Lost in Translation: Teaching Product Design Across Cultural and Language Boundaries in China and the United Kingdom

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Abstract

This paper will explore strategies for transcending cultural and language barriers by two British design tutors when teaching in design studios at a Chinese university. Ian Lambert and Richard Firth, both based at Edinburgh Napier University in Scotland, have been visiting tutors at the Zhengzhou University of Light Industry (ZZULI) in China for three years and have recently been exploring the use of entirely visual design briefs.

The pedagogical differences between Chinese and British design education are widely known and the nuances of British design pedagogy, and even the most blatant differences, are often lost through the translation of verbal direction.

Pedagogic design communities in China and the UK are keen to share ideas on design education and innovation in industry. While such cross cultural design exchanges seem to focus on the export of western design and innovation philosophies, approaches to Chinese design education have also been imported back to the UK with positive results.

The paper will draw upon hands on experience and primary field research, including the experience of British design students on exchange in the China.

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1. *Introduction*

Since 2004, the Chinese government has supported the expansion of design education as part of the Closer Economic Partnership Arrangement (Lau et al., 2005 p. 72). There are now over 30,000 undergraduate design students in China; in 1985 there were only two hundred (Cheung-Nainby et al., 2006, p. 115). Recent estimates suggest there are over 500 design schools in China, with that figure predicted to rise to 1,700 in the next two decades (Rigby, 2007, p.24)

While design schools in China are increasingly adopting western teaching methods to foster the development of ideas and innovation and focus on process and design strategy (Gao & Ren, 2008), the Confucian pedagogic approach of learning by "rote" or copying/following the teacher is still prevalent. This *top-down* approach is continued in Chinese design companies were management structures are often patriarchal. By contrast, Western design companies are more likely to foster innovation through teamwork and creative thinking. Confucian pedagogy has its strengths in design education, as will be discussed and we are not attempting to assert that western design pedagogy is *better* than Chinese. However, following the teacher is not conducive to the development of innovation. Although China has a long history of technical innovation, the notion of Intellectual Property Right (IPR) has little influence there. Chinese manufacturers will happily make copies of other peoples' inventions – why pay for research and development when you can use someone else's? Rigby (2007) says, "China's products are popular but rarely original … While China is the workshop of the world, the design capability – that all important creative force – is still very much where it has been for a century, the US and Europe." (p.22)

It is no co-incidence, that in many Chinese university design departments, studio projects have had an emphasis on the re-styling of an existing design (outcome), rather than problem solving and user-centred design development (process), as may be found across the UK and is certainly the case on design programmes at Edinburgh Napier University.

2. *The Brief*

In April 2008, we travelled to China to teach Product Design for two weeks at the Zhengzhou University of Light Industry. The students were in their third year of a four year undergraduate programme based in the University's International Education College, and supported by tutors from the School of Art & Design. We do not speak Chinese, and while the students were concurrently learning English, the level was not good enough for teaching to take place without a translator.

We had become familiar with Chinese design pedagogy on previous teaching visits to ZZULI and through discussion with design professors there. Also, Edinburgh Napier product design students had

spent three months in the third year industrial design studio at ZZULI in 2007 as part of an exchange programme which continues today.

The challenge of teaching Chinese design students has nothing to do with their ability as designers or their capacity for learning, per se, but in communicating thought strategies across contrasting cultures. In bringing something from the UK, our aim was to teach design innovation by emphasising the *process*, through teamwork, brainstorming, idea generation, and quick prototyping (testing of ideas) with reflective practice.

Students were asked to design a suitcase that met international aviation requirements for hand luggage. This required them to undertake user-centred research that would inform the design process, and to make full size models to test and evaluate ideas. By embedding these processes in the project we aimed to ensure that the students could not succeed without their own information gathering and reflective practice, and enable them to take ownership of their own learning.

Design professors at ZZULI are progressive and forward thinking in their ambitions for design pedagogy and the purpose of our visit was to expose ZZULI students to western design thinking. Professor Gao Liang and Professor Ren Jian Jun of the ZZULI School of Art and Design, who have taught Edinburgh Napier students on the exchange programme had observed that British students were more "critical and reasoning" in their thinking and able "to go into more depth with their ideas" – or, as Gao puts it, "more scientific". By contrast, Gao and Ren believe Chinese students working alongside them were weak in critical thinking and reasoning, but more *"intuitive"* and also tended to have stronger skills in visualising the finished product. Both professors described the Chinese curriculum as having "very specific requirements" with an "emphasis on the outcome instead of the process… and this has to change" (Gao & Ren 2008).

This can be further supported by contrasting the experience of the students on the exchange programme between ZZULI and Edinburgh Napier University. The Edinburgh Napier design students, with no grasp of Chinese language at all, were placed in a studio where only a few students had basic English language skills. The Chinese professors, while very supportive, made little allowance for this – the Edinburgh Napier students had to determine what was going on using their initiative and respond accordingly. They would simply ease into the project and use sketching and modelling to help get their ideas across to tutors and peers. By contrast, the Chinese students who visited Edinburgh Napier would wait for instruction, and struggled with the lack of direct tutor intervention.

Gao, who had spent six months on secondment at Edinburgh Napier University in 2007, and Ren are both leading the changes in pedagogic strategy for design at ZZULI. Their own pedagogic research has resulted in four recommendations to change curriculum design (Gao & Ren, 2008):

1) To be more interactive in the teaching (to run both ways between teacher and student)
2) To change the role between the learner and the teacher – whereby teachers learn *with* the students
3) Train the students to think creatively
4) Assess the students from different perspectives other then a final test (or outcome)

It would be fair to say that these recommendations would be refreshing in any design school across the globe, but while Gao and Ren are progressive, they still have some work to do in making their ideas common practice throughout their own university.

In addition to differences in the cultural perception of design, we also encountered translation difficulties. Translation from English to Mandarin is not straightforward. Giving advice on a simple matter like making the edge of a form "rounded" only became clear to the translator when we said "curved" instead.

Further problems arose from the deep rooted culture of the student-teacher relationship. In the west, students are often encouraged to question and challenge pre-conceived ideas. But to question a teacher in China is considered disrespectful, and the students were uncomfortable in doing this with us. At the end of a design task, a group of students asked what to do next. We answered, "we want you to think for yourself." The students remained silent for a while, before asking "how shall we do it".[1]

2.1 Group Working

In British higher education, group work used in design as a means of fostering innovative teams or "hot groups" (Kelley, 2002, p.69). We quickly observed how the layout of the design studios differed to our own. In western design schools students face each other while in China students face the front of the room. We duly re-arranged the tables to enable group based learning (see fig 1).

With the students unaccustomed to this form of learning, we used Tom Kelley's guide to the *Perfect Brainstorm* (Kelley, 2002, pp. 53 - 66), to carefully explain the "rules" of brainstorming.

Figure 1: ZZULI design students brainstorm ideas as a group (R. Firth 2008)

Using this process, the students were asked to come up with 50 quick design concepts and make a short-list of 5 to take forward to the next stage of the design process (fig 1). We had to work hard to keep them going: at first, the students tried to use detailed fully rendered drawings to visualise each of their concepts, so we stopped them to re-iterate the need for quick sketching to speed things up. They immediately copied exactly what had been drawn on the white board – not what we wanted. With further perseverance they eventually produced some potentially good ideas. However, at the end of the process they still asked: "Which ones shall we choose?"

This inability to self-reflect cropped up throughout the project. Questions like "is this good", or "do you like this?" came up repeatedly, and it took time for the students to proceed without direct tutor feedback and make progress based on their own decisions. Sketching and sketch-modelling at full scale allowed for analysis and evaluation without the investment of time required for neat and detailed drawings and models (see fig. 2). However, it was difficult to get them to value a strong concept over what "looked good" which is what they had been trained to do.

Figure 2: ZZULI design students working at full scale (I. Lambert 2008)

In producing the presentation model, some groups were distracted by the superficial imitation of real life materials - surface decoration – which concealed the structure and detail, which in turn expose the *process*. In the final stages, the students had fallen back into their comfort zone of *outcome*.

3. Lost in Translation

Whether or not this arose from a breakdown in communication is unclear, but the translation – or what was lost in the translation - was one of our biggest challenges. Most of our translators were English language teachers who knew nothing of design education and were unfamiliar with the terminology: Trying to convey the subtleties and nuances of design detailing that can make or break a design, or explaining how an observation could lead to innovation proved challenging. Indeed, only very recently was it brought to our attention that the use of the word "work" to describe a student's design output did not make sense. "I think your *work* is very good," would be more accurately translated if spoken as "I think your *design* is very good."

Occasionally, subtlety and detail were lost in translation: after we had attempted to explain to a group of students how they could improve their design by going back to their original observational research for ideas, the translation merely came as "you must change your design." A few translators would also miss the point: after trying to assist a group of students in *independently* weighing up the comparative strengths and weakness of two of their designs, the translator asked, "…so which design shall I tell them to do?"

In spite of these challenges, many students produced a successful body of project work (designs) that compared favourably to the work of our own students. The students had developed designs from observational research which had taken place outside Zhengzhou Central Railway Station. Watching people sitting on their cases had led to integrated seating; people sleepily listening to mp3 players with thieves about led to enclosed access for the jack plug of earphones; watching two people carry a heavy bag led to two robust handles on either side of the case.

In just 9 days, each team had produced three full-sized models/mock-ups, which had been used (with guidance) as part of reflective process at each stage of the design development. To varying degrees they achieved the tasks required, and many recognised the benefit of user centred research in developing new ideas.

China will need innovation to underpin its' economy. Hester Abrams (2006) quotes Sir George Cox, Chairman of the UK Design Council as describing innovation thus "...the process of shaping ideas (design) links the generation of ideas, (creativity) to their successful exploitation (innovation) ... Creativity + Design = Innovation" (p.4). If this is the case for British Design, then for China it is the re-shaping of ideas and their *designers.* Chinese manufacturers need this to move their industry forward. The students had at least tasted a British approach to design education.

The students used rapid modelling to quickly assess and determine the suitability of design solutions and communicate their ideas and they generally agreed that in working as a team they had learnt how to generate and develop more ideas – this is innovation.

But the key question was, would they take these skills into their next design project after we had left? Answer: Probably not, unless *told* to do so.

3.1 No Translation
We returned to ZZULI in April 2009, and decided to revise our approach and exploit our visual skills, by entirely using visual briefs and only using translators to clarify basic requirements, such as when to return from a break or what materials to bring for the next day.

In November 2008 second year ZZULI design students in the International Education College had been given a two week project to design highlighter pens. The brief had been issued several weeks in advance of our arrival and at the start of the project we took the students through the brief in depth with the aid of a translator. Through the translator, the students assured us that they had already read the brief and understood what was being asked of them. At the end of the first week, the students began asking questions about the submission requirements and format for presentation. "But it is all

clearly stated in the brief" we replied. The same translator told us the students never read briefs. We were learning that sometimes "yes" means "no".

During our next visit in April 2009, the students were briefed in silence with a visual slide show. We ran two one week projects each for four different groups of second year students, requiring each to design:

- A highlighter pen
- A kitchen knife
- A tape measure
- A folding hair brush

These objects had been chosen as they allowed for user centred research and were of a manageable size to allow for iterative modelling. The slide show brief consisted of a sequence of tasks that make up a design process: research - design precedents and images of these in use; team work - images of students working together in brainstorming groups; idea development - rapid sketch development; prototyping and testing - model making; and visual presentation. At the end of the briefing, they knew exactly what to do without going through the onerous task of piecing together very specific terminology from a written brief. The students were able to follow the task and achieved in one week, what had taken two weeks on our previous trip.

We showed them how to *do* things by using visual demonstration to teach (see fig. 3) with a smattering of Chinese words, such as "kwai", meaning "fast", when sketching to help students achieve a confident and sensitive line quality.

Figure 3: Demonstration sketch of a highlighter pen for students (I. Lambert 2009)

Removing the need for a translator in the studio resulted in a stronger teacher-learner relationship in both an individual and group context. When a task needed to be carried out, we tried to explain it with images. At times, a kind of design *Pictionary®* was used. Figure 4 shows how we tried to explain that we wanted five pages of developmental sketching. The group showed a certain degree of delight as we addressed the room with drawing.
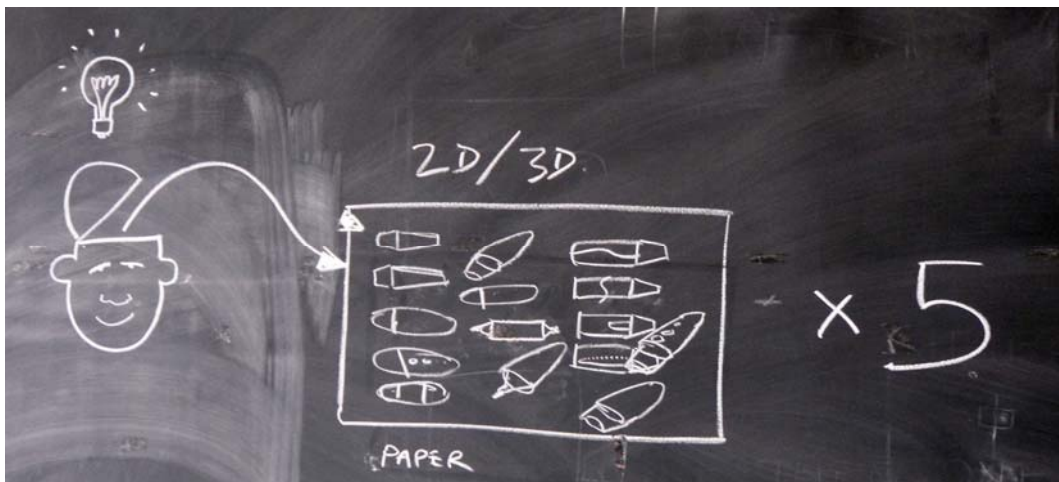

Figure 4: Pictionary® - Diagram asking students to produce five sketch sheets for highlighter pens, (I. Lambert 2009)

At other times, drawings were used to convey the possibilities for developing ideas through rapid sketching. Figure 5 shows four possibilities for folding away a hairbrush, which the students understood much more quickly then with the aid of a translator.
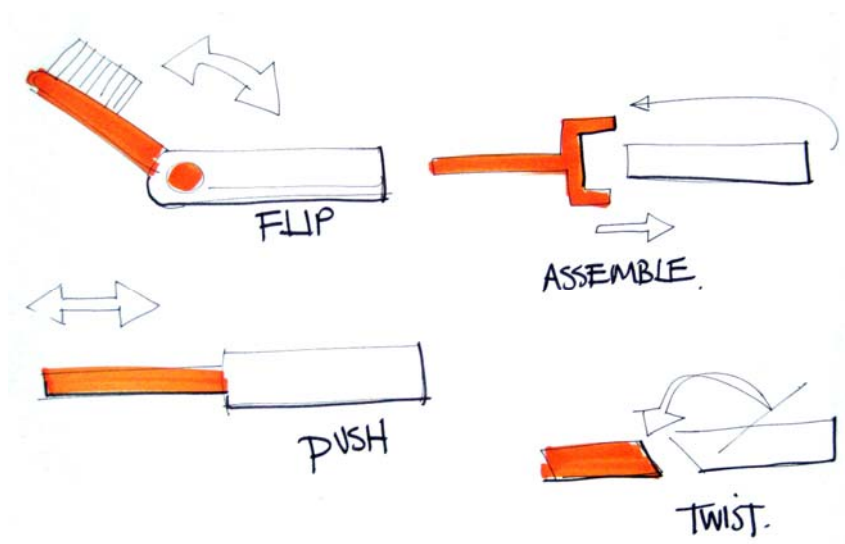

Figure 5: Possibilities for developing the design of a hairbrush (R.Firth 2009)

We could demonstrate sketching and drawing to large groups by relaying this by camera to the data projector and onto the wall (see fig 5). The group were asked to look at the screen and watch us draw

or make models. This helped them to develop the skills and to understand the process – by doing this they were, in fact, learning by rote.

Figure 6: Lambert uses an overhead camera to demonstrate drawing skills

In an earlier paper *Pencils Don't Crash* (Lambert & Firth 2006), architect Will Whimshurst, of Richard Rogers Partnership was quoted as saying*, "…* a quick sketch can transcend language in terms of the ability to convey relatively complex ideas quickly. Not to mention the fact that sketching is an international language…" (p. 407)

We were doing exactly that – using drawing as an international language.

It did not take long for the students to produce a range of outcomes with a higher degree of clarity and awareness of the process. We deliberately asked for models to stay un-rendered in order to avoid distraction from the process. Sketching was left as fast and informal and the students were encouraged to flick between sketching and 3D models in the development process. While the students worked on the their own designs after the research and brainstorming stage, they were encouraged to support and intervene on each others process to enhance the development of ideas. Figure 7, shows range of outcomes for the tape measure brief that have been driven by process.

Removal of the translator – the middleman – had increased efficiency and output, but above all, the quality of the student experience.

4. Conclusion

What we have shown is that teaching design without words can enhance the student experience. If visual learning has benefitted students in China, then we can assume it will benefit students in the UK.

We are, after all, teaching our students to think and communicate visually, and as the world grows ever smaller this process can be used to teach design to students from any cultural background. Our next step will be to take a wholly visual approach with students for whom English is their first language, and publish that experience as a purely pictorial essay.

4.1 What We Have Brought Back to Edinburgh Napier

Drawing by Rote. Chinese design students learn how to draw by copying their teachers, or from the drawings of other design professionals found on the internet. Many western design academics would question whether this approach would facilitate the necessary analysis and application of the basic principles of drawing: line weight, perspective, ellipses in their own work. We have already talked about the Confucian approach of learning by rote. Watkins and Biggs (2001) describe, in *The Paradox of the Chinese Learner*, the relationship between memorising (i.e. copying) and understanding, yet "[Chinese] students show high levels of understanding." (p. 5). In fact, our own students have repeatedly shown upon returning from three months study at ZZULI an improvement in skills for design sketching and have put it down to the Chinese approach.

Previously, we would not have entertained the notion of teaching drawing by copying the work of others. However, with this approach, students can quickly gain skills in the application of media and quickly build their confidence. We now introduce drawing skills in this way (see fig. 6) – but ensure that it is quickly transposed onto their own ideas.

Clear Instruction. Are our students really all that different? Actually, no. It takes quite a bit of patience and hard work to get our own students to embrace the notion of group work, even if they are very good at it by the time that they graduate – the problem in ZZULI was amplified by translation, but has forced us to use as simple an explanation as possible and in the end their students produced better work then we would expect of our own. For them to take their skills in to the next project is a matter for their own tutors and the work of Gao and Ren is extremely positive and promising in seeing this happen.

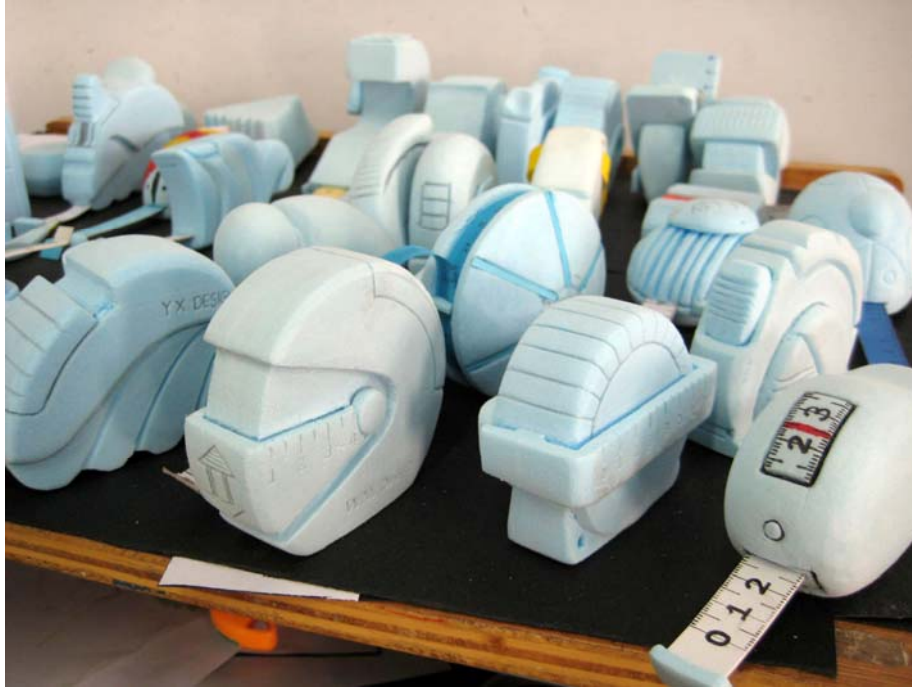It is fitting for us to conclude this paper with an image (fig 7).

Figure 7: Conclusion: Tape Measure Project - evidence that words are not needed to teach design (R. Firth 2009)

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[1] In introducing her paper Are Chinese Teachers Authoritarian, Irene Ho starts, "In Chinese societies under the influence of the Confucian culture, teacher authority and the suppression of individuality have deep seated cultural roots. As a result, teacher centred pedagogy and student compliance are still prevalent in many modern Chinese societies…" (p. 99)

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