generate opportunities for new enterprises (Kushida, 2015) and address *Concerns about Promoting Diversification.* Systemic problems, such as, the certification culture, the colonial economic structure, limited resources, and weak industry-PSI links, would promote sustainable opportunities for diversification in T&T (Brown, 2009). Administrators recognized the need to *Encourage Entrepreneurship* as the entrepreneurial spirit (Lochan, 2004; UNESCO, 2016) is critical in the world of work. The traditional approach to preparing students for jobs must be replaced by a new model that requires students to be self-driven and innovative to detect opportunities for creating economic value.

Recommendations

1. The issue of alignment and partnership raised by several PSI administrators signals the need for support from industry. A symbiotic relationship in which industry finances PSIs' research and the latter in turn provides the grist for data driven industry decisions can be beneficial for both entities. Firms that are technology leaders can provide opportunities for internships and apprenticeships, thus consolidating a collaborative framework and advancing opportunities for authentic learning.
2. There is need for training and networking at the postsecondary level and other levels in the education system. Consistent and relevant training for administration and staff must be provided as it can increase the quality of educational services provided by all educational institutions. This training can also be supplemented by conferences, stakeholder workshops, symposiums, and online networking, which would also ensure that cutting-edge knowledge and skills continue to exist in educational institutions and industries.
3. Administrators attested to the fact that policy direction was difficult for several reasons, including change in political directorates. A clear policy-framework based on sound data gathering and sharing would strengthen leadership's vision and minimize the negative outcomes associated with political interference in the operational goals of PSIs.
4. Noting the need for research by administrators, the study can be useful to research connected to PSIs. Future studies in other educational jurisdictions can draw upon and compare the findings from this research, towards the formulation of a framework that facilitates the building of new knowledge within context.
5. The promotion of self-employment and entrepreneurship requires a strategic framework of initiatives supporting the work of PSIs. An ecosystem that supports entrepreneurship must accompany programme initiatives of the PSIs so that young entrepreneurs in any area can access finance, legal assistance, office space, communication devices, and marketing support.

6. There is need for public consultations on preparing postsecondary students for the world of work, as the issue affects all citizens. Public consultation can offer a first-hand opportunity to change societal philosophies about examinations, TVET, and diversification.

Conclusion

This study emerged from concerns about the adequacy of postsecondary preparations for the world of work, in relation to mismatches in the labour force, unemployment, underemployment, and existing skills-gaps. Rapidly changing technology and increased globalisation further exacerbated anxieties. Furthermore, T&T is a post-colonial society with a lingering mismatch between education and the needs of the world and work, which resulted in an absence of structural interdependence among physical and human resources, educational institutions, productive sectors, and government. Given the demand for creative ways of producing new products in the Fourth IR, PSIs must work within an ecosystem to stimulate entrepreneurship and diversification. PSIs require a futuristic outlook that is based on research and close relationships with stakeholders. A schooling ecology is required to establish a seamless education system that minimizes the disruptive effect of the legacies of certification-driven examinations. Administrators spoke about a lack of initiatives for diversification, entrepreneurship, innovation, and industry-links, all of which require an integration of institutions and support mechanisms. The creation of a knowledge-based economy, driven by innovation and entrepreneurship requires strong state programmes and policies, so PSIs can graduate students in new fields where they get support for the implementation of new ideas. PSIs, as stated by administrators, do engage in noteworthy world of work preparations such as the provision of authentic learning, focus on skills development, development of a holistic student, and integration of technology. There is, however, room for systemic improvement towards the development of a versatile student, able to confront current and future issues in the world of work.

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