

# Identifying Quality in Innovation in Higher Education: A Data-Driven Approach

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*Quality Assurance, Qualifications and Recognition:  
Fostering Trust in a Globalised World*

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# Thesis

- The charge to **foster trust** is also a challenge to hone a quality culture that is robust and defensible, and yet agile, responsive and adaptable
- This quality culture is marked by a holistic understanding of stakeholder characteristics and priorities.
  - Students/Graduates
  - Higher Education Providers (& Internal Quality Assurance)
  - Business/Industry/Labour Market
  - External Quality Assurance

# Thesis

- We will move closer to cultivating trust when we can reliably demonstrate knowledge and understanding of the:
  - broad demographic spectrum of learners enrolled in higher education
  - diversity of HE providers
  - range of learning modalities
  - requirements of business, industry and the world of work
- The evaluation tools/mechanisms not always tailored to suit the various disciplines and environments (including online) currently being utilised in HE.

# Thesis

- This paper posits that building organisational knowledge management systems within *internal* and *external* quality assurance societies in Higher Education will better equip us to manage the constant and significant change taking place in contemporary global society.
- This can be achieved through increasing reliance on data as evidence of the changing trends and practices in HE.
- Knowledge puts us in a position to be proactive.

**“We are called to be architects of the future, not its victims”**

**(R. Buckminster Fuller)**

# Focus of Paper

- In the changing landscape of global Higher Education, UCJ has seen:
  1. diversified profile of local and international HE providers
  2. new innovations in technology-enhanced teaching and learning (including Online and Distance Education)
- How do we safeguard quality and value disruptive technological change in global Higher Education?
  - Exploring the opportunity for external quality assurance through a more organised system of data gathering, analysis and knowledge sharing.
  - UCJ iQAMS Project

# The UCJ

- **The University Council of Jamaica (UCJ)**
- National External Quality Assurance Agency (EQAA) for higher education in Jamaica. Established by legislation in 1987.
- Facilitates institutional registration and the review of institutions, programmes and short courses for accreditation and recognition.
  - The UCJ also sees the mission of external quality assurance as developmental
  - seeks to enable institutions to (i) enhance their internal quality assurance systems, (ii) demonstrate institutional effectiveness and (iii) facilitate student success.

# Jamaican HE Sector

- A diverse, semi-autonomous and independent composite of institutions and programmes
- Sector has seen a striking increase in local and overseas providers and varied modalities for knowledge exchange.
  1. Universities, University Colleges, Teachers Colleges (Education, Business, Science, IT, Health Science Specialty Colleges (Sports, the Arts, Theological Studies, Tourism and Hospitality)
  2. Tertiary Institutes, in service training organisations, post-secondary training centres, vocational training institutions offering tertiary-level programmes (face-to-face and online)
  3. Overseas universities with satellite campuses and online programmes

# Changing Profile of HE in Jamaica

- **Diversification**

- Types of institutions – Public, Private, For Profit, Non-Profit, Brokers (new)

- Types of programmes – (i) traditional and non-traditional HE, (ii) face-to-face, correspondence, online mixed-modalities

- This diversity also presents the challenge of finding effective approaches to maintaining an integrated and coherent system that meets the occupational needs of the country and the global labour market.



# Changing Profile of HE in Jamaica

- Strategic Government imperatives:
  - Increase percentage of population holding a degree from 15% to 80%
  - Establish parity of esteem between General (Academic) Higher Education and Technical Vocational Education and Training
  - make HE more responsive to labour market requirements
  - Operationalise the National Qualifications Framework and promote internationalisation and trade in educational services
  - Increase technological resources to support HE
  - Promote quality orientation



# UCJ Research and Environmental Scanning



- Indicates there is need for a more systematic approach to tracking changing trends at two levels:
  1. EQAA
  2. Institutional
- Interdisciplinary literature on disruptive technology points to the following developments:

- **Our Universities:**  
Designed mainly in the 19<sup>th</sup> and 20<sup>th</sup> centuries are in need of substantial reform to address the realities of **the 21<sup>st</sup> century** and beyond.





“The world is now “at the beginning of a Fourth Industrial Revolution (4IR).  
Developments in genetics, artificial intelligence, robotics, nanotechnology, 3D printing and biotechnology...are all building on and amplifying one another.

This will lay the foundation for a revolution more comprehensive and all-encompassing than anything we have ever seen.”

Schwab (2017), World Economic Forum

- ✦ The traditional College or University system concentrates too much on preparing for jobs and not enough on mentoring own-account business leaders
- ✦ It sometimes leaves behind that cohort of secondary school leavers who did not excel in the traditional Arts or Science subjects based on the unreconstructed matriculation requirements of these universities and colleges.
- ✦ Many such youth cohorts are among the most creative, flexible and hands-on group, capable of learning unconventional skills, leading news businesses and operating joint enterprises.



- Some students are classified into discipline specific **faculties** and subject specific **departments** that lead to narrowly focused, traditional career options
- Graduates and employees are looking for new job types and different skillsets



Several jobs that were high in demand in 2010 often did not exist in 2004.

**We are trying to educate students for jobs that don't yet exist, using technologies that haven't been invented in order to solve problems we don't know are problems yet."**

Source: Former US Secretary of Education Richard Riley

## Skills Disruption



**35%** of core skills will change between 2015 and 2020

### Disruption across countries and industries

48%	Italy	average disruption
42%	India	
41%	China	
41%	Turkey	
39%	South Africa	
39%	Germany	
38%	France	
37%	Mexico	
35%	Information & Communication Technology	
33%	Professional Services	
30%	Energy	
30%	Consumer	
29%	Health	
27%	Media, Entertainment & Information	
31%	Brazil	
29%	United States	
28%	United Kingdom	
27%	Australia	
25%	Japan	
21%	Gulf Cooperation Council	
19%	ASEAN	

Source: Future of Jobs Report, World Economic Forum

# Work in Agriculture and Personal Care

- ▶ Future of Jobs discussion remains incomplete without recognising that a significant share of the Global South workforce remains employed in agriculture. This sector needs training in modern skill-sets.
- ▶ There is also optimism about growth in personal care, health and service jobs due to rising stress, fatigue and other occupational and social dysfunctions.





- HEIs and EQAAs must continue to give attention to the changing trends and anticipate the need for evaluation of programme learning outcomes that are more concentrated on new and diverse professional competences and interpersonal skills in areas such as:
  - Entrepreneurship for innovators
  - Business and Science ethics
  - Data mining and data analytics
  - Web management and cyber security,
  - Emotional intelligence
  - Communication and Self Presentation/Branding



# Christensen (2017) on dealing with disruptive innovation

- In book *The Innovator's Dilemma: When New Technologies cause Great Firms to Fail*, Christensen (2017) argues that the solution to disruptive technologies cannot be found in the standard toolkit of good management.
  - Christensen suggests that it is those that learn to understand and harness the principles of technological change that are better equipped to deal with it.
  - External QA has an important role to play in lead this charge to embrace innovation in the Higher Education sector



# ONLINE TEACHING & LEARNING

# Perspectives on Online and Distance Learning

- Cassey (2008) – “the delivery of HE in the online modality holds greater promise and is subject to greater suspicion than any other instructional mode in the 21<sup>st</sup> Century” (p.45)
- Difficult to define and establish clear measures of online education because of the diverse approaches to its adoption.
- Content of Evaluations: Internal and external QA evaluations may include review of evidence such as: (i) viewing the platform, (ii) examining discussion fora, (iii) student feedback mechanisms, (iv) screen captures of online assessment, (v) marking schemes, (vi) peer review observations.

# Institute for Higher Education Policy (IHEP) 1998-2000



- Confirmed the need to increase research conducted in online learning programmes and the quality of such programmes
- IHEP identified 24 quality indicators for online programmes grouped into 7 overarching themes:
  1. institutional support
  2. course development
  3. teaching and learning
  4. course structure
  5. student support
  6. faculty support
  7. evaluation and assessment methods

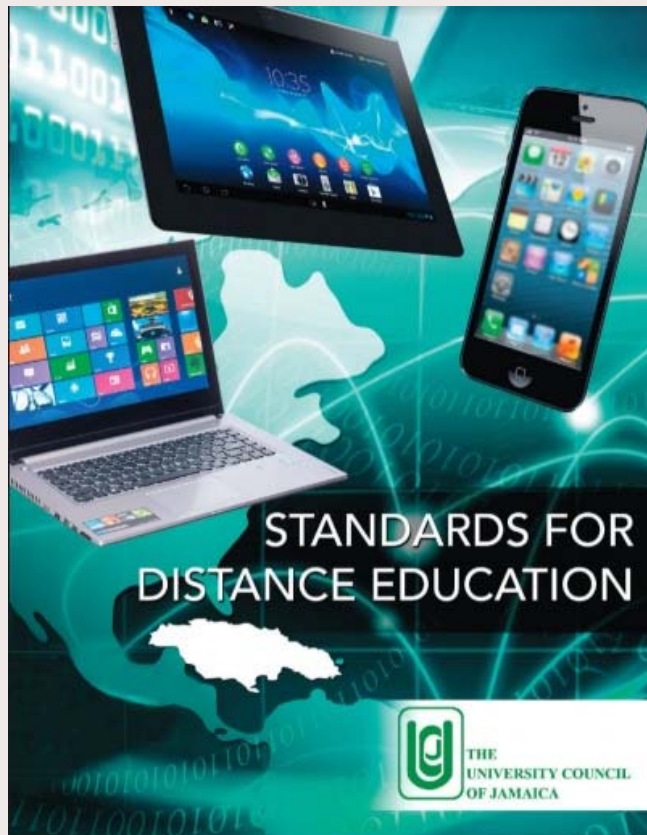
# Dilbeck (2008)

- Surveyed 200+ community college administrators using IHEP indicators to ascertain their perceptions of the efficacy of their online education provision.
- Found that tool was useful, but omitted *quality enhancement/improvement* (Campbell & Rozsnyai, 2002; Vlasceanu et al, 2007)
  - Assert that the onus is on institution to make the best use of its autonomy and freedom to demonstrate quality in online learning.
  - This should draw on stakeholder feedback

# Shelton (2010)

- Modified IHEP (2000) quality online indicators
- Used Delphi method to examine the views of experts from 43 HEIs
  - Delphi: An interactive method to collect anonymous input from experts using various techniques
- Developed a Quality Scorecard for the evaluation of online programmes
  - Weighted: Evaluates the quality and effectiveness irrespective of the size of the institution

# UCJ Distance Education Standards (2014)



1. Governance
2. Academic Programmes
3. Curricula and Materials
4. Learner Services and Support
5. Learner Assessment, Achievement and Satisfaction
6. Technology Services
7. Human Resource Management
8. Financial Management
9. Advertising and Promotion
10. Research and Development



# Reflections on Online Learning

- Regardless of the nature of the technology enhanced modality, good practice suggests quality evaluations should:
  - Be designed for the intended purpose
  - Incorporate interactive elements (in some cases face-to-face contact is recommended)
  - IT Support (students and faculty)
  - Professional development and pedagogical support for faculty
  - include a check on mechanisms to monitor, evaluate and improve the provision (Dottin, 2015)
    - Monitoring can prove challenging when there is variable and unregulated adoption of online learning in institutions.
    - This issue can be addressed by documenting various forms of online learning being used, tracking their various features and assessing how they have advanced learning outcomes

# ADOPTING A DATA-DRIVEN APPROACH

# The Value of Data Analytics in Organisational Development

- **Data** is at the heart of the strategic power of organisations.
- Data analytics facilitate monitoring of changing trends in organisational performance.



# The UCJ and QA Process Automation

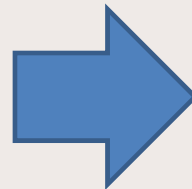
- The UCJ's Automation Project commissioned by the UCJ Council.



- The Integrated Quality Assurance Management System (iQAMS) is designed to automate several aspects of the administration of the UCJ's Quality Assurance (QA) processes, which have historically been manual.
  1. Registration
  2. Programme and Institutional Accreditation
  3. Transnational Recognition

# Introducing an Automated Application Process

- iQAMS will use an online form in a secure platform to facilitate electronic submission of applications and supporting documents.



# Why introduce iQAMS?

1. Digitises and streamlines core quality assurance processes
2. Reduces historically time consuming and tedious manual processes
3. Facilitates preparation of more data-driven submissions by HEIs
4. Ensures consistency of information
5. Increases high-value work productivity of review panels
6. Provides a secure electronic database for storage of quality assurance case management data: submission for review, UCJ reports and institutional responses
7. Generates reports on aggregated data on HE landscape which can inform institutional planning as well as national HE policy development

# Research Underpinning Online Application System



- Alignment to UCJ Quality Assurance Standards and benchmarked international standards
- Collects aggregated data on pertinent matters for national development
- Technical Team conducted extensive research on online learning, TVET and General Academic Tertiary-level education

# Conclusions and Reflections for QA

- Recent literature points to the need for QA to continue to monitor:
  1. The effectiveness of its guidelines on online and distance education taking into account rapid pace of change
  2. Forces of technological change must be understood and embraced by QA and HEIs to facilitate adaptation and the relevance of standards by which higher education is evaluated.



# Reflections for QA

- In view of technological disruption QA (internal and external) must invest in research and other forms of data gathering to ensure continued relevance of standards and to demonstrate understanding of the evolving nature of HE
  - This research should always include stakeholder consultation
- The actions of QA must continue to be data driven to inform policy.
- Some HE quality standards are agnostic of change [face-to-face vs online].

# Reflections for QA

- As we promote continuous improvement with institutions, we must continue to evaluate what we are doing well methodologically and what can be done more effectively.
- The posture of QA should be to openness to institutional innovation and as an enabler/facilitator of the achievement of quality.

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