CROSS-CULTURAL DESIGN (CCD) LEARNING REFLECTIVE TOOL BASED ON UK AND KOREA'S COLLABORATIVE DESIGN PROJECTS

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Keywords: cross-cultural design, reflection learning tool, cultural design education

1. Introduction

In the recent years, considerable efforts have being made to explore and understand cross-cultural relationships as a result of globalisation. Previous studies on the phenomena of cross-cultural relationships and practices have focused almost exclusively on anthropology, sociology and, more recently, international business and marketing. However, there has been limited discussion about cross-cultural concerns in a design practice context. Key theorists of cross-cultural researcher like Hofstede [1984] and Hall [1989] have focused on the sociological exploration of cross-cultural relationships but hardly touched on any specific area of design. In today's multicultural global societies, understanding cultural diversity is vital to designers in order to create meaningful design outcomes - products, services and any other forms, as well as engaging with end users. Therefore, there is a growing need to foster awareness of cross-cultural factors amongst today's design students. Diehl and Christiaans [2006] argued that Cross-cultural studies "have been extensively applied in research in the field of cross-cultural teamwork and communications and even interface design. Existing cultural models, however, do not provide extensive information about how it can be applied in a meaningful way to design" (p.503). In order for students to have a well-rounded understanding of culture, it is important to provide them with more of a diverse range of culturally engaged curriculum in their higher education experiences. What is required is a new way to define a 'Cross-Cultural Design (CCD)' educational model to 'incubate' and 'direct' designers and design students appropriately in order to benefit from the expanding field of cross-cultural studies. Don Norman [2010] declares that design education must change so that designers can have an understanding of (among other issues), societal and behavioural problems, and that designers should apply service design approaches in all aspects of the process so that design outcomes can do more than scrape the surface of complex social issues. If the designers of today are educated to be more culturally aware, then cross-cultural consideration becomes a universal and integral part of the design process.

Cultural transmission within Cross-Cultural Design (CCD) practices comes in two forms; one is a more organic or unstructured form of cultural communication or interpellation, and the other is of a more structured, directed, or indeed "designed" form of cultural mediation. The unstructured version is a free flow of cultural interaction throughout history, society, and context, whereas the structured version is a controlled and strategically driven mixture. This paper deals with the development and explanation of this second form of more structured and directed type of cultural mediation, and develops a methodology for 'Cross-Cultural Design (CCD)' design learning, in order to help facilitate educational practitioners and design students in such contexts.

The first part of this paper seeks to define what the key characteristics of such a CCD practice should be, in order to best augment the learning process in cross-cultural contexts. A number of case studies are considered in order to justify these observations and insights.

The second part of the paper seeks to develop a reflective CCD learning tool based on the 5 key CCD characteristics that are identified in section 1. This reflective CCD learning tool includes a method for the quantitative assessment of responses to the projects in order to help them be more accessible for both educators and students. However, what is most important here is that this point scoring system is not intended to qualify or disqualify the student's designs but rather to show the different quality of each design. The point scoring results in the radar diagrams visually describe the current balance of CCD qualities of the student's design so the student can clearly understand his/her own design and decide where to improve it. The CCD learning reflective tool provides space for In-project check lists and Post-project check lists for clear comparison.

The third part of this paper then seeks to test the validity and use of these CCD reflective learning tools. CCD short course programmes were conducted over the past four years since 2011, in collaboration with Goldsmiths, University of London (UK), Korea Institute of Design Promotion (KIDP) and Regional Design Center (RDC), South Korea, in order to investigate the viability of these methods.

The findings from each of the above sections of this paper, with regards to identifying the most comprehensive and effective tool to guide people within Cross-Cultural Design, will then be gathered, processed, and consolidated into a reflective CCD learning tool.

2. Need for Cross-Cultural Design education

Globalisation is the process of integrating various aspects of our everyday lives such as economics and culture, from all parts of the world [Bordo 2002], [Mussa 2003]. Globalisation, by some researchers such as Richard Jenkins, the author of *Social Identity* (2014), is widely believed to 'have made human life more diverse' [Jenkins 2014, p.33] and offered "more experiences and elective identities" [Jenkins 2014, p.34] whereas others suggest that alongside diversity, globalisation brings in its train greater homogeneity [Jenkins 2014, pp.33-34], which merges each region or area's unique local trait with global traits. George Richer [2008] suggests that "globalisation is an accelerating set of processes involving flows that encompass ever-greater numbers of the world's spaces and that lead to increasing integration and interconnectivity among those spaces" (p.1). Here, what needs to be emphasised is that despite the concerns about standardisation and uniformity, academics including some like Guy Julier [2008] argue that globalisation still offers an optimistic vision for the design industry as an opportunity for renewed creativity with enhanced quality and flexibility. While cross-cultural research has been mainly used to help the understanding of multinational culture and improve international communication and marketing, it could now be used to enhance not just communication but also the quality of design of products and services. Many have already argued that the importance of cross-cultural design in the future will continue to grow [Leong and Clark 2003], [Lin 2007], [Sohoni 2009]. As a result, design education, as well as design professionals, have to consider the cultural context of the users in order for goods and services to fully satisfy the consumer.

3. Identifying the characteristics of cross-cultural design (CCD)

Cross-Cultural Design is a form of design that embraces different cultures, languages and other social contexts. In the era of globalisation, Cross-Cultural Design is initially about improving the quality of communication and understanding across cultures and makes a wider appeal to an international audience from all over the world with different cultural backgrounds. Figure 1 shows a New Year's card design from 1991 with a use of Chinese character for 羊 which means 'sheep' to replace English character Y, for celebrating the year of the sheep.

Figure 1. Use of chinese character in New Year's card 1991 [Steiner and Haas 1995, p.25]

Developed from the simple use of multi-cultural languages on the visual materials, it shows how different national cultures can be more actively used for advertising global brands. A recent example of Apple's i-phone 4 TV advert in 2010, for example, has the same story, with even the same music, but representing different cultural themes for each country as seen in Figure 2. For UK's advert, the football was the main theme that shows people wearing football uniform talking to friends whereas Korean advert shows a newly married bride with Korean traditional costume talking to her mother. The Cross-Cultural Design is not only about language and communication but also about brining people's different values, lifestyles and relationship for a better understanding of each other.
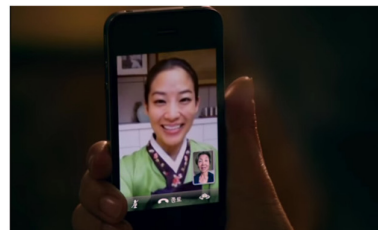
i-phone, Europe (2010) - Football   i-phone, Korea (2010) - Hanbok

Figure 2. I-phone's multi-cultural adertisment, 2010

The Korean kitchen interior company Hansam's kitchen design showcased in 2009 (Figure 3a) was a good example of Cross-Cultural Design, that showed how different lifestyles and practices can be represented in design. The main concept it introduced was to combine the Western kitchen table culture with the Eastern floor-seating culture. The primary purpose of the Western table is sitting and dining, whilst the typical purpose of the Eastern table is to have tea. The cross-cultural concept is multicultural in design, creating a space for both eating and drinking tea and induces an environment for socialising cross-culturally as well.

Another example of a fusion between two cultures of the occidental and the oriental is 'ORI-OCI' (Figure 3b) by Italian designer Carlo Contin. 'ORI-OCI' consists of two parts; Chopsticks as the main body, which can be assembled by the user, with other parts that transform into cutlery at their choosing.
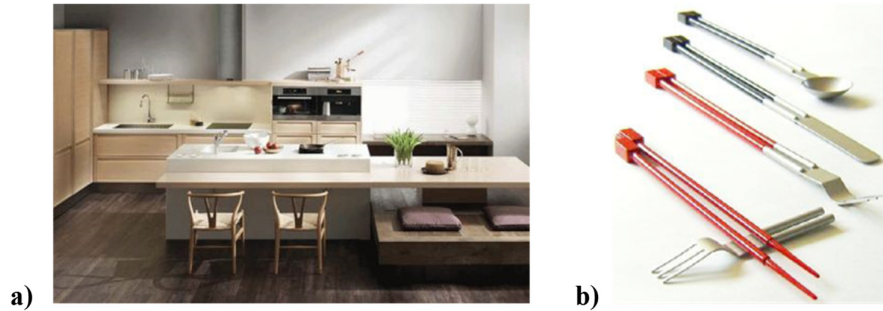
a)   b)

Figure 3. a) Hansam cross-cultural kitchen design, b) ORI-OCI

Through the case studies above, we can see how many tools and elements of design and culture interact, and what these are capable of producing and expressing in their designs. The interaction and use of such cultural interactions are not one-dimensional but are, in fact, very complex. From materials and design, nature, environmental and societal structures to lifestyle or religious factors, we were able to explore the various interaction of cultures in design. Erin Moor, a designer and ethnographer, in her article, "*Cross cultural design = Living on the edge*", stated that "living on the borders ('on the edge') is easy to see how people of one place have integrated the customs and languages of another into their daily lives. When one lives on the border, cultural exchange or collision is inevitable. Products, services and communications more often than not, cater to people of both or many backgrounds" [Moore 2010].

Based on the findings from case studies 5 key characteristics of Cross-Cultural Design can be identified:

1) Cross-cultural understanding

A good Cross-Cultural Design should derive its concept from the in-depth understanding of cultural differences including cultural concepts, material, practices, and behaviour rather than just playing with visual elements like patterns and colours. For this, historical context, tradition and customs, as well as locality of each culture, should be understood.

2) Originality

Cross-Cultural Design requires an ability to think creatively and design a quality of being unique and novel. It should be able to propose a new notion of function, form, meaning and lifestyle through design activity.

3) Practicality

Cross-Cultural Design is about the creation of a usable design for everyday life through combined cultures. It should consider various practical aspects of the design as an everyday commodity if the design can fit into cultures and be used in our daily life, can be easily made and mass-produced at a marketable price, have a clear target user, and lastly, it inspires the user for the better lifestyle.

4) Universal design

Cross-Cultural Design should produce universally understandable design with minimised cultural errors and misunderstanding. It should be able to be used in any places, and its audience should be able to understand the cultural elements and ascendancy. It also should be able to deliver universal issues or values whilst preventing any cultural misunderstanding. Furthermore, it can have cultural impact on each other's culture either to encourage changing one culture upon the other or protecting one from the other.

5) Cultural identity

Lastly, Cross-Cultural Design should be culturally distinctive and represent the participating cultures. Cultural identity can be shown on the form, material, colour and pattern or symbol.

4. Setting up CCD learning reflection tool

To help design students to conduct Cross-Cultural Design, we developed a CCD learning reflective tool that is a form of self-reflective practice, based on Schön's concept of reflective practice. In *The Reflective Practitioner* Schön [1983, 1987] identified two types of reflection: reflection-in-action and reflection-on-action. Reflection-in-action was seen as a process that was spontaneous. In this regard, the practitioner employs intuition and experience to deal with the here and now. On the other hand, reflection-on-action is thinking that is retrospective and involves teachers using structured reflection to analyse their practice. Schön's ideas were influential because he managed to amalgamate different ideas about practice, creativity, and knowledge into a coherent body of thought that could be applied as a critical strategy [Crouch and Pearce 2012, p.44-4]. However, as Killion and Todnem [1991] pointed out, Schön's model lacks a way of predictive, innovative, or "future thinking". In order to remedy this we have developed a form of "reflection-for-action" which is a more proactive process to make changes (improvements) to future actions, or contexts for action, in difference to reflection-on-action and reflection-in-action which focus on revisiting the past in a reflective manner.

As a result, here, CCD reflection tool is developed based on 2 types of reflection process: (1) Reflection-in/on-Action and (2) Reflection-for-Action. The template of the reflection tool is presented in Table 2. *Reflection tool (1) Reflection-in/on-Action* tool is an 'in-project' check list which is primarily to be applied after the design outcome, but also during the design process as a guide. *Reflection tool (2) The Reflection-for-Action tool* is a 'post-project' check list, not only used to evaluate the outcomes but also to seek for solutions to make future improvement for balanced CCD. The CCD learning reflection tool uses a Pentagon-shaped radar chart method with pre-set questions to grade each criterion. The evaluation criteria are brought over from the characteristics of Cross-Cultural Design (1) Cross-cultural understanding; (2) Originality; (3) Practicality; (4) Universal design; and (5) Cultural identity.

Therefore, based on the pentagon shaped radar chart generated in the Reflection-in/on-Action tool, this tool requires students and designers to identify the weak points in their design, work out the problems, and find the solutions in the Refletion-for-Action tool (Blue column in Table 2).

5. Setting up the CCD short course programmes and testing CCD learning reflective tool

In order to test the viability, effectiveness, and resilience of the reflective CCD learning tool, we have run various CCD educational design programmes over the past four years within the PI Studio (Prospecting and Innovation Design Research Studio) at Goldsmiths, University of London in a partnership with Korean government-sponsored design related organisations such as KDM (Korea Design Membership). Among all the educational programmes, four short course programmes carried out between 2011 and 2014 have been selected to be present in this paper. These programmes were run for students from Korean universities with various design backgrounds from product, fashion to service design. CCD short course programmes allowed us to have sufficient time to teach and communicate with students. Students were asked to form groups to research and develop their own designs based on a programme brief. Each programme had a unique themes based on different cultural concerns and perspectives as summarised in Table 1. After each programme, we exhibited student team's final design results at different exhibitions to gauge the public reaction and its marketability. We also carried out student feedback sessions to see how they found the CCD short course programme.
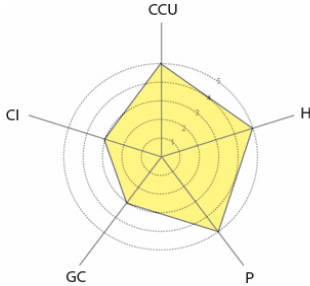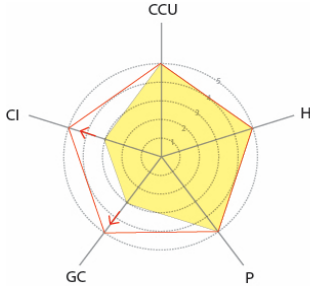
Table 1. Four CCD short courses since 2011

Programme	1	2	3	4
Title	Cross-Cultural Design of Korean and Britain	Bon Voyage	Tourism of the Ordinary	Entangled Cultures
Date	June 2011 - September 2011	June 2012 - September 2012	June 2013 - September 2013	June 2014 - September 2014
Brief	The participants were asked to	The design projects explored the	The design projects engaged with a	The design project's brief was

	Reflection in/on		Reflection for	
	deepen their understanding of Korean and British culture and to unravel and combine the similarities and differences between the two cultures.	cultural practices and activities of the tourist. The aim was to use these cultural practices as an opportunity to generate new concepts for cultural products and services.	number of lost cultural practices in Korea, drawing on them to invent new cultural practices as well as reinventing existing ones.	to use design to explore how to build relationships between tourists, their hosts, the cultural practices of tourists, objects, objects of tourism, and places they visit.
Length	4 months	4 months	4 months	4 months
Participants	26 BA Design students	28 BA, 4 MA Design students	24 BA Design students	20 BA Design students
Design Outcomes	8 projects	11 projects	12 projects	7 projects
Exhibition	Designersblock	TENT London	TENT London	TENT London

From the total 38 design projects, we found that CCD short course programmes enabled students to understand and engage with cultural differences and further develop their own cultural questions and interpretation. The CCD reflective learning tool in particular was a great help for students to see what factors they needed to consider when designing. Through the delivery of these Cross-Cultural Design projects it is clear that Cross-Cultural Design activities within the design curriculum help students understand and respect cultural difference, and support the success for the future development of a culturally enriched design field.

Below is the CCD learning reflection tool template which has been tested with the above four CCD short course programmes. Due to insufficient space in this paper, all 38 projects could not be presented here, therefore, as Table 2 shows, Re:born, CCD project developed during Cross-Cultural Design of Korean and Britain in 2011 is selected as a sample presentation of actual application of CCD learning reflection tool by the student.

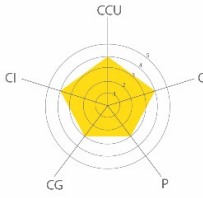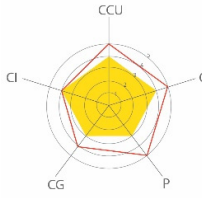**Table 2. Cross-Cultural Design (CCD) leaning reflective tool example**
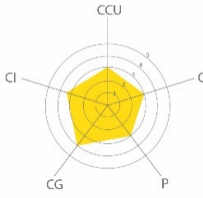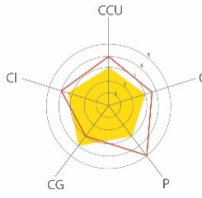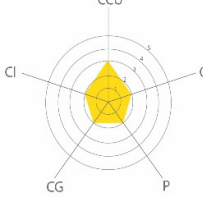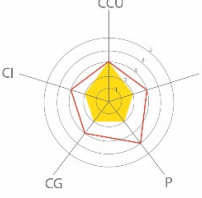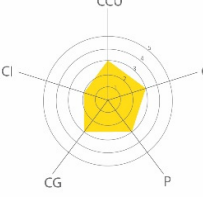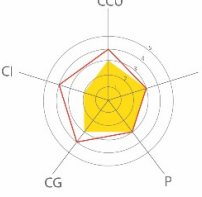
	Reflection in/on	Reflection for
	In-project check list	Post-project check list
Re:born Tie		

Criteria	This check list is to be completed as the student does the project.	This check list is to be completed after the project.	
	To grasp the current state of the design outcome.	To identify problems and to find a way to improve it for the future.	
	Evaluation	Strategy	
		Problem	Solution
Cross-cultural understanding (CCU)	Does this understand the different cultural elements? (Cultural construction concept, material practices and behaviour, not just simply combining patterns and colours). 1 5	N/A	

	Understanding of historical context of each culture.	1			
	Understanding of tradition and customs of each culture.	1			
	Understanding of locality of each culture.	1			
	Positioning motives of different cultures.	1			
Originality (O)	Newness	1	5	N/A	
	Function	1			
	Form	1			
	Meaning	1			
	Lifestyle				
Practicality (P)	Fit culture: Can this be used in our daily life?	1	5	N/A	
	Make: Can this be mass-produced?	1			
	Cost: Can this be produced at a marketable price?	1			
	User: Does it have a clear target?	1			
	Aspirational: Does this inspire the user for the better lifestyle?	1			
Universal design (U)	Can it be used in any places?	1	3		
	Can audience understand the cultural elements and ascendancy?	1			
	Does it deliver any universal issues or values?	1			
	Does it prevent cultural misunderstanding?	1		Because Korean Goreum is not well-known, audiences tend to link it to a different design of a bow tie.	Include introduction of Korean Goreum in the package.
	Does this have any cultural impact on each other's culture – either to encourage changing one culture upon the other or protecting one from the other?	1		Goreum is a unique Korean way of fastening clothes, but it is not reflected in the design.	
Cultural identity (CI)	Does it clearly represent both cultures?	1	3		
	Form	1			
	Material	1			
	Colour	1		Random choice of leftover fabric.	Using Korean traditional fabric with patterns and colours.
	Pattern/symbol	1		Random choice of leftover fabric.	

*1 (YES), ** Blue – Required to be filled by Students

Below is a brief representation of some of the other projects that were evaluated using the same criteria and methodology.

Table 3. A brief summary of projects - CCD learning reflective tool

	Project details	In-project check list	Post-project check list
1	Pin Heads (Cross-Cultural Design of Korean and Britain, 2011) Pinheads design motifs from both UK/Korean royal families.		
2	Sot Dae Infuser (Bon-Voyage, 2012) Sharing a folk story during tea time.		
3	Auto Veil-Well Wish (Tourism of the ordinary, 2013) A new types of wedding celebration.		
4	T:Cle (Entangled Cultures, 2014) A guidebook transform accessories.		

6. Validating the CCD design projects - feedback from public, press and participating students

Student's design results from the four CCD short course programmers were exhibited at *Designers block* and *TENT London* and well received by the public and press. We made a total 200 sales with 38 designs and got in touch with various buyers such as 'terre a terre', 'PEDLARS' and 'momowani'. Also, the designs were featured in various Design focused media in US and UK. For example The Cross-Cultural Design projects exhibited at *Designersblock* in 2011 were featured in *Arts Thread Blog* and the projects from Von Voyage were featured in *Coolhunting.com* in 2014. Based on this success, we are currently developing these prototypes into mass-market products.

After each programme, we had feedback sessions with all participating students. The feedback from Korean Students was very positive throughout the four years. They were generally satisfied about learning different design methodologies, including various types of hands-on and field research which focused on experience. Also, they found that understanding different cultures could open their minds to new ways of design. Indeed, as one students suggested, it enabled them to understand that design is "Not just about making pretty things [but] understanding people's life and lives" [Raju 2012], and another suggested, "Learn about new countries, cultures, and different areas of creativity" [Hyejin 2012].

7. The benefits of cross-cultural design education

Through Cross-Cultural Design practice, we showed that design should go beyond existing paradigms. Moreover, designers should create their own paradigm and be able to tell stories through their work.

Indeed, good design is complete when people use it. Therefore, the design should be able to attend to people's needs and desires. It should be a tool for change and not just to market and sell "lifestyle" products. As discussed throughout this paper, the main issue with Korean design education is that it is too centred on technology, and lacks user-oriented understanding and contextual sensitivity.

Based on the findings from carrying out programmes over a four year period, particularly by comparing Korean and British culture, the benefits of Cross-Cultural Design are summarised as follows:

Table 4. Benefits of cross-cultural design

Receiver	**Students / Designer**	**Developing global design capability. Self-promotion. New design possibilities. Networking and Wider spectrum of audience**
Provider	Teaching team (Educator)	More diverse teaching methodologies
Supporter	Government or organisation	Promotion of national culture. Improving national cultural identity
End-user	Consumers	Culturally interesting products and services, Universal design

The immediate and primary benefits are to those students and designers who receive CCD education. With the CCD method, students and designers can find new design possibilities, global design capabilities and a wider spectrum of audiences. Furthermore, they can attain self-promotion and networking skills based on cultural understanding and interaction. The secondary benefit is for educators providing the CCD education itself and for the government or related organisations supporting CCD. Educators can benefit from CCD because it helps to develop more appropriate teaching methodologies. Governments and related organisations can benefit from CCD because it can be used as a way of promoting national culture or design and improve a country's cultural identity. Lastly, the third benefit is for the consumer, who will actually use the finished products of CCD. In this regard, CCD can offer culturally well-rounded products and services for contemporary consumers who are becoming familiar with standardised global production, or want to express their own cultural identity. Moreover, CCD can contribute to the improvement of the universality and diversity of products and services. In this light, the programmes carried out and presented in this paper are extremely significant.

8. Conclusion

According to Jang Sanggeun, director of Gwangju Design Center, who is the head organiser of their short course programme, the CCD learning reflection tool used in the CCD short courses helped students to explore culture more as designers. Many participating students also said that using CCD learning reflective tools was easy to follow and helped them to carry out more significant, culturally relevant, and directed, or systematic design process. Moreover, they found that the whole experience of using the CCD learning reflective tool was not only about developing design, but also educational, and taught them which aspects of a design and cultural concerns needed to be considered for balanced Cross-Cultural Design.

One of the principal aims of exploring and formalising 'Cross-Cultural Design' as a design education method is to enrich culture and society through generating new cultural practices and the objects that support those practices. From our practical test with design students over the past four years proved that CCD reflective tool helps students to benefit creative synergies of differing cultural practices, objects and artefacts that emerge when multiple cultures collide and hybridise.

As we develop in an ever-expanding global society, the demand for designers to understand cultural differences is on the increase. The Cross-Cultural Design approach explores cultural differences whilst celebrating diversity by opening a dialogue between cultures through design. At the same time, 'Cross-Cultural Design', by respecting cultural diversity, also protects and enhances the current local cultures.

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