

The evaluation of a blended faculty development course using the CIPP Framework

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ABSTRACT

The impact of faculty development programmes on actual teaching is not always clear. This is even more so with respect to using technology in teaching. This study sought to evaluate the impact of a compulsory faculty development course on blended learning course implementation, using a Context, Input, Process, Product (CIPP) evaluation model. Findings indicate that blended learning implementation improved and lecturers completing the course had increased levels of confidence in the use of technology for teaching and enhanced skills in blended course delivery. However, there is a need to provide continued support and more opportunities for hands-on experience.

Keywords: *Blended Learning; Faculty Development; Impact Assessment; developing countries*

INTRODUCTION

The professional development of higher education teaching staff has gained importance internationally as more institutions recognize the value of faculty development programmes. Expectations for higher standards of teaching, research, and service are contributing to the increased recognition of faculty development. Also, there is increased pressure by accreditation institutions, government agencies, and the general public to demonstrate positive student learning outcomes and greater evidence that faculty development programmes are having a positive impact on teaching (Saroyan & Frenay 2010; Dee Fink 2013).

Faculty development is defined as “a set of activities that engages all members of the teaching faculty in the kind of continuous professional development that enhances their ability to construct curricula and modes of instruction that more effectively fulfill the educational mission of the institution and the educational needs of students and society” (Dee Fink 2013, p.1). Faculty development, while recognized as having an impact on the quality of teaching has been slow to gain recognition by some academic staff (Whitchurch 2009) but that situation is changing. The extent of the impact of faculty development programmes on actual teaching is not always clear; this is even more so with respect to using technology in teaching.

The University of the West Indies, St Augustine Campus established a faculty development programme more than two decades ago through the work of its Instructional Development Unit, later renamed the Centre for Excellence in Teaching and Learning (CETL).

The CETL offers workshops, consultations, seminars, and other training opportunities for UWI staff (full-time and part-time lecturers, teaching assistants, laboratory demonstrators, tutors and administrators). However, the main focus of the CETL has been the implementation of the Certificate in University Teaching (CUTL), which is mandatory for all full-time contracted members of the teaching staff. The CUTL and other faculty development activities are intended to equip participants with the resources and training that they need to make them effective, successful

teachers at the tertiary level. The CUTL comprises 4 courses, one of which is *CUTL 5106-Advancing Teaching with Technology*.

While many higher education institutions globally recognize the importance of professional development for teaching staff, there has been uneven implementation of universal participation as mandated for new faculty members (Dee Fink 2013). Dee Fink (2013, p. 2) outlines a typology of four levels of acceptance of faculty development within countries as:

- Level 1: Little or no faculty development activity;
- Level 2: Substantial minority of institutions have faculty development activity, and faculty participation is voluntary;
- Level 3: Nearly universal activity; participation mandated for new teachers;
- Level 4: Continuous faculty development expected of ALL postsecondary instructors.

The St Augustine Campus through the CETL has been able to reach Level 3, where participation in faculty development is mandated for new teachers who must complete the CUTL within their first three-year contract. The CUTL is now offered as a blended programme to teaching staff. Blended learning is generally recognized as an approach to teaching and learning, which combines face-to-face classroom instruction with technologically assisted activities and applications. The offer of the CUTL as a blended programme coincided with the Campus's move to "promote the use of ICT's to enhance teaching" (UWI's Strategic Plan 2007-2012 page 14). The CETL was responsible for implementing the Blended Learning Policy of the St. Augustine Campus and to ensure that part of the training for academic staff included preparing them to design and deliver blended learning. This study sought to evaluate the impact of the course *CUTL 5106 Advancing Teaching with Technology* on blended learning course implementation using the Context, Input, Process, Product (CIPP) Evaluation Model.

BLENDED LEARNING AND FACULTY DEVELOPMENT

Blended learning holds promise for the positive transformation of higher education (Christensen & Horn 2013). As Universities seek to embrace blended learning, it has been recognized that faculty training is critical for success (Kim & Bonk 2006; Kenney & Newcombe 2011; Badawood, Lerine Steenkamp & Al-Werfalli 2013). According to Kenney & Newcombe (2011), faculty must be supported to effectively design and deliver blended instruction. This involves providing the necessary knowledge and skills and encouraging the right attitudes. In addition to adequate training, other "institutional drivers" have also been identified as critical for successful adoption of blended learning. Porter & Graham (2016) in a study on drivers and barriers to faculty adoption of blended learning conclude that sufficient infrastructure, technological and pedagogical support and the alignment of faculty and administrator's purpose for adopting blended learning are critical. Support for faculty is considered key. Evaluation of the efforts of The UWI to provide support for faculty via training is critical to the assessment of the effectiveness of the implementation of blended learning on the campus.

The Course CUTL 5106

CUTL 5106 is a three-credit, post-graduate, certificate course intended to develop skills in teaching with technology and specifically in the design and delivery of a blended course. The course comprises five units: The Role of Technology in Teaching and Learning: Trends and Developments; Media and Technology Selection and Integration; New and Emerging Technologies for Teaching and Learning; Blended Learning and Course Management Systems; and Legal and Ethical Issues. The course is delivered in a blended format comprising four face-to-face sessions, and weekly online discussions, over an eight-week period.

The CIPP Evaluation Model

The Context, Input, Process and Product (CIPP) evaluation approach proposed by Stufflebeam (2003) is a comprehensive framework for “guiding evaluations of programmes, projects and systems” (Stufflebeam 2003, p. 31). Stufflebeam identifies four purposes for evaluation, namely “guiding decisions; providing records for accountability; informing decisions about installing and or disseminating developed products, programmes and services and promoting understanding of the examined phenomena” (p. 34). The model proposes a context evaluation, which assesses needs. The “I” in CIPP refers to an input evaluation, which assesses plans or strategies used and responsiveness of the programme to client needs, while process evaluation looks at the extent to which outcomes were met. Product evaluation looks at impact –what were the intended and unintended outcomes of the course or programme.

While there are various types of evaluation approaches the CIPP model was felt to be the most appropriate for reviewing the implementation of CUTL 5106 because it focuses on improvement and accountability (Brewer 2009). The CIPP model also has the flexibility to be used proactively and retroactively (Stufflebeam 1971).

PURPOSE OF THE RESEARCH

The study sought to answer the following questions:

1. How adequate was the course to meet the training needs of faculty to design and deliver a blended course?
2. To what extent was adequate support provided for faculty to participate in and benefit from the course?
3. To what extent was the process used by CETL to deliver the course effective?
4. What has been the impact of CUTL 5106 on blended learning course implementation and the use of technology to advance teaching at the University of the West Indies, St Augustine Campus?

METHODOLOGY

A case study design using a combination of quantitative and qualitative methods was employed. The combined approach was used to broaden the scope of the data collected and to allow for triangulation of data. The study population comprised one hundred and fifty (150) teaching staff, who completed the course CUTL 5106 between 2010/11 and 2016/17, from the seven (7) faculties (Engineering, Humanities and Education, Science and Technology, Social Sciences, Food and Agriculture, Law and Medical Sciences) of The University of the West Indies, St. Augustine Campus.

The survey instrument used was in the form of a questionnaire, which was distributed online via *Google Forms*. Participants were informed about the survey via email using their staff email accounts. All staff members are provided with computers and Internet access on the campus, so accessibility was not an issue. The survey was available during the first month of the second semester (January to February 2018) since it was felt that there would be less time constraints early in the semester. Participants were advised that the survey would take 20 minutes to complete. They were sent weekly email reminders to complete the survey. No incentives were provided. Fifty respondents completed the survey instrument resulting in a 33% response rate. Various factors

can be attributed to this low response rate including workload of staff, low prioritizing of the issue, lack of incentives and time elapsed since some had completed the course leading to some lack of interest.

The questionnaire contained thirty (30) items: twenty-three (23) closed-ended and seven (7) open-ended. The first eight (8) questions focused on the demographic characteristics of the respondents. These data were not used in the discussion since cross-tabulations revealed no differences in responses based on demographic characteristics. The questionnaire also included a 5-point Likert Scale measuring academic perception of the context (adequacy of course to meet their needs), input (support for them completing course and teaching with technology) and process (how the course was structured and delivered). The 5-point Likert Scale's range was coded as follows: Strongly Agree (1), Agree (2), Neutral (3), Disagree (4) and Strongly Disagree (5). The survey instrument also sought to gather qualitative data from respondents on the benefits derived from completing the CUTL 5106 Course. This included aspects of the course that help respondents in their teaching; areas in which the course can be improved; unexpected positive aspects of the course; unexpected negative aspects of the course and any additional comments on the overall experience completing the CUTL 5106 course.

In addition to the survey, interviews were conducted with deans and administrative officers representing the Faculties of Humanities and Education, Law, Medical Sciences, Science and Technology, Social Sciences, Faculty of Engineering and Faculty of Food and Agriculture. A total of 11 interviews were conducted comprising all deans and available administrative officers at the time. These interviews were guided by an interview protocol and sought feedback on areas identified by Graham et al. (2003) as factors impacting the implementation of blended learning

FINDINGS AND DISCUSSION

Perceptions of Faculty on the Adequacy of CUTL 5106 to Meet Training Needs (Context)

The majority of participants (54%) agreed that the St. Augustine Campus should provide more training for staff in the use of technology for teaching. Seventy-six percent were in agreement with the statement that CUTL 5106 provides adequate training for staff to enhance their teaching using new technologies. Ninety percent agreed that CUTL 5106 could help staff design a blended course and 82% agreed that CUTL 5106 could help staff deliver a blended course.

Input/Support Provided for Teaching Staff

The questions in the input category of the survey, focused on perceptions of whether adequate support was provided for participation in and the completion of the course as well as whether support was provided to deliver a blended course. Based on the data collected, it is apparent that faculty generally agreed that adequate support was provided for completion of the course. However, once they had completed their training, teaching staff felt they did not receive support from their faculties to deliver blended courses. Deans and administrative officers in the faculties felt their specific roles in implementing blended learning were not clear. Deans interviewed were not required to take the course because in all cases their contracts did not require it since they were employed before the course became mandatory. Thus, any strategies related to furthering blended learning implementation, including the preparation of faculty, were not seen as a priority. Only one dean indicated actively advocating for blended learning and supporting staff. This respondent admitted having prior experience and training in open and distance learning and stated that this experience provided inspiration and motivation. Most deans and faculty agreed that following the conclusion of CUTL 5106, inadequate support was provided to implement blended learning.

Effectiveness of Process Used by CETL to Deliver the Course

Eighty-six percent (86%) of the respondents agreed that the delivery of CUTL 5106 in a blended format was effective. In relation to the eight-week time frame for CUTL 5106, 24% strongly agreed this was adequate and 44% agreed that this was adequate. Eighty-two percent (82%) agreed that the interactive face-to-face sessions and group work helped them develop their confidence in teaching with technology. Seventy-eight percent (78%) agreed that the preparation of a storyboard helped them develop their confidence in teaching with technology and 84% agreed that they used the skills and information gained from CUTL 5106 in their current practice. Responses to the open ended questions suggest that those who did not use the skills either felt they needed more individual support to gain the confidence or they were not sufficiently supported by their departments.

Product/ Impact of the Course on Implementation

The survey instrument also sought to gather qualitative data from respondents on the benefits derived from completing CUTL 5106. In some cases respondents gave more than one response to the questions. These responses were then categorised according to common themes. Frequency in the tables refers to the frequency of a response as opposed to the number of respondents for each question. The most frequently cited benefits were "Greater Appreciation for the Overall Availability and Use of Technology" and "Improvement in Teaching Skills and Delivery of Courses". Enhanced Confidence in Teaching and the Use of Technology and Greater Exposure to Varied Teaching Methods were also cited frequently. Responses are depicted in Table 1.

Table 1: Aspects of the CUTL 5106 Course that Most Benefited Respondents

HOW DID YOU BENEFIT FROM THE COURSE CUTL 5106?	Frequency	Percent (%)
Improvement in the use of online tools (namely My-e-Learning)	3	6
Greater Appreciation for the Availability Online Tools for Teaching/Blended Learning	5	10
Greater Appreciation and Exposure to the Availability of Technology/Greater Use of Technology	9	18
Improvement in the Design of Blend Course	1	2
Improvement in the Delivery of Blended Course	5	10
Improvement in Teaching Skills and Delivery of Courses	9	18
Enhanced Confidence in Teaching and the Use of Technology	7	14
Greater Exposure to Varied Teaching Methods	7	14
Valuable Resources and Clear Explanations	1	2
Not Stated	2	4
Other	1	2
TOTAL	50	100

Product/How CUTL 5106 Helped Teaching

There were 46 responses to the question of how CUTL 5106 helped teaching. The majority of responses related to "Improvement in the Use/Delivery of A Blended Course", followed by "Improvement in Teaching Skills and Delivery of Courses". Responses also fell into the categories of "Greater Exposure to Online Resources/Use of Online Tools/Resources" and "Greater Appreciation of and Exposure to Technology/Greater Use of Technology". These responses are depicted in Table 2.

Table 2: *How CUTL Helped Enhance Teaching*

HOW HAS CUTL 5106 HELPED YOU IN YOUR TEACHING?	Frequency	Percent (%)
Improvement in Teaching Skills and Delivery of Courses	10	20
Improvement in the Design of Blend course	3	5
Improvement in the use/Delivery of Blended course	13	25
Greater Appreciation and Exposure to the Availability of Technology/Greater Use of Technology	8	16
Greater student engagement with concepts and content	3	6
Greater Exposure to the Availability Online Resources/Use of Online Tools/Resources	8	16
Not Stated	5	10
Other	1	2
TOTAL	51	100

With regard to the unexpected positive outcomes of doing the course, 14% of the responses in the open-ended sections when reviewed were related to the theme "Greater Awareness/Exposure to the Availability of Online Resources and Use of Online Tools/Resources". 12% of the responses indicated that some respondents experienced no unexpected positive outcomes. With regard to unexpected negative outcomes, although 46% of the responses indicated there were no unexpected negative outcomes, the lack of departmental/faculty support accounted for 6% of the responses for this question. (See Table 3)

Table 3: *Unexpected Negative Outcomes of doing CUTL 5106*

WHAT WERE THE UNEXPECTED NEGATIVE OUTCOMES OF DOING CUTL 5106?	Frequency	Percent (%)
None	23	46
Realization of the Need/Dependency on Technology	1	2
Realization of the Lack of/Limited Proficiency in Use of Technology	2	4
Lack of Departmental/Faculty Support in the Use of Online Tools/Resources	3	6
Heavy Workload of the Course/Time Devoted to Complete Course	2	4
Social Issues/Social Life Negatively Affected	1	2
Not Stated	13	26
Other	4	8
Not Applicable	1	2

Participants were asked to indicate whether they delivered a blended course after completing CUTL 5106 and to specify the name, course code and most recent year of delivery of the identified course(s). Only three persons indicated that they had not delivered a blended course. Regarding the impact of CUTL 5106, it is apparent that the course made lecturers more confident in using a learning management system and in the implementation of a blended course. There is a perception that their communication skills with students improved and they had a greater appreciation for the use of technology in teaching and learning. Also, In order to implement blended learning effectively, they acknowledged the need for institutional support in the form of reduced workload while preparing courses, and/or assistance in course development especially with regard to use of technology.

Since the implementation of the Blended Learning Initiative in 2012, generally, there has been an increase in the use of the learning management system (LMS), MOODLE. As indicated in Table 4, there was a very moderate increase in the percentage of courses with content and activities in myeLearning from 25% in the 2011/2012 academic year to 34% in the 2016/17 academic year.

Table 4: *Percentage of Courses in myeLearning with Content and Activities (2011-2017)*

ACAD YEAR	TOTAL MYEL COURSES	COURSES WITHOUT CONTENT & ACTIVITIES	COURSES WITH CONTENT & ACTIVITIES	PERCENTAGE OF COURSES WITH CONTENT & ACTIVITIES
2016/2017**	4131**	2732**	1399**	34%
2015/2016	5078	3500	1578	31%
2014/2015	5032	3576	1456	29%
2013/2014	4680	3306	1374	29%
2012/2013	4652	3390	1262	27%
2011/2012	4303	3210	1093	25%

** Figures to date 8-FEB-2017 (Moodle 3)

Lecturers were encouraged to use MOODLE, branded *MyeLearning* on the UWI campus, to provide resources for their students such as course outlines and readings at UWI St. Augustine as part of the initiative. The training of lecturers via the formal certificate programme and teaching with technology workshops were intended to move lecturers beyond the use of the LMS as a repository. A direct link between the increase in use of the LMS and the implementation of CUTL 5106 has not been made. However, responses from participants in the CUTL course indicate that those who participated in the course have used the LMS more since their training.

How Can CUTL 5106 be Improved to Enhance Teaching with Technology and Blended Learning Course Implementation on the St. Augustine Campus and What are the Broader Implications of this for Faculty Development in General?

The open-ended question on how CUTL 5106 could be improved received forty-three (43) responses. The suggestions with the highest frequencies were "Follow-Up Sessions/Refresher Courses", "Longer Time-Frame for Course Completion" and "More Personalised/One on One Sessions with Participants". Nine percent (9 %) of the responses indicated that no improvements to the course were necessary. (See Figure 1)

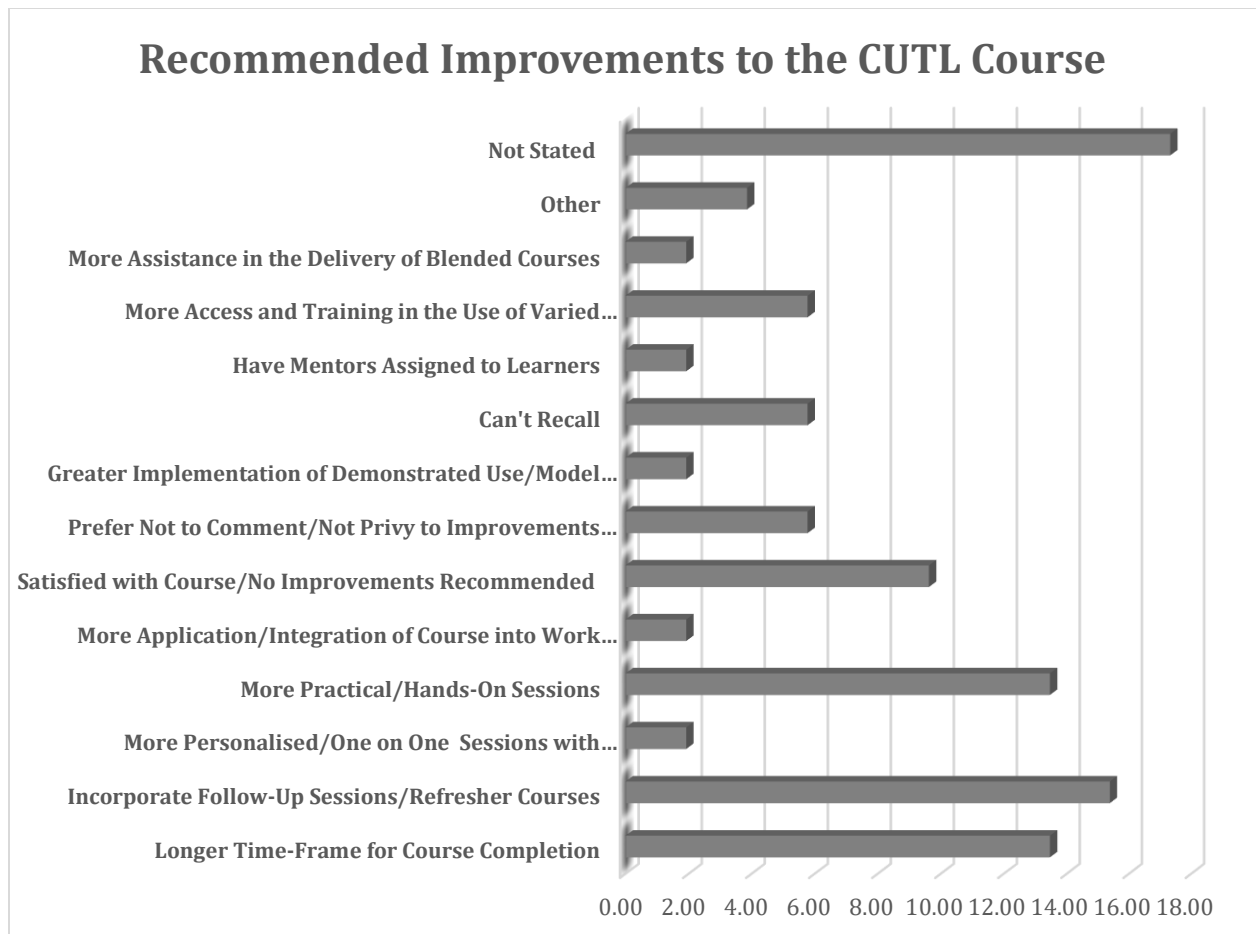


Figure 1: *Recommended Improvements to CUTL Course*

CONCLUSION

Since CUTL 5106 has been available to faculty, the St Augustine Campus of the UWI has seen an increase in the number of blended courses offered to students. Lecturers who completed CUTL 5106 identified several personal and professional benefits of the course especially their increased levels of confidence in the use of technology for teaching and learning, and their teaching skills.

Faculty members have indicated that their ability to deliver blended learning courses has been negatively impacted by the lack of support within their faculty or department. Generally, CUTL 5106 was beneficial. Some lecturers (9%) expressed the view that the course was adequate in its current form. Other lecturers indicated several areas where improvements could be made including more follow-up and one-on-one assistance. These recommendations can be implemented with the support of administration since it would require allowing space in lecturers' schedules for devoting time to working on their courses and resources in the form of elearning support specialists. These recommendations all point to the need for continuing faculty development support and building administrative support for faculty development. Part of this may be addressing institutional issues, which may not be supportive of continuous faculty development.

Additional research is required to determine the impact of CUTL 5106 on course delivery. If a similar study is conducted, perspectives of students should be solicited. Strategies to ensure there is a good response rate need to be explored such as the offer of incentives for completing the survey. The campus senior management will need to ensure that deans are supportive of the initiative.

While a formal certificate course is a good first step to equip faculty with the knowledge, skills, and attitudes for developing and delivering blended courses, there is a need to:

1. Create opportunities for keeping up-to-date with developing technology,
2. Provide technical and other support within the faculty after the course is completed, and
3. Offer more opportunities for hands-on experience for those who may not be technologically savvy.

These suggested changes seem to be pointing to Dee Fink's (2013) Level-4 ideal of continuous faculty development. These recommendations have implications for resources required by the CETL and faculties. Staff with the requisite educational technology skills, who can offer more hands-on-training as required and follow-up consultation may need to be part of the scenario in the re-design or re-visioning of a faculty development course to encourage blended learning. The findings also seem to reinforce Porter and Graham's (2016) view that technological and pedagogical support and the alignment of faculty and administrator's purpose for adopting blended learning are critical.

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