

Boarding the Less Travelled Road: Designing an Entry-Level Qualification Program for online adjunct faculty

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Abstract:

Developments in digital technologies have produced profound changes in the structure, design and delivery of distance and online higher education around the world. New social practices have emerged due to the proliferation and amplified use of emerging technologies hence requiring academic staff to obtain the necessary skill sets through professional training or qualification opportunities in order to cope with the new technologies and effectively participate in the online knowledge economy. Over the years, research has proven that unlike full-time faculty, adjunct faculty, one of the largest faculties in online offerings, rarely receives the same level of capacity building and may struggle to provide sufficient support to online learners. Inadequate qualification and training in terms of familiarity with and use of online communication tools and virtual learning environments can lead to catastrophic results. A common challenge that online higher education institutions face today is to ensure their faculty effectively integrates technology, pedagogy and content knowledge (TPACK) to manage and facilitate their online course offerings. This paper therefore reports on the current lack in skills and knowledge faced by online adjunct faculty and further investigates their preferences in terms of approach and content to design an entry-level qualification program known as Course for Online Adjunct faculty (COAF) that enables online adjunct faculty to effectively and efficiently teach online with consistent high quality.

Key words.: online adjunct faculty, TPACK, entry-level qualification program

Article History: Received: 01st January 2019, Revised: 06th January 2019, Accepted: 06th January 2019, Published: 07th January 2019.

I. INTRODUCTION

Online courses have fast become a staple pedagogical approach in all higher education institutions (HEIs). In Malaysia, online learning is not a new phenomenon as the idea of integrating technology in education has been progressively enhanced since the 1970s'. In fact the development of online learning in Malaysia started during the pre e-learning era when the Educational Technology Division was set up by the Ministry of Education in 1972 (Asirvatham, Kaur, & Abas, 2005). However, similar to the United Kingdom, Australia, United States of America and New Zealand, Malaysia has now taken an accelerated interest in online learning. Malaysia (41%) is now ranked third among the top ten self-paced e-Learning countries, after India (55%) and China (52%) (eLearning Industry, 2015). One of the main reasons for this acceleration of online learning is the increased in population seeking tertiary education. Tremblay, Lalancette and Roseveare (2012) similarly stated that outside the OECD, private enrolments in Asia such as in India, China and Malaysia are likely to expand further in the years to come given the large projected increases in higher education participation, especially in Massive Open Online Courses (MOOC).

With the increased number of students applying for online courses and the different business models adopted by online universities as compared to traditional full-time universities, online programmes today are increasingly relying on adjunct faculty to facilitate online course offerings (Lyons, 2007; Allen & Seaman, 2008; Mueller, Mandernach, &

Sanderson, 2013). Adjunct, casual or part-time, academic staff members (referred to throughout this research paper as adjunct faculty) has long been a staple part of online higher education throughout the world. However, the strength of adjunct faculty in employing technology, pedagogy and content as an amalgamation is questionable. Already research findings have indicated the apparent lack of quality assurance in relation to teaching and learning online (Bevan-Smith et al., 2013; Parker & Sumner, 2013). With the induction of ubiquitous learning, a more clear and definite institutional strategy for strengthening the online faculty needs to be implemented. Hence entry-level qualification for teaching online, a non-norm practice at the Malaysian Higher Education Institutions (HEIs) needs to be looked into immediately. With Massive Open Online Courses (MOOC) becoming a practice for many HEIs in their offerings for lifelong education in the near future, capacities of the adjunct academic faculty especially on combining their technological-pedagogical-content knowledge needs to be strengthened with immediate effect.

II. RESEARCH OBJECTIVE

The main objective of this study was to determine the current lack in skills and knowledge faced by online adjunct faculty and investigate their preferences in terms of approach and content for an entry-level qualification program that can enable online adjunct faculty to effectively and efficiently teach online with consistent high quality.

^[1] Designation

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III. LITERATURE REVIEW

TPACK

Mishra and Koehler (2006) upgraded Shulman's (1986, 1987) PCK into Technological Pedagogical Content Knowledge (TPCK). Technology was introduced to include teachers' understanding of teaching specific content with appropriate pedagogical methods and technologies. Similar to Shulman's argument, Mishra and Koehler (2006) also states the same that content, pedagogy and technology cannot be viewed separately.

Niess (2008) illustrates TPACK as 'the total package required for truly integrating technology, pedagogy and content knowledge in the design of curriculum and instruction preparing pupils for thinking and learning with digital technologies (p.10).

TPACK thus is perceived as the intersection of content knowledge (CK), pedagogical knowledge (PK) and technological knowledge (TK) as illustrated in Figure 1.

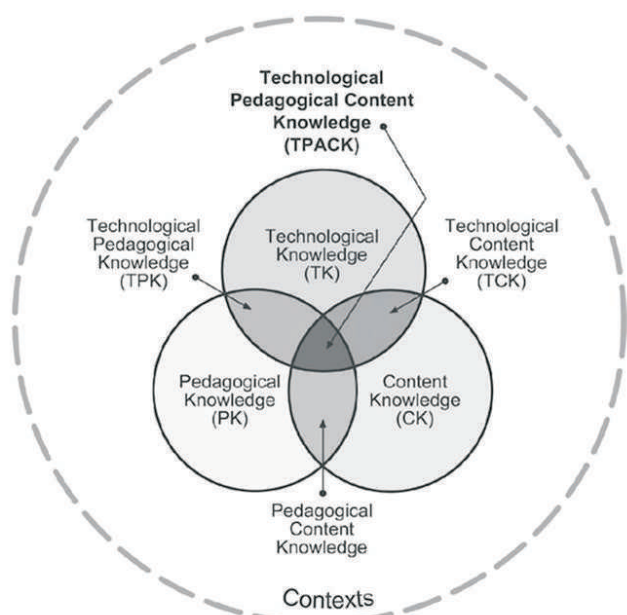


Figure 1 : Technology, Pedagogy and Content knowledge TPACK

In the TPACK model in Figure 1, there are three main domains of an educators' knowledge: content, pedagogy and technology. Equally important to the model are the interactions between and among these three bodies of knowledge, signified as pedagogical content knowledge (PCK), technological content knowledge (TCK), technological pedagogical knowledge (TPK) and technology, pedagogy and content knowledge (TPACK).

Online adjunct faculty

Online adjunct faculty is an emerging phenomenon in which a novel class of faculty who is virtual and distributed has begun to play a vigorous role in the total development of educational advancement in a technology rich environment. Online adjunct faculty, according to Carnevale (2004) and Bedford (2009) are not destined by scheduling or geography, are outside of the tenured system and consist of individuals

who seek flexibility in work and contribution of their professional knowledge which is easily made possible through the deployment of digital technologies in universities and college worldwide. Brand (2013) frequently describes this adjunct faculty as the lost/invisible tribe as they are not seen as being a part of the core team which develops and delivers the course of study. Brand believes that although they are rarely included in structural changes or developments and frequently work in the shadows with minimal support and recognition, many higher education institutions (HEIs) today are unable to function without the input of online adjunct faculty. Parker and Sumner (2013) describes online teaching and learning as either blended, which is a combination of face-to-face and online, or a completely online model with each context requiring the development of specific skills. Online teaching and learning is widely recognized to involve at least as much time in preparation and delivery as the face-to-face education, can take many forms: from one-to-one to large group teaching, and requires tutors to have consistent training related with technology since all online learning requires the use of web-enabled digital tools and a growing range of software applications (Parker & Sumner). Taken all together, such individuals according to Brand (2013) are usually employed without systematic access to training or development and may be under-supported in their teaching role. Compared to other sections of the academic workforce, the professional learning, development and support for online adjunct faculty differs greatly and have important ramifications for teaching and learning quality (Parker & Sumner, 2013; Starr, 2013).

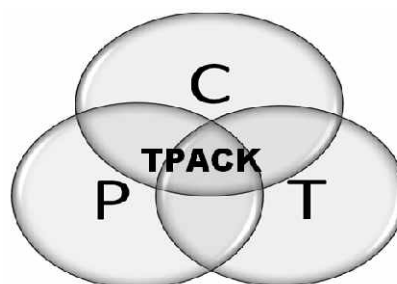
For the purpose of this study, online adjunct faculty therefore is defined as;

'instructors that are employed on an hourly or contractual basis and are not destined by scheduling or geography, are outside of the tenured system and consist of individuals who seek flexibility in work and passion in contributing their professional knowledge made possible through the deployment of digital technologies'.

Entry-level qualification for online adjunct faculty

The term 'Entry-level Qualification' herein refers to the entry point or level to any career. Depending on the career, the entry level role may require academic and/or vocational training before entry into the role (Wikipedia, 2017). For the purpose of this research, 'Entry-level Qualification' refers to certification from a recognized university to qualify as an online tutor and it consist the amalgamation of three key areas of knowledge essential for online tutors as shown in Figure 2.

Figure 2: Technology, pedagogy and content knowledge (TPACK)



Content (C) is the subject matter that is to be taught online.

Technology (T) encompasses modern technologies such as computer, Internet, digital video and commonplace technologies including, blackboards

Pedagogy (P) describes the collected practices, processes, strategies, procedures, and methods of teaching and learning in the online environment. It also includes knowledge about the aims of online instruction, online assessment, and online student learning.

Why does a TPACK-based entry level qualification program matter for online adjunct faculty?

Despite the key role that online tutors play in higher education, the 'casualisation' of the industry has resulted in a somewhat haphazard procedure for the employment of tutors. Rather than emphasis being placed on online teaching and online facilitating ability, tutors are often employed based on their availability or who they know (Eveline, 2004).

Firstly it must be understood that adjunct faculty, be it offline or online, have varied backgrounds and work experiences, diverse motivation for teaching, and different satisfaction or dissatisfaction in their academic environment (Gappa & Leslie, 1993; American Academic, 2010; Gilbert, 2013; Parker & Sumner, 2013). Compared to face-to-face instructions, online adjunct faculty that has contact with students through campus management system (CMS) or learning management systems (LMS), may not be adequately certified to teach online (American Academic, 2010; Megner, 2013; Parker & Sumner, 2013), thus may not have the necessary pedagogy or technology skills required to teach (American Academic; Megner). Faculty implementation of online learning in higher education varies significantly (Clay, 1999; Hunt, 2009; Magnussen, 2008; Mitchell & Geva-May, 2009), and faculty preparation for teaching online in higher education also varies considerably (Lokken, 2009).

To date, professional development efforts and qualification trainings in the Malaysian academic industry are at large focused to school teachers, conducted by the Teacher Education Division (TED) of MOEM whereas for HEIs it's principally focused for the full-time faculty generally conducted by respective institutions and is rarely designed specifically for adjunct faculty teaching online. Parker and Sumner (2013) has also stressed that adjunct faculty faces considerable challenges in accessing and sustaining the levels of support required if they are to be effective in their roles as online facilitators. Brand (2013) concurs that online adjunct faculty are often employed without any systematic access to training or development and maybe under-supported in their teaching role.

It is important to note that to facilitate change and improve the quality of online teaching and learning in the Malaysian HEIs, innovative training programmes are essential and this has been emphasized by a number of studies (Cochran-Smith, 2001; Fullan, 1993; Guskey, 2000; Othman & Dahari, 2011). Currently most just use a straight jacket training programme which is not very effective (Guskey, 2002; Peters et al, 2011; Mueller et al., 2013). Professional development programmes that focuses on training instructors in technology for instructional purposes lasting for just one day has been criticized by many researchers as being brief,

fragmented, incoherent, de-contextualized and isolated from actual online classroom situations (Ball & Cohen, 1999; Collinson & Ono, 2001; Schwillé & Dembélé, 2007; Parkner & Sumner, 2013; Villegas-Reimers, 2003). Consequently this has led to concerns regarding the apparent lack of quality assurance in relation to teaching and learning online (Bevan-Smith et al., 2013; Parker & Sumner, 2013).

As evolution in educational technology is pacing forward from e-learning and m-learning towards ubiquitous-learning, it is more important now to ensure that a proper entry-level qualification program such as the one suggested in this paper, is awarded for faculty engaging online teaching and learning since it requires advance resources and knowledge. There is currently no broadly renowned entry-level qualification program for online tutors, though very limited institutions do provide post-graduate qualification for teaching online, particularly the Open University UK (The Open University, 2015).

Teaching online is a diverse paradigm and demands different pedagogical practices hence different measures of trainings (Zawacki-Ritcher, 2004; Biro, 2005; Henard & Roseveare, 2012; Parker & Sumner, 2013). To reach the goal of preparing adjunct faculty for effective online instructions, a well-designed entry-level qualification program is essential.

IV. METHODOLOGY

Context and sample

The study was carried out at a branch campus of a well-known established online university that offers a comprehensive range of undergraduate and postgraduate programmes via the hybrid mode. In that particular semester, 75 tutors were employed to teach students from various faculties and programmes ranging from diploma, bachelors, masters as well as Phd. All respondents were briefed on the nature of study, aims, what is required of the participant, timeline for study and the benefits of participating. Of the total population (75 tutors), 63 responded to the questionnaires, which represents 84% of response rate. Referring to Research Advisors (2006) spreadsheets this indicated a 95% confidence level.

Instruments and Data Analysis

The entire study was conducted in two phases. Before the study began, a preliminary phase took place. At this phase, two distinctive sets of data-collection instruments were developed, namely, TPACK Gap Analysis (TPACK GA) and Entry-Level Model Preferences (ELMP) and were pilot tested. As for the first phase, the TPACK GA was used to analyse major practical problems. As for the second phase, ELMP was used to collect data from online adjunct faculty on their preferred approach and content needs for an entry-level program design.

Statistical Package for Social Sciences (SPSS) version 22 was used to analyse the quantitative data. The quantitative data from TPACK Gap Analysis (TPACK-GA) and Entry-level Model Preferences (ELMP) questionnaires were analysed using frequency counts and percentages.

V. FINDINGS AND DISCUSSION

Reliability of Quantitative Instruments

A set of quantitative instruments, TPACK Gap Analysis (TPACK GA) and Entry-Level Model Preferences (ELMP) that were drafted either by adapting them from previous studies (Archambault & Crippen, 2009; Baran, Thompson, Koehler, Mishra, & Shin, 2009; Ward and Benson, 2010) or specifically developed for this study were pilot-tested with a group of 40 participants who did not participate in this study. The data collected was coded and analysed using Statistical Package for Social Sciences (SPSS) Version 22. Instrument 1, TPACK GA indicated a Cronbach Alpha value (0.843) and Instrument 2, PDMP indicated a Cronbach Alpha value (0.70).

Previous Online-related Training Courses Attended

Prior to developing an online professional development intervention for adjunct faculty, it was important to investigate the participants' previous online teaching training courses. Table 1 shows the duration of professional training courses that adjunct faculty have attended related to online teaching and learning.

From Table 1, it can be deduced that 54% (34) participants have never attended any professional training programme on teaching and learning online. Only 46% (29) participants have reported attending any professional development programme on teaching and learning online. From the 29 participants who have attended, approximately 66% (19) participants had between 2 to 5 days training, 24% (7) participants had attended between 1 to 2 days training and approximately 10% (3) participants attended more than a week of training.

Table 1: Prior Online-related Training Courses Attended

Questionnaire	Response	Frequency (n)	Percentage (%)	Number
Have you ever attended any courses on teaching online?	Yes	29	46	63
	No	34	54	63
If YES, what was its duration?	1-2 days	7	24	29
	3-5 days	19	66	29
	More than one week	3	10	29

The findings in this study hence concurs with literature which also stated that online adjunct faculty have rarely received training on best practices in virtual classroom management and traditional classroom management skills for the virtual world (Wolf, 2006; Power & Gourd-Morven, 2011; Landers, 2012). Review of literature has clearly indicated that as of now the availability of training opportunities to scaffold and support the acquisition of experience in the pedagogy and technologies for online tuition is patchy (Parker & Sumner, 2013).

Major practical problems faced by online adjunct faculty

As outlined in the literature review, adjunct faculty needs to demonstrate a firm mastery of technology, pedagogy and content knowledge in order to effectively teach online. In summation these are the findings and discussions on major problems:

Technological-Pedagogical Knowledge

With regards to practical problems associated with technology, pedagogy and content knowledge (Table 2), tutors lacked knowledge on different technologies that can be used for online teaching (58.7%) compared to other aspects of technology, pedagogy and content knowledge.

Table 2: Practical problems Associated with Technology, Content and Pedagogy Knowledge

Statement	Disagree	Agree	Rank (from highest to lowest problem)
TECHNOLOGY			
I know how to solve minor computer problems while teaching online.	22.2% (14)	77.8% (49)	12
I can learn technology easily without help.	44.4% (28)	55.5% (35)	4
I have the technical skills I need to use technology in an online classroom.	38.1% (24)	61.9% (39)	7
I have a vast knowledge of different technologies that can be used for teaching online	58.7% (37)	41.3% (26)	1
I follow-up new developments in technology from time to time.	44.5% (28)	55.6% (35)	3
I frequently use different types of technology while teaching online students.	55.6% (35)	44.5% (27)	2
CONTENT			
I have sufficient knowledge about the content I am teaching	20.7% (13)	79.3% (50)	13
I have various ways and strategies of developing my understanding of the content to teach online.	31.8% (20)	68.2% (43)	9
ONLINE PEDAGOGY			
I know how to assess students' performance in an online classroom.	30.2% (19)	69.8% (44)	10
I can adapt my teaching based upon students understanding or misunderstanding.	30.2% (19)	69.8% (44)	10
I can adapt my teaching style to different categories of learners	26.9% (17)	73% (46)	11
I can assess students learning in multiple ways.	41.3% (26)	58.7% (37)	6
I can use a wide range of teaching approaches in a blended learning classroom setting.	26.9% (17)	73.1% (46)	11
I am familiar with common misconceptions students have.	42.8% (27)	55.5% (35)	5
I know how to organize and manage my lessons online	34.9% (22)	65% (41)	8

Combining technology, pedagogy and content knowledge

On combining technology, pedagogy and content knowledge, a high percentage (Table 3) reported weaknesses with combining technology and pedagogy (TPK) as compared to technology and content (TCK) or pedagogy and content (PCK).

Table 3: Combining Pedagogical-Content, Technological-Content and Technological-Pedagogical Knowledge

Statement	Disagree	Agree	Rank (based on average calculations)
Pedagogical Content Knowledge (PCK)			
I am aware of misconceptions, prior knowledge, and particular problems students may have when learning my subject area.	39.6% (25)	60.3% (38)	3
I can select effective teaching approaches to guide students' thinking and learning in my subject area.	17.5% (11)	82.6% (52)	
Technological Content Knowledge (TCK)			
I know about technologies that I can use for understanding and teaching my subject area.	27% (17)	73% (46)	2
I can use multiple technologies simultaneously for teaching and learning in my subject area.	31.7% (20)	68.3% (43)	
Technological Pedagogical Knowledge (TPK)			
I know how to choose technologies that enhance different teaching approaches for a lesson.	34.9% (22)	65% (41)	1
I know how to choose technologies that enhance students' learning in a lesson.	36.5% (23)	63.5% (40)	
I can choose technologies that enhance the content of a lesson.	38.1% (24)	61.9% (39)	
I can think critically about how to use technology in my blended learning classroom.	41.3% (26)	58.7% (37)	
I can adapt the technologies I know in different teaching activities.	28.6% (18)	71.4% (45)	

The findings (Tables 2 and 3) indicated that adjunct faculty reported weaknesses in two constructs notably Technology Knowledge (TK), and Technological Pedagogical Knowledge (TPK). A number of reasons can be proposed for such phenomena. Firstly these weaknesses can be justified by the fact that most adjunct faculty participated in this research graduated from higher education institutions when technology had not been completely introduced into their curriculum, where only basic computer skills using Microsoft was prioritized for teaching and learning, as observed in the demographic table below (Table 4)

Table 4: Demographic Data of Online Adjunct Faculty

Description	Frequency (n)	Percentage (%)
Participants		
Male	31	49
Female	32	51
Qualifications		
Master	40	63
Bachelor	15	24
PhD/Doctorate	4	6
Diploma	2	3
Postgraduate Diploma	1	2
Others	1	2
Age		
18 -25	-	-
26-25	18	29
36-45	19	30
above 46	26	41
Teaching experience (years)		
0-1years	12	19
2-10 years	14	22
11-15 years	10	16
above 16 years	27	43
Online teaching experience (years)		
0-1 years	28	44
2-10 years	27	43
11-15 years	7	11
above 16 years	1	2

Computer skill-based courses however are not sufficient for teaching online courses effectively. Several researchers have warned that although basic computing skills constitute the cornerstone of Information Communication Technology (ICT) knowledge, basic computer skill-based courses are not enough to prepare faculty to integrate technology in online instruction as they are usually taught in isolation from a pedagogical context (Mishra and Koehler 2006; Harris et al. 2009).

Besides, it was also discovered that because a majority of the tutors employed hardly attended any professional development program on teaching online as observed in the demographic information (Table 1) of those who took part in the study, hence knowledge on technology and online pedagogy as an amalgamation lacked poorly. In terms of professional training opportunities, research had also repeatedly indicated that unlike full-time faculty, adjunct faculty rarely receive the same level of professional training on best practices in online instruction (Wolf 2006; Blodgett 2008; Bedford 2009; Landers 2012). Similarly the findings in this research that indicated weaknesses in adjunct faculty's knowledge of TK and TPK, therefore concurs with current literature indicating that availability of training opportunities to scaffold and support the acquisition of expertise in the pedagogy and technologies for online tuition is patchy (American Academic 2010; Megner 2013; Parker and Sumner 2013).

Preferred approach, content needs and assessment methods

In terms of preferred approach to enhance their knowledge of technology, pedagogy and content, majority participants (80.9%) preferred a fully asynchronous professional development intervention (Table 5) that included Learning Management System skills; basic instructional design principles ; facilitating online discussions; synchronous and asynchronous technologies; various assessment methods ; rubrics for online task; and continuous feedbacks strategies on assessments (Table 6).

Table 5: Preferences on approach for an entry-level qualification program

Statement	Disagree	Agree	Neutral	Rank
I prefer a complete face-to-face entry-level qualification program.	9.5% (6)	76.2% (48)	14.3% (9)	2
I prefer a fully asynchronous entry-level qualification program.	9.6% (6)	80.9% (51)	9.6% (6)	1
I prefer a blended mode entry-level qualification program.	7.9% (5)	69.9% (44)	22.2% (14)	3

Findings (Table 5) concluded that online adjunct faculty preferred a fully asynchronous entry-level qualification program to enhance their online teaching effectiveness. Findings of this study coincided that of Noonan, McCall, Zheng and Erickson's (2012) research that examined the effect of asynchronous online professional training program for special education teachers where participants reported greater satisfaction in the asynchronous professional training than that experienced during traditional professional training programs.

Ideally, online adjunct faculty participants preferred the asynchronous e-learning approach as it enabled them to complete the course at their own pace, by using the Internet merely as a support tool rather than volunteering exclusively for e-learning software or online interactive classes. In addition, the researcher strongly believes that due to the nature and various backgrounds online adjunct faculty have, a fully asynchronous entry-level qualification program supported the work relations among participants and instructors, even when participants cannot be online at the same time. Parallel to Hrastinski's (2008) and O'Neil's (2013) viewpoints, asynchronous e-learning makes it possible for learners to log on to an e-learning environment at any time and download documents or send messages to instructors or peers.

Asynchronous training or also known as self-paced training, did not require online adjunct faculty participants and instructor to be online or in person at the same time for instruction. This allowed flexibility where participants had the option of completing the training on their own with little or no help from the instructor (Slatinsky 2013).

Table 6: Preferences for General Content, Specific Content and Assessment Method

Statement	Disagree	Agree	Rank (from high preferences to low preferences)
General Content			
I prefer the entry-level qualification program to start the program with basic instructional design principles for an online instructor.	28.6% (18)	71.4% (45)	6
I prefer the entry-level qualification program to include synchronous and asynchronous technologies in an online learning environment as a training content.	27% (17)	73% (46)	5
I prefer the entry-level qualification program to include Learning Management System skills required by instructors in the online classroom.	20.6% (13)	79.3% (50)	4
I prefer the entry-level qualification program to include facilitating online discussions successfully.	17.5% (11)	82.6% (52)	2
I prefer the entry-level qualification program to include various assessment techniques as training content for measuring individual and group student performance.	12.7% (8)	87.3% (55)	1
I prefer the entry-level qualification program to include basic legal issues of teaching online.	19.1% (12)	80.9% (51)	3
Specific Content			
I prefer the entry-level qualification program to focus on technology knowledge rather than content and pedagogy knowledge to enhance online teaching effectiveness.	19% (12)	80.9% (51)	2
I prefer the entry-level qualification program to focus on pedagogy knowledge rather than content and technology knowledge to enhance online teaching effectiveness.	30.1% (19)	69.8% (44)	3
I prefer the entry-level qualification program to focus on content knowledge rather than pedagogy and technology knowledge to enhance online teaching effectiveness.	30.1% (19)	69.8% (44)	3
I prefer the entry-level qualification program to focus on all three knowledge areas: technology, content and pedagogy knowledge to enhance teaching effectiveness.	15.9% (10)	84.1% (53)	1
Assessment Method			
I prefer the entry-level qualification program to include a variety of assessment methods to ensure mastery of competencies and to familiarize participants with diverse online assessment choices.	9.5% (6)	90.5% (57)	1
I prefer the entry-level qualification program to conduct all assessments face-to-face only.	55.5% (35)	44.4% (28)	4
I prefer the entry-level qualification program to conduct assessment both, online and face-to-face, to acquaint participants with varied assessment approaches.	9.5% (6)	90.5% (57)	1
I prefer the entry-level qualification program to use rubrics to assist participants in knowing how their work will be assessed.	14.3% (9)	85.7% (54)	3
I prefer the entry-level qualification program to provide continuous feedbacks on all assessments through the Learning Management System.	11.1% (7)	88.9% (56)	2

The need for instructor preparation to teach online has been established in the online education literature (Miller and King 2003; Allen and Seaman 2008; Parker and Sumner 2013). As shown in Table 6, this research captured the needs for a specific entry-level qualification program preferred by the online adjunct faculty. A needs assessment before a designing a professional training activity is necessary as it must be based on the needs of participants. Considering participants need while planning a professional training activity is important in many senses and must be the first initial step before designing any program (Guskey, 2000).

This again concurs with Slatinsky (2013), a crucial step in the instructional design process is the analysis phase consisting of audience analysis as well as instructional and content analysis, where it is important to determine what method and content of training will be most beneficial to the audience, which also considers practical matters such as Internet accessibility or instructor availability.

Review of literature has also indicated that although some of the schemes and modus operandi used in face-to-face delivery can be transferred to an online setting, online instruction deviates significantly from face-to-face instruction and can present numerous challenges for instructors transitioning to a virtual environment (Paloff and Pratt 2001; Hardy and Bower 2004; Ko and Rossen 2004; McLean 2005). To address online learners' requirements, online instructors themselves first need to acquire new skills, roles, strategies, and techniques (Varvel 2007; Colwell 2011; Parker and Sumner 2013).

Similar to the findings in this study (Table 4.5), literature has also stated that adjunct faculty have various backgrounds and hold various roles (American Academic 2010; Gilbert 2013; Tomkinson 2013) and majority are rather accustomed to the traditional, face-to-face course instruction (Landers 2012) although they may not be certified teachers (American Academic 2010; Megner 2013; Parker and Sumner 2013). Many may not have the classroom management skills and teaching strategies to lead the continuous online learning environment, making it further difficult to provide quality online course of study to students (Landers 2012; Parker and Sumner 2013). Hence, designing an appropriate and suitable entry-level program that takes into consideration the major practical problems and content needs is equally necessary to produce effective online adjunct faculty.

VI. CONCLUSION

The findings from this study therefore have contributed to close the gap in the literature by determining the practical problems and the preferences of online adjunct faculty for an effective entry-level qualification program. Based on findings, online adjunct faculty required a training that revolved around two knowledge areas –technological and pedagogical knowledge (TK and TPK), since it was reported as the weakest in online delivery of instructions. The findings in this study also concur that of Mishra and Koeler (2006) stating that the 21st century educators need the specific knowledge to effectively teach a virtual classroom, notably on blending technology, pedagogy and content. As indicated in review of literature, teaching online will be more effective if online adjunct faculty is capable of associating technology,

pedagogy and content in a way that promotes learning amongst learners (Mishra and Koeler). Furthermore, information obtained from the needs assessment before designing the entry-level qualification program provides more defined and credible principles for producing an effective program.

In conclusion, this paper reported the findings on a preferred entry-level intervention to enable adjunct faculty to effectively teach online. Findings on practical problems faced in terms of technology, pedagogy and content knowledge conducted at phase 1 combined with findings on online adjunct faculty's preferences for an entry-level intervention in phase two, provided better insights for the researcher to position design principles to create the most suitable entry-level qualification program for the online adjunct faculty. As an outcome, Course for Online Adjunct Faculty or better known with its acronym COAF was designed and developed by the researcher as the entry-level qualification program.

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