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# Participation in continuous professional development training and perceived teaching assessment: A case study at the Malaysian Technical University

**Nor Hazana Abdullah, Alina Shamsuddin, Eta Wahab, Muazu Hassan Muazu**

*Faculty of Technology Management and Business, University Tun Hussein Onn, Malaysia*

*corresponding e-mail: [hazana@uthm.edu.my](mailto:hazana@uthm.edu.my)*

*address: Faculty of Technology Management and Business, University Tun Hussein Onn Malaysia,  
86400 Parit Raja, Batu Pahat, Malaysia*

**Abstract:** Participation in training has been claimed to have various effects on individuals, teams and organizations. In the context of higher education, continuous professional development (CPD) training programs is of utmost importance to improve academicians' competencies, teaching effectiveness and eventually students' performance. However, majority of studies on CPD training programs in Malaysia have been exploratory and descriptive in nature and none has investigated the relationship between participation in CPD training programs and perceived teaching performance. Thus, this study aimed to bridge the empirical gap using quantitative secondary data from year 2015 to 2017. University's CPD training program participation records and the teaching assessment ratings by students on eighty academicians were included in this study based on the data accessibility from both sources. Descriptive analyses showed that majority of respondents who were rated excellent by students attended CPD training programs. Linear regression analysis showed that 11% of variance in teaching performance was explained by participation in CPD training programs. This finding substantiates the importance of CPD training programs. More importantly, this result shows that compulsory CPD training programs during the initial teaching years is not sufficient to maintain teaching performance. Consequently, academicians need to participate in CPD trainings to upgrade their teaching know-hows.

**JEL Classifications:** M0, I21

**Keywords:** Continuous professional development training, teaching performance, higher education, training participation

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## 1. Introduction

Although the existing education system has contributed significantly to development of the country's human capital, the 4th Industrial revolution is redefining and re shaping the future educational goals. Consequently, there is a tremendous shift towards advancement in pedagogical understanding, technology-based instructional designs, innovative teaching platforms and increasing ethnocultural diversity of students (Chalmers & Gardiner, 2015). It is evident that quality teaching to prepare for country's future human capital needs has been and continues to be a significant issue (Arokiasamy, Ismail, Ahmad, & Othman, 2009). Quality teaching and learning environment could only be derived from competent academicians who are developed through an iterative process of "self-study, education, training, and experience" (Jusoff, Abu Samah, & Abdullah, 2009). However, the complexity of academicians' roles has made the issue of balancing between teachings,

administrative activities, research (Blackmore, 2008) and participation in CPD training (Nair, 2016) an arduous challenge. The use of technologies especially ICT tools in teaching and learning also aggravated the issue. According to Lye (2013), academicians, who already had heavy teaching loads, spend too many hours designing instructional or teaching materials using ICT tools with poor technical support and facilities.

Trainings have been used across industries to build and improve employees' competencies and productivity (Raymond, Bawa, & Dabari, 2016). Similarly, in the context of higher education, the quality of teaching could be improved when academicians learned how to teach more effectively through various trainings (Delamare-Le & Winterton, 2005). Competencies such as knowledge, skills, attitudes (Cully, Heuvel, Wooden, & Curtain, 2000), work habits, behaviors, abilities, and personal characteristic (Delamare-Le & Winterton, 2005) could be improved through training. Apparently, training is typically presumed to provide workers with improved promotional opportunities, enhanced job security, boosted confidence, and competence and increased salary (Cully et al., 2000; Wabule, 2016). Training could, therefore, be generalized as a mechanism for performance improvement in the work place. In the sphere of education, Continuous training and development of academic staff also brings about job satisfaction and in the end lead to improved organizational success (Okechukwu, 2017).

CPD training programs provide occasions for academicians to gain exposure to new knowledge but to relate with people of diverse backgrounds (Wabule, 2016). Training of university academicians brings about an improvement of academicians' skills, development of academicians' conceptions of teaching and learning, and consequent changes in students' learning (Gibbs & Coffey, 2004). Othman & Dahari (2011) argued that professional development is paramount to the academicians not only because the growth of knowledge has exponentially increased but the academicians' roles and responsibilities are also expanding. That is why Adu & Okeke (2014) saw CPD as a necessity for all the academicians in this modern time because it is a process that helps them manage their development on a continuous basis.

Despite all the benefits associated with participation in CPD training programs, the question remains whether the participation in the CPD training programs could improve teaching assessment as perceived by students. Therefore, this study aims to answer the question by investigating the relationship between training participation in CPD programs and perceived teaching performance among academicians in a selected Malaysian Technical University in Malaysia.

## 2. Literature review

The adult learning theory highlights the need for ongoing quality professional development, which requires academicians to embody lifelong learning. Professional development needs for teachers include varying number of activities from student centered approach to improve classroom dialogue, course management, curriculum and instructional designs and innovative learning platforms (Pehmer, Groschner, & Seidel, 2015). Similar modules were observed in the CPD programs at one of the public universities in Malaysia, which include 'An Overview of Teaching and Learning Strategies', 'The Use of ICT in Teaching and Learning', 'Curriculum Design', 'Managing Effective Classroom Environments' and 'Assessment' (Othman & Dahari, 2011). Slightly different with more emphasis on technology integration, one private higher education institution in Malaysia used Technological, Pedagogical, and Content Knowledge (TPACK) model to

support their staff with online teaching and learning or pedagogical skills training program (Lye, 2013). The contents of training modules focused on the blending of Information and Communication Technology (ICT) in education. The pedagogical modules include theories on the teaching and learning while technological module focuses on utilization of social network, Internet, and software in teaching and learning environment.

As evident from these studies, types of CPD training programs offered vary based on university's strategic educational goals. In the selected Malaysian Technical University of this study, there are two types of CPD programs. There are compulsory CPD training programs which include basic course of teaching and learning for new academicians and there are optional CPD courses which include learning technologies courses, learning assessment, and instructional design strategies for 21<sup>st</sup> Century Learning. The compulsory CPD trainings usually conducted for duration of two weeks with follow-up assessment that could last throughout one semester. However, optional CPD training courses are offered throughout a year where academicians could participate voluntarily. These short training courses usually lasted not more than two days. The optional training courses are reflective of current advancement in the field of teaching and learning and meant to strengthen the academicians' competencies in teaching.

Studies focusing on Continuous Professional Development (CPD) training in the context of Malaysia's higher education are limited. Majority of these studies used qualitative approach and descriptive in nature. For example, Othman, Mohin, & Dahari (2013) explored academic staff's perceptions and experiences on Basic Teaching Methodology Course (BTMC) at three public universities in Malaysia. They found that the BTMC participants did not fully appreciate the benefits of professional development programs and how it affected their performance. Several facets of the BTMC such as the teaching methodologies were claimed to be ineffective. This study's findings were consistent with earlier study (Othman & Dahari, 2011) using descriptive survey from 100 academicians from four public universities in Malaysia. Nair (2016) also seek to understand academicians' experiences of CPD courses. Similar with the studies of Othman & Dahari (2011), he highlighted the need to change the methodology of the CPD programs where academicians could "benefit and learn through peer support; observation and feedback; consultations amongst experts and peers; dialogue with colleagues...". He suggested that academicians should be empowered in decisions concerning their developmental needs.

### **2.1. Factors affecting participation in training**

The literatures that focus on factors affecting training programs, specifically the CPD programs among academicians at higher educations are limited. Nonetheless, it is beneficial to review factors affecting training found in other contexts. These factors found in the literatures could be categorized into organizational factors, training-related factors, individual factors and environmental factors.

Funding is one of the most important organizational factors for continuous higher education learning activities (Meer & Meijden, 2013; Postholm, 2012; Easton, 2008) and could limit the number of academicians selected for CPD training. The more funding is available, the greater the number of academicians could participate (Lohman, 2009; Zwick, 2012).

In addition, employer attitude, discriminatory management policies, and practices are most often the initial barrier to training participation. A study by Maurer & Tarulli (1994; cited

in Kyndt & Beart, 2013) shows that firm policy was negatively related to training participation by employees. Many managers hold conventional views about the productive potential of older workers (Cully et al., 2000) women and less educated staff of an organization. Consequently, those that are engaged in the continuous development training are mostly highly educated individuals and high performing young employees in the firm.

Strong emphasis on research and publications rather than teaching accomplishments also contributes to lack of interest to participate in CPD training programs (Knapper, 2016; Schieb & Karabenick, 2011). This factor alone can deter many academicians from attending any training because they may feel it would not contribute to their career advancement. Another reward issue is the financial benefits attached to the training program. Numerous studies have obviously stressed the importance of salary supplement (financial support) for academicians nominated for a CPD training (Birman, Desimone, Porter, & Garet, 2000; Abadiano & Turney, 2004), and revealed that it significantly affects involvement decisions of individuals in CPD training. Researchers agreed that financial support is one of the necessary incentives boosting participation of academicians in CPD training (Easton, 2008).

Other important factors are training-related in terms of the training design, training management and training deliveries. For example Lee (2009) and Steyn (2009) opined that an essential element that influences academicians' participation in professional development programs is that academicians see themselves as having the right to voice out their views (Bayar & Kösterelioglu, 2014). Academicians' involvement in the planning stage of training programs would improve their willingness to participate (Adu & Okeke, 2014). Academicians, should, therefore, be responsible for planning their professional learning, drawing up their individual professional development needs on self-evaluation, and integrate their needs to ensure quality and relevance of the training and even the instructor's competencies (Postholm, 2012; Tejada, 2013; Bayar & Kösterelioglu, 2014). This notion coincides with the views of Steyn (2014) that for effective professional development programs to attract academicians' participation, it would require facilitators who are knowledgeable and well prepared.

The type and relevance of training is a fundamental element in influencing teacher's participation. According to Tejada (2013), the rationality of competency-based training should be a more necessary kind of training that aimed at professional problem-solving, modernization of content to a productive logic and attuned with the worlds of education and employment today. It should be training that brings reality to the table. As concerns, initial academicians training, supporting approaches such as the dual school system and work-linked training are significant (Tejada, 2013). It referred to as social constructivism, where problem-solving and case studies are used.

The timing and venue of the training are also important as many academicians enjoy only the entry-level training which is never enough to take them through to the end of their career. So lack of such consistency deters so many from participating in future training because the choice of period, duration or season may not be favorable for academicians due to their tight work schedules (Steyn, 2012). Steyn (2012) further maintained that researchers differ on the ideal duration of CPD program to lead to teacher change. Several prefer short courses while others opt for lengthier programs (Lee, 2005). It is an indication that one-size-fits-all approach might not necessarily work at all times, as there are variations in the training context. Also lack feedback monitoring to understand the effect of the CPD on the staff and difficulties encountered during previous training to

avoid a repeat of such (Steyn, 2012; Steyn, 2009) could indirectly affect future participation. Studies among Malaysian academicians revealed that workload as one the most important factor that hinder their participation in training (XX).

CPD programs that will ensure effective participation of academicians must be context-specific (Mewborn & Huberty 2004; Vemic, 2007). The location (Easton, 2008) of the venue, proximity (Lohman, 2009) and the duration of the training are essential and could influence participation. Prior involvement in the training is an effective influencer of teacher participation in CPD (Maurer, Lippstreu, & Judge, 2008). According to them whether the previous participation is on the job or off-the job, required or optional affects training participation.

Individual factors such as age, sex, level of education may also have influence on training participation. For example, earlier studies had indicated that the age of an individual always has the negative relationship with the willingness to participate in development education and training (Cookson, 1986). In contrast, Cully et al. (2000) showed that age effect on training varies across countries and it is dependent on the (Zwick, 2012) training incidences within an interval of time. They further argued that older people from Belgium, Switzerland and the US's oldest workers participate in training at a much closer rate to that of the mature workers. Also, level of education of individual employee in an organization has consistently been found to predict training participation of staff (Blundell, Dearden, & Meghir, 1996). In view of Cully et al. (2000), training participation is presumed to rise with higher educational qualifications. It could, therefore, be said, the higher the educational qualification, the greater the chance of workers participation in a CPD program. Well in the higher institutions of learning the reverse could be the case as senior professors see themselves as above the laws as such cannot honor any instruction or directives from a HOD who happened to be their student at a time. The HOD/Dean would not have the audacity to issue such instructions to his professors, forcing them to participate in training.

Additionally, academicians' characteristics influence their participation in the training program. Earlier studies showed that experienced employees tend to see involvement in training as a waste of their time (Cully et al., 2000; Bayindir, 2009; Özer & Beycioglu, 2010; Torff & Sessions, 2008). Equally, prior training experience could influence his/her future participation (Kyndt & Beart, 2013). Özer & Beycioglu (2010) found that female academicians have more positive attitudes toward training than do male academicians. Similarly, Blackmore (2008) claimed that, women are more probable to embark on professional development than men. Torff & Sessions (2008) investigated how age, gender, grade level and level of educational attainment affects training programs participation and found that they all influence training participation positively.

Studies also suggest that staff expectations on the usefulness of a particular CPD program is could influence their participation (Cookson, 1986; Pitsoe & Maila, 2012; Steyn, 2009; Maurer, Weiss, & Barbeite, 2003). This expectation could be career exploration that employees are more interested in (Kyndt & Beart, 2013). If their expectations from the training program are low, the participation would be weak. Kahraman et al. (2014) further pointed out that self-efficacy is concerned with the utilization of whatever skills one poses and not with the skills one has. Studies have shown the importance of academicians' self-efficacy on continued education or CPD (Lohman, 2009). This self-efficacy varies amongst individuals depending on each one's teaching ability. How one feels about their capacity to teach may impact what they perceived to be important, and thus influence which fresh ideas and styles academicians value and accordingly embrace as part of their

instructional routine (OECD, 2010). It was argued that persons with a high degree of self-efficacy are more disposed to carry out challenging tasks, persevere longer at them, and spend extra effort in the process of accomplishing the task (Kahraman et al., 2014). Studies reported above indicated that self-efficacy is a significant factor that could influence academicians' participation in professional development training.

The environment is the external factors that influence academicians' participation in CPD. According to Kyndt & Beart (2013), any support that is coming from outside the work environment is external. In his view, Cookson (1986) external factors are for example extreme climatic conditions in the area, topographic elements that could restrict movement, broad spatial dispositions, and government policy. He further maintained that even access to transportation links, sociocultural, peer group or colleagues influence are all external factors. The importance of the influence of colleagues on academicians' decisions to participate in CPD programs cannot be taken too lightly. According to Meister (2010) colleagues have greater influence on decision to participate in professional development training. Maurer et al. (2003) found that family and friends to positively relate to participation in CPD activities but not for older employees' participation.

Government policy on CPD in the education sector is equally an external factor Cookson (1989). Governments around Europe and even China have initiated support programs to encourage the continuous academic development of academicians in their countries (OECD, 2010). In the UK, Denmark, and Sweden for example, the governments have engaged in build-up campaigns and strategic policies favoring investment in CPD for academicians (OECD, 2010). Furthermore, family life and social network or group activities such as membership in a union or sports club influence training participation among employees (Leisink & Greenwood, 2007). Association of union members is a factor to reckon with because the action of such association can affect participation in CPD for academicians.

## **2.2. Training and performance**

Training is often associated with improved financial performance, productivity, job satisfaction, organizational commitment in business environment. However, the effect of training in the context of education has far reaching effects since it concerns not only improved competencies of the academicians attending the training but affect their students' performance. Therefore, majority of studies have been focusing on the impact of teacher's training are on students' performance.

For example, Arshad & Naseem (2013) compared the performance of three groups of trained teachers from private schools, untrained teachers from private schools and trained teachers from government schools in Pakistan. They found that trained teachers managed classroom more effectively in terms of teachers' knowledge and teaching clarity, attentiveness to students, teaching styles, use of teaching aids and motivation.

Harris & Sass (2011) estimated the effects of different education and training on the ability of teachers to encourage student achievement by controlling certain variables (e.g. experience). They found that content-focused teacher professional development is positively associated with productivity in middle and high school math. Similarly, Hill et al. (2005) found that teachers' mathematical knowledge contributes to improve students' mathematics achievement after controlling for key student- and teacher-level covariates.

Kane (2006) used six years of data on student test performance to evaluate the effectiveness of certified, uncertified, and alternatively certified teachers in the New York

City public schools. The study revealed that certification status of a teacher has minimal influence on student test performance and actual performance in class is more predictive of teacher effectiveness. Garet et al. (2008) had similar findings neither PD intervention resulted in significantly higher student test scores at the end of the one-year treatment.

Guthrie (1982), in his comprehensive reviews of literatures with relation to Beeby (1996) concluded that despite the substantial evidence on the positive effect of training and education on teacher's performance in developing countries, 'exact nature of the relationship is complex and varies considerably between different educational, social and cultural contexts' which somewhat accurately summarized the mixed findings in the recent studies.

This study differs from the above-mentioned studies because teaching effectiveness is not measured using the students' performance but rather the student's perception on the academicians' teaching performance. As evident from previous studies, students' performance is affected by various factors not limited to teaching effectiveness alone. Thus, it would be more accurate to measure the academicians' performance based on students' assessment.

### 3. Methodology

This study was a quantitative secondary research which involved re-analyzing internal past data from year 2015 to 2017. There were two types of internal data that were used which were the university's CPD training program participation records and the teaching assessment ratings by students. Eighty academicians were included in this study based on the data accessibility from both sources. Both data sources were evaluated as high quality since they were collected by authorized personnel; the employed measures were both reliable and valid, and the methodology used to collect the data was more than sufficient. Furthermore, the research objective could be answered using these two internal data sources. The data were analyzed cumulatively to protect anonymity and confidentiality of the selected academicians.

The students' assessments on teaching quality of the academicians were based on four dimensions which include course planning and preparation, delivery, assessment and evaluation and professionalism. There were seventeen questions being asked where the students need to rate from 1 (Poor) to 5 (Excellent). The scores were averaged to represent the total score. The CDP training participation was measured nominally in terms on whether they had attended (1) or never attend (2) any type of CPD training program offered by the university. Secondary data were analyzed using linear regression where participation in CPD training program was the independent variable while the student assessment on teaching was the dependent variable.

Majority of academicians included in this study was female (52.5%) with majority of them were senior lecturers (36.3%), followed by associate professor (27.5%), lecturers (18.9%) and professors (7.5%).

### 4. Results

Table 1 showed that 52.5% of academicians did not participate in any CPD training programs in the last three years (2015-2017). Majority of academicians' teaching performance were rated as excellent (50%) where their average scores were above 4.5 out



of 5.0 as shown in Table 2. Thirty percent of the academicians' teaching performance was rated as satisfactory only. The cross tabulation table shown in Table 3 revealed that academicians who did not attend training received less favorable teaching assessment by students. In fact, more academicians who were rated as excellence participated in CPD training and vice versa.

Prior to performing the linear regression analysis, data were screened and cleaned. Assumptions related to the use of regression (linear relationship between independent and dependent variables, homoscedasticity and independence of error terms) were performed and found to be deemed acceptable. Table 1 showed that 11% of variance in perceived teaching assessment was explained by participation in CPD training.

TABLE 1. TRAINING PARTICIPATION 2015-2017

TRAINING PARTICIPATION	FREQUENCY	PERCENT
No	42	52.5
Yes	38	47.5
TOTAL	80	100.0

TABLE 2. PERCEIVED TEACHING PERFORMANCE 2015-2017

ASSESSMENT	FREQUENCY	PERCENT
Satisfactory	24	30.0
Good	16	20.0
Excellent	40	50.0

TABLE 3. CROSS TABULATION

TRAINING PARTICIPATION	TEACHING PERFORMANCE			TOTAL
	SATISFACTORY	GOOD	SATISFACTORY	
No	16	4	No	16
Yes	7	0	Yes	7
TOTAL	23	4	Total	23

TABLE 4. LINEAR REGRESSION ON PERCEIVED TEACHING PERFORMANCE

R-Square = 0.110 F =9.595 , p< 0.05		
Predictors	Beta	p
CPD training participation	0.331	0.03

## 5. Discussion

Although much work is needed to fully understand the ways in which training affects the ability of teachers to promote student learning, the result of this study does offer some tentative suggestions for shaping future training policy at universities. It indicates that compulsory CPD program at the early stage of the teaching career would not be sufficient to equip the academicians with necessary knowledge and skills in the dynamics education environment. This is because all the academicians included in this study have undergone the compulsory CPD training programs and their performance as being assessed by the students are only at satisfactory levels. This means that the current policy on minimum of seven days training should be revised where certain portion of the compulsory training days should include continuous professional development training programs.

Moreover, advancement in technology, especially digital technology, cause knowledge to obsolete faster than before. Teaching aids are evolving to be more interactive and academicians must be technology savvy to be able to utilize them to improve their teaching effectiveness. As claimed by Lye (2013), academicians are required to be equipped with the technological skills and to apply these technologies effectively into teaching and learning processes in order to be able to teach more effectively to the millennia generation. These new developments are usually incorporated in CPD training programs offered by universities. However, since participation is optional, majority of academicians do not keep abreast with current trends in teaching and learning.

This study is also among the first to empirically investigate the impact of CPD trainings on academicians' perceived teaching performance by students. However, it has several limitations in terms of data sources and sample size. The use of secondary data limits our analyses to include more variables such as academicians' experience. The sample size of eighty might not be sufficient to provide generalization. Nonetheless, this finding provides future directions for more empirical validation.

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