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A FRAMEWORK OF FOSTERING CRITICAL THINKING IN A MULTICULTURAL, INCLUSIVE CONFUCIAN HERITAGE CLASSROOM

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Abstract

Critical thinking is an important 21st century skillset often embraced by educators today as a backbone of creative problem-solving competency. The presence of social interaction and dialogue becomes crucial in fostering critical thinking and its development. A claim is that a lack of dialectic interaction among Confucian Heritage Cultures (CHC) classrooms poses teaching and learning challenges for critical thinking development. Our action research study was conducted in two cycles aimed to find out ways to facilitate classroom activities that promoted dialectic interaction with peers and instructors. The study cycles hoped to transform CHC learners who appeared to be passive – unwilling to ask questions and often hesitant to speak up, resulting in a teacher-centered environment – to active learners and critical making participants in creative designing environments. Our paper reports experiences emerging from the second cycle of our action research project during an on-going teaching and action research phase of inquiry. A conceptual framework of culturally appropriate critical thinking pedagogy for an Art & Design Visual Communication classroom is situated in a multicultural, inclusive and Confucian Heritage Culture environment. A practical inquiry methodology was adopted to demonstrate the various approaches of social constructivism in fusion with Confucianism to encourage interaction for critical thinking within a multicultural, inclusive, CHC classroom.

Keywords: Confucian-Heritage-Culture, Critical thinking, Social constructivism, Interaction, Asian pedagogy.

1 THE IMPORTANCE OF FOSTERING CRITICAL THINKING

Critical Thinking refers to the cognitive ability and awareness to question assumptions via analyzing factors from different viewpoints that can result in a formation of reasoning as a guide to an informed action or decision ([1], [2], [3]) The process of critical thinking requires learners to experience cognitive conflicts via social interaction and recognize the dissonance as opportunities to question original ideas, beliefs and assumptions so as to evolve existing solutions or to recreate new ones. For critical thinking to take place in a classroom setting, creating the space for social interaction and dialogical inquiry becomes an essential pedagogical consideration in fostering its development. ([4], [5], [6], [7]). When cognitive skillsets such as critical thinking is reinforced via social learning opportunities, it serves for “collaborative problem solving” opportunities to deal with a highly complex and diversified world (Barak, 2016; Griffin, 2012).

2 A QUESTION ON CRITICAL THINKING IN “CONFUCIAN HERITAGE” CLASSROOMS

There seems to be some claims about the passive involvement of students from the Confucian Heritage Cultures (CHC) nations in critical thinking that is grounded in Western philosophy of Socratics and Aristotelian ([9], [10]). It is perceived that learning of Confucianism – an East Asian philosophical and ethical teaching places an emphasis on collectivist behaviors such as prioritizing social harmony, respect of the social hierarchical system and maintaining good interpersonal relationships with one another. The collectivist learning behaviors are perceived to be in contrast with critical thinking beliefs in searching for the truth via individual expressions and challenging the status quo of matters ([9], [10]). As such critical thinking practices seem to come across as confrontational from a CHC point of view. Shin [9] reported that when practiced within a CHC classroom setting, learners displayed passive behavior such as unwillingness to ask questions and often were hesitant to speak up, as they concerned that doing so will disrupt the harmonious relationships with one another. Findings from other researchers showed that pedagogical settings requiring social interaction for

critical thinking in CHC classrooms often resulted in silences with a dependency on the teacher figure to “provide the answers” ([10], [11], [12], [13], [14], [15]).

Contrasting perspectives have posed a reflective question: Are CHC passive learning styles for critical thinking skills due to cultural and societal values or due to an instructor’s teaching methodology? According to Wong [16] CHC learners can be highly adaptive to new styles of teaching and learning if culturally appropriate methodologies are adopted. But Shin [9] and Nisbett [10] suggested that CHC learners simply have a different way of ‘seeing the world’ in comparison to the western interpretation of critical thinking. It is timely to embrace the call for designing culturally appropriate pedagogical strategies that synthesize educational theories (for eg. Critical Thinking) and East Asian values (Confucianism) [15].

3 SOCIAL CONSTRUCTIVISM AS THE BASIS OF DEVELOPING CRITICAL THINKING

Our framework refers to social constructivism for some insights. Social constructivism considers a learner-centered education. Its theory of learning highlights knowledge construction via means of social interaction for improving learners’ cognitive development ([4], [6], [17], [18], [20]). The zone of proximal development theory (ZPD) theory argues for the potential to increase mental capacities beyond the actual development zone when the opportunities to be assisted by others arise ([6],[19]). With reference to Vygotsky’s paradigm of learning, Henson [18] noted observations on an increase in learners efficiency to solve problems when a collective group assisting each rather than working alone. Bruner [20] alongside Vygotsky [6] advocated social learning for enabling self-discovery and building self-confidence in learners. Bruner [20] called for instructors to create opportunities that allow learners to discover knowledge on their own rather than relying on direct knowledge transmission from instructors. He highlighted embracing ambiguity as part of the cognitive developmental process [19]. Figure 1 outlines a conceptual framework that takes into consideration of social constructivist pedagogy and Confucius-heritage cultures to foster critical thinking for CHC classrooms.

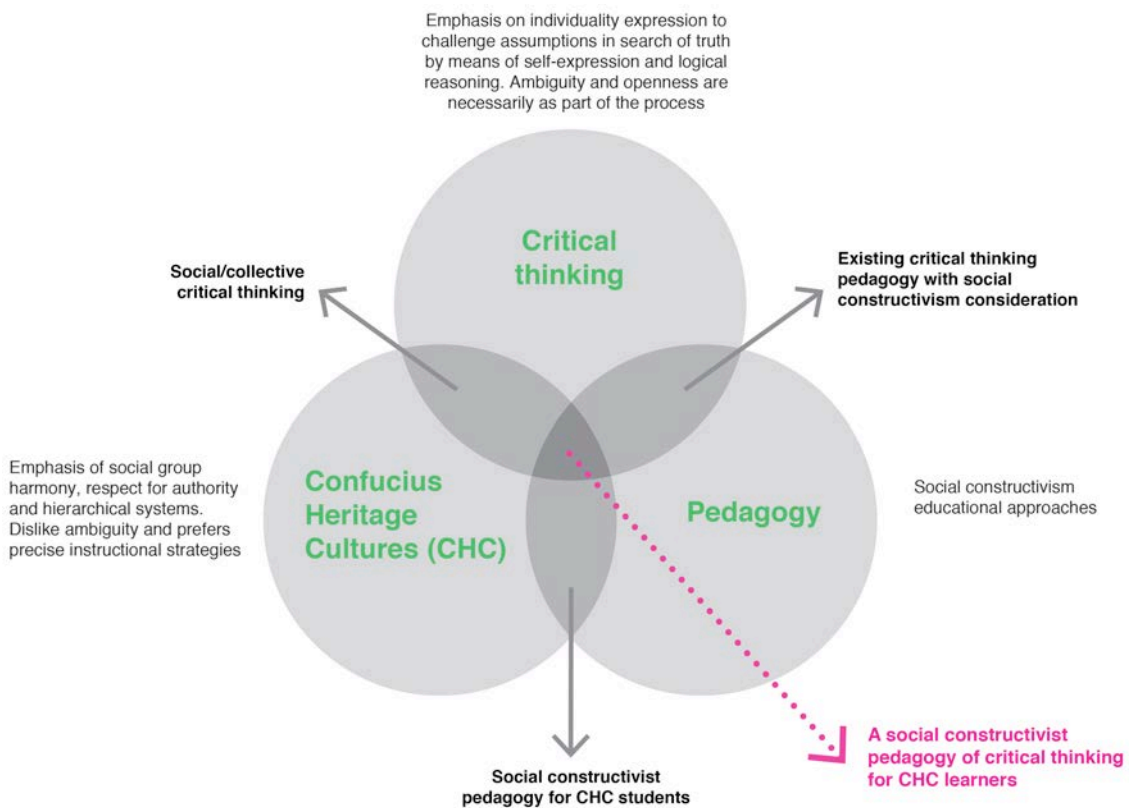


Figure 1: Conceptual framework for a social constructivist pedagogy of critical thinking for CHC learners

4 A SOCIAL CONSTRUCTIVIST PEDAGOGY OF CRITICAL THINKING FOR CHC LEARNERS

The framework in Figure 1 features a learner-centered pedagogy that requires the instructor to facilitate social learning experiences that are culturally appropriate to CHC learners in order to foster critical thinking. The instructor's role in this framework is grounded in Vygotsky's [6] zone of proximal developmental model and Bruner's [20] scaffolding theory. The instructor empathizes the social and cultural parameters of CHC learners, adopts the every day values of social harmony and of the respect for hierarchical system into the pedagogy. His(her) pedagogy seeks to create non-confrontational social interaction that engages the learners' cognitive participation, preparing the ground for collaborative problem solving via critical thinking practices.

5 ENCOURAGING SOCIAL INTERACTION AMONGST CHC LEARNERS TO IMPROVE CRITICAL THINKING: A CASE STUDY

Various social constructivism educational approaches were identified, tested and adopted within the framework in a classroom setting for the creation of dialogical opportunities, where instructor and learners are both responsible for problem solving process [21]. The approaches are structured in a five step practical framework that will be elaborated in the next section. Elsewhere we reported our initial cycle of teaching and action research (see [19]). This paper focuses on reporting our experiences in the second cycle of action research. Using the second cycle of an on-going teaching and action research as a practical case study, the first author refined pedagogical interventions from the first cycle and developed a practical framework that adopted the above-discussed conceptual framework.

The sample participants were a group of undergraduate year 2 Visual Communication (Design) students studying a typography module (editorial design) in Singapore. Other than grasping fundamental principles of the subject, it is the desired outcome that the students embrace cognitive conflicts created by social learning as opportunities to evolve their existing solutions or to recreate new ones and by extension developing critical thinking abilities independently and confidently rather than relying on the instructor for the "correct answers".

The practical framework comes in a five steps cyclical cycle.

- 1 Provide building blocks of subject via active learning**
- 2 Identify critical knowledge collaboratively**
- 3 Create small group critique sessions**
- 4 Provide individual consultations at appropriate timing**
- 5 Provide reflective opportunities collaboratively in large group**

5.1 Provide building blocks of subject via active learning

To equip learners for critical thinking, instructor should provide sufficient 'building blocks' of the subject at the beginning of the module [1]. Social learning is encouraged via active learning activities for interaction to take place among CHC learners at this stage. Nuthall [17] suggested that activity-based teaching encourages a state of being 'mutually experienced' among learners and encourages interaction. Learners gather experiential understanding as materials that they can share with one another through the process. Collectively shared experiences can be very motivating for Confucius cultures as the opportunity to interrelate with one another on the outset search of new knowledge reinforces CHC values of being 'interconnected units' [9] towards achieving a positive end.

In the first author's classroom, factual and fundamental knowledge of the subject was first presented via the traditional way of lecture slides. Students were then required to perform a variety of hands-on active learning in small groups to exercise their understanding of the theoretical knowledge received via the lecture presentation. (see figure 2)

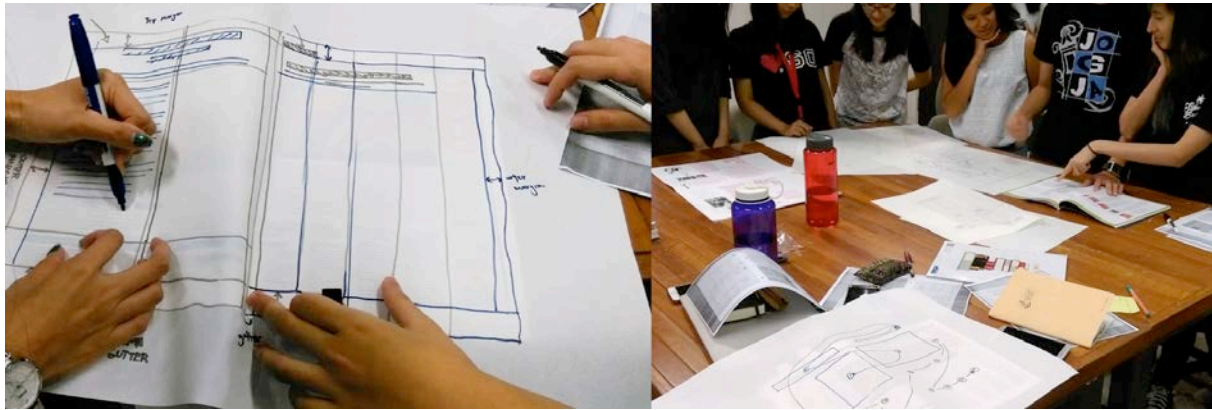


Figure 2: Hands-on active learning in small groups, mapping the invisible grids and columns of editorial spreads collectively.

5.2 Identify critical knowledge collaboratively with peers

As knowledge acquired by learners in the early stages was still new, the quality of the knowledge application is likely to be amateur and assumptive. This made for a fertile ground to foster critical thinking by challenging assumptions [1]. Identifying critical knowledge of the subject together with peers at this point can drive a learner's mental development beyond that of the actual development as suggest by Vygotsky's [6] ZPD theory. Learners were asked to pair up with someone who does not have any idea about the progress of their assignment. The learner pair took turns to review each other's work using a structured questionnaire designed by the instructor as a guide to help them to identify critical knowledge collaboratively. The questionnaire was carefully designed with questions to aid learners to take on an "instructor" role when reviewing their peer's work. Feedback of their peer's work was indirectly provided by the learner reviewer in the form of answering the questions in writing. The instructor went around each learner pair and participated in the on-going dialogue, using the content of the dialogue as materials to co-construct knowledge collaboratively with the learners. The questionnaire created by the instructor became a tool to open up a dialogue between the learners in a non-confrontational manner about their work. CHC learners are used to an environment where the teacher figure is often seen as the exemplar of knowledge and not their peers [22]. It is therefore crucial that the instructor in this study explained the objective of this activity prior to implementing it. As such it cleared up confusion of the role reversal method.

5.3 Create small group critique session

In a Visual Communication classroom, critique session is an essential form of pedagogy where students are given the opportunity to inquire, reflect, explain and justify what they have produced ([23],[24]). During a critique session, knowledge is exchanged and transferred amongst peers and instructors openly, creating new ways of moving forward either to revised or conclude an existing piece of work ([25], [26]), essentially practicing critical thinking. A critique session provides the space for social interaction among learners and instructors to enter a respectful dialogue to question assumptions that is required of in critical thinking [1]. The critique process is underpinned by social constructivism theories where the co-construction of knowledge via means of social interaction and experiential learning becomes the foundation of a life-long learning attitude ([6], [17], [20]).

In a CHC classroom, critique sessions require close pedagogical management and facilitation from the instructor for it to be fruitful and interactive. According to Nguyen, Terlow & Pilot [22], it has been shown that CHC learners are unlikely to raise comments or 'truths' that will put the other person in an unfavorable light openly, damaging the societal relations between them. To over come this, the instructor arranged for critique sessions to be held in small groups of no more than five, a gradual increase from the prior pair-work setting. Learners were provided the freedom to be grouped with anyone they wish to. The author found that dividing the class into smaller groups of their own choice help diffuse the tensions of critique sessions that can seemed confrontational in a large group. The small group dynamic allowed for close physical proximity among each other, thus improving the intimacy of interacting with one another.

The ambiguous nature that results from open-ended group discussions during critiques can create discomfort for CHC learners who are used to precise instructions from the teacher figure. Nguyen,

Terlow and Pilot [22] have reported that visual stimulations providing a back drop can help reduce CHC learners' levels of uncertainty during such situations. The instructor designed a checklist as the visual stimulant to reduce the level of ambiguity of the critique session. The content of the checklist is used as material for the instructor to open up a conversation with the learners before entering the critique session. Learners were also observed to be more at ease using the checklist as a visual stimulant to make objective comments about their own work as well as their peers.

To continue overcoming the cultural parameters of commenting on someone else's work, learners were provided with sticky notes and clear ground rules on how to comment on their classmates' work. In the first round, they were first asked to go around each and every student's work to comment on the areas that they thought were well done on sticky notes. After that they were asked to go around the work the second time, but this time pointing out the areas that they thought require improvements and the reason for it. They were requested to indicate their names on the sticky notes for both the rounds so that the instructor can make out who have commented on what and is able to create a meaningful dialogue among the students later.

After all comments had been noted down on the sticky notes, each learner was required to address the comments left behind his/her work. The instructor expanded on interesting comments, facilitates disagreement and clears up ambiguous feedback. As names were encouraged to be left on the sticky notes feedback, instructor was able to invite other learner(s) to participate in the dialogue to co-construct new knowledge together.

The combination of a small group setting with visual stimulations, sticky notes methods and close facilitation of the instructor worked well for CHC learners to participate actively in the critique session. The instructor observed that each student garnered a substantial amount of feedback from peers, they were also much more willing to interact and speak up with each other openly in the above setting breaking the stereotype of CHC learners as being passive. (See figure 3)

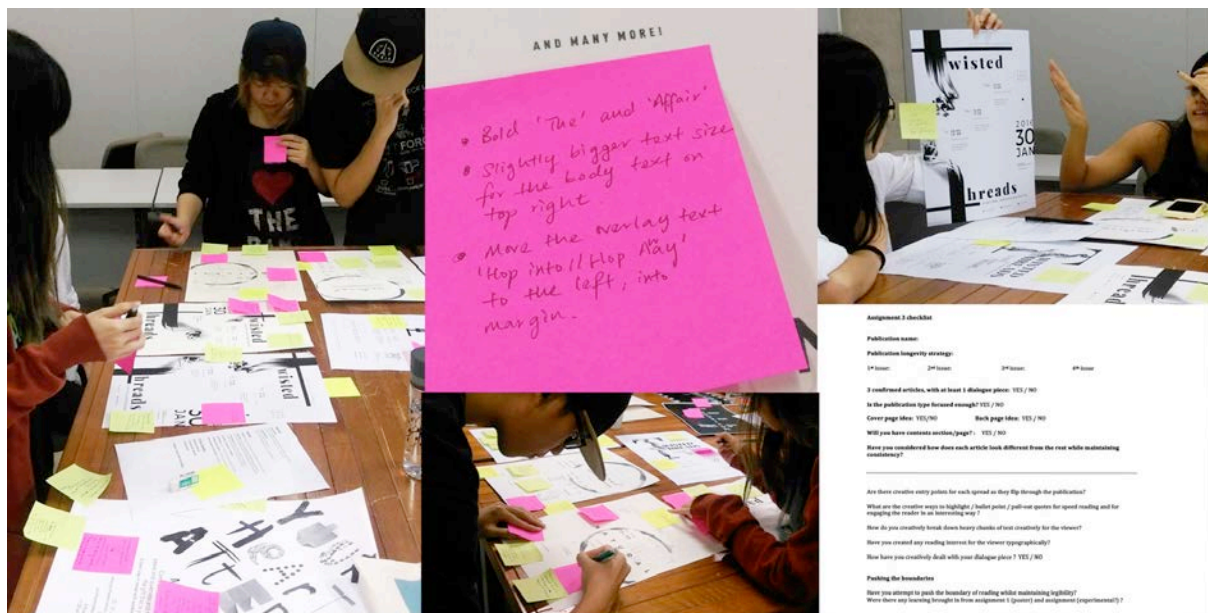


Figure 3: Small group critique sessions aided by visual stimulation (checklist), sticky notes methods and close facilitation of instructor

5.4 Provide individual student consultation at an appropriate timing

Nguyen, Terlow and Pilot [22] reported that CHC learners do not enjoy ambiguity and uncertainty in their learning process and often look up to the teacher figure for assurance due to the respect of the hierarchical system. Student interviews from the first cycle of this action research confirmed this claim. Most of the learners made remarks that they had enjoyed learning with their peers through the various group activities. They valued the opinions of the instructor on a one-to-one basis.

The first author found that providing some form of progress assurance to learners on an individual basis reassures CHC learners' anxiety that arises from learning a new subject.

When individual consultations opportunities were provided at a timely phase for e.g. after all group activities and discussions, the instructor was well-equipped with plenty of co-constructed materials yielded in prior group activities as a guide to developing the learner's critical thinking ability instead of taking on the role of an immediate provider of model answers. This prevented CHC learners from the tendency to overly rely on the teacher figure.

In this manner, the instructor fulfilled the desire of the learners' need for teacher's attention, at the same time the instructor could deliver individual consultations that were student-centered by making use of materials that resulted from the collaborative efforts prior.

To motivate students further, the instructor can include an assessment component to see how students have evolved and progressed based on the co-constructed materials and not by how the final piece of work will end. All prior group activity materials are to be kept and documented by the learner and submitted together for submission.

5.5 Provide reflective opportunities collaboratively in a large group

As learners' knowledge of the subject evolve and mature towards the end of their assignment, it is timely to provide reflective learning opportunities to continue developing their critical thinking skills even after they have completed the assignment. In this final step, active learning can be used once again to debrief learners of their learning and wrap up the learning experience in a large group collective manner.

Brookfield [1] encourages instructors to provide opportunities for learners to empathize with each other on their learning journey as part of the critical thinking process, reassuring that each learner is not alone in experiencing the challenges of learning a new subject. This collective group dynamics is very much aligned with the collectivist nature of CHC learners where they are comfortable being a part of an interconnected network instead of standing out as a unique individual [9].

In a Visual Communication classroom, critique is a pedagogy that all learners practiced at upon assignment completion. The action research team met frequently to find out creative ways to innovate the practice of critique among the CHC learners. The first and third authors had in different occasions direct interactions with the students in small and large group critique sessions that required them to challenge their peers' work. Their experiences and observations confirmed that during critique sessions the majority CHC behavior in the Singaporean classroom showed preference to passive listening to what the instructor has to say about their work and others' work. The action research suggested a move of the critique session to step 3 and wrapping up the assignment with reflective learning.

Learners were requested to do a very short informal presentation of their completed work with close facilitation by the instructor. The instructor encouraged questionings from the class but was prepared to experience few responses. When the presentations were completed, an active learning activity suitable to the subject was introduced to allow collective reflections and social interactions in a large group. The instructor facilitated this activity closely by encouraging all students to speak to each other in an informal way when they discussed, reflected on their learning journey (see figure 4).



Figure 4: Active learning for collective reflection via social interaction in a large group.

During the reflective session the learners of the course filled out an anonymous feedback on their learning and the course's instructions and pedagogy. The instructor modified the Critical Incident Questionnaire by Brookfield [1] and used it to gather feedback after completion of each assignment. The questionnaire allowed the learners to self-reflect on their critical thinking experiences and served as a helpful tool to gather continuous feedback on critical thinking pedagogy and to understand learning issues of concern among the learners.

6 CONCLUSION

To prepare for the 21st century, it is crucial for the students to develop their ability to interact with their peers openly and for the instructors to create dialogues that enable collaborative problem solving. Our observations from this second cycle of the action research tells us that the CHC learners' collectivist nature of being connected can serve as means to work in non-confrontational settings and to open up themselves to interaction in groups. We observed that learners of our study who worked in collectivist environments enjoyed interacting with their peers and shared their experiences in finishing assignments. In empathizing with multicultural and inclusive socio-cultural parameters of Confucianism, the instructor was in a position to adopt suitable learning activities that empowered all learners to speak freely and to be responsive in thinking critically and creatively.

Our social constructivist pedagogy of critical thinking synthesized the multicultural features of the Singaporean society and the aspiration to include all in learning. Our classroom values synthesized CHC values (e.g., harmony and respect), common values of Singapore (e.g., diligence, resilience) and values of collaborative critical thinking discourses (individual expression, logical reasoning) in non-confrontational manners. The multicultural and inclusive social interaction encourages participation, sense of belonging, and willingness to collaborate among the learners.

The learning to think critically in an indigenous inquiry environment was encouraging. Given the deliberate efforts to synthesize social constructivist approaches, values of learning in groups, our study to date refined what we observed in the first cycle of the action research: Open interaction for co-constructed knowledge pathways.

We have been pleased with the outcomes of learning among the learners in our study. They were conscious in finding ways to complete their creative designs and to participate actively in the co-constructed learning journey. Learning points from the second action research cycle will be integrated into the curricula and instructions of the third action research cycle. We hope to expand knowledge base of internationalized and indigenous pedagogies through continuous educational research and development that aim to prepare learners for a highly diversified and globalized world in the 21st century.

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