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Document/Reflect/Create
Cultural Probes in Teaching and Learning environments

[Short Paper]

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1. ABSTRACT

This paper looks at an experience in a teaching and learning (T&L) environment using Cultural Probes (CP) [8, 11, 12, 13, 14, 15, 16, 17, 19], ethnographic tools traditionally used in Participatory Design [25, 28], for reflective practice [1, 26, 27] based activities. The paper is divided into four main sections. The first provides an overview of the pedagogical underpinnings to the case study. The second section offers an outline of the case study, including students' feedback and related reflections. The third part of the paper analyses in depth the case study, providing some propositions around the possibilities offered by the use of CP in various domains. The fourth section concludes the paper, remarking the case study's major outcomes.

The final proposition offered by this paper is that there are multiple ways of looking at and using Cultural Probes – ways that require designers to go beyond their traditional contexts.

General Terms

Documentation, Design, Experimentation, Theory.

Keywords

Participatory Design, Cultural Probes, Teaching and Learning, design methodology, reflective practice, case study, reflective probes, playful triggers.

2. PEDAGOGICAL BACKGROUND

Participative and constructivist T&L methods underpin the

pedagogical background of the case study discussed in this paper. Constructivism looks at cognition as a mental construction. This theory has evolved from the notion of Progressive Education by Piaget [23] and Dewey [9, 10] and was greatly contributed by the work of theorist such as Vygotsky [29], Bruner [4, 5, 6], Kelly [18], Ausubel [2], and Papert [20, 21, 22].

With specific regards to T&L environments, this theory claims learners learn through experience and by reflecting on experiences. Context is also regarded as a highly influential feature of the learning process.

The author of this paper has been strongly influenced by the work and methodologies of Reggio Emilia schools [7] where through questioning, exploring and reflecting learners create their own knowledge. In constructivist paradigms: learners become experts in learning - they *learn how to learn*, and teachers act as facilitators of both learning and reflecting processes. The author believes that teaching and learning practices that revolve around notions of PD should utilize experiential and participative learning methods [3]. In the following sections the author shifts to writing in the first person - a format more appropriate to communicate and mirror the personal qualities of the case study.

3. CASE STUDY

I have been using the notion of reflective practice in my teaching activity for a few years and in 2002 I started experimenting with the idea of *probing students*. Often students are given the task of filling in reflective journals to articulate their own reflections about their learning activities during a specific semester. Within this context, my idea was to experiment with this notion and take it further, creating a situation where I could probe students to give them a chance to: *document* their learning activities, crystallizing their learning and giving them an option to unfold and reflect on their own learning processes; *take further* their learning by being proactive and creating something out of it; *reflect* on their own reflections; *play with* the notion of creative writing within a quite

structured context; *experiment* in an intimate way with what it means to be probed; *learn how* to articulate and summarize essential notions and key concepts; and *understand* the differences between task and outcome.

Besides, I intended to give myself a chance to play with the notion of *a brief like a probe that is built by its user*; and to collect students' feedback on their own perception of their learning so I could document and improve my teaching activity. This paper's case study subject relates to undergraduate work that was undertaken in 2003 over a two semester period. The brief behind this work changed from one semester to the next. I will firstly provide indication of both briefs and their individual outcomes and then their analysis and reflection as a whole experience.

3.1 Semester 1

2.1.1 Brief

Students (about 75) were given a probe-like exercise titled Document/Reflect/Create that looked at the activities of the semester (13 weeks). The brief was structured in its tasks and open in its outcomes. Students were informed they were free to challenge the brief's boundaries if they felt this appropriate as long as they provided a rationale for such a choice.

The brief required students to undertake a series of tasks related to class events (i.e. lectures, tutorials, and outside experiences). Each event had to be included on an A4 page folded in A5, to mimic a greetings card. Tasks included: on the cover students had to document the event via a visual means (picture, cut-out or a drawing) and also by using one sentence or word only (to highlight the event's central key); inside the card, on the left, they had to document the event in writing; inside the card, on the right, students had to articulate their reflections around/about the event (they were encouraged to use creative writing if they felt it suitable); and on the back-cover students were finally asked to include a 'creation' – a creative outcome that emerged out of their reflections (the question being: if you learned something, what are you going to do with it now or in the future?).

In this first semester students were asked to submit a total of 11 cards: 6 related to lectures, 3 to tutorials, and 2 to experiences. They had to include the cards-collection in a container/folder of their choice and then submit them at the end of the semester. An individual written feedback was then given to each student separately, together with a result and possible suggestions on interesting follow up readings.

2.1.2 Submissions and feedback

Submissions varied in appearance and depth. Most students reported they enjoyed the exercise although it proved complex at times. One of the main issues encountered during this semester had to do with the notion of what document, reflect and create meant. Some students felt they struggled with the space between these three notions and felt they blurred, making the required task hard to complete properly. In particular, the questions they

struggled with were: how do I manage to document something without reflecting on it at the same time? is a thought/reflection a creation? what can I create? What is a creation? Am I asked to create a product, an idea, a system..?

Some students reported they felt it hard to deeply reflect at the end of the semester on something that occurred earlier. Most students demonstrated a strong engagement in this task and it was reported that it was a 'big job' – enjoyable but quite demanding. They mostly did not sacrifice the quality of their reflection – but at a cost.

From an educator perspective, this work enabled me to deepen my relationship with my students and learn about what they made out of activities during the semester. The task proved to be hard for me too as I had to assess and feedback a substantial amount of submissions within a short timeframe. This is consistent with what is reported by other constructivist practitioners [24] – that participative T&L processes require learners and educator to put extra effort.

3.2 Semester 2

2.2.1 Brief

Following feedback and my personal reflections on the experience, I decided to explore this exercise further and provide students with weekly tasks and feedback (to avoid big end of semester submission and to allow deeper levels of reflectiveness). I wanted to explore the chance of getting students feedback on class activities so I could re-assess my teaching on a weekly basis. I felt I could use this assignment as a tool to have a more participatory teaching, adapting my practice to students' needs and characteristics as much as possible. I was also interested in taking further the notion of Cultural Probes within T&L environments to experiment with the idea that probes could be built by their final users, while the designer task is to give an open ended brief to ignite the process.

I modified the brief and added an extra level – to reflect on one's reflections. Students were given the brief in week 1 and had firstly to design an appropriate container for the upcoming A5 cards. The container had to be of a specific size so it could be placed in my office during the semester. This way each week I could receive submissions from students; assess them providing feedback; and include each submission in its container. Containers' location in my office implied students' presence in my everyday life. This creates a sense of intimacy between learner and teacher that I believe contributes to constructivist practices.

Students were asked to document, reflect on and create something out of a lecture, tutorial or experience that occurred in any given week and to include this in an A5 sized card. Weekly cards were submitted each Monday and by the Thursday I was in a position to give each student written feedback on their card. In addition, I was in a position to: know whether the topic discussed the previous week had been properly 'digested', or if there were issues that needed extra explanation; and to 'adjust' the following

lecture to incorporate possible clarifications or add-ons. This occurred in few instances and proved to be a successful method that students appreciated as it acknowledged that the material had been adapted to them, their needs and understandings. By the end of the semester students produced a series of cards (crystallizations of specific events that occurred during that time) that filled their own containers (metaphorically speaking: that increased their knowledge).

I decided this time to add an extra step to the process. My idea, in line with Reggio Emilia philosophy [7] was to have a ritual where I could personally return containers before the last phase of the assignment – to mark the process in time so students could establish a sense of ownership, belonging and connection. I asked students to bring drinks and cakes at the last session and re-organized the room to accommodate a table in the centre with all the containers on it while a PowerPoint presentation (featuring images I took during the semester) was projected with some music in the background. Students were asked to take an instruction leaflet before entering the room, to relax and enjoy the ‘party’ and, if they liked, to look at their peers’ works.

The change in setting seemed initially to destabilize students’ expectations – for a while the room was silent and it appeared as if they did not know whether I expected them to do something in particular. I explained I was not expecting anything, offered my thanks for a great semester together and decided to provide some personal accounts of how I undertook a similar assignment in the past.

After a while they seemed to feel more comfortable in the new setting and started undertaking a variety of activities while I started returning containers to each owner individually and gave to each student a little gift: a glass-marble hand wrapped by me – a symbolic statement accompanied by my personal thanks to each student for sharing the semester with me. This was my way of marking shared experiences on a temporal, symbolic, and emotional level.

After this event students had a final task: to reflect on their reflections. The idea was to re-read all the cards they produced during the semester and to create a new one that had to be the reflection on the semester experiences’ reflections. Students were also asked to include in the bottom of the container an artifact to illustrate the core reflection they intended to share. I then reassessed the lot and provided feedback to each student.

2.2.2 Submissions and feedback

This second experience proved more complex than initially anticipated. Students put into this assignment an incredible amount of work. The idea of having weekly submissions was to enable them to be fresh on the events and also to divide in small portions the load. However, students increasingly felt that they had to put even more work making my idea of making things easier on them redundant. Some students reported this was because now they felt such an intimate relationship with me that they ‘wanted

to make me happy’ with their submissions. Others enjoyed the chance to reflect on their studies and lives and felt the assignment was ‘almost addictive’. Others reported that the weekly submissions made them feel they had to improve each time. Some felt this second version was too prescriptive even if the brief encouraged them to explore possibilities and challenge the brief if appropriate. Some would have preferred to choose each week what they wanted to report and others felt the card size was inappropriate for creativity to emerge. In my feedback I would encourage them to explore the boundaries of the card, to surprise me, to escape the ‘template trap’, and challenge limitations. Some students seemed to be the creators of their limitations while others surprised me with their reflective and creative capacities. I was particularly amazed by the number of international students that strengthened their confidence via this assignment.

Overall the response to this work was very strong. However, the theory that with weekly submissions my load would have been more manageable proved to be wrong as I found myself spending an incredible amount of time on each student’s card per week. Regardless an ad hoc designed feedback form that allowed me to insert a limited amount of comments, I found the engagement with students, their life and reflections deep and ‘almost addictive’, and I dedicated more time and energy than initially expected. This engagement impacted on my work-load but also and more importantly on my relationship with the students and on the emotional bond I created with them. This bond generated in several instances a sort of emotional overload as I was drawn into so many lives and ways of filtering the world.

4. ANALYSIS AND REFLECTIONS

Cultural Probes have in my experience been successful within T&L environments for a series of reasons. In Table 1 I have divided this experience’s pros into three sections: Challenges that the experience unfolded; Lessons learned by the educator; and Situations and opportunities enabled by the use of CP in a T&L environments.

<p>The experience challenged:</p> <ul style="list-style-type: none"> ○ the notion of probes and their use; ○ stereotypes around the ways and the place for creative acts; ○ the notion of what a brief means and is about within an academic context.
<p>Through this work I learned:</p> <ul style="list-style-type: none"> ○ about learning; ○ about teaching; ○ to be a reflective practitioner.

The use of CP in a T&L environment enabled:

- the notion of briefs as probes;
- students to express ideas and notions in a variety of media;
- educator to get meaningful feedback on teaching practice and curriculum;
- students to engage in reflective practice in a more self driven and personal way;
- students to reflect on their reflections;
- consistent dialogue with students;
- monitoring of students' progress while the learning occurs;
- reassessment of teaching practice while the teaching occurs;
- educator to provide students with prompt and ad hoc clarifications to curriculum;
- educator to document and improve learning process;
- participatory T&L practice, where students' needs can be considered allowing the educator to design ad hoc curricula;
- students to generate new ideas out of their own reflective practices.

Table 1. CP in T&L environments: pros

Besides, I also isolated a series of issues that both learners and educator experienced (refer to Table 2).

Students' difficulties:

- understanding the difference between the notions of documenting, reflecting and creating;
- applying the notion of creativity beyond artifacts;
- understanding the importance of reflective practice;
- balancing academic demands with personal sympathy;
- applying reflectivity within an academic domain.

Educator's difficulties:

- differentiating between academic and personal roles;
- strongly communicating that creativity can be applied beyond products;
- communicating that there is a difference between objective and subjective limitations within a design process;
- avoiding extra workload in the feedback process;
- maintaining a balance to avoid emotional overload.

Table 2. CP in T&L environments: difficulties

This experience showed me that Cultural Probes can be used in multiple situations and do not have to be necessarily designed by designers. In the case discussed in this paper I designed a brief to enable students so they could design Reflective Probes and then probe themselves. Students produced and used such probes while I designed the opportunity for them to do so.

I suggest that in T&L environments reflective assignment briefs could be designed as if they were 'ancestors' of Cultural Probes within a process where students design their own assignment/probe and then probe themselves undertaking reflective practices. To take this notion beyond a T&L environment, I propose that: Cultural Probes could be designed by users; the designer's task could be in such cases that of designing ancestors (or briefs); and such ancestors would enable users to design probes and to then probe themselves.

Cultural Probes could in some instances be open-ended tools enabling designers to offer opportunities for users without having the aim of probing them for specific responses except the idea of

triggering reflective and creative outcomes. In these cases Cultural Probes could act as Playful Triggers and their design could be the product of the end users' play. I believe this way of interpreting Cultural Probes opens up opportunities for innovative applications within design, teaching & learning, and organizational contexts.

It is proposed that a designer/educator/manager's role could be that of producing stimuli via briefs/tasks so that users/students/workers can probe themselves using Playful Triggers they designed. This then implies the opportunity for users/students/workers to nurture and design their own ways of using/learning/working.

5. CONCLUSIONS AND PROPOSITIONS

Can one design project briefs as if they were Cultural Probes? The practice discussed in this paper offered me some interesting T&L opportunities and the possibility to look at CP in new ways.

In particular, I propose that Cultural Probes could be open-ended tools aimed at triggering a response within a design, T&L or organizational context. I have also argued that the role of designers (or educators or managers) could be in some instances that of creating briefs enabling users to design their own Cultural Probes and to then probe themselves.

The debate around Cultural Probes looks at these tools for information, inspiration or to provide empathic data [8, 11, 12, 13, 14, 15, 16, 17, 19]. I believe there are multiple and parallel ways of looking at and using such tools. I here propose that CP can be used as Playful Triggers and reflective stimuli.

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7. REFERENCES

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