Using Pictorial Exemplars in Two-Dimensional Design Education

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Abstract

This discussion paper describes the use of pictorial exemplars in two-dimensional (2D) design; how they help with learning and what factors or variables, such as positioning; deconstruction, explanation and guidance; discussion and feedback; motivation; and cultural aspects contribute to their success or failure. It also aims to highlight some of the discrepancies that exist between the perceptions of lecturers and students regarding the usage of exemplars. The word exemplar in this paper means a typical model from a particular genre of 2D design, for example packaging, advertisement, poster, corporate identity, etc., and is used interchangeably with the word example. Subjective qualities such as best, highest ideal or winner are not intended to be attached to the description of exemplar. Comments from experienced lecturers, design students and from referenced sources will be examined in this paper.

Keywords: Design, pictorial, exemplar, lecturers, students

1. Introduction

The impetus for writing this paper originally came from a discussion held with several colleagues at the School of Design, Curtin University regarding the pros and cons of pictorial exemplars as a teaching aid in two-dimensional design. It appeared from the discussion that although all the lecturers felt the use of exemplars of both professional and student work was beneficial, some were concerned that students were misinterpreting the intent of the exemplar. The lecturers involved in the discussion agreed to be interviewed for the purpose of this paper. To compare perceptions and balance the argument it was deemed important to obtain information from the student's perspective. The inclusion of relevant references from some notable sources was also considered important to this discussion.

Several students agreed to participate in informal interviews. These individuals comprised second and third year students of different gender and cultural backgrounds, who had been taught by the lecturers interviewed in this paper. The questions used for the interviews were open-ended and both lecturers and students were encouraged to voice their opinions. To maintain the anonymity of the individuals, all quotes from lecturers are indicated by the capital "L" and students by "S" included with the date the interview was conducted.

This discussion will include several important issues such as motivation and cultural aspects, however it should be noted that the scope of this paper limits the amount of information that could be presented. Both these topics would be worthy of an intensive research study.

Despite the increased use of visual examples for learning, there seems to be no widely disseminated framework or guideline available in professional literature to help 2D design lecturers assist students in learning information from these examples. The intention of obtaining this information was therefore, to discover if a set of guidelines could be produced to aid staff in the use of exemplars.

2. Learning through pictorial images

The depiction of ideas through visual forms or images has long been an elemental dimension in human culture. Visual forms range from cave paintings to moving pictures, cartography to electrical wiring diagrams and are used primarily to make and represent connections among ideas and concepts. They can be instrumental in helping an individual learn and retain understanding. Two-dimensional design is about pictures, graphics, words and other elements used to express ideas and communicate to people. For effective communication, the receiver must be able to construct meaning from the visual image.

It has been suggested in research that visual models of problem solving and visual thinking are often preferable to verbal thinking when it comes to the retention of information (Rowland, 1976). Indirectly images influence language, concepts, values and ideals by association. Clichés such as "feeling blue" and "on a wild goose chase" emphasises the part played by imagery in the comprehension of language. An image can depict a highly complex structure directly to the viewer.

Einstein's description of his own thought processes confirms that some creative thinkers use images rather than words:

> The words or language as they are written or spoken do not seem to play any role in my mechanism of thought. The physical entities that seem to serve as elements in thought are certain signs and more or less clear images that can be voluntarily reproduced and combined…. [These] elements are, in my case, of visual and of muscular type. Conventional words and other signs have to be sought for only in a secondary stage, when the mentioned associative play is sufficiently established and can be reproduced at will (cited in Rowland, 1976, p.45).

Harry S. Broudy (1987) adds to this argument when he cites Allan Paivo in the book *The role of imagery in learning*; "Imagery is centrally important in facilitating long term retention, at least in adults" (p. 11). It must be noted that the students referred to in this paper are essentially adults and therefore, visual teaching aids will be considered beneficial.

Another factor that needs to be addressed is whether students have the necessary skills to read images in an appropriate manner. There is a commonly held belief that learning from visual forms is an easy skill to master, but this is not the case. Visual learning can be at least as complicated as text learning in that it needs a system of order and guidance to read the image. As Rik Lowe (2001) points out, "People tend to over-generalise about the accessibility of the information presented in pictorial form and assume that all images are easy to understand. Recent research shows that when students think they understand an illustration, the meaning they develop can be very different" (p. 1-3).

The study of visual literacy does not seem to be formalised in pre-tertiary curriculum despite the current proliferation of images in our environment. It is possible that most people spend very little time analysing images because visual literacy —the ability to read images — is often seen as inferior to the written form and is therefore, not encouraged or taught at school. As a result, it cannot be expected that students who enter a visual discipline would have this skill.

> At the moment, our theories of meaning (hence our dominant theories of cognition) are entirely shaped by and derived from theories founded on the assumption of the dominance of language. Meaning is in fact identified with 'meaning in language'. This constitutes a major impediment to an understanding of the semiotic potentials of, among other modes, the visual and its role in cognition, representation, and communication (Kress, 2000, p. 159).

3. Defining pictorial instructional design

Pictorial instructional design uses images to illustrate all the components in a process and how they interact. Many pictorial instructional designs are portrayed as a diagram, flow chart or as systematic instructions. In the book, *Educational illustrations,* Ric Lowe (2001) analyses the use of pictorial images as a learning tool across a wide range of disciplines and his suggestions for the design of instructional illustrations are noteworthy, however learning to demonstrate a scientific experiment is not the same as learning to design a corporate identity. Lowe states, "Graphic characteristics [used] for depicting the subject matter may influence the way that learners approach the matter" (p. 1-24). Since one of the principal objectives for design students is to understand the influences of these graphic characteristics, the purpose of some pictorial images in design education is different. Students have to understand the language of visual communication before they can create designs for others.

Exemplars are often used in design education to illustrate how design elements can interrelate and visually communicate to an audience. A diagram or flowchart works in a similar way, however the reading of an exemplar can be more subtle and difficult because it may communicate on a number of different levels. Pictorial instructional design is generally thought of as examples that show finite answers. For example, the purpose of a medical image might be to illustrate a complex problem or to describe a particular organ's location. A medical student would not be expected to make judgements or comment on semiotic meaning.

In design, an exemplar is often used to expose students to the concept that design solutions are infinite rather than finite. Exemplars portray through an arrangement of elements — use of design principles (line, colour, shape, texture, etc), words and visual forms, — the range of ideas that can be produced by different designers.

4. Use of pictorial exemplars in two-dimensional design

In design education, unlike many other disciplines, there are few benchmarks. In an aesthetic realm, the criteria are subject to variations in aesthetic theory. Only in the area of production can benchmarks be set. "I use exemplars for production values in order to explain that there are certain benchmarks and qualities expected to be met in this unit" (L0204). Although production is a large part of the design process, it is not considered the most important aspect. Fundamentally, the designer's ideas are the primary commodity. The use of exemplars therefore, is common in the discipline to show the variety and breadth of ideas that a designer can produce for a specific design problem. "The advantage of using an exemplar is to allow [students] to have comparative measures and an understanding of how other approaches are taken" (L0804).

> Educationally, it is a truism that to teach concepts without perceptible examples will be hard even for learners with good intellects. The more abstract the subject, the more perceptual examples, designs, and illustrations are needed for the production of insight (Broudy, 1987, p. 28).

The study of design is a good example of an abstract subject. There is a certain degree of vagueness implicit in the rules of design. It is not a precise science. Phrases such as judging spatial relationships in typography "by eye," express this vagueness. This is not to say that teaching design is about misleading or confusing the student. To express that a piece of type needs to be spaced "by eye" merely means that there is a recognition that the actual fitting together of the components (letters) is up to the individual's perception and experience. Powers of observation have to be developed for design students to be critically aware of subtle nuances such as the spacing of type.

Imagine trying to teach design students to understand visual concepts such as line, shape, colour, texture, figure/field relationships, etc. without visual exemplars. In typography, it would be extremely difficult to verbally describe the internal shape of a letterform from a particular typeface without visually showing it, concepts that students learn to recognise through seeing and doing. Pictorial exemplars are far superior in explaining those concepts you would like a student to understand and use. Edward de Bono (1967) in his book *The use of lateral thinking* states: "The visual language of thought makes use of lines, diagrams, colours, graphs and many other devices to illustrate relationships that would be very cumbersome to describe in ordinary language" (p.67).

One of a designer's dominant considerations is the impact of perception and the impetus it provides for the creation of a design (Coleman, 1964). The foundation of the study of perception is known as Gestalt psychology. "Perception is the mental realisation of the source and the conception is the process of transforming that idea into visual terms through design qualities (Coleman, 1964, p.49)". Broudy (1987) adds: "That some learnings [sic] involve the discernment of a pattern or design, as the Gestalt psychologists insist, is of prime importance to the role of imagery and imagination in learning" (p. 10).

According to Broudy (1987) the skills of aesthetic perception are as follows:

1. Sensory – perceiving the vividness and intensity of features that convey the affective qualities of colour, shape, texture, values etc.
2. Formal – composition, balance, repetition, rhythm, contrast, hierarchy of elements.
3. Technical – merits of the object or skill with which it has been carried out.
4. Expressive – the import of the message as aesthetically expressed (p. 48).

According to the lecturers interviewed, design students need to be taught to how deconstruct an exemplar in terms of process, design principles, production values, historical, political and cultural contexts and message, as well as recognise its aesthetic qualities. These learning objectives are similar to the description of aesthetic perception skills above. As Broudy (1987) supports: "The act of deconstructing an example in terms of skills of aesthetic perception, is important to designers in order for them to be competent image makers" (p. 51). The following quotes identify a variety of purposes for which a lecturer might use exemplars:

> If the project is for a product like Colgate toothpaste I might go back to the oldest advertisements and discuss their relevance in a historical context in order to show why this would no longer be relevant or current now (L2604).
> Visual exemplars are appropriate to teach students what has happened in the past in order to enable them to apply the process to contemporary problems (L0204).
> Sometimes I use exemplars to show production values or for idea generation (L2504).
> I show exemplars to demonstrate relationships between the elements. In advertising, it's not important what the actual headlines and pictures are but what is the dynamic between them. Are they compatible, contrasting? Is there an element of cynicism or sarcasm created because of the juxtaposition of elements? (L0204)
> Design goes in fashion circles. It is appropriate use exemplars in order to expose students to the current tastes and make them aware of the aesthetics of a piece because it is quite possible that they will have a future client who wants to project themselves in the latest style, be seen as cutting edge or a trend setter (L2904).

Aesthetics play a large part in the communication of a design artefact (poster, advertisement, corporate identity, etc.) and can contribute on a number of levels — both logically and emotionally. This communication is dependant on the individual responding to the design artefact. For example, a corporate identity can communicate on both a logical and emotional level. Different individuals may respond to the same corporate identity for different reasons. The colours invoke an emotional response due to one person's experience or personal bias. The shape may invoke a logical response in someone else for very much the same reasons.

> No two persons will have exactly the same perceptions. Each person sees things differently because of experience, interests, the impact of subject matter, and the meaningfulness of the source at the time of the observation (Coleman, 1964, p. 27).

Design students need to understand the importance of aesthetics in relation to the perceptions of a target market. "If a student is designing an annual report for the finance industry then it should relate on an aesthetic level and communicate to that particular sector of industry" (L2604). The learning of aesthetics is hard to measure because it is an abstract concept that relies both on the student's and the end user's perceptions and experience. This can only be achieved from exposure to and explanation of pictorial exemplars that are contextually framed. The issue of context caused one student to comment that, "An insight into the target audience of the examples would help because it would give us reasons why it was so successful in its communication and its aesthetics when it was produced" (S2704).

5. Contributing factors to the success and failure of pictorial exemplars

5.1 Positioning

The nature of a design project can affect the positioning of an exemplar. If a design project exclusively concerns a mechanical process such as producing a colour wheel where each individual follows the same process to achieve a similar result, then logic would suggest that exemplars were shown during briefing. This would dispel any confusion about the brief and the lecturer's expectations. With design projects that deal with solving problems, then the positioning becomes a more debatable issue.

> I think it is disadvantageous to use exemplars at the beginning of a project because it predisposes the student to take particular directions (L1804).
> I avoid showing students exemplars until their own ideas are formed and developed so they don't go ahead and produce predictable outcomes (L2904).
> I think the problem with showing some students exemplars up front, is the students having a preconceived notion between method and outcome. For example, the student thinks that the exemplar is showing them the way to do something in order to achieve the answer and that these exemplars are a finite set of answers (L0204).
> I tend to show exemplars at the end because of the problem with plagiarism. I don't want students to just copy that particular style because it was shown (L3004).
> I think that showing examples at the beginning just gives them the answer (L1004).

Many lecturers claim that experience has taught them that the most appropriate placement of exemplars for problem solving design projects is after the student has begun generating solutions for themselves. 'Placement is judged by my own experience and depending on the type of assignment, i.e., you try it one way and see that didn't work and so you try it another way and that worked better and so you guide yourself accordingly" (L2904).

The lecturer's consideration of the positioning of exemplars for different types of design projects shows an attempt to understand what works in a given situation. Some students however, do not understand the motive behind these decisions. This is noticeable in these comments:

> I prefer the examples at the beginning [of a project] because it tends to kick start you and give you a guide (S3004).
> Positioning at the beginning helped me figure out and clear up any issues I had with the brief. It didn't persuade me or stop me from taking any particular direction (S2904).
> The lecturers are the one's who are marking us therefore; they should show us the examples up-front. It's mean of them to withhold information in order to catch us out (S2604).

Some students agreed that the positioning of an exemplar for a problem solving design brief was more appropriate further into the project.

> Generally, I think it is good seeing exemplars of possible solutions, but I do not think it should be shown at the beginning when you are given the brief. I prefer having just a blank canvas with no ideas in my head (S1804).
> I think the second week should be used for showing examples so that I can look at my own ideas in comparison (S2704).
> Visual examples are appropriate after you have done your own exploration (S0804).

It must be noted however, that the students who agreed with lecturers about positioning exemplars later in a project cycle were at the end of the three-year course and could look back in hindsight. The students who felt that positioning was more appropriate at the beginning were generally half way through the course.

5.2 Deconstruction, explanation and guidance

Many of the problems that concern the use and understanding of exemplars relate to the deconstruction and explanation process. In design, the deconstruction of an exemplar is important in order to understand the multiple layers of meaning. "Rather than hoping that learners will somehow be able to discover a productive path through an illustration…. it would make more sense to give [students] explicit guidance, in the sort of things they should look for and what sequence they should use in their exploration" (Lowe, 2001, p. 4-32). Many of the lecturers quoted in this paper felt that the current level of guidance, deconstruction and explanation was appropriate. Here are some of their comments:

> I can't see a better way to deconstruct exemplars than how I am doing it. In advertising, I tend to deconstruct every advert I show them and have a whole briefing session [3 hours] on how to do that (L2604).
> I deconstruct the exemplars in terms of categories and highlight what is relevant and that seems to work (L1004).
> I give repeated showings, reminders and I explain as long as it seems necessary and useful (L2904).
> I try to guide the student's thoughts towards how the problem was solved. What made this piece relevant and what the designer could have been thinking? This method has worked best for me (L0804).
> If you don't deconstruct that's when the students start copying (L2604).

Students, on the other hand, had a different perspective. Generally, they felt the deconstruction process and explanations from lecturers were either non-existent or didn't go deep enough. These were some of the students' comments:

> Fifty-fifty unexplained to explained. Sometimes examples are just flashed up. I've found it reinforces the example if it is explained why it is up there (S3004).
> It would have helped if the piece was deconstructed into certain areas such as message, composition, design elements, etc because then we would understand what we were looking at (S2604).

> Usually I've found the deconstruction process a bit shallow, but at least it's starting the process (S2904).
> Sometimes we were shown examples without explanation and I had to make up my own mind on whether it worked or didn't work. It was based on my own opinion and I felt I didn't know enough yet to make that judgement. (S2704).
> When examples were explained it would have helped if I knew what aspects worked in the piece rather than a general overview because sometimes what's good about it doesn't always apply to the entire design, but aspects of it (S0804).

These comments highlight a discrepancy between staff and students relating to the deconstruction and explanation of exemplars. According to student feedback, lecturers needed to be more thorough in explaining exemplars even though most lecturers believed that they had been. It seems that most students do not explicitly understand the value of exemplars and their content.

Some design lecturers admitted that they did not spend a great deal of time explaining an exemplar. "I should explain examples in more detail than I probably do. I sometimes rush things. I think in principal [lecturers] should spend more time but there is a fine line between over-explaining things and having some [students] switch off and others needing more time' (L2904). This concern for over-explanation was also voiced by another lecturer, "I think there are times when you over-explain the exemplars and [the students] get confused" (L0204).

It can be assumed that a clear understanding of an exemplar's attributes would allow design students to organise the information more rationally. As Lowe (2001) illustrates: "There is a need when presenting instructional illustrations to give students more explicit guidance about detecting and interpreting these perceptual cues" (p. 4-9). Many students however, believe that lecturers often use examples as something to put on screen, as they are talking and sometimes only with a tenuous link to the information. Few lecturers seem to explain in enough detail, for enough time, the relevance of the exemplar.

> There have been a couple of times where I've been shown examples that I didn't understand because they were too old and dated for the brief and I couldn't see how they related…. There was no explanation of the context of the period when they were designed (S3004).
> Generally, we were not given enough time to view or learn anything. It's normally just a quick flick through (S1804).

Lowe's (2001) statement that, "the decisions to use images for instruction is often based on intuition and therefore lacks the necessary clarity of thought" (p. 4-32); suggests one explanation for this discrepancy.

> When information is viewed, it needs to be taught using a framework similar to what is used with information that is read. With a pre-, during and post-phases to the lesson students are more likely to learn (Flood, Lapp & Wood, 1998, p. 300).

5.3 Discussion and feedback

It has been suggested in some research that recall is enhanced in students who are encouraged to discuss and review information provided in lessons (Kiewra, 1985, p.73–77). One strategy that has been considered by all individuals interviewed was the provision of a structure to encourage student to lecturer and student-to-student discussions. When viewing an exemplar using a structured discussion technique, students could gain the necessary personal and theoretical distance, constructively analyse, account for cultural context and creatively extend and apply what they have learned. Without sufficient structure, viewing exemplars could possibly deteriorate into a passive activity bereft of learning. All participants interviewed regarded discussion as being significant for the comprehension of an exemplar. Several students commented:

> With group discussions, I've found that the students come up with issues that the lecturer hasn't brought up and you wouldn't have noticed by yourself. That's been a big help to see other's points of view than just the lecturers. Through discussion you get to see others perceptions. (S3004).
>
> With a discussion, you get different opinions and it is interesting to hear what other students think. It helps to see why other students do or don't like a particular piece and whether these thoughts are relevant to our learning (S2704).

A structured discussion may provide helpful feedback for a lecturer to gauge the success of the deconstruction process and explanation. A lecturer who used a structured discussion technique reported:

> When using a structured discussion format I also look for feedback in the group for acknowledgement that the group understands what we are looking at and why. If I don't get that acknowledgement then I am inclined to discuss it further (L0204).

Other lecturers who had not used a structured discussion technique also saw the benefits:

> If you get them involved, then by the language they are using or by the way they are deconstructing and at what level, you'd generally get an idea of their level of understanding and this would be an advantage (L2704).
> I've noticed that the students are a bit reticent to discuss amongst themselves so a structured discussion would be good. Perhaps getting them to write down stab points, this could be then used as key points for discussion. That way I could assess whether they were on the right track (L1804).

The success of a structured discussion would largely depend on the size of the group. The smaller the group the easier it is to implement and obtain valuable feedback. With a large group, it would be difficult to assess the success of the deconstruction and explanation of an exemplar, as one lecture explains:

> In a large lecture, where you cannot logistically hold structured discussions, you can use as much oratory to explain. But there are going to be individuals within that group, because of language difficulties or not particularly paying attention that you just cannot check on because of the numbers. They will perceive the exemplar differently and walk away from the lecture with the wrong thing in mind (L0204).

5.4 Motivation

In a culture dominated by television, video and computer games, lecturers need to be aware that some students may tend to view all images casually rather than critically. Lowe (2001) argues that pictorial examples are being viewed in a "superficial, holistic way rather than being studied in depth with a more analytical approach" (p. 2-13). This is reinforced by a student's statement: "When I am shown examples I sometimes just look at the face value of it, whether I like it personally" (S2704). This may be because the exemplars were not fully explained. It may also depend on a particular individual's experiences or innate learning style. "Sometimes students don't understand what it is you are communicating not because it is not explained fully but sometimes it may be the case that they just don't care because they are extrinsically motivated i.e., looking for maximum return for minimum effort" (L0204).

It must be highlighted when discussing innate learning styles in co-junction with teaching that these are both very important factors. Students' motives must be considered— the impetus for why they are doing what they are doing — as well as the effectiveness of the lecturer's explanation. Communication is a fundamental aspect upon which curriculum should be developed. The difficulty of this task often depends on the student's motivation and most educators would agree that this is of enormous importance to learning. "Each student will understand material presented differently, depending on [their] background knowledge, readiness to learn, interest and motivation and other factors" (Birenbaum & Dochy, 1996, p. 8).

Certain issues regarding student motives have been raised by a number of staff. These suggest the possibility that exemplars could be a disadvantage for certain individuals.

> If the student isn't exactly sure of what you are doing and they are particularly extrinsically motivated, they will be looking for the shortest possible route to the outcome. Students like this quite literally look at an exemplar as a holistic example of what the answer should be (L0204).
> Some students complain lecturers are being unfair if we don't show exemplars upfront but these students don't have the wisdom to recognise our motives. In the end it's not about fairness and unfairness, its about learning and as long as they are fixated on 'it's not fair', it becomes very counterproductive (L2904).

> If a student is aiming for minimum effort for maximum return then they'll just look at the examples for something to copy (L1804).

> When students ask to be shown exemplars upfront, it has a lot to do with their motivation and lack of understanding in the point of the project. It shows a lack of personal equity in the design process. This is a student telling us, 'I want to devolve my responsibility and I want you to tell me what I'm supposed to do, what I'm supposed to get, how I'm supposed to get there and what I'm supposed to take away from it.' This attitude completely devolves the individual from any aspect of the learning process and anything they do get at the end will be valueless because they've invested so little in the first place (L0204).
>
> The decision making process is usually defined by guiding criteria within an individual. In an absence of self-determined criteria for making a decision some students will default to whatever criteria are there and the one thing exemplars do is provide this criteria and this will act as a beacon for them to copy (L0804).
>
> It's the marking mentality of students who believe if they have an ideal to aim for then they could achieve better marks. The mentality of, 'if you don't show me how to do it, then I'll never learn'. But this is not our job. Our job is to allow them the freedom to experiment and explore with some guidance of the process (L2604).

The concern about students being motivated by marks, "getting the right answer" and finding the shortest route is exemplified by some student's perceptions. These were some second year student's comments.

> I think that [the exemplar] is there to show you what to aim for, what the lecturers expect (S3004).
>
> Because the problem set was something I didn't understand it helped to have [exemplars] to see what was expected from us (S2604).
>
> I like seeing the end product because it gave me ideas on how to solve the problem (S2904).
>
> I found [exemplars] help rather than expecting us to work it out for ourselves, because you waste so much time and we don't have that much time" (S3004).

Some third year students responded differently:

> There has always been an understanding not to use or copy an example (S2704).
>
> I've been told that these examples are what others have done and we need to come up with our own ideas. I've always understood that (S0804).
>
> Design briefs can be interpreted a zillion ways. The exemplars are only there to show some of these ways. I prefer to come up with ideas that are completely different to the ones I've been shown (S1804).

The discrepancy between the comments of the second and third year students may have to do with motivational aspects students experience during their course. Perhaps some second year students have not yet come to terms with the expectation of self-motivation and independent learning, which are characteristics of university education. Third year students seem to benefit from the learning value of retrospection.

5.5 Cultural aspects

Although using pictorial exemplars might be considered an advantage for teaching concepts to groups of students who have different spoken languages and cultural backgrounds, the cultural aspects may also contribute to their failure. As Biehler and Snowman (1997) point out: "Ethnic differences in communication patterns and preferences, values and thinking styles can lead to misunderstandings among students and between students and teachers" (p. 156). These differences might be attributed to overseas students; misunderstanding the accent and intonation of the lecturer; having to adjust to new modes of thinking; a fear of making mistakes; possible cultural variations in participation techniques and expectations; being unaccustomed to independent academic thought; and being accustomed to learning by rote. The following comments highlight the effects of these problems:

> When we show Asian students exemplars of the end product, some of them are more likely to project [the exemplar] against their own project and believe that that is the outcome [lecturers] expect. (L0204).
>
> Overseas students tend to focus on what they think an academic wants and therefore tend to see exemplars as being a guide for the answers (L0804).

> I think many overseas students can't understand the language and are loathe joining the discussion in case they make fools of themselves. Because of this, we cannot often get feedback on whether they've understood. (L2904).

> In terms of reference, I'm sure that a visual analogy or exemplar is so much easier for overseas students to understand the general rules. The problem is though, that I've asked them to understand it in a western way because of the choice of examples and so they end up having my cultural interpretation of it (L0204).

Using pictorial exemplars with a western bias may be disadvantageous for some overseas students, especially those coming from Asia. As one student pointed out, it may be difficult for them to understand the cultural context of these examples:

> It would be wrong for the lecturers to judge Asian students as lacking in intelligence just because they don't understand the exemplars being shown. The Australian students have an advantage of understanding the cultural context of what they are seeing whereas the Asian student needs a greater learning curve to understand them. It would be like comparing an amateur with a professional. They are just not on the same level (S2704).

It has been recognised by some universities that academic courses need to respond to the requirements of international students who now comprise a significant percentage of the student body. One lecturer concurred, "If you are lecturing you need to be more sensitive to the cultural mix of the group, because nine times out of ten, there will be a large contingency of overseas students" (L2604), as did a student; "Lecturers need to be more open-minded to other cultures because a lot of these students are here and want to go back and work in their own countries" (S2704).

Both lecturers and students interviewed raised the issue of cultural differences and gave their outlook on how this could be addressed. The following comments illustrate the lecturer's opinions:

> Because of the mix in cultures, we have to look further a field in the sorts of examples we use, otherwise what we are trying to do is teach western style design to students who have an eastern style orientation (L2904).
> Showing examples from different cultures would give the Australian students in our course an idea that design is not all about what happens here, it's what happens in the rest of the world (L3004).

Many students ask to be exposed to a more culturally mixed selection of examples. Here are some comments that highlight why they think this would be an advantage:

> I think it would be good to have a diversity of examples because I'm looking into breaking into a different market and it's harder to position my portfolio towards an Asian market because all I've been exposed to is western biased examples (S2704).
> I'd like to see more examples in context to the cultural background of all students. It would be valuable for those of us who do not intend to work here (S3004).
> It would produce more interesting designs, if we could draw elements from culturally different design examples and mix it in with our culture. A fusion look, which is very popular now (S1804).

Providing examples from other cultures may seem like an obvious solution however, as one lecturer pointed out is not a simple task:

> I think part of the problem is that we use British, European, American and Australian examples that are often alien to the Asian culture. We should find more culturally appropriate examples but the problem with finding examples, which we understand on both the aesthetic and cultural level, is increased by our own lack of knowledge of their significance and relevance to the overseas student (L1804).

This problem of lecturers finding the time to study the vast number of cultural backgrounds in order to select appropriate teaching aids could prove difficult. One student however, had an interesting suggestion:

> I'd like a better mix of multi-cultural lecturers. It would be beneficial because we would be able to see and experience different perspectives on what was appropriate dependant on the culture. It would make it easier to believe because [the multi-cultural lecturer] would have had a real experience of that culture (S2704).

6. Conclusion and recommendations

It must be realised that the primary use of exemplars is to explain the principles of design and its context, not to teach the student the elusive quality of creativity. Creativity cannot result from merely discussing visual methods or viewing exemplars. The value of exemplars could however be increased by a better method of utilization.

There was agreement from all participants that deconstruction and discussion were the most significant phases needed in understanding exemplars. As mentioned previously, the success of this depends on small class sizes that enable careful in-class reasoning of the problem exploring process. An obvious recommendation would be to decrease the number of students. Most university courses no longer have the luxury of small student numbers. The lecturer has to choose between "switching off" some students by over-explaining the exemplar and under-explaining and making students feel insecure and confused.

In terms of positioning exemplars, the discrepancy between the comments of the second and third year students is of interest. Perhaps the third year students understand the lecturer's reasons for the positioning because they have the benefit of experience. The difference may also be due to maturation and adjustment to the university teaching culture. Becoming accustomed to different learning expectations takes time and can be particularly difficult for overseas students.

The primary criticism from students is that some lecturers do not explain and clarify the exemplars in terms of their cultural and historical context. Experience tells us that if a student feels secure in their comprehension of examples, they are more likely to freely extend themselves in diverse design directions. This confidence is a highly desirable attribute for a design student to possess. We need to make sure we also show and understand exemplars from different cultures to be inclusive to our overseas students.

The comments in this paper indicate, that when an exemplar is insufficiently explained the student responds insecurely, or with a false confidence rather than with objectivity or optimism. This identifies a need to clarify, convey and expand the body of knowledge that an exemplar can contain and establish a more consistent and effective method for their use. This need could be addressed by producing a set of guidelines for staff on the use of pictorial exemplars as teaching aids. These guidelines could be particularly helpful for those individuals who write and prepare material and may also be new to teaching.

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