

Design in the world kitchen – A case study in multi-national collaborative design education.

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ABSTRACT

This case study describes an Industrial Design project concerning the kitchen, its environment and the products within it. The consuming and preparation of food as a unifying feature of humanity was chosen as a topic to both bring together students of diverse nationalities and at the same time expose any cultural contrasts.

The project involved students of Lulea Technical University in Sweden, the University of Northumbria, UK and Monash University, Australia. The purpose of the studio activity was to advance multi-national creative team working and expose undergraduates to new cultural experiences outside their normal environment. The project took place in three distinctive phases. Firstly a research investigation within the bounds of the students' home institutions and countries. A second phase hosted by Lulea Technical University in which research material was synthesized into targeted design briefs and finally a third phase, the configuration of physical design outcomes hosted by Monash University at the Prato Centre in Italy.

The project is indicative of the 'studio' mode of teaching and learning but with the heightened level of experience in placing the student within an 'alien' but stimulating environment rich in cultural heritage. It was speculated that this period overseas might have the most influence upon the learning experience during activities requiring a great deal of creativity. The project also enhanced team based co-operative learning at an international level between individuals and institutions that, the authors would hope, would prove central to a young designers' education. This case study examines the nature of studio practice in Industrial Design education; the influence of the environment upon that practice, the dynamics of multi-national groups, the process of the project, the results of the undergraduate research and finally some observations resulting from the activity.

1. BACKGROUND

Industrial design concerns itself with the planning, evaluating and creation of objects where by the needs of the human being are central. And those needs are responded to at a number of levels from the visceral to the behavioural. In the four-year bachelor undergraduate degree offered at Monash the program seeks to educate and train professional Industrial designers

confident in their contribution to the field through high quality visual expression, usable, safe products produced by economic and efficient means. The experiential activity of designing to solve problems is a distinguishing feature of 'Studio' education. The studio learning experience, whereby students work, thinking, drawing and making to realize solutions either collectively or as an individual has been used for very many years. It has been a successful cornerstone of the industrial design program both at Monash and at overseas institutions.

Typically, industrial design projects are multifaceted with variable and open-ended outcomes that encourage students to have a heightened responsibility for their learning. Cultivating innovation is the sought outcome and synthesizing what we call 'design thinking' as an effective tool for attaining those high levels of innovation. Evidence of the relative merits of this approach comes from the results of evaluation surveys conducted over recent years.

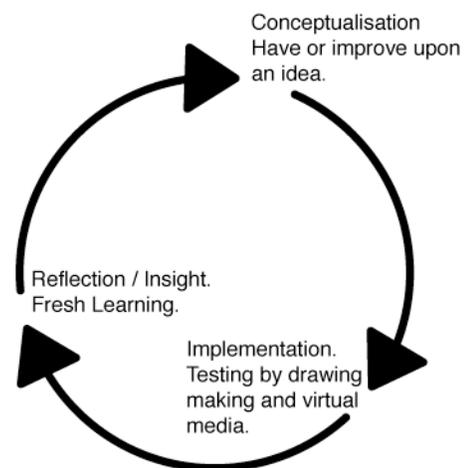


Fig.1 The Learning Circle in a studio context.

Fig.1 shows the classic stages of the 'learning circle' in which students apply thinking skills to conceptualise an issue and then experiment by making. Lecturing staff then bring their experience to assist the student in reflecting upon their outcomes in order to re-conceptualise and refine their design thinking further.

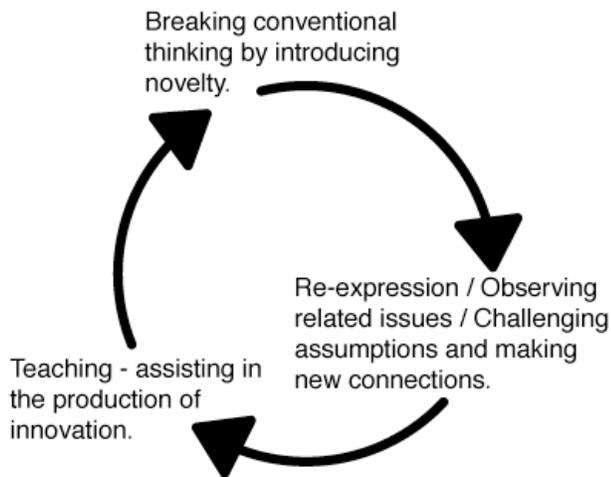


Fig.2 A modified circle demonstrating the practical measures adopted.

The loop is re-expressed above in Fig. 2 with more detail illustrating the actual techniques employed at each stage. Conceptualisation is the formulating of innovation or what we might term as ‘novelty’. This is done by bringing otherwise disparate information together to form new patterns either in functionality or physical form. Such outcomes could be through the observation of related matters in another area of endeavour or challenging convention, but all in some way making new connections. The ‘cultivation’ of these connections is supervised by the intervention of teaching staff.

A. The Effect of Physical Space

There is a body of research (Csikszentmihalyi 1997 & Boyes 2005 et al) that suggests that student learning is affected by physical place. An effective learning environment, physical, social and psychological supports the task at hand and encourages learning and teaching. It would seem few students are immune to the impressions that impinge on the senses from the outside. The working context in which particularly creative people live and work has consequences upon the production of innovation as well as its acceptance. This, it is suggested, might account for the creation of clusters of creative individuals that gravitate towards centres of design activity at certain places and institutions. This is certainly evident of such regions in the world such as Scandinavia and Italy. These are the locations that created a contextual background to the ‘Kitchens of the world’ project and imbued a historical design culture that may in fact help students see situations holistically and from novel viewpoints.

B. Centres of Design Activity

The professional practice of Industrial Design is not distributed evenly around the world but appears to gather intensity in different geographical regions. To enrich the learning experience Australian design students need to access these practice-rich areas. Part of the rationale for undertaking this collaborative project was to experience how different locations appeared to influence the creative process. During the early preparation for this project students were living in their home countries and working at their own institutions gathering elements from which a specific design problem was to emerge in a familiar environment without the distractions of new cultural experience. Issues and observations concerning a problem were therefore able to incubate.

C. Connections with new stimuli

Once the student groups met, the distraction of new stimuli and new environments facilitated creative thinking to make connections that were unlikely within an environment of everyday experience. As elaborated upon earlier from unexpected connections new insight is derived. The institutions involved in the project come from countries that have a deep design culture in comparison with Australia. Italy and Sweden are repositories of a wealth of design history. The opportunities for learning in these places capture the students’ interest and involvement within the design field. A greater density of design and manufacture in Sweden and Italy therefore provide more ferment and a greater output of innovation prompting the creative student to experiment with ideas more readily than if they had stayed within a more familiar environment.

2. CASE STUDY

‘Kitchens of the World’ was a collaboration between Lulea University in Sweden who also hosted part of the activity, the University of Northumbria in the UK and ourselves. The project focused upon the studio activity in designing that brought about learning experiences and creativity in two main areas.

1. Working in multicultural groups.
2. Working in a changed environment.

Each of the universities embarked upon a period of preliminary investigation during March of 2005. Setting out to question current paradigms of food preparation and consumption as well as their associated rituals. Investigating opportunities for new systems in the light of our varied cultural backgrounds. For Lulea this meant visiting commercial kitchens and interviewing luminaries of the culinary world. Northumbria carried out an audit of contemporary attitudes to food and cooking and the popular media’s portrayal and representation of culinary activity. For Monash University a

more studio-based research activity took place resulting in conceptual designs.

The results of this information scoping were brought to Lulea Technical University in the north of Sweden in late April 2005 and formed the basis of a forecast of relevant social and cultural issues, emerging technologies, design trends and ergonomics in relation to each of the students' design concepts. Presentations from each of the universities' cohort of students' formed the basis for creating specific design briefs that emerged from the scoping investigation. Crucially at this stage the groups were re-formed, this time as multinational groups containing an equal number of students from each university. The design briefs that emerged from this process were as follows:

1. a kitchen that promoted and stimulated children to learn to cook;
2. a kitchen for young couples in a small apartment;
3. a communal kitchen;
4. a kitchen for someone living alone, and
5. a kitchen to assist in combating obesity.

The design briefs were redistributed between the groups so that the original authors were not the designers. This precluded any possibility of preconceptions of the design outcome.

In terms of group dynamics the new multinational groups followed all the hallmarks of group development namely storming, norming and performing. Perhaps the Australian and English cohort bonded a little closer for two reasons: language being an obvious one (though typically the Swedish contingent spoke English fluently), and their student cultures were similar. Lulea University students came from a far more linear process path that reflected an engineering, and perhaps more deductive, method to design solutions. This educational experience, one proscriptive and the other liberal, did create tensions, particularly in the period in which groups were carving out their design strategies.

This stage concluded by decamping to Stockholm where the students were then treated to presentations and discussions with two multinational manufacturing companies: Electrolux and IKEA. Both visits to their offices in Stockholm gave the students insights into their processes and the relevancy to their own research work. We then moved on to the Monash Centre at Prato to complete the design study and create the concept outcomes.

The Italian intervention was the longest period in the project and the one in which there was something of a level playing field in experience, as this time the Swedish cohort were also away from home. From the cool climes of a rigid and structured crisp and tidy design culture to the effervescent, and at times apparently anarchic, flavour of Italy had an energizing effect upon stimulating the groups. Of course there were the

distractions of curiosity but there remained a sense of working within a greater whole in terms of artisanship and creativity beyond the walls of the centre. The studio spaces at Prato are basic compared to the facilities at Monash, Melbourne but that only served to create a heightened responsibility within the groups for resourcing materials, utilizing laptops and delegating tasks.

3. OUTCOMES

The outcomes in sketch and model form reflect each of the groups' aspirations for a kitchen and reflect their perceptions of the principle issues of their community.



Fig. 3 The Communal Kitchen.

Fig 3. (above). A lozenge shaped bench that can be accessed from all sides suitable for outdoor environments and catering for groups of up to ten people cooking different dishes. The communal aspiration of this kitchen suited apartment living where the premise was individual home occupiers could meet others in a social context. Apart from the obvious concerns over shared responsibilities regarding the product's maintenance and upkeep, the design appealed to an egalitarian community keen to rebuild a social cohesion that might elude single occupiers of apartments.



Fig. 4 The 'I-Along' Kitchen.

Fig 4. on the previous page is a kitchen entitled 'I-alone', a kitchen for the single user based on the supposition that they

also live alone. A compact console style kitchen that envelops the user creating a sense of security wellbeing and accessibility. Products seek to encourage their use to prepare healthy meals rather than exclude the lone user from pleasures of experiencing preparation, experimentation and enjoyment of the cooking process.



Fig. 5 The couples kitchen entitled 'Relaxation Point'.

Fig 5. (above) is an apartment kitchen for young couples. This island kitchen contains all cooking requirements, including a sink, hotplate and dishwasher and a dining area complete with fireside hearth, expressing a combination of utility and intimacy. It was the aim of this group to draw in the visual coda for relaxation into the immediate physical environment of the cooking and preparation process.



Fig. 6 Part of the kitchen - 'A New Way'.

Fig 6. Shows the design for a pedestal steamer. This steamer formed a central component of a kitchen that sought to assist

the overcoming of obesity. The concept encourages a healthier lifestyle through immersion into dietary practice, such as steaming vegetables in this instance, and retaining a protracted display of healthy foods and products. Therefore, the kitchen's décor and novel pedestal appliances attempted to reinforce healthy food preparation techniques.



Fig. 7 'Crescendo' a kitchen for children and adults alike.

Fig 7. (above) shows a model of a kitchen bench system that promoted an inclusive and safe cooking environment for use by children. In essence the bench took the form of a series of shelves or cabinets that articulated up and down to suit the height requirements of a child. This flexible arrangement also included an interactive display that suggested recipes and the step-by-step ways for the child to carry them out.

4. IMPLICATIONS

There were two main interventions in the normal studio paradigm of study; working in multicultural groups, and working in a changed environment. To assess the effectiveness of these interventions and reflect upon the outcomes, a semi-structured interview was carried out with each of the Australian students to validate the observation of the projects' progress.

Analysis of the responses does suggest, anecdotally at least, that people with prepared minds that find themselves in different, but stimulating settings, appear to be more likely to find new connections among their new colleagues and new ideas. This was a qualitative test rather than a quantitative comparison and no correlation was made with the relative creativity of groups remaining in their own countries.

All the students responded that they had enjoyed the experience but that the groups were not cohesive, displaying group behaviour rather than team identity despite carefully defined roles emerging towards the end of each project. Difficulties arose in the process of gaining 'buy-in' to the chosen design and the feeling of some sense of ownership in the outcomes. This would appear to reinforce *'the triumph of the individual creative mind'* as displayed by current design

orthodoxy. That said, deeper levels of consideration and sensitivity between each other was evident when the balance tipped from intellectual enquiry to the more recreational aspects of travelling overseas.

In response to the change of environment both Prato and Lulea stimulated students' creativity. They presented novel and complex sensory experiences, albeit mainly visual ones. Attention is diverted from the norm and encouraged to follow the novel. Interestingly despite the attention on culinary activity none of the design concepts displayed an overtly Swedish or Italian technique or theme but tried to respond to the brief in a focused and neutral way. There were no problems in pursuing divergent thinking much more in managing consensus and convergent thinking when decisions had to be made.

Typical working days would be eight hours with two group meetings a day, at least one of which with a teaching staff member from one of the institutions involved. Respondents to the semi-structured interview enquiry commented that this was too much of an interference to the momentum of the group.

The project generated positive outcomes in the form of exhibitions in Sweden, Australia and the UK and very positive press enthusiasm here in Australia in national and state newspapers.

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