

Three-Tiered Communities of Practice and Professional Development Model

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Abstract: *Many global studies indicate academicians in higher education institutions are alone in their development journey. When the Ministry of Higher Education Malaysia had set in motion Higher Education 4.0, focus was on academicians' Professional Development (PD), to adapt Learning and Teaching 4.0. This is a qualitative case study on a Malaysian private higher educational institution that fostered PD by creating organizational Communities of Practice (CoP). Focus group discussions with fourteen experienced academicians who were actively involved in many CoPs, revealed in-depth knowledge on the workings of CoPs. The results were further reviewed by two subject matter experts in CoP, a Malaysian professor from an esteemed national university and an international consultant on group mentoring for organizational development. The study found CoPs benefitted the academicians to improve and sustain technologically advanced pedagogical methods and other academic duties towards Education 4.0. Additionally, organizational development was evident because of the CoPs, as these academicians' won awards at exhibitions, produced more publications, improved the overall standards of teaching and classroom management. This study revealed organizational CoPs have three levels of workings to be nurtured for its efficiency and sustainability, the individual CoP members, the CoP and the organization where its embedded, thus the development of the Three-Tiered CoP and PD model.*

Keywords: Communities of Practice Model, Professional Development, Higher Education Institution, Training and Development, Education 4.0

1. Introduction

The academicians face the continuous transformation, to use current teaching & learning methodology, latest technology assisted programs in teaching and their subject matter, work on research and publications, supporting innovations & collaboration with multi disciplines & industry consultation (Zou,2018; Linda et al,2017). However, the academics in higher education institutions, often work alone and experience social isolation due to the competition, for example applying for research grants and accumulating publications (Darwin and Palmer,2009; Leal Filho et al, 2021; Griffin, 2022). Malaysia akin to the rest of the world progressed towards Education 4.0, looking at the necessary changes and the guidelines for higher education institutions and focusing on the academicians' professional development (My HE 4.0,2018). The Ministry of

Education of Malaysia in their mandate (2018) focused on Professional Development for the academicians to assist them to cope with Learning and Teaching 4.0 and the 21st century pedagogy, as seen in the figure 1.

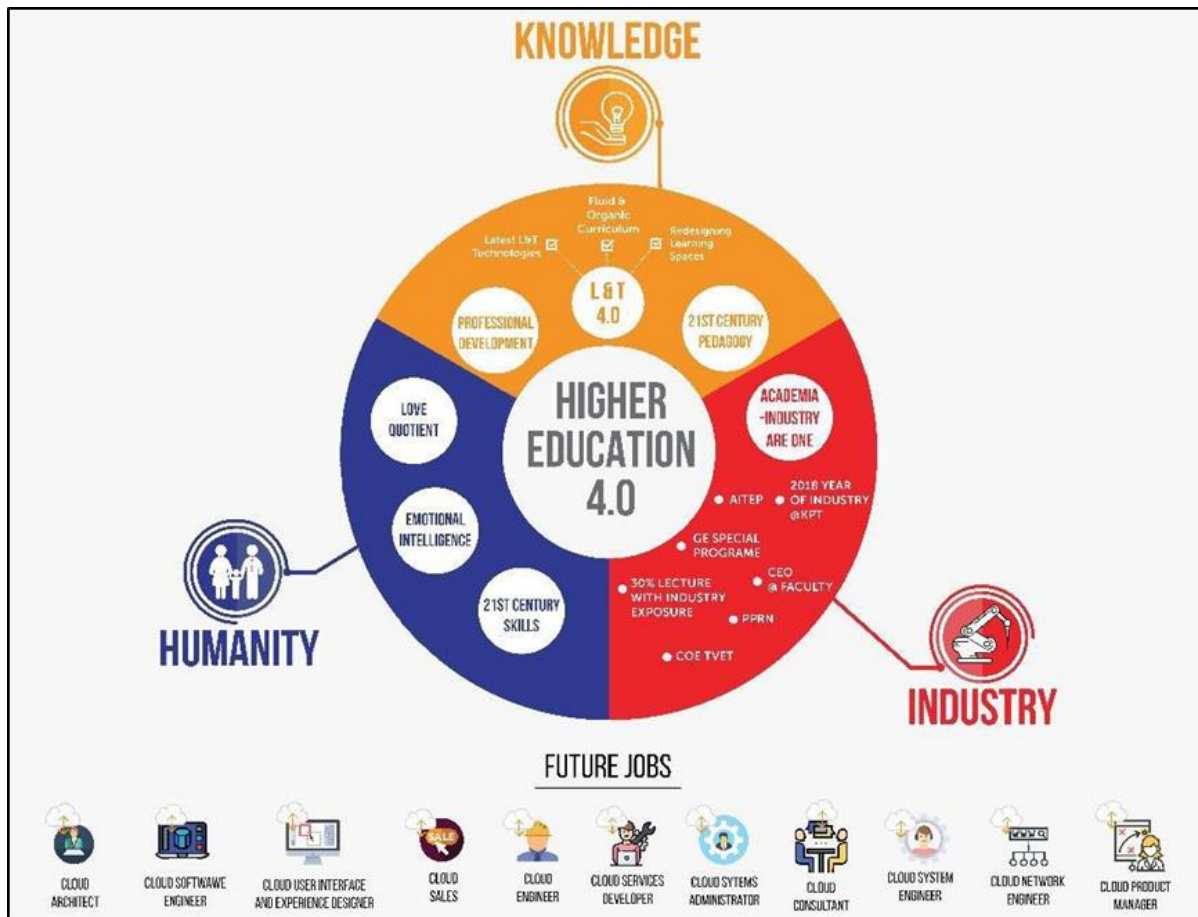


Figure 1: Higher Education 4.0, the importance of professional development, teaching and learning 4.0 and the 21st century pedagogy

As illustrated in the above figure, universities constantly require investing in emerging technologies and human connectivity, building digital resilience and institutional capabilities in digital governance for its survival. Additionally, studies have indicated that organizational learning practices have a strong effect on perceived employability and academic staff's career success in private higher education institutions in Malaysia. Thus, effective human capital development strategies help to manage their academic staff effectively and create a competitive advantage to better cope with intense competition due to globalization and the commercialization of the higher education industry in Malaysia (Tee, Cham, Low & Lou, 2021; Abu Said et al., 2015; Arokiasamy et al., 2014; Tee & Chan, 2016; Zafar & Mat, 2012)

In Malaysia, Education 4.0's forced evolution in teaching and learning at every level of education (Mahdy et al., 2020). A reflective Malaysian study on the higher education sector (Azmi et al., 2018), found many difficulties faced by academicians in teaching and learning to prepare the students for Industry 4.0. The studies on the academicians' perceptions on 4 IR suggested future research was essential to discover ways to enhance the teaching styles to suit the requirements of

Education 4.0 (Prem Chandran & Usman, 2021). To overcome challenges of Education 4.0, the Malaysian Minister of Higher Education had prioritized the teacher Professional Development (PD) to enhance teachers' knowledge and practice, but the academicians still faced difficulties at ground level. The problem was eminent in the literature with regards to professional development of academicians to better cope with the transformation to Education 4.0 and meeting the constant new demands on the academics (Knowledge, Industry, Humanity Mandate, 2018; Murugaiah et al., 2016; Azmi et al., 2018; Hussin, 2018; Mahdy et al., 2020).

Models of professional development in the past are unsuitable and necessitate a model of professional development that requires a fundamental change in the institutional structures (Darling, Hyler and Gardner, 2017; McDonald and Cater-Steel, 2017). Research states that Professional Development programs appear ineffective in creating improvements in teacher practices and student learning (Mahdy et al., 2020; Murugaiah et al., 2016; Azmi et al., 2018; Hussin, 2018; McDonald and Carter Steel, 2017). Literature asserts that the traditional workshops for Professional Development conducted by external trainers / experts or by attendance at conference would not be effective (Guskey, 2002; Boyle 2010; Hammond et al., 2017). Similarly, short workshops did not boost the development of new skills nor have any long-lasting effect on pedagogy. Hence, an unconventional Professional Development model which is more complex, long term and embedded in the educational institutions is required (Ingvarson et al, 2003; Hammond et al, 2009; Hammond et al., 2017; McDonald & Carter Steel, 2016). The development of creative pedagogy is often carried out using learning models in the education sector, directed at achieving competence relevant to 21st century needs (Widiastuti, Supriatna, & Nurbayani, 2023). Learning models or learning communities are often adapted in the western countries for sustainable professional development (McDonald and Cater-Steel, 2017).

This study looks at a Malaysian educational institution to provide in-depth insights and understandings of how professional development of academicians were fostered with organizational learning Communities of Practice that engaged their scholars to adapt the aspects of Education 4.0. The research question was what the contributing factors of Communities of Practice for professional development were and then conceptualizing a Communities of Practice model for the university. It offers an Asian perspective on practices and experiences of academicians who swiftly adapted their academic duties to the requirements of the institutional changes. In addition, the findings may also benefit higher educational institutions in the developing countries to conceptualize their own CoP and PD model.

2. Literature Review

The theoretical foundation on learning indicates that learned values and driven talents can be grounded on the theory of social learning, the theory of motivation and the theory of social identity. These theories further propagate Communities of Practice for their members' Professional Development. Similarly, the foundation of CoPs arose from the situated nature of learning. Lave and Wenger (1990) first published the concept in their book, *Situated Learning: Legitimate Peripheral Participation*.

Learning communities are based on two assumptions; firstly, it is assumed knowledge is situated in the day-to-day lived experiences of teachers and critical reflection with others who share the

same experience. Secondly, it is assumed that actively engaging teachers in professional learning communities (PLC) will increase their professional knowledge and enhance student learning (Buysse, Sparkman, and Wesley, 2003).

Many studies on PLC indicated it promoted changes in their teaching cultures. The aspects of the teaching culture included collaboration, a focus on student learning, teacher authority, and continuous teacher learning. All the eight studies that examined the relationship between teachers' participation in PLCs and student achievement found that student learning had improved (Berry et al., 2005; Bolam et al., 2005; Hollins et al., 2004; Louis and Marks, 1998; Phillips, 2003; Strahan, 2003; Supovitz, 2002; Supovitz and Christman, 2003). Yet producing an effective PLC is difficult as it fails to be sustained over a long period of time. Another challenge in maintaining PLC is to cultivate "social capital" to accept this PLC culture and ensure that it continues to be practiced in schools (Hassan et al., 2022; Ting, 2015). Studies on PLCs in Malaysian education institutions have indicated that collaboration is essential to the performance of PLC in schools, where the administrators and teachers work together. The study also found PLCs develop students' academic achievement. Finally, the role of school leaders was found to be significant and school leadership is proven to be able to improve student academic achievement (Marzuki et al., 2015; Musimartin, 2014, Faiz, Rozaimi, and Jamal@Nordin, 2016).

Professional development for academics is moving in the direction of communities and groups. There are numerous studies in this area, CoPs are facilitating social learning in higher education, how CoPs were implemented in higher education in Singapore, and cultivating CoPs as a platform managing knowledge (McDonald and Cater-Steel, 2017). There has been positive impact of Communities of Practice in support of early-career academics and learning and teaching networks (Van Waes et al., 2015). Furthermore Community-based professional development (C-PD) created a real improvement in practice and has revealed numerous benefits compared to individual-based trainings, also effecting cultural and systemic changes (Wenger-Trayner and Wenger-Trayner, 2017, 2020; Mercieca & McDonald, 2021.). The Community of Practice among academicians has indicated as facilitating interdisciplinary collaborations and removing boundaries, according to the research-based Communities of Practice in UK higher education sector (McDonald and Cater-Steel, 2017). CoP is called differently according to the organization's interpretation and objective of the concept (Ackerman et al. 2013, Agrawal and Scarso, 2014). Many related terms are found in the literature, like knowledge communities (Barrett et al., 2004; Yamazaki, 2004), networks of practice (Wasko and Faraj, 2005), community of practitioners (Gherardi, 2006), collectivities of practice (Lindkvist, 2005), communities of knowing (Boland and Tenkasi, 1995), strategic communities (Kodama, 2005), brand community practices (Schau et al., 2009) and organizational CoP (Kirkman et al., 2011; Kirkman et al., 2013).

Undeniably, one of the most widely cited and leading origins of social learning is Wenger's model of CoP (Smith, Hayes, and Shea, 2017). The working definition of CoP in this study is where the community is a place where there is shared understanding, shared meaning, and shared identity (Wenger et al., 2002) and the practice creates specific knowledge creation, learning, knowledge sharing and innovation. The three dimensions of Wenger's CoP model are: (1) identification of a domain of interest, (2) the community, and (3) the practice. The definition of CoP, according to Wenger, Trayner, and de Laat (2011, p.9) is a "learning partnership among people who find it useful to learn from and with each other about a particular domain. They use each other's

experience of practice as a learning resource”. According to Wenger et al. (2002), the three dimensions make a CoP, an ideal knowledge structure. Similarly, Bolisani and Scarso (2014) emphasized these three components of CoP, and it can be used as design guidelines to establish and manage CoP effectively in organizations. Although the definition of CoPs can be ambiguous as there are many types of CoPs found in the enormous literature of CoPs (Unnikrishnan and Usman, 2021).

Most of the literature on CoP emphasizes the creation, nature, and benefits of the CoP but there is not much work on the fundamental components of CoP. Three fundamental elements of CoP as discussed by Wenger are domain, community, and the practice (Wenger, McDermott and Snyder, 2002). The researcher has expanded below these three elements and its relevance to a higher education institution.

Domain, the structural element which constructs the common ground, namely the assumptions, beliefs, and knowledge, that are commonly held among the members (Clark, 1996). The domain knowledge (Nardi and Miller, 1991) is the ‘force which knits the community together’ and is the *raison d’être* of the community. The ‘shared knowledge or domain, which gives legitimacy to the group, rather than just a social network which is engaged in companionships (O’Donnell, Porter, McGuire, Garavan, Heffernan and Cleary, 2003; Wenger, McDermott and Snyder, 2002). The Domain for Wenger (2004), constitutes “the area of knowledge that brings the community together, gives it its identity, and defines the key issues that members need to address” (para. 13). Therefore, the domain is what gives a group its identity.

Community is a union of practitioners set in the social structure or the community. Community element within the CoP is where the community requires a commitment to a set of shared values, norms and meanings, a shared history and identity, basically a common culture (Etzioni, 1996). CoP can be of different sizes but about 20 members in a CoP is found to be ideal as larger sizes would hinder interpersonal communication (Wenger and Snyder, 2000). Furthermore, the group of people to constitute a CoP must come together to interact and learn from each other about ideas or topics of interest.

Practice is the ‘propelling force’ that drives the community forward, captivates and keeps the interest alive among the members and it is the shared resource of the community. Wenger et al., (2002) defines practice as a ‘set of frameworks, ideas, tools, information, styles, language, stories, and documents’ which is owned and assessed by the Community. ‘Practice’ is seen as ‘observable activity’ that is tangible (Handley, 2006). Practice Wenger (2004) defines practice as “the body of knowledge, methods, tools, stories, cases, documents, which members share and develop together” to address recurring problems in their specific contexts. Consalvo et al. (2015) defined practice as “a way of acting in the world” and as “a field of endeavor and expertise”. Thus, Practice is both the knowledge of and engagement with a domain.

The CoP is anchored in the assumption that any country or culture can be involved in the process, benefits, and outcomes of these groups. Literature recommends research is necessary to study the cultural differences when conceptualizing new models and research in mentoring (Clutterbuck et al., 2017). There is limited research in an Asian context, particularly in Malaysia the notion of CoP (or online Communities of Practice) as a tool to assist teachers in their professional growth is still

in its infancy (Murugaiah et al., 2016). Considering the importance of CoP in the arena of professional development, it was interesting to study if these communities can provide meaningful professional development opportunities for the academicians in their teaching and learning practices. Furthermore, to explore the important variables present or not present for successful CoPs as a source of continuing professional development for the academicians.

3. Methodology

Research Design

The study was founded on the social constructivism research philosophy. The case study analysis was centered on the situational nature of CoPs, where a case study could be a group or a community that is treated as one entity or the total study population (Kumar, 2019). The case study of the university was used for exploring the CoP concepts, the operational definition, the dimensions of CoP and social phenomena in CoPs and their meanings as seen by academicians and the organizational processes in the university (Cassell and Symon, 1994; Weick, 1996; Bryman, 2004). It is intended to contribute to one's knowledge of individual, group, organizational, social, political, and related phenomena (Yin, 2014; Yin, 2003).

Qualitative research on a case study of a private international higher education institution in Malaysia. The parent company of the chosen university is one of the nation's largest and most diverse conglomerates. It is mainly involved in the Automotive, Services and Properties sector, after a merger between two major companies in 2000. The university became a full-fledge university in October 2015, within five years when it began as an international college in April 2010. The study was adopted to examine how the academicians related their experiences in the CoPs towards their professional development in Education 4.0. Leading to an in-depth understanding of the role and the dimensions of CoPs for professional progress.

Subjects

According to Miles, Huberman and Saldana, (2019, 2014) qualitative research is usually conducted using a small sample of people within their context or in-depth study. The participants of the study were involved with different types of CoPs to develop the academic knowledge and skills required for Teaching & Learning 4.0. and the 21st century pedagogy. They were all involved in some CoPs for related academic developments focused on the University like Teaching and Learning Community (TeLeC), Community for MOOC (Massive Open Online Courses), Curriculum Review Community, Community for developing online courses, Community for University magazine, Community for government research grant, Community for Mentors and Coaching, and other communities related to academicians' requirements.

A collaborative PD approach involving multi-disciplinary with faculty leaders, experienced senior lecturers, and early-career lecturers was carried out in the institution. There were a total number of fourteen academicians who participated in the study. The academic staff involved were from the Faculty of Engineering and Technology and the Faculty of Business and Management. Experienced lecturers were selected for the study as they had been part of many CoPs related to Education 4.0 in the university and about eighty five percent of the participants had been in the education sector for a minimum of eight years. About ninety-three percent of the participants had

been in the education sector for a minimum of five years. Below is a summary of the details of the participants.

Table 1: Details Of the Participants

Participants	Position and Faculty	Teaching and CoP experience	Academic and Industry experience	Male Or Female
Participants 1	Lecturer FOB	Ten Years	Both	Female
Participants 2	Lecturer FOE	Twenty Years	Both	Female
Participants 3	Lecturer FOB	Eleven Years	Both	Female
Participants 4	Lecturer FOB	Eight years	Academic	Female
Participants 5	Lecturer FOE	Eight years	Academic	Male
Participants 6	Lecturer FOB	Eight years	Both	Male
Participants 7	Lecturer FOB	Nine Years	Both	Male
Participants 8	Lecturer FOB	Ten Years	Academic	Female
Participants 9	Lecturer FOE	Nine Years	Academic	Female
Participants 10	Lecturer FOB	Nine Years	Academic	Female
Participants 11	Lecturer FOE	Eight Years	Academic	Female
Participants 12	Lecturer FOB	Thirteen Years	Academic	Male
Participants 13	Lecturer FOE	Three Years	Academic	Male
Participants 14	Lecturer FOB	Five Years	Both	Male

Data Collection Method and Data Analysis

Participants were initially sent an email invitation with the agenda and the details of the focus group discussions to confirm if they were interested in joining the study and to confirm their availability. The focus group was selected specifically as it encourages an open discussion to discover and understand the experiences of the participants of the CoPs. The recommended number of participants in a face-to-face focus group is about four to twelve participants (Oates and Alevizou, 2018). Two focus group sessions were carried out with the fourteen academicians, each session had seven members from various Communities of Practice in the higher education sector. There is no specific number of times focus group discussions to be conducted. In practice, given the saturation of data, finances and the time constraints, the researcher can decide on the required number of focus group discussions to be carried out for the study (Oates and Alevizou, 2018; Herington et al., 2005; Brici et al., 2003).

The focus group discussions were held in a private meeting room, a staff-only venue at the research site. The focus group discussions did not exceed 2 hours and tea was provided at the end. Like the semi-structured interview protocol, this forum commenced with a welcome, followed by an overview of the process to be followed and a presentation by the researcher on the study of Communities of Practice. The focus group discussion was combined with open ended and close ended interview questions (Klenke,2008; Barbour,2018; Oates and Alevizou, 2018). The focus group discussion was audio taped with their permission.

Focus group discussions combined with semi structured interviews and written feedback at the end of the discussions were allowed to respect the confidentiality of the participants. The focus group sessions were audio recorded with the permission of the participants. There were some closed-ended questions to understand their definite views on the matter. Nonetheless, there were mostly

open-ended questions as it allowed them to discuss things among each other, talk at length and choose their own words to describe their experiences and stories. The questions were adapted from published literature and validated by two subject matter experts. The participants of the study were asked about their perceptions and experiences of the research objectives of the study on CoPs and professional development.

The analysis procedure of the transcripts from the focus group discussion is indicative of qualitative analysis process as consisting of three stages: data condensation, data display and conclusion drawing and verification (Miles et al., 2020). All interview transcripts were transcribed and checked for accuracy among the authors. Consequently, the transcripts were coded manually by the author, using tables and headings to organize codes. The data analysis from the focus groups was done by using the coding process, creating the codes, the same patterns in the coded data are categorized into one group because of the commonality finally with analytical reflection the major categories are consolidated into themes (Saldana, 2014). Each research objective had its first set of tables for transcription with the coding, a second set of categorization tables and conclusive thematic tables. The codes were validated by two CoP professionals, firstly a professor and chair for the Center for Literacy and Sociocultural Transformation from a reputed public university in Malaysia and another international mentoring consultant from New Zealand with vast experience in group mentoring and CoP.

The major themes reported signify the most persistent issues raised by the practicing lecturers who have been involved in many CoPs in the same universities. We understand that quantifying qualitative data is contentious; nevertheless, we indicate the proportion of lecturers reporting on each theme to convey that such references were not isolated occurrences. Indeed, all the focus group participants (n= 14) made explicit comments about the positive impact of working in CoPs on their professional development in Education 4.0.

Confirmability

Confirmability is the degree to which the findings of an inquiry can be confirmed as being shaped by the respondents and not by researcher bias, motivation, or interest (Lincoln and Guba, 1985). The following activities were done to supports confirmability of the research:

- i. A detailed research methodology is provided.
- ii. Records are maintained to support a data-oriented audit of the study.
- iii. Data method and data source triangulation were employed to reduce investigator bias. Triangulation is the idea of congregating multiple perspectives for mutual confirmation of the data. This is to make sure all aspects of a phenomenon have been investigated. This enhances the validity of the result of the study (Krefting, 1991). Triangulation was employed in this study to strengthen the evidence and enhance credibility of the findings.

Firstly, the primary data from the focus group discussions with two different groups of participants in the University confirmed the similarity in their feedback on the matters related to the Communities of Practice and their professional development. The informant groups contributing to the inquiry were lecturers and senior lecturers from different faculties of the university. The data collected from different groups of people gain multiple perspectives and validation. From the experience of the participants of both the groups, emerged outcomes based on the varying perspectives, thus contributing to the credibility of the study.

Secondly it was validated by national expert opinion in Communities of Practice, a professor, and the chair from the faculty of Social Science & Humanities in the National University of Malaysia. Furthermore, the researcher had discussed over a few semi-structured online interviews to verify the documentation, notes, coding, and data analysis with an international consultant who specializes on establishing group mentoring projects in universities and other business organizations.

Lastly after coding the data, the themes were presented to some of the participants as a method of member checking. Also, the results were presented and the conceptual model that was developed by the researcher was validated by three independent examiners.

4. Findings

The findings of the research objectives were tabled to include the transcriptions of the participants' responses, the coding of the transcription, categorization of the codes, and finally the conclusive themes were presented. The themes that repeatedly showed up among the focus group sessions were analyzed and researched further. These themes were also verified with the two experts of Communities of Practice, a professor from the national public university and an international consultant on Mentoring and group mentoring. The finalizing themes of the dimensions of the CoP for PD had three major sub themes, the individual dimensions of CoP members, the CoP's dimensions, and the organizational dimensions. The table in the appendix indicates the details under the major themes that was derived from the focus groups on CoP for professional development.

The themes for the members in the Communities of Practice.

All the participants stated the personal attributes of the members were seen as significant for CoP's success and sustainability. Personal willingness, commitment and the mindset of a team player were essential. The members who were knowledgeable & experienced further contributed to the success of the CoPs. Leadership in the CoPs was seen as essential, meaning good leaders and experienced mentors were important. Eighty percent of the participants agreed on the importance of leadership for CoPs to be successful. For example, (P12, RO1_1), "If there is bad and egoistical attitude, then it will not work. Some members of the industry do not appreciate the academicians and their research base". Similarly, (P13, RO1_1) indicated that the individualistic character and motive was important for the community to be productive, stating "If some members bring along their personality and personal agenda that conflicts with the COP, then it will create difficult issues among the co-workers."

Additionally, a qualitative study in Malaysian education institution, revealed based on thematic analysis, teachers' functional competency level, namely, teacher's attitude, skills, and knowledge born from self as the internal situations and the school climate factors as the external factor influence teachers' functional competence level through the conditions of their work environment (Ismail, Shanmugam & Rajoo,2021). This study contributes to expanding the teachers' functional competency level in realizing educational excellence across 21st-century learning.

All the participants found Community, Practice and Domain to be significant as in Wenger's CoP. Additionally, the study found Reward and Administration were essential for the functioning of the

CoPs. Factors mentioned to support the functioning of CoP were the recognition and rewards, token of appreciation and rewards for CoP members, and good administration of the CoP with good framework for CoP workings, good supporting resources, time allocation for CoP activities and even collaboration outside CoP when required.

The themes for Communities of Practice.

Community- There was total consensus among all the participants of the study, that academicians as a community, played an important part in the learning, they shared common goals, created a positive social learning culture, and focused on professional development. The whole community has improved participation, increased commitment, better performance, and higher productivity. This is supported by the many studies on Communities of Practice in educational institutions. (Wenger & Wenger ,2017,2020).

The study revealed the academicians believe they play an important part in learning, especially as a community of practice (CoP) in which it “creates an environment of learning” that involves a “group of learners who encourage each other” (P1, RO2_1). It also requires a total commitment of leaders and management of the community to achieve its goals (P2, RO2_1). Such CoP “creates a learning culture”, which P7 believes, would be meaningful in addressing the “current challenges we are all facing so that we can revise and make the necessary changes” (P7, RO2_1).

Practice- The practice refereed here is they were all academicians, deans, senior lecturers and lecturers dealing with teaching and learning methods in Education 4.0 at the university. It was found that the academicians had developed many resources, won exhibitions products and competitions due to CoPs. Furthermore, the CoPs had their own success stories that boosted the members and other non-members of the university. During the workings of the CoP, innovative practices were created to solve some of the common problems among academicians. Most importantly the participants indicated that they were bonded via their practices and shared goals.

Education 4.0 was challenging for the lecturers as new technological knowledge was required to conduct online classes, (P3, RO2_2) indicated “the CoP practice has created good ideas and information on how to do online teaching and video recording of our topics.” Similarly, (P1, RO2_2), said “we have created many resources from the community and have exchanged many success stories. We also share materials for our research and ideas on how to write for government grants for our research.”

Many participants in the focus group stated that they wanted to further foster student learning, as indicated by (P4, RO2_2), “we share with each other our experiences and our interest to improve student learning. I have been involved in many competitions where we have won certificates and trophies after working closely with some of the members in the CoP on different teaching styles that are suitable to student’s aptitude.

Domain- The participants being lecturers all shared the same identity, beliefs, and philosophies about Education4.0. They were all keen on continuous professional development, the latest technology in teaching and learning, collaborations with other education institutions and industry. The other domain was related to their teaching subjects, like English and Business subjects.

The study showed that the members of the CoPs of the university were eager about professional development so that they perform their academic task to their best ability and develop their students in return. (P1, RO2_3) indicated that as an English teacher, she was motivated to improve the language skills of the future generation as indicated in her quote,

” The domain of knowledge does motivate the members of the CoP to learn and attain professional development. I am an English language lecturer and in one of my CoPs, we are all English teachers, and we share similar issues in our class, so we brainstorm to create solutions. We are all passionate about improving the younger generation and their English language skills. We want to cultivate English language in Education 4.0.” Likewise, P4, RO2_3, who is a business lecturer stated, ” I agree that Domain is important. I teach in the Business faculty, so I and the other Business lecturers share our materials like the textbooks, articles, and power point presentations. We discuss and update our subject knowledge with current topics and changes in the curriculum.”

The domain was not limited to the subject being taught, all the academicians were connected to the domain of teaching and learning, this thought was well indicated by (P2, RO2_3)” Of course, the domain is important for the members to work together and improve our professional development. I have been for example in TeLeC, Teaching and Learning Community where we were interested and discussed Outcome Based Education (OBE) and Outcome Based Assessment (OBA). We felt that all academicians should practice it and this knowledge gave us common ground in our practices “. P 13, RO2_3, concurred,” the domain is important in the CoP for professional development. When we share a good work culture and values, it motivates us, and we improve our work output.”

Rewards- The study revealed that all the participants indicated that both extrinsic and intrinsic ones were essential. P2, RO3_1, statement is reflective of all,” For sure, reward should be part of the CoP, both tangible and intangible. Reward makes us feel appreciated and glad to give our best.” The extrinsic or tangible rewards that were suggested by the members of the CoPs included bonuses, increment, holidays. While the intrinsic or intangible, for example, were to provide employees with a sense of accomplishment with no equivalent monetary value, award plaques or certificates, even a simple word of appreciation was seen as essential. P8, RO2_4. ” For the success of the CoP there should be reward attached to its performance.”

Participants indicated their work should be recognized, for example P1, RO2_4, stated , ” Some of the important variables that contribute to the efficient performance of CoP are the individual members’ personal effort and commitment, the recognition from the boss for the contribution made by the members of the CoP even a “pat on the shoulder’ and rewards would work well. When ‘everything’ goes unrecognized then its demotivation and the CoP will not be productive.”

All the participants indicated the outcomes achieved by the CoPs in the university should be attached to some forms of rewards as it is a form of recognition from the management and serves as a motivation tool. According to P9, RO2_4,” Furthermore the CoP should be given some token of appreciation as an encouragement. P13, RO3_2, concurred” The rewards are important even simple gestures like when the management come for the CoP sessions themselves and participate in the activities of the CoP. Other rewards would be giving meal vouchers like KFC coupons for the members. In addition, if the CoP has worked hard and contributed greatly to the development

of the institution then the management can reward it like a sponsored overseas holiday, or a hotel stay in a local holiday destination.

Administration of the CoPs was unanimously found to be important for the success of the CoPs. The administration included that the CoPs were to have clear goals, proper planning for the workings of the CoPs, good management of the CoPs, set time allocation for CoPs during the working hours and supporting resources for the efficient running of the CoPs. P2, RO2_4, said "Some of the important variables that contribute to the efficient performance of CoP are good framework for the functioning of the CoP. Similarly, P13, RO4_1 indicated" There must be an acceptable framework and Standard Operating Procedures for CoP. The members of the CoP must all be willing to move towards education 4.0. All must be supportive to go through the process of acquiring skills and knowledge for Education 4.0". The members wanted some clear guidelines for the CoPs and good management of the CoPs, probably to appoint a "leader" who will manage the CoP, as pointed by P6, RO2_4," The CoP needs a good leader, and it should be managed effectively.

CoPs' contributing factors to achieve professional development were deduced as Community, Practice, and Domain, similar in Wenger's CoP model. Nevertheless, this study also indicated that Reward and Administration of the CoPs were significant. Thus, data proposes that a sustainable organizational CoP requires the five variables. CoPs have demonstrated significant improvements in teaching quality (behavioral change). Lecturers by observation and collaboration generated new insights about pedagogy which improved their practice (intellectual change). Lastly lecturers experienced closer ties to their co lecturers and were motivated to collaborate (attitudinal change). Similarly, Verna Allee (2000) concluded that CoPs in organizations helps to drive strategy, assists problem solving, aids talent management, builds core capabilities and knowledge competencies, faster diffusion of improved operational practices and increases innovations. Another study's findings showed similarly that teachers' job satisfaction was directly influenced by interpersonal communication, work environment and locus of control (Sembiring&Purba,2019).

The themes for the organization where Communities of Practice are embedded.

Senior management support was thought of as crucial for CoPs' success. There were several dimensions of the Management that showed up as significant for the success of the CoPs. A strong commitment by the Management towards the goals of the CoP was seen as essential, for example Education 4.0 required the digital transformation among all members.

These CoP's goals ought to reflect the top management's strategic vision and goals set for the organization. The benefits of such a community are at all three levels of the organization, the individual employees, the community as a whole and the whole organization. The whole organization is supporting the employees by giving them the opportunity to increase their performance and achieve strategic goals. (Onge and Wallace, 2003).

A quote that is reflective of majority of the CoP members in the focus group is indicated by Participant 7, RO2_4," Some of the most important variables that contribute to the efficient performance of CoP are the management clear support for the CoP and providing good resources to support the functioning of the CoP like time allocation, technological support like equipment and online data.

5. Discussion

An advantage of qualitative research is that it often reveals more than what the initial research objective was of the study. This case study was to learn about the dimensions of CoP for PD, instead study revealed other significant dimensions that contribute to a successful and sustainable CoPs. The three sub themes from the case study, were classified into the CoP members, CoP and organizational component, lead to a triad CoP model for PD. A wholistic conceptual CoP model for professional development in a higher education institution was conceived, the Three Tier CoP and PD Model (Unnikrishnan, 2020), as shown in Figure 2. The conceptual model was validated both from the study's results and two Communities of Practice experts. The three tier CoP and PD model has been put forward based on the data analysis of this study.

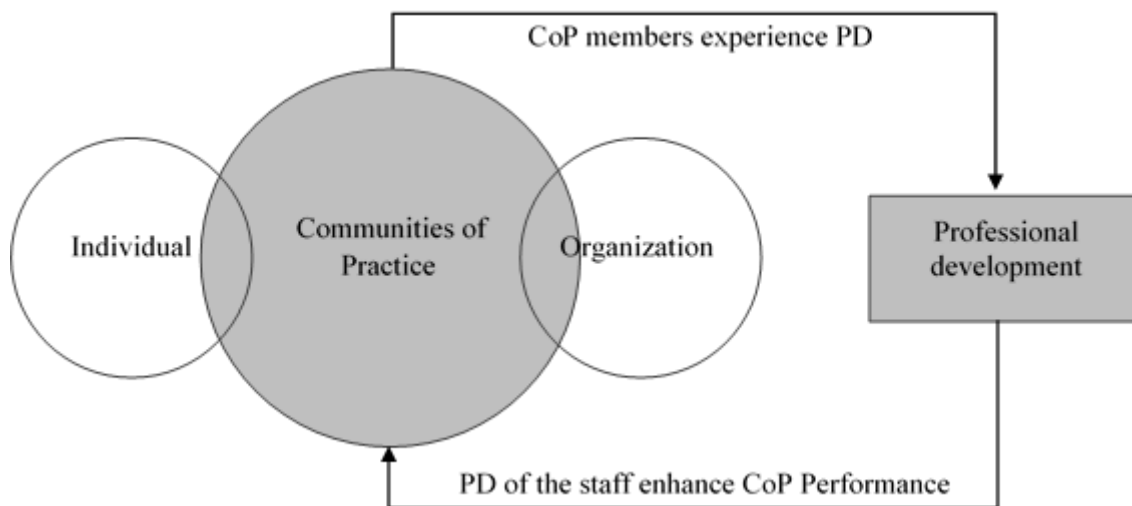


Figure 2: The framework of the researcher's conceptual CoP model for Professional Development: The Three Tier CoP and PD Model
 Source: Unnikrishnan (2020)

A CoP should be invested from the micro to the macro level for its effectiveness. The individual members of the CoPs were seen to have a great impact on the performance of the CoP, so the members require to be trained and consistently guided during the workings of the CoP. Looking next at the CoP from the study indicated five significant dimensions, basically Community, Practice, Domain, Reward and Administration of the CoP for its success and sustainability. Lastly the third tier is the organization which plays a crucial role in the CoPs performance to achieve professional development. Above Figure 3 is based on the results of the study indicating each tier, the individual members, the CoP, and the organizational level. In the end, the application of this model is expected to help the success of academicians' professional in Education 4.0 through CoP participations.

This phenomenon of learning in the Communities of Practice is endorsed by the theory of Situated Learning on contextualized learning (Lave and Wenger ,1991). Situated Learning proposes that the education process of an individual is not just the intellectual process of acquisition of skills and knowledge but is also reliant on their social context and their participation in the social context where the learning process occurs. CoPs in organizations can be one such social context for

learning and development and continuous development for facing the non-stop challenges faced by the organization.

Another Malaysian study on Professional Learning Community (PLC), similarly indicated the environmental (organizational) support dimension is the most dominant dimension of teacher self-efficacy. This proved environmental support, either in the form of relationships or school structure, plays an important role in improving teachers' self-efficacy, which leads to an impact on students' academic achievement (Hassan et al.,2022). Similarly, Jeon et al., (2011) identified individual, social and organizational factors that affected knowledge sharing among CoP members and the perceived consequences. The study indicated when the expected reciprocal relationship is greatest, the knowledge-sharing activities are also greater in CoPs.

6. Conclusion

This study was based on one small private higher education institution in Malaysia. The findings might not be reflective of the other private or public higher education institutions of Malaysia as there could be differences in the views and workings of CoP. Thus, the results from the study like other case study findings cannot be generalized (Kumar, 2019). Nonetheless, the findings of study have reinforced the literature on CoP and its effectiveness as a platform for professional development in a higher education institution (McDonald and Steel, 2017). Also, a positive internal environment at the workplace has been proven in numerous theories and literature as one of the crucial factors contributing to employee satisfaction, job performance, and high organizational performance (Mohd Yusoff & Tengku-Arifin, 2020).

Professional Development of academicians in educational institutions is one of the building blocks for generating a competent and successful future workforce, with essential knowledge, attitudes, and skills. The significance of this topic created a great interest in the researcher to study the literature on CoPs and then conducted an in-depth case study which finally led to a CoP and PD model being developed. The CoPs had revealed the academicians established extensive networks, found solutions to problems, were oriented to help others by solving everyday problems, and developed an interest in doing innovative digital pedagogy and technologically advanced ways to teach their subjects. The social actions in the CoPs also created collegiality and social cohesiveness.

The findings in this research can be used as a recommendation to other educational institutions for establishing their own CoPs, specific to their needs and environment. The three dimensions of the Three Tier CoP & PD model could be a guide to involve all the 3 major players in an organization. There is no “one size fits all” CoP as it needs to be home grown. This model throws light that a CoP needs to be nurtured via training members on how to work in a “community”. Subsequently CoP should be established, with Wenger’s three dimensions and reward and the administration of the CoP as revealed in this study. To finish with creating a supporting environment, where the organization encourages CoPs to flourish and perform effectively.

CoPs have been successfully utilized not just in the educational sectors but can be utilized in the other economic sectors like the industry and service sectors. Also CoPs created with academicians and industry experts can be a bridge to reduce the gap between the academic sector and the

industry, leading to a successful collaboration to improve knowledge, skills, and practicality. Most importantly because of the social learning that takes place in CoPs, if created and cultivated then it can create value to the members of the CoPs, the community, and the whole organizations.

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APPENDIX: Details of the dimensions of CoP from the focus group.

Thematic Analysis Table		
RO2	Final Codes	Themes
Q1 Community = academicians	Community learning Learning environment Encourage each other/ Inspiring/ Encouragement Improvement/ Development Share experiences and knowledge Share skills/on-job Common Targets Time frame Learning from each other's behavior / Observing members Leader Community management Learning culture Discuss current challenges Professional development Teamwork Discussion on Teaching and Learning Community support Goal sharing Understanding Members Positive working culture Better results/ Productivity Active participation Participants Commitment	1. Community- Academicians 2. Community- Learning Social learning Continuous learning Learning environment Encouragement Inspiration Share experiences Share knowledge Share on job skills 3. Community- Common Goals Mutual targets Goal sharing Improvements 4. Community's Culture Social learning culture Professional Development Positive working culture 5. Community Development Active participation better performance results Higher productivity Increased commitment

Q2 PRACTICE= teaching	Resources created Success stories New ideas/Good ideas Research materials Government Grants University Academic Standards of Practice Good information Education 4.0 On-line teaching methods Video recording on topics Shared resources Exchange of interests Sharing of Experiences Methods to improve student learning Winning competitions Sharing teaching styles Collaborations Post grad school Documentation University Magazine Student discipline Problem Solving References Open communication Community support/bonding Accumulated knowledge/information Revised curriculum	1. Education 4.0 Teaching and Learning Methods to improve student performance Online teaching and learning Video recording on topics Shared resources Sharing teaching methodologies/ styles Problem solving References Accumulated knowledge/ information Revised Curriculum New technology/ software Academic work/subject matter Multi-disciplinary 2. Resources created Research materials University academic SOPs Norms and rules in CoP 3. Achievements Government grants Winning competitions Exhibition products Collaborations Projects. 4. 4. Success stories Sharing experiences
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	<p>New technology /software Academic work/ Subject matter Projects Positive feeling Clear shared goals Compassion Multi-disciplinary Different perspectives Product exhibitions Continuous professional development Norms/rules in CoPs Community bonding/Social Creative sessions</p>	<p>5. New Ideas/ Innovations Good/useful information Creative sessions Exchange interests Different perspectives</p> <p>6. Bonding Social bonding Positive feeling Compassion Communication</p> <p>7. Clear shared Goals</p>
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Thematic Analysis Table		
RO	Final Codes	Themes
Q3 DOMAIN= Education.	<p>Domain inspires and motivate Professional development English teachers Passionate Teaching and learning skills Similar issues Brainstorm for solutions Cultivating culture Creating a change Education 4.0 Shared interest/Common goals Outcome Based Education (OBE) and Outcome Based Assessment (OBA). Common Practices Other academic institutions Business subject's discussion Technology Share academic materials/ Subject knowledge Current topics and New Curriculum Collaboration Trust Willingness to share Continuous professional development No subject expert in Islamic Finance Academicians and Industry collaborations Practical application Student academic performance CoP active and effective English language Dedicated to improving English Actively participate Long standing relationship Shared philosophy of education On-line teaching Video presentations Many new Ideas Currently appropriate-MCO Improved work output</p>	<p>1. Education 4.0 Teaching and learning Teaching and learning skills Similar issues Brainstorm for solutions Shared interest/Common goals Outcome Based Education (OBE) and Outcome Based Assessment (OBA). Common Practices Share academic materials/ Subject knowledge Current topics and New Curriculum Actively participate Long standing relationship Shared philosophy of education On-line teaching Video presentations</p> <p>2. Continuous Professional Development No subject expert in Islamic Finance Practical application</p> <p>3. English English language Dedicated to improving</p> <p>4. Technology Online teaching Video presentations Many new Ideas Currently appropriate-MCO</p> <p>5. Business Subjects Business subject's discussion Share academic materials/ Subject knowledge Current topics and New Curriculum</p> <p>6. Academicians and Industry Collaborations Other academic institutions Collaboration Trust</p>

	<p>Learn new skills Develop skills Set our agenda Enhance each other/team building Leadership Communication The domain leads to other professional development Passionate</p>	<p>Willingness to share Long standing relationship</p> <p>7. Leadership Set our agenda Enhance each other/team building Leadership Communication The domain leads to other professional development Passionate Cultivating culture Creating a change</p>
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Thematic Analysis Table		
RO	Final Codes	Themes
<p>Q4 OTHERS</p>	<p>Personal effort Individual members Commitment Demotivation/Unproductive without recognition Recognition /Rewards and appreciation for CoP Good framework Willing members Team players Experienced Members Knowledgeable members in their field Good resources to support Top management support -strong and visible Trusting members Management trust Collaboration outside CoP when required Leadership/Leaders/ Helpful. Management of the CoP Technological support and on-line data Time allocation Open communication bet CoP and Management Transparency Goal setting Communication among members Mind set of members/Sharing mind set Happiness in the team Co-operation Culture of CoP Conflict reduction Compassion Successful member – role models Experienced mentors Selfless</p>	<p>1. Personal attributes Team players Personal effort Individual members Commitment Willing members Experienced Members Knowledgeable members in their field Mind set of members/Sharing mind set Co-operation Compassion Selfless</p> <p>2. Reward Demotivation/Unproductive without recognition Recognition/ Rewards and appreciation for CoP</p> <p>3. Administration of the CoP Management of the CoP Good framework Good resources to support Goal setting Communication among members Culture of CoP Successful member – role models Experienced mentors Technological support and on-line data Time allocation</p> <p>Team Happiness in the team Team players Trusting members Conflict reduction</p> <p>4. Top management support Top management support -strong and visible Management trust</p>