

Case study report 2: Thinkpetizers teachers' workshops

1. Partner

Partner name: FORTH in cooperation with University of Malta

Objectives: To identify if participating teachers:

- (a) Experience the workshops as engaging and fun.
- (b) Value creativity, humour and fun as positive and useful elements for enhancing learning experiences.
- (c) Are willing to bring the concepts and approach suggested by the workshops to their classrooms.

Case selection: The case study is about two fast-paced hands-on teacher workshops ('Thinkpetizers' and 'The Return of Thinkai') aiming to introduce the concept, practice and value of creative thinking and how it can be practically utilized in any formal/non-formal/ informal learning environment as a means for triggering (creative) thinking and setting the mood for conducting any type of activity, but also as an engaging way for approaching any learning subject.

2. Abstract

Contribution: The concepts and approach suggested by the workshops were positively assessed by the teachers. On the one hand, they ascertained that they had an engaging and fun experience, while on the other hand, they acknowledged creativity, humour and fun as positive and useful elements for enhancing learning experiences and expressed their willingness to incorporate them to their classrooms.

Background: This case study covers two teacher workshops ('Thinkpetizers' and 'The Return of Thinkai') conducted consecutively (with a 15-minute break). The workshops were organized and run by FORTH in collaboration with the public primary school of Fre, the Regional Directorate of Primary Education of Chania and the Cultural Centre of Chania. A researcher from the University of Malta, who was not associated in any way with the creation or running of the workshops, participated as an independent observer of participant behavior, conducted short focus groups after each one of them and collected and handled the evaluation questionnaires.

The *Thinkpetizers* workshop (*Workshop A*) presents the underlying philosophy and a 'recipe' for successfully creating Thinkpetizers and how they can be practically utilized in any formal/non-formal/ informal learning environment as a means for triggering (creative) thinking and setting the mood for conducting any type of activity, but also as an engaging way for approaching any learning subject. Participants acquire and experience a design philosophy, as well as, a series of several practical activities, for sparking and coaching many different aspects of creative thinking.

The Return of Thinkai (*Workshop B*) is a Hollywood-type adventure based on Joseph Campbell's book "The hero with a thousand faces" which has inspired famous directors like George Lucas and Steven Spielberg. It is an adventurous scenario-based educational activity implemented using as building blocks the concept of Thinkpetizers which is over-arched by a meta-Thinkpetizer which concerns how an adventurous scenario-based educational activity can be implemented using Thinkpetizers as building blocks.

Research Areas/Questions: See the Objectives in section 1.

Methodology: A mixed methodology of qualitative and quantitative methods was used: non-participant observation, focus groups, and questionnaires. During the non-participant observation, data were collected through field notes and a rating matrix (Figure 1) based on the time-plan of the workshops. After the conclusion of each workshop participants were asked to fill in a printed version of the FUNQ questionnaire (created in cooperation with Technische Universiteit Eindhoven) which also included a "fun-o-meter" (Figure 2) where they had to draw a line at the level of fun they had (it goes from 'Boring' to 'A Lot of fun').

Additionally, a short focus group, of approximately 10 minutes, was conducted after each workshop. The focus groups were audio recorded and followed a structured protocol of questions (see Appendix I).

| A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|----|------------------------------|--------|----|-------|----|-----------|----------|----------------------|-----|------------|---------------|--------------|----------------|
| 1 | Title | Slides | Ex | Total | | Attention | Interest | Active Participation | Fun | Engagement | Collaboration | Productivity | Other comments |
| 2 | Part A | | | | | | | | | | | | |
| 3 | 1 Αρχή | 2 | | 2 | 2 | | | | | | | | |
| 4 | 2 ΠΡΟΣΟΧΗ! | 2 | | 2 | 4 | | | | | | | | |
| 5 | 3 Διλήμμα | 2 | | 2 | 6 | | | | | | | | |
| 6 | 4 Παχνίδι | | 3 | 3 | 9 | | | | | | | | |
| 7 | 5 Τι θα κάνουμε | 3 | | 3 | 12 | | | | | | | | |
| 8 | 6 Δουλεύουμε σε ζευγάρια | 2 | | 2 | 14 | | | | | | | | |
| 9 | 7 Ερωτήσεις | 3 | | 3 | 17 | | | | | | | | |
| 10 | 8 #2 | 2 | 2 | 4 | 21 | | | | | | | | |
| 11 | 9 Σχετικά με εμένα | 3 | | 3 | 24 | | | | | | | | |
| 12 | 10 Σκευεδάκια | 2 | | 2 | 26 | | | | | | | | |
| 13 | 11 Συνταγή | 3 | | 3 | 29 | | | | | | | | |
| 14 | 12 Μην αφήσεις το περσέρι... | 2 | 3 | 5 | 34 | | | | | | | | |
| 15 | 13 Σχετικά με τις ιδέες | 2 | | 2 | 36 | | | | | | | | |
| 16 | 14 Ζωγραφίζουν Φωνές | 1 | 3 | 4 | 40 | | | | | | | | |

Figure 1. Variables rating matrix during observation. The matrix was based on each workshop's timeplan.



Figure 2. "Fun-o-meter" included in FUNQ questionnaires (goes from 'Boring' at the bottom, to 'A Lot of fun' at the top).

Findings: Participants enjoyed the workshops, the rapid pace, the alterations between theory and practical activities, the playful environment, the emphasis on creativity and divergent thinking, the content presented by the facilitator and the format of the workshops. It was surprising to see that the attention of the participants was sustained throughout the workshops, despite the long duration and the rapid pace of the workshops.

Interactions among the participants were limited as indicated both in the questionnaires and during the observation. This could be attributed to a) lack of cohesion among the participants. They probably were not familiar enough with each other and trust was probably not developed enough. Social and collaborative interactions started to increase as the workshops progressed, and b) there was limited time for the group activities and a shared common goal or artefact was not always required. So the participants, especially in the beginning of Workshop A, focused on completing the task individually with little interaction with group members. Collaborative interactions increased with the group had to produce one shared artefact or coordinate for presenting something.

The participants recognised the emotional (fun, humour) as well as the cognitive value of the workshops and were willing to bring elements of these workshops to their classrooms. They were also willing to attend similar workshops with slightly different, new content (not a repetition of the same workshop).

3. Method

3.1. Overview and context

When the study was done: 15 June 2019

Where: Chania, Crete Greece

Setting: Non-formal; a space in a cultural center which is used for presentations and workshops. Chairs and large desks were available for the participants. In front of the tables there was a projection screen used by the presenter / facilitator. Each table could accommodate up to 6 participants, who were mostly working in pairs.

Type of activity: Making & playing using only physical materials.

3.2. Participants

Participants: 18 teachers.

Age: All participants were adults.

Gender: 14 female, 4 male participants.

Language: Greek

Background of participating teachers: Mainly Primary School teachers, but there were also a couple of Kindergarten teachers.

Background of facilitator(s): The facilitator is also the creator of the workshops, as well as of a methodological approach for introducing creative thinking and fun in learning activities. Using this approach, in the past five years he has developed and delivered workshops and events that introduce the concepts and practice of creativity, design, and design thinking to children, parents, teachers and the general public. Up to now, he has run more than 60 workshops in 5 different countries with a total of about 3500 participants, in venues ranging from small classrooms to auditoriums with audiences from 10 to 300 people, including students of all ages, parents, educators and the general public.

Selection process: There was an open call for participation by the Regional Directorate of Primary Education of Chania. People who would like to participate filled in a web form. Participants were selected on a first come first serve basis.

3.3. Procedure

Number of occurrences: One time event.

Duration: About 4 hours.

Phases and schedule: The first workshop lasted about 90 minutes and the second 120 minutes. There was a 15-minute break between the two consecutive workshops. Both workshops are very fast-paced and are roughly structured as a perpetual sequence consisting of:

- (a) 2-4 minutes presentation
- (b) 2-5 minutes creative activity
- (c) 2-3 minutes idea & sharing group discussion

Group work / individual work: Participants are allowed to discuss freely during the activities or even to copy from each other, since copying is often a good starting point for igniting idea generation. Participants mostly work in pairs and, occasionally, in groups of 3 or 4. Overall, the workshops' spirit can be epitomized by the phrase: "I am not interested in competing with anyone. I hope we all make it."

Type of facilitation: The facilitator has several roles. He is presenting information and sets tasks to be undertaken by the participants. While participants are working on a particular task, he acts as a helper walking around the room, answering to questions, making suggestions and vocalizing prompts or supportive comments. When a task is completed, the facilitator mediates a quick session during which participants present their ideas, comments, observations, etc.

Instructions to participants: The workshops include several creative activities. Before each activity some inspirational material is presented, followed by very brief instructions.

Use of research instruments: A mixed methodology of qualitative and quantitative methods was used: non-participant observation, focus groups, and the FUNQ questionnaire which also included a "fun-o-meter".

3.4. Resources

What materials was used and why were they chosen: Both workshops use commonplace and inexpensive materials, such as blank or printed sheets of paper, paper napkins, aluminum foil, spaghetti, etc. Beyond the obvious impact on cost, the use of such materials has another important effect - it makes participants realize that creativity does not presuppose any special resources or conditions. It can be achieved with anything, anywhere, anytime. The unconventional use of ordinary materials can also aid in broadening the scope of associative thinking by creating new, more remote, semantic associations.

How the materials were used: Participants use the material to draw, write and construct ideas.

3.5. Data collection

What kind of data was collected:

During the non-participant observation data through were field notes and a rating matrix based on the time-plan of the workshops (Figure 1). The variables included in the matrix were: *Attention, Interest, Active Participation, Fun, Engagement, Collaboration, Productivity*, with an open field for other comments. During the workshop any existence of indicators was marked for each variable; the respective indicators were: *watching the lecture* (attention), *nodding, verbally agreeing* (interest), *commenting on the lecture, working on an activity* (active participation), *laughing, smiling* (fun), *engagement*, as it emerged from the analysis, combined indicators from the Attention and the Active Participation variables, working together with others, discussing, commenting on the work of others (collaboration), and producing an artifact or an idea (productivity). Field notes of the participants' actions and behaviour regarding their attention and participation during the workshop were held, e.g. laughter, talking to others, working on an activity, watching the lecture). The field notes were timed so as to match the progress of the workshop with the observations. See Appendix III for a sample of a completed rating matrix and field notes.

After the conclusion of each workshop participants were asked to fill in a printed version of the FUNQ questionnaire which also included a "fun-o-meter" (Figure 2) where they had to draw a line at the level of fun they had (it goes from 'Boring' to 'A Lot of fun'). Therefore 2 completed questionnaires were collected from each participant, one for each workshop.

Additionally, a short focus group, of approximately 10 minutes, was conducted after each workshop. The focus groups were audio recorded and followed a structured protocol of questions (see Appendix II: Focus group questions for the questions).

Why this data: The collected data are a good mix of subjective participant views and objective independent observations. Their synthesis can render a multi-perspective representative picture of the impact of the workshop, as well as of its perceived value and success.

How much data was collected: 35 completed FUNQ questionnaires (2 per participant, 1 for each workshop, 1 participant did not complete the questionnaire for Workshop B), 15 minutes of recorded audio from the focus groups, a rating matrix and several pages of hand-written field notes.

3.6. Data analysis

Descriptive analysis was used for the questionnaires and qualitative analysis for the observation rating matrix, the filed notes and the focus groups recordings (thematic coding)

4. Results

4.1. FUNQ questionnaires

Descriptive analysis of the questionnaires showed positive attitudes towards both workshops. The questionnaire is included in Appendix I.

In the fun-o-meter, the mean value for workshop A was 9 (in a 1-10 rating scale) and for workshop B 9.18 (see Table 1 for more details). Similarly, in var6 (*I enjoyed doing this activity*) 100% of the respondents agreed or totally agreed for both workshops. Indicatively, in one of the cases (no. 11) the respondent added 3 additional Xs in her “I strongly agree” response to this question, probably indicating her enthusiasm about the workshop.

Table 1 Fun-o-meter results

| | | Statistics for fun-o-meter | |
|--------|---------|----------------------------|----------------------------|
| | | Fun-o-meter for workshop A | Fun-o-meter for workshop B |
| N | Valid | 18 | 17 |
| | Missing | 0 | 1 |
| Mean | | 9,00 | 9,18 |
| Median | | 9,50 | 10,00 |
| Mode | | 10 | 10 |

95% and 100% for Workshop A and B respectively responded that they agreed or strongly agreed with doing something similar again (var5). In one case (workshop A) one participant responded that they strongly disagreed, but as was clarified during the focus groups this implied that they wanted to see a continuation of the workshop and not exactly the same workshop.

Further, the indicators of stress were low for the majority of the respondents. Almost 100% of the respondents responded that they rarely or never felt bad, irritated, angry, sad, or bored, for both workshops (var27, 28, 29, 30, 18). In one case (no. 12) though, the responded added a comment to question 27 “I felt bad (during the workshop)” (Workshop A). He selected the “Strongly disagree” response

but commented: “I felt strange because while the main goal was creativity, some questions appeared to have a predefined and predetermined answer”. In the same case, the respondent added another comment in q. 28 “I was frustrated” (for the Workshop B). He selected “2 Rarely” and added “The bell ringing at the end of the activities. Limited time for the activities.”

The results were mixed regarding the social aspects of the workshops (var23, 24, 25, 26). Although the questions regarding talking to people they had never talked to before (var26) or making new friends (var 23) were rated highly, rating 3 (sometimes) received the majority of the responses for the questions involving the support of interaction with other people (approximately 30-40%). This can probably be explained by the format of the workshops which mainly involved presentation with limited number of activities requiring collaboration. For detailed results see Table 2.

Table 2 Statistics for var 23, 24, 25, 26 for workshops A and B

| Statistics | | | | | | | | |
|------------|--------------------------------|--|---|---|----------------------------------|--|---|---|
| | I made new friend (workshop A) | I talked to others easier than usual. (workshop A) | I felt closer to others more than usual. (workshop A) | I talked to others to whom I had never before. (workshop A) | I made new friends. (workshop B) | I talked to others easier than usual. (workshop B) | I felt closer to others more than usual. (workshop B) | I talked to others to whom I had never before. (workshop B) |
| N Valid | 17 | 18 | 18 | 18 | 17 | 17 | 17 | 16 |
| Missing | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 2 |
| Mean | 2,53 | 3,11 | 3,17 | 3,44 | 3,06 | 3,29 | 3,35 | 3,81 |
| Median | 3,00 | 3,00 | 3,00 | 3,50 | 3,00 | 3,00 | 3,00 | 4,00 |
| Mode | 3 | 3 | 2 ^a | 3 ^a | 3 | 3 | 4 | 4 |

a. Multiple modes exist. The smallest value is shown

4.2. Non Participant Observation

Throughout both workshops (A and B) there were many indicators particularly for the variables Attention, Interest, and Fun, despite the long duration of the workshops. Even though there were occasions during the workshops where 1-2 participants would get distracted (e.g. look at their mobile phones, talk briefly with each other, look at their questionnaires), their attention would quickly return to the facilitator and the activities. Throughout the workshops participants would nod in agreement, watch the lecturer, laugh at certain points, take photos of the presentation, in few cases make jokes, even during the end of workshop A where there were also non-verbal indications that they were tired (e.g. position of the body). Participants showed increased attention particularly when the Fun Facts were presented by the facilitator (pieces of information which were fun but irrelevant to the context of the presentation) or when they seemed to relate to the content of the presentation (e.g. references to school life or the everyday life and problems of teachers).

Active Participation and Collaboration were limited, particularly in the beginning of Workshop A. All the participants engaged with the activities and produced the required artifacts or ideas (Productivity) with very few Collaboration though, even in the group activities – each participant was focused on the activity and tried to accomplish the goal with little interaction with team members. This shifted slightly towards the end of Workshop A when team members started to interact with each other and with other teams. In Workshop B, Active Participation and Collaboration indicators increased, possibly because the participants started feeling more comfortable with the environment and with their co-participants. In some cases participants made comments or asked questions or clarifications during the facilitator’s presentation. Interaction during the activities among group members was also increased – groups members discussed

the activity more, worked on a common artifact, commented on each other's work, particularly when one shared outcome would be specifically required from each group (not work that could be done individually by the members). Intra-group interaction also started to increase approximately 30 minutes in, during Workshop B, with groups exchanging jokes and commenting on each-other's work.

By the end of Workshop B the participants, even though seemingly tired, displayed an increased playful attitude particularly during the "Thinkai triplomas awards ceremony" and most of them seemed to be immersed to their roles (Thinkai knights).

4.3. Focus Groups

The questionnaire is included in Appendix II.

4.3.1. Workshop A

There was only one response in Q1 from one participant who said that they wanted to also answer evaluation questions about the facilitator and not only the activity.

There was no response in Q2.

Concerning their difficulties with the workshop (Q3) the participants mentioned the divergent thinking required, quickly, in a limited amount of time. Indicatively, one of the participants said: "I found it was difficult to forward my thinking unconventionally. And in a limited time".

What the participants reported that they liked about the workshop (Q4) were: the quick pace and alternations, the slides of the presentation, the facilitator was accessible, the playful music, and the fact that anyone could participate and talk. This was actually the question that triggered the most responses from the participants.

Commenting on whether they would want to participate in something similar (Q5) the participants said that they would want to participate in a continuation of this workshop "the next level" as one participant described it. Another participant said that she enjoyed being exposed to a different viewpoint since this is something she hasn't yet developed. They also added that they would want to see additional content and also delve deeper into the content.

Q6 also triggered a lot of responses from the participants. Participants said that they would want to organise something similar with their students or be inspired by these workshops as it would be fun both for their students as well as for themselves - the teachers, it would be a great ice-breaker, it would improve the students' cognitive skills, it would help the students think creatively and out of the box, it would also be interesting for the parents, to break the stereotypes in everyday school life, and for making the students comfortable with making mistakes, as mistakes are actually learning opportunities and we learn from our mistakes.

4.3.2. Workshop B

There were no responses for Q1.

For Q2, one of the participants commented that it was the limited time of the activities and the bell ringing at the end of each activity that stressed them a little.

Concerning the difficulties encountered (Q3) one participant commented that it was the requirement to generate ideas in a limited time, and two participants responded that they could not hear the facilitator easily due to the acoustics of the room.

The things that the participants responded that they liked (Q4) were the conceptual framework presented by the facilitator that provided a context for all the elements and activities presented, the practical application and activities, and the examples.

Finally in Qs 5 and 6 the participants responded that they would like to participate in something similar and also organise something similar with their students.

5. Lessons learned

In general: An interesting finding stemming from the questionnaires, the observation data and the interviews is that participants experienced and appreciated both Workshops almost identically, irrespectively of the differences in their content, but also of the fact that the second workshop was held just a few minutes after another long, fast-paced and demanding workshop (thus, one would expect participants to feel more tired, bored or willing to participate). This finding supports the fact that creativity, humour and fun can contribute to creating demanding learning experiences which can foster a high engagement, interest and enjoyment level.

Implications (for practice, research or theory): The concept of the *Thinkpetizers* and the related approach, as introduced and used by both workshops, seem to be a useful, practical and viable way for enhancing learning experiences with creativity, humour and fun.

Limitations: The study included a limited number of participants, but its results are in accordance with those of related studies conducted both with similar, but also with very different audiences.

Reflections for the next phase of the project: Results verify that both workshops constituted engaging and fun learning experiences. In this respect, a key question is what can we do as a project to extract practical knowledge in a form which is shareable, understandable and reusable so that educators can enhance their own practices?

6. Notes

A purpose statement for the research: Educational workshops created by the specific facilitator have been repeatedly assessed as being very engaging and fun by participants of all ages, irrespectively of their topic. In the context of the COMnPLAY project we aim to study a range of such workshops, in order, on the one hand to objectively measure and validate their engagement and fun value, while on the other hand to investigate how this is achieved, so that this knowledge can be codified and reused to introduce such aspects in formal and informal education.

Appendix I: Focus group questions

Q1. Is there any comment you would like to make for this workshop but you did not have the opportunity to express in the questionnaire?

Q2. If in the survey you responded that at some point you felt bad, frustrated, angry, or sad during the workshop, why did you feel that way? What made you feel that way?

Q3. What were the most difficult parts of this workshop for you?

Q4. What did you like in this workshop?

Q5. If you would like to participate again in something similar, can you describe the reason for this? Or, if you would not like to participate in something similar, can you describe why you wouldn't?

Q6. Would you be interested in organising a similar workshop with your students? Why?

Appendix II: FUNQ questionnaire

At the top there were 2 questions regarding the gender and the age of the participant. Then a "fun-o-meter" was included where they had to draw a line at the level of fun they had (it goes from 'Boring' to 'A Lot of fun').

The questionnaire included the following questions and answers (in Greek):

Note:

Questions 1 – 6 were rated in a 1 – 5 scale where:

1 = Totally disagree

2 = Disagree

3 = Cannot decide

4 = Agree

5 = Totally Agree

Questions 7 – 30 were rated in a 1 – 5 scale where:

1 = Never

2 = Rarely

3 = Sometimes

4 = Often

5 = All the time

var1. I did this activity because I had to.

var2. I did this activity because I wanted to.

var3. This activity was easy for me.

var4. The activity was difficult for me.

var5. I want to do something like this again.

var6. I enjoyed doing this activity.

During the workshop...

var7. I knew what to do.

var8. I could do what I wanted to.

var9. I felt like I had to do this activity.

var10. I felt I was good at this activity.

var11. I was curious.

var12. I did something new.

var13. I had fun.

Table 4 Sample of field notes for Workshop B

Meas 6' Skepiti

4.12' ngapiniam, kaitipia, kaitipia uera
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