

# Community of Inquiry for Graduate Certificate in Higher Education

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The Graduate Certificate in Higher Education (GCHE) programme is conducted in a blended mode (workshop learning activities and online forum discussion) using the Community of Inquiry (CoI) framework where the three interdependent elements, Teaching Presence, Social Presence and Cognitive Presence, provide the frame to design, facilitate and teach the units in the programme. In line with the framework requirements, the workshop learning activities are designed to engage students in active learning and to build a sense of community among GCHE students who are full-time lecturers. This programme is compulsory for all lecturers except those who have acquired similar qualification or have many years of teaching experience. The Practical Inquiry (PI) model is used to analyze the cognitive dimension of the knowledge-building processes occurring in online discussions. This analysis focuses on the top and bottom 10th percentile of the students' discussions. Incidentally, exploration is the most frequently coded category of messages posted by the students (overall, 38%). The results from the PI model also indicate when there were limited interventions from the facilitator in the forum discussions it did not lead to students adrift. But the cognitive presence indicator shows that it fails to take the discussion to the resolution stage. Hence, even for students who are lecturers with postgraduate degrees “guide on the side” for online learning may not work. The facilitator needs to prompt the students and post messages to inspire them to move on to the resolution stage.

*Keywords:* Community of Inquiry (CoI), blended learning, postgraduate programme, practical inquiry model, online forum discussion, student-centered learning

## Introduction

The Graduate Certificate in Higher Education (GCHE) is a compulsory programme for all lecturers except those who have acquired similar qualification or have many years of teaching experience. In this programme, there are four units and lecturers have to attend two units per year on a part-time basis and it takes two years to complete. The units are as follows:

- (1) HED5051: Learning and Teaching in Higher Education in Southeast Asia;
- (2) HED5052: Contemporary Issues in Higher Education in Southeast Asia;
- (3) HED5031: Higher Education Project: Design and Literature Review;
- (4) HED5041: Research Project Development and Implementation.

This programme is conducted during semester breaks as lecturers from different schools are teaching full-time. Hence, in GCHE programme lecturers are “students” once again. All the 18 students in unit

HED5052 have a Postgraduate degree in their respective disciplines but not in education. They have been teaching for at least two years, on average. Nine of them are male and the rest female. They are all mature students over 30 years of age.

The units are offered in a blended mode where learning activities are designed for face-to-face interactions as well as online forum discussions. The face-to-face interactions are conducted in workshop style where students are placed in groups to discuss among themselves. The group consensus is subsequently presented to the class for inter-group debate. The topic in the forum discussion is an extension of the face-to-face workshop learning activities. Students are given three weeks to interact in the forum and their postings are substantiated by personal experiences and research findings.

In the GCHE programme, students have to pass each unit before they are allowed to move on to the next unit. There is no final examination, they are assessed based on their participations in online discussions, group project, and workshop learning activities. All the assessments are designed to support learning, as it is an assessment for learning rather than of learning. Students are encouraged to collaborate in group, discuss with each other, and refer to publications as well as their own experiences when they tackle the assessment questions.

### **Community of Inquiry (CoI)**

The growth of blended and online learning is well documented and reported in literature. According to Allen and Seaman (2014), 7.1 million college students took at least one online course during the fall of 2013 which is a drastic increase from 1.5 million students in 2002. Competition for students is fierce as more and more alternatives to traditional higher education come into fold. The year 2012 is dubbed “Year of the MOOC (Massive Open Online Courses)” and it causes many higher education to ponder whether lecture halls will soon be extinct (Kwan, 2013). Given the current challenges, it is imperative for universities to take strategic approach to blended learning. Faculty members need to become aware of their own need to learn and change in order to produce optimal learning in their courses (Fink, 2013). Studies have shown that students in blended courses performed significantly better than students in completely online courses or students in face-to-face courses (Glazer, 2011). Universities need to ensure they provide the necessary training on successful blended learning pedagogical approaches. This institutional support is pertinent in order to achieve a strategy, to change the culture, or to achieve organizational learning (Fink, 2013).

Unfortunately, in Malaysia the growth of blended learning is not as drastic. Harun, Abbas, and Rahman (2012) reveal the blended learning adoption rate is low, only 13% of the academicians adopted it. And 65% of teachers are familiar with blended learning strategy but nobody is using it in teaching. Likewise in another study, data show that Malaysian trainee teachers have acceptable level of readiness in blended learning but the practice of online and blended learning is not satisfactory (Mohamed Amin, Norazah, & Ebrahim, 2014). When the huge demand for blended courses catches up in Malaysia, universities will need lecturers who are trained to deliver online pedagogy and are well versed in technologies that support online teaching and learning. The challenge is to develop a theoretical framework to support lecturers in instructional design used to enhance learning outcomes of blended courses and in the development of these courses. CoI is one such framework to facilitate meaningful online learning through three interdependent elements: Teaching Presence, Cognitive Presence and Social Presence (Garrison, Anderson, & Archer, 2001). Teaching Presence in CoI would appear to be a core to establishing and maintaining Social and Cognitive Presence (Garrison, Cleveland-Innes, & Fung,

2010). And Teaching Presence is crucial for deep and meaningful learning and as such it plays a key role in establishing and sustaining CoI (Shea, Li., Swan, & Pickett, 2006). Open University Malaysia (OUM) has adopted CoI model which is intended to help tutors ensure that deep learning is generated (Zoraini, 2009). However, in 2008 it was found not all tutors were able to support online forum discussions where they were expected to provide three types of presence as explicated by CoI. This paper attempts to investigate CoI of blended learning (face-to-face workshops and online discussions) through the Graduate Certificate in Higher Education programme.

The three components of the Teaching Presence, that is, design, facilitation and direct instruction, are discussed in relation to the Cognitive Presence and the Social Presence. At the design stage of the Teaching Presence, the learning activities are designed to engage students in active learning; and to get them to discuss in small group, share their ideas and reflect on their experiences. The activities are problem-based and question-driven such as finding solutions to problems, resolving case studies and working on projects. They are intentionally designed to build a sense of community when students work together in groups, introduce themselves and discuss formal course expectations and identify concerns.

At the facilitation stage of the Teaching Presence, the facilitator carried out small group discussion, brainstorming, role playing, case study, and debate. The main aim is to allow students to explore all possibilities and to be involved in the discourse. The exploration process can be extended beyond the face-to-face session into online discussions leading to the integration of ideas and findings which are subsequently tested by the group members for possible resolution or application.

Finally, at the direct instruction stage of the Teaching Presence, the facilitator diagnosed students' comments and injected sources of information to maintain the flow of discussion and discourse. Contrary to popular belief, "guide on the side" for online learning may not be appropriate. Facilitator has to occasionally post a few general comments to guide the discussion towards integration and resolution; a word of caution, do not take side in the discussions.

### **Cognitive Presence**

In this paper, learning activities are designed to engage students in active learning. They have to discuss in group, share their ideas and reflect on their experiences. This is because the design of academic activities has a significant impact on how students approach learning (Garrison & Cleveland-Innes, 2005). For instance, the cognitive presence grows as students inquire into the contemporary issues in higher education like MOOC rose in the learning activities. Students move from the definition of MOOC to an exploration of relevant ideas from journal articles and their own experiences, integrating those ideas into solution or group consensus and eventually testing and verifying the usefulness of the ideas. However, the testing and verifying stage of the Cognitive Presence is not well developed. Two possible reasons are explained under "Online Discussion" in this paper.

This Cognitive Presence is felt in both face-to-face and online learning environments. And in line with Meyer (2003), GCHE students are more thoughtful in online discussions and they draw evidence from journal articles to support what they said. It certainly leads to deeper critical thinking through their collaborative work (Abrams, 2005). In the face-to-face workshop, students were active in the group learning activities. The facilitator played the devil's advocate to probe the students into deeper deliberations of the activities.

In this unit, HED5052, to facilitate a workshop learning activity, like debate, students were placed into four groups. That is, the pros and cons groups, the referee group and finally the audience group. The topic of

debate was posted to Moodle at least two weeks in advance. The topic was,

The design and teaching of a service learning course are in line with student centered teaching concept. Does service learning have a significant positive impact on your SETU (Student Evaluation of Teaching and Units) score?

But students did not know which group they belong to, hence they had to read widely. After the debate, the referee group had to decide on a winner with reasons. The loser has the rights to appeal by stating their grounds. The facilitator will decide on the appeal and announce the winner. The role of the audience group is to ask questions to both pros and cons groups based on their arguments in the debate. In this face-to-face debate, the facilitator has to identify important contributions from the students, sum up the debate, provide relevant information links and resolve issues.

In the case of online discussions, facilitation is crucial to sustain cognitive presence. At the same time it is important for the facilitator not to dominate the discussions (Garrison & Vaughan, 2008). In this unit, HED5052, students were very active in the online discussions. The scenario given for online discussion was,

Higher institutions around the world are promoting student centered teaching. You may be wondering what is wrong with teacher centered approach, you were taught in this manner while in schools and universities and you are successful in life. Hence, what is all this fuss of changing the style of teaching? Would you stay with your traditional teacher centered approach or would you change? Give reasons to support your decision.

There were 151 postings in three weeks of forum interactions and these postings when downloaded to the WORD document it takes up 85 pages. The facilitator monitored the postings in the background occasionally, posted a few lines to give direction in the discussions.

In the context of direct instruction, “guide on the side” for online learning may not be appropriate as it leaves many students adrift and faculty confused (Garrison & Vaughan, 2008). Fortunately, in HED5052, students are actually lecturers with postgraduate degree and with the limited intervention from the facilitator it did not lead to students adrift. The trick is to know how much of intervention is needed as too much may lead to reduce discourse and collaboration from the students which eventually undermine students’ taking responsibilities of their learning. On the other hand, students must not be allowed to become frustrated to the point that they disengage because facilitator does not diagnose misconceptions and provide explanations.

When direct instruction is applied in the face-to-face workshops activities of the unit, the facilitator had to step in to correct students’ misunderstandings. For instance, when they were asked to comment on the feasibility of student centered teaching in their disciplines, some students misunderstood the term student centered teaching. Nevertheless, many views were offered and counter-arguments were imparted. Among the major concerns were support from the management, class size, and trainings.

### **Social Presence**

The design of the learning activities is intentionally done to build a sense of community among GCHE students who are full-time lecturers. Even though some of these students are from the same school, their sense of community may not be strong as they rarely meet each other let alone socialize. The facilitator posts to Moodle the course requirements and expectations, assignments, and content one week before the course commences. When the students meet on the first day of the course, they instantly use the course requirements, expectations and assignments as a common ground to start a conversation and to discuss. It is a common mistake on the first day of class, to jump straight into teaching without giving much emphasis for students to

know one another and to build connection. It is recommended to allocate at least two hours of the first lesson to develop the Social Presence through various activities such as getting students to reflect on their powerful learning experiences and learning styles, to discuss with previous students on the nature of the course as they experienced it, and to discuss in small group on the results of introductory survey where students share their expectations and goals for the course as well as their information technology competencies.

Social Presence can be further enhanced through learning activities. For instance, in one activity students have to select among their group members to play the role of student, lecturer, management and parent. In their respective roles, they had to give their views on student centered instructional strategies and assessments based on the given situation,

Universities around the world Malaysia included, are progressively moving towards student centered teaching and assessment. There is some resistant from students, lecturers and even parents but university management is generally for it. On the other hand, we have research findings advocating student centered teaching and assessment.

The face-to-face environment seems to focus students more on their peers and issues of social presence (Garrison et al., 2004). It has an advantage of building the community group identity and establishing trust to support collaborative learning (Rocco, 1996). Sustaining social presence can be accomplished efficiently online as Vaughan (2004) found that social presence shifts from open communication to that of group cohesion, which encourages collaboration in an online environment. Even though, in this unit HED5052, students do not post in group in the forum, their line of thoughts and arguments tend to fall in line with the group cohesion.

The challenge, from the Social Presence perspective, is to maintain the group cohesion and collaboration during the facilitation of discourse. This is because a cohesive community of learners is associated with high-quality of learning outcomes (Dixson, Crooks, & Henry, 2006). Students were given a group project assignment to work on which may eventually lead to research requirements of the next unit in the GCHE programme. The group members decide on the nature of the educational project. This shared purpose of the learning experience is paramount in building group cohesion. Besides sharing learning experience, group members also share the assignment marks if they can work together. To encourage the group to assume responsibility for purposeful discourse, each group is required to give an oral presentation of the project. Thereafter, the class and the facilitator gave their comments and feedback for improvement.

At time the cohesiveness of the community may be endangered. In this regard the immediate presence of the facilitator makes it possible to intervene and to control dominance or intimidation and build relationships (Garrison & Vaughan, 2008). This is because a successful blended learning environment requires a strong Teaching Presence to establish the climate for collaborative learning and for students to be comfortable to share their thoughts. In HED5052, the cohesiveness of the learning community is still intact even after the semester ended. The students still stay in the same group in the subsequent unit.

### **Online Discussion**

In this unit, HED5052, the outcomes of students' learning are measured through assignments like reflective journal (25%), teaching plan (10%), online forum discussion (30%) and group project report (35%). There is no final examination. This paper gives an indication of the quality of online forum discussions of the top and bottom 10th percentile of students based on their performance in this unit. Garrison and Archer (2000) argue that collaborative constructivist learning sets the conditions associated with deep and meaningful

approaches to learning. However, Biggs (1987) cautions that interaction by itself does not promote deep approaches to learning, it is the specific design goal and interaction facilitated and directed in a sustained manner that promote deep approaches to learning. As discussed under the Cognitive Presence and the Social Presence, the design and facilitation of the workshop learning activities and online discussions in this unit HED5052 focus on achieving deep and meaningful learning.

The Practical Inquiry (PI) model is used to analyse the cognitive dimension of the knowledge-building processes occurring in online discussions. This analysis focuses on the top and bottom 10th percentile of the students' discussions. The total number of messages with cognitive presence indicators posted by the students is 89, with the top 10th percentile taking up 64 messages and the bottom 10th percentile the remaining 25 messages. The duration of the forum discussion is three weeks and the scenario of discussion is mentioned in the Cognitive Presence.

Table 1

*Cognitive Presence in Students' Forum Messages*

| Cognitive Presence   | Cognitive Presence Indicator  | Top 10th Percentile (%) | Bottom 10th Percentile (%) | Overall (%) |
|----------------------|---|-------------------------|----------------------------|-------------|
| Triggering Event     | Recognize problem<br>Puzzlement   | 16                      | 4                          | 12          |
| Exploration          | Divergence<br>Information exchange<br>Suggestions<br>Brainstorming<br>Intuitive leaps | 36                      | 44                         | 38          |
| Integration          | Convergence<br>Synthesis<br>Solutions   | 20                      | 20                         | 20          |
| Resolution           | Apply<br>Test<br>Defend   | 6                       | 0                          | 5           |
| No Category Detected |   | 22                      | 32                         | 25          |

Table 1 shows that distribution of percentages of each category of the Cognitive Presence. Exploration is the most frequently coded category of messages posted by the students (overall, 38%). This means that students were exchanging information, giving suggestions and brainstorming for ideas. Eventually, it leads to students integrating information from various sources and build on each other ideas to create solutions (integration overall, 20%). For both percentile, exploration is also the most frequently coded category follows by integration.

All the students in the bottom 10% percentile did not apply, test or defend the product of their integration. That is, the resolution category comes up 0% while their counterparts in the top 10% percentile did not perform any better, they managed to achieve 6% in the resolution category. One possible explanation is the facilitator practiced "guide on the side" in the online forum discussion. That is, students interacted among themselves while the facilitator stayed at the side, reading the postings without probing the students to move their discussions to a higher level, that is, resolution category. Another possible explanation is the students believe they have reached maturity in the discussion, not knowing they need to move to the resolution category. This is because the facilitator did not prompt them. This finding is in line with another study conducted in Malaysia where the students were enrolled in a master's course in English language studies (Nor Fariza, Afendi Hamat, & Mohamed Amin, 2012). Analysis of the online forum interactions using the transcript analysis tool indicates

that the students were actively collaborating to process the information, exploring the topic thoroughly and took initiatives to make enquiries. In terms of the PI model analysis, the students in the English language studies are at the exploration category and possibly into the integration category too. But, they have not progressed to resolution. In addition, lecturers only contributed minimally in the forum discussion. Lee (2014) concurs that active participation and interactions in a learning community may not be enough to promote higher order thinking skills. There is still a need for adequate and timely teacher intervention to foster higher levels of thinking.

### Conclusion

There is no doubt, conducting GCHE programme using the CoI framework has benefitted students in their quest for teaching and learning knowledge, in particular through the design of the workshop learning activities, facilitation and direct instruction of online and face-to-face learning.

The results from the Practical Inquiry (PI) model indicate when there were limited interventions from the facilitator in the forum discussions it did not lead to students adrift. But the cognitive presence indicator shows that it fails to take the discussion to the resolution stage. Hence, even for students who are lecturers with postgraduate degrees “guide on the side” for online learning may not work. The facilitator needs to prompt the students and post messages to inspire them to move on to the resolution stage. Previous studies (Garrison & Arbaugh, 2007; Luebeck & Bice, 2005; Meyer, 2003) have pointed to Teaching Presence as a crucial element in promoting student learning at the higher levels of inquiry and instructor should play a major role in the process. Similarly, Pawan et al. (2003) stated that “without instructor’s explicit guidance and ‘teaching presence’, students were found to engage primarily in ‘social monologues’” (p. 119).

The importance of the Social Presence in the CoI framework cannot be taken for granted as it could jeopardize the functioning of the other two presences, that is, Cognitive Presence and Teaching Presence. The facilitator needs to provide students with a common ground to start a conversation and eventually socialize. Students need to build trust among the group members which naturally led to greater group cohesiveness and a feeling of security in the community (Lee, 2014). Social Presence may create a condition for sharing and challenging ideas through critical discourse but it is insufficient to bring learning to a higher level of inquiry (Garrison & Cleveland-Innes, 2005). In this study, the Social Presence is well developed among the students; they still stay in the same group in the subsequent unit. They try to extend the social relationship to the facilitator. It is good to build rapport with the students but it should not be at the expense of the facilitator’s professionalism.

After the completion of the unit, an online Faculty Learning Community (FLC) was established to further encourage students to strengthen their Social Presence as well as Cognitive Presence. They can post any teaching and learning problems, issues, and articles to the FLC and any member of the community can suggest ideas to overcome the problems and comment on the issues. Of course, the facilitator is also actively involved.

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