

USING MOVING IMAGE TO FACILITATE STORYTELLING AS AN IDEATION METHODOLOGY AND A PLATFORM TO ENHANCE THE INTEGRATION OF INTERNATIONAL STUDENT COHORTS WITHIN HE PRODUCT DESIGN

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ABSTRACT

The use of moving image within HE Product Design education is increasing. Here, film is commonly used as a tool for the presentation of concepts or finished objects, as an instructional tool, and in user observations and research. Iteration techniques that engage moving images to support sketching and reflection processes are starting to become more visible in the methodologies of product designers. As international collaboration becomes a key focus to many university development strategies, the increase in international student intake can create challenges when managing language, culture and different prior learning approaches. Nonetheless, research that addresses filmmaking as ideation and its impact on the integration of multicultural and/or international student cohorts is rare. This led to the research question: How can storytelling through moving image be used as an ideation methodology and as a platform to enhance the integration of international student cohorts within HE Product Design? To answer that question, this paper presents, analyses, and discusses a series of case studies that illustrate examples of the use of filmmaking workshops within HE Product Design. The studies were conducted over several years in collaboration with international exchange partners at universities in Scotland, Norway and China. A precedent that simple and accessible film editing software should be used to encourage clear and engaging storytelling, rather than style and effects, underpinned each workshop. The methodology of filmmaking proved to be a useful tool for breaking down cultural and language barriers. It also proved to be an effective tool for ideation processes.

1 FILMMAKING IN DESIGN

Storytelling has always been an important part of human life. Stories excite us, and within the creative industries, the mantra *'People remember a good story, not facts'*, is frequently cited. David Kelley, the founder and chairperson of IDEO, tells us that *'stories persuade in a way that facts, reports, and market trends seldom do, because stories make an emotional connection'* [1]. The use of stories to deliver a message is common in advertising and it is an effective branding tool as well [2]. Storytelling is common in graphic design and other forms of 2D visualizations [3]. In recent years, the emergence and accessibility of the digital realm has empowered students to create and deliver sophisticated project content that has challenged the traditional 2D presentation board format. The use of moving images has also increased. Film is widely used as a research methodology in the social sciences. Video can be an *'indispensable medium for collecting data and preserving their relevant features in a naturalistic perspective'* [4]. Vibeke Sjøvoll, Norwegian artist and design researcher, maintains that *'in product design, video has mostly been seen as a tool for the presentation of concepts or finished object, as an instructional tool, or in user observation and research'* [5]. She says that *'the most in-depth exploration of the inherent qualities of video is commonly found in fine arts'*. The use of film media is continuously evolving and has recently been used as a tool for creativity, playfulness [5] and reflection [6, 7]. In the case studies presented in this paper, students were encouraged to use technology to advance their designs, instead of merely 'endorsing' a design by using new technology and effects to present it. This concurs with the comments of Johathan Crary [8] who warns that *'in the*

near future there will be billions of individuals with a similar level of technological competence and basic intellectual assumptions'. We were interested in using moving image as a platform to capture and present different stages of a design iteration process; to provide a single 'hub' in which the narrative of a process can be archived, documented and edited easily; and to enable the users to quickly review their process as a holistic experience as a project evolves. While international collaboration has become a key focus of many university development strategies, the increase in international student intake can also create challenges in managing language, culture and different prior learning approaches. The challenges of cultural barriers can result in emotional isolation and loneliness, which might influence the academic performance of foreign students [9]. Members of the research team regularly engage in staff mobility programmes in China; they accept many exchange students from Chinese universities into their own programmes as well. Some typical representations of the Chinese culture of learning is that students 'do not question accepted norms and ideas' in the classroom [9]; specifically, the teacher's status and authority as a source of norms is central [9, 10]. With influence from the Confucian heritage [11], Chinese students have a reflector learning style preference, which means that they could take a less active role in learning, that they prefer to learn through observation and that they benefit from the opportunity to think before acting.

2 INTEGRATING FILMMAKING INTO A DESIGN PROCESS

The use of filmmaking as part of a creative tool kit in product design education has started to increase in recent years. One example is Sjøvoll, the aforementioned design researcher [5], who has used filmmaking techniques as a 'sketching' or creative tool to develop the approaches of individual product design students to their projects. She asked students to produce films to explore specific terms and themes, which were then used to inform their development. This methodology, which demonstrates just one successful application of integrating filmmaking into a design process, encouraged students to interact directly with each other, their subject matter and the wider social community that their products serviced.

2.1 Research question

Integrating filmmaking and digital storytelling as a reflection tool in Higher Education (HE) Product Design studies has started to evolve [6]. Nonetheless, research addressing filmmaking as an ideation and 'sketching' tool [5] is scarce, and its impact on the integration of multicultural and international student cohorts offers newer 'emerging' opportunities to explore. This led to the following research question: How can storytelling through moving image be used as an ideation methodology and as a platform to enhance the integration of international student cohorts within HE Product Design?

3 METHOD

The research question was explored through a set of case studies [12] executed through different 'themed' internationally based workshops. Participatory observation [13] was used as a method to study how students were responding to our constructed 'playful' filmmaking project structure. Two of our workshops were analysed through quantitative data collected from questionnaires. Students were encouraged to use a range of different presentation formats, such as talking head, short story scenarios, photomontage, animation, documentaries and news reports. Priority was given to clear storytelling, rather than accomplished technical execution. This was an important part of the method since we wanted to encourage the students to experiment with the medium and not be scared of it or of showing their results. Short time restrictions, ranging from 30 seconds to a minute and 30 seconds, were implemented on the filmic outputs to help focus the students' decision-making and encourage them to edit information that was clear, engaging and precise. Emphasis was directed towards the use of the simple filmmaking software that comes as standard on both PC and Mac platforms.

3.1 Case study through multiple workshops

The case studies were organised into a set of short project workshops that explored different learning and teaching scenarios across a range of year groups. With a supporting aim of acting as an icebreaker activity to introduce and galvanize both student year groups and incoming exchange students, each study explored a different iteration approach and/or technique.

Workshop 1: Sketchbook recordings: Quick and dirty

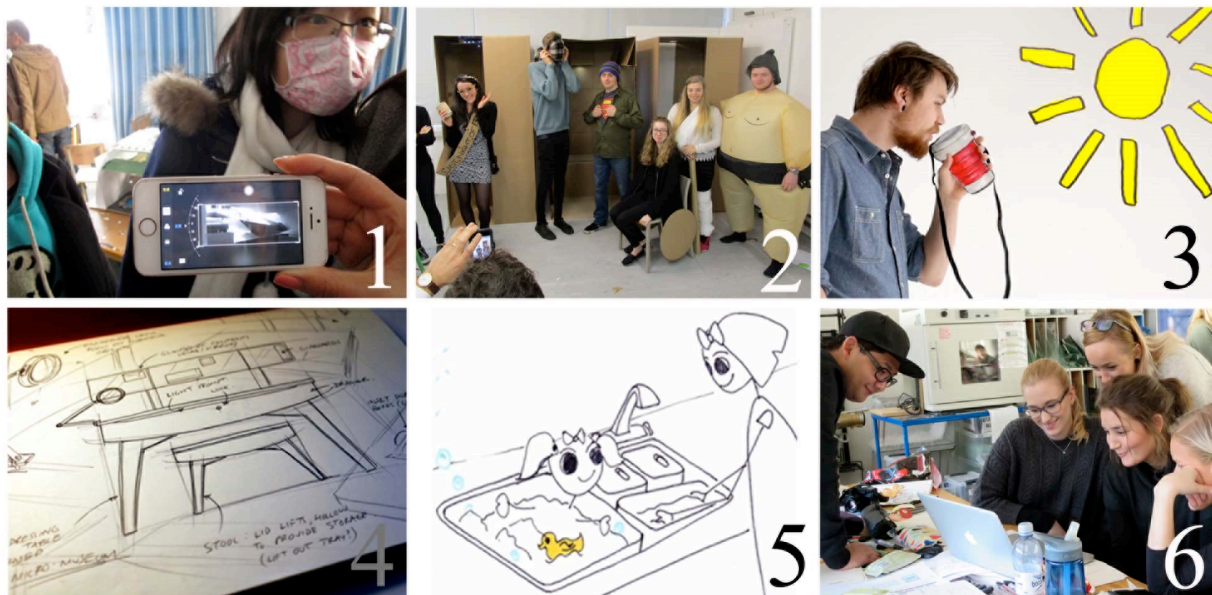
Here, design iteration was encouraged through focusing on recording the students' sketchbook content. Students were encouraged to use their original sketches, no matter how rough they were, and organize them in a clear narrative that described the evolution of their design process. They were further encouraged to select an appropriate soundtrack, related to the project theme, to accompany their film and create a 'pace' with which to edit the content. Because the illustration content was to be lifted directly from their sketchbooks, films were intended to reveal and promote original art direction that related to the individual students. A further aim of the workshop was to promote quick and efficient presentation techniques without pressure for the students to rework artwork into a state perceived as more 'finished'. This was the first time that many of the students had engaged in an animation process.

Workshop 2: Overcoming language barriers

A range of projects was delivered during a teaching exchange in Zhezhou in Southern China. Nearly all of the participating students were non-English speaking. The class sizes were large, ranging from 80–120 students per class, depending on the particular year group. Translators were available. During our workshops, roll playing and scenarios were acted out and recorded between students and staff. Demonstrations were captured either through video or as a photomontage and used as visual learning aids, viewed on large screen projectors as well as for working off tablets and smart phone screens.

Workshop 3: Aircraft toilet: User profiles

The focus of this Edinburgh based workshop was to design and build full size toilet units, modelled in cardboard, for use on commercial airlines. Eight groups of six students each, from a cohort of first year product and interior design programmes, were given a specific user profile to consider (e.g., pregnant passenger, broken leg, super hero, visually impaired, wheelchair user, scared of flying, etc.). The groups were asked to user test the initial design of each group, while keeping 'in character' of their allocated persona. The students filmed the results of these initial tests and used it as user feedback to review and inform their design iteration. The final project outcomes were then filmed for a third time with more focus placed on a presentation narrative. The aim of the user profiles was to encourage students to think about their designs from a different perspective, thus considering the needs of a broader user group. The diverse user profiles were chosen to enrich the student experience through acting out scenarios in character and encouraging debate between participants through physical hands-on activity.



*Figure 1.1. Using mobile devices to aid language issues in non-English speaking schools
2. Role-playing with user personas. 3. Integrating live action and illustration
4 and 5. Sketchbook content used as source material for animation 6. Editing film in teams*

Workshop 4: Juice or coffee: Feedback and feedforward

In this workshop, held in Lillestrøm, Norway, forty international students, including Norwegian, Japanese, Polish, German, Scottish and Spanish, worked in eight teams to develop design solutions for a domestic juice or coffee-making product. To help analyse the design proposals, students mounted full size marker rendered design concepts onto cardboard and used them as props during filmmaking. Students then viewed another team's film and made a second 'review and feedback' film to give back to the original team. A third 'final' film was produced based on findings from the previous two films.

4 FINDINGS

The act of making and presenting projects through a moving image methodology had a noticeably positive influence on the impact on student engagement and a constructive effect on breaking down the language and cultural challenges that we often face when working internationally. In the international focused workshops, actions/images spoke louder than words and the communication between staff and students was more direct with limited need for translators. The use of filmmaking in the presentations helped to increase the confidence of most of the students and it gave a voice to students with limited English. This was evident by the use of suitable cultural references, such as the incidental things like music, fashion and humour, displayed by some students in their films, which revealed something a little deeper about the personality and interests of the individual students. Through storytelling and role-playing, students were empowered with a sense of fun, excitement and a desire to produce and present a finished film. Presentations proved to be more of an event with a degree of pre-presentation excitement and anticipation. Within the student cohort, there was a range of skill bases and students were quick to share techniques and suggest useful, relevant software. Using multiple deliverable points meant that students had numerous opportunities to engage in peer-to-peer learning. We observed many students working directly from their mobile smart phones: recording, editing and uploading all from the same smart phone. It was interesting to see that since the students did not need to return to a fixed studio space, the iteration process could be conducted in situ. This also affected the pace and fluidity of the project development. In reviewing the workshops where we engaged student feedback, the feedback from all of the participants in the coffee/juice and the aircraft toilet workshops was that they would use this type of filmmaking process again.

5 DISCUSSION

The filmmaking process was received as a positive experience amongst the students. A number of the feedback comments highlighted their enjoyment of the process: one student wrote, '*fun, fun, fun.*' in the feedback questionnaire. Digital media, platforms and processes are familiar to most young adults, as Sjøvoll explains [5], '*Using video also strongly connects with the visual culture that surrounds the students in their everyday life, as digital technologies constitute a significant part of the language through which we express ourselves.*' While some are skilled in movie making, others have less experience. Nevertheless, what we saw repeatedly is that students did not need a technical explanation of how to make a movie. Either they knew how or they found out how. This concurs with Sjøvolls' findings [5].

5.1 Filmmaking as an ideation methodology

Even though digital media was not new to the students, using film and storytelling as an ideation process was. The nature of filmmaking provides a structure in which the creator needs to constantly review, reflect and observe their work. In the context of HE Product Design studies, providing the students with an opportunity to view their work, either from another perspective or in the third person, proved to be an invaluable outcome of the filmmaking methodology. Photographic media (still or moving) is used because it is particularly good at carrying or evoking three things: 'information, affect and reflection'[14]. As a result, photos can be described as '*a more transparent representation of the life experiences of participants in [a] study*' [15]. This concurs with a comment from one student who said that it was '*easy to evaluate other team's concept and had good time to give feedback*'.

As explained in the method chapter, we made three films of each idea in the Lillestrøm workshop. The students found this tool for ideation development useful. They commented that they liked the stages of making more than one film. To let the groups swap concepts and make feedback films for each other clearly led to developments that would not have occurred if the ideation had been kept within the group. Participants commented that they liked this methodology. Some workshops experimented with

'hybrid' ideation approaches by combining marker rendering, animation and live action displaying a range of ideation tools. The evolving use of social media and the accessibility of digital mobile devices enabled students to capture and edit information in both studio and at site-specific locations. Placing short time restrictions on film presentations required students to reflect on and edit their work more precisely and with less procrastination. Many students commented on the advantage of working quickly, as illustrated through this student quote, *'I liked the pressure of time.'* By working in the moment with a limited time to refine and finish the visual content, there seemed to be a spontaneity and freshness to ideas and presentations that might otherwise be compromised by having the availability of more time and resources. Nonetheless, some students wanted more time in the process and, in the workshop in Lillestrøm, there was a general wish from the class that the workshop be extended by one day to produce a more finished result.

With regard to presentation days and feedback, we required only a projector and a surface on which to project. This made set-up time quicker and did not require the preparation, hanging and 'financial' cost of multiple presentation boards per student. This is interesting to consider, as compared with a more traditional static graphic presentation format that requires students to attend a degree of competence in a range of presentation skills before they can effectively deliver their presentations. One student wrote in the questionnaire, *'Better and more engaging than standing up at the front trying to explain our concept.'* We observed that a filmic presentation with strong narrative was more forgiving on any technical shortcomings, specifically, *'People remember a good story.'*

3.2 Filmmaking as a tool for student integration

The act of making and presenting projects through a moving image platform had a noticeably positive influence on student engagement and a constructive effect on breaking down the language and cultural challenges that we frequently face when working internationally. Indeed, language barriers are a challenge to many students and teachers. In this study, the majority of the participants did not have English as their first language. Moreover, we have noticed that many non-English speakers are afraid of speaking English, especially at presentations. To prepare a film can ease the pressure on these students. In using this method, the voice of the shy can flourish. It also brings clarity that bridges limited language skills: as one student reflected, *'It's easy to catch the point of another's concept.'* Another student said that filmmaking *'makes it clear, simple and a short cool way to catch a client's attention and show more sides to a product and how it interacts'*. Although translators were available at the workshop in Zhengzhou, the number of non-English speakers created its own challenges since many of the subject specific terminology and processes tended to get lost in translation. Here, the films created a 'language' that made it easier for people to understand each other across culture and language barriers. One student said, *'it [film] is a good way to describe and show without having to explain'*. Moving images provided simple storytelling and narrative. The medium is not the message; therefore, we have seen that sometimes almost childlike execution, such as line drawings and finger puppets, effectively conveys the message if the narrative and structure of the presentation is strong and cohesive. Through a cycle of play, pause and repeat, students can experiment, edit and review their work before presentation day, thereby instilling a personal confidence in them that they will deliver their key messages without fear of freezing. As one student explained, *'The nice thing is that you can use it to see it as many times as you like. That gives more times to find out what can be improved or done differently.'* Although the ability to work in this way has proved useful for breaking down cultural and language barriers, the methodology is also useful and it gives the students confidence when cultural differences and language are not an issue.

6 CONCLUSION

It has been said that making a film is done in three steps: first, it is written, then filmed and then edited. The advantage of this approach is that it gives space for reflection between the various stages of a creative process. Using the example of a typical 30-second TV commercial format, the rule of 'say it, explain it, repeat it' can provide an extremely focused set of parameters in which a student must deliver his/her pitch. This limited time-frame has beneficial impacts on the assessment staff members who need to sustain focus, stamina and alertness when providing feedback to large student cohorts.

All of the participants in presentation days are contributing to the day, not just 'getting through it'. The capacity for a reflective dialogue with moving images, combined with the immediacy and accessibility

of the software, allows students to continually evaluate and iterate their work. Within group projects, students have more opportunities to allocate specific responsibilities (such as model making, filming, editing, directing and motion graphics) among their peers, all of whom contribute to the overall production of the product.

In the context of working internationally, integrating moving images into a teaching and learning environment provided a universal language of image and sound to which that all of the participants could understand and respond. Acting out scenarios and role-playing facilitated numerous opportunities for the students to interact with each other and build relationships, which, in most cases, had a positive effect on group dynamics. In addition, relationships between students also occurred through peer-to-peer learning by a sharing of knowledge of technical 'know how' on common/familiar media platforms, such as tablets and smart phones.

Since it is a powerful communication tool in helping to negotiate language barriers, it is also worth considering the empowering effect of filmmaking methodology in encouraging more teaching staff to engage in overseas teaching workshops. In terms of assessing project outcomes, through the association with the story, staff members have often remembered the product/projects and the student(s) long after the event has finished. Moving image methodology has introduced new skill sets to our students. This has been reflected in surveys of our recent graduates who have integrated moving images into their scope of work, such as through kick-starter promotions, or who have diversified into other areas of the creative industries, such as exhibition, audio visual and entertainment industries. This further promotes, strengthens and enriches the opportunities that HE Product Design programmes can offer. Moving image processes can provide a single hub in which a range of hybrid creative industry skill sets can be crafted into a holistic design iteration process.

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