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An evaluation of using playful and non-playful tasks when teaching research methods in adult higher education

Abstract

The use of playfulness in higher education has been considered sparsely when compared to other areas of education, for example primary schools. This paper is an evaluation, and a piece of reflective practice, of teaching a research module to postgraduate students using a combination of playful and non-playful tasks. The evaluation indicates that when initially participating in a playful task students do not make the links with how it relates to research when compared to non-playful tasks. However, once the playful task is complete, students can relate the task to the research process. For both the playful and non-playful tasks, there was a difference in how much students enjoyed participating in them. This could relate to whether the tasks were an individual or group task. There was also a difference in how helpful the playful tasks were for completing the assignment compared to the non-playful tasks. This evaluation considers the use of playfulness when teaching not only research, but any subject within higher education.

Key Words: Reflective Practice, Reflection, Playfulness, Teaching, Research

Introduction

When completing the Higher Education Academy Fellowship, and having to be reflective throughout the process, it was a requirement to consider my 'philosophical' approach to teaching and learning. I put together the following:

If I was to sum up, my philosophy is a playful constructivist experiential facilitator to engage learners through different forms of engagement (kinaesthetic, auidial and observational) within a relaxed environment

This statement aimed to combine the underlying constructivist approach to learning used through studying my PGCE as a secondary school science teacher, the experiential facilitator I developed through running an undergraduate playwork pathway on the BA Community Studies course at the University Wales College Newport (UWCN) (now part of the University of South Wales) and the playfulness and relaxed environment reflected through my professional playwork practice (for a brief explanation of playwork see King & Newstead, 2017). As a qualified secondary school teacher who became a playwork practitioner (Play Principles Scrutiny Group (PPSG), 2005), for me, it was not a huge leap to combine the two contrasting professions of teaching and playwork when becoming a lecturer in higher education. That is to use playfulness in my lectures.

Playfulness, as a concept, has been discussed in relation to children and learning, for example learning and care (Singer, 2015), computer based learning (Price, Rogers, Scaife & Stanton, 2003), and early years practitioners understanding of play in educational tasks (McInnes, Howard, Miles & Crowley, 2011). It has also led to research with an adult focus, for example personality traits of subjective well-being and humour (Yue, Leung & Hiranandani, (2012), sexual mating (Chick, Yarnal, & Purrington 2012), positive emotions (Fredrickson, 2001) and within adult higher education (Poyer, 2011; Rice, 2009; Tanis, 2012). However, Proyer (2012) stated, playfulness is still very much an "understudied field in psychology and related disciplines" (p. 104) where "more research is needed on the situational conditions that allow playfulness to occur as well as conditions that hinder the

exhibition of playfulness in daily life” (p. 121). The situational conditions could include using playfulness within adult learning in higher education, which at present has very little research (Nørgård, Toft-Nielsen & Whitton (2017).

Playfulness as a state of mind, provides the scope for an individual who can think flexibly, take risks with ideas (or interactions), and allow creative thoughts to emerge (Youell, 2008) and can be considered in different contexts (Howard & McInnes, 2013, Proyer, 2012). Firstly, playfulness can be considered as an individual personality trait (Barnett, 2006; Lieberman, 1977, Proyer, 2012). With respect to personality, Barnett’s (2007) quantitative study with American undergraduate students on playfulness as a personality trait identified four key factors in both within themselves and others: gregarious (cheerful, happy, friendly, outgoing and sociable); uninhibited (spontaneous, impulsive, unpredictable and adventurous); comedic (clowns around, jokes/teases, funny and humorous) and dynamic (active and energetic). and proposed a definition of playfulness as the: predisposition to frame (or reframe) a situation in such a way as to provide oneself (and possibly others) with amusement, humor, and/or entertainment (Barnett, 2007: p. 955).

Proyer (2012) also undertook a quantitative study with undergraduate students and found there was a relationship between playfulness and extraversion, low conscientiousness, and higher endorsements to culture using a series of playful measures. From a learning perspective, although personality and culture are important, the teaching environment will always have a range of personalities (for example, a mixture of introverts and extroverts) within postgraduate courses who range from a global cultural perspective. It is this third area which may be of more importance for the learning environment, that is the aspect of conscientiousness. Proyer (2012) raises the important question around the expression of conscientiousness:

If this lower expression of conscientiousness in playful adults generalizes into all areas of their life (e.g., leisure time, work time, relationships etc.) or whether this is restricted to specific areas and tasks (e.g., those that are less challenging or pursued just for fun) (p. 112).

A second aspect of playfulness can be considered is disposition (Katz, 1993). Disposition is the way people act and approach situations and activities where Dewey (1933) stated that playfulness is “an attitude of the mind” (p. 210). Disposition can be considered in relation to Proyer’s (2012) correlation study on playfulness and life aspirations.

Proyer’s (2012) study found a relationship between playfulness and intrinsic goals where “playfulness relates robustly to a greater expectation of the likelihood that aspirations can be achieved” (p. 115). Reflecting the results from a previous study where playfulness related to better academic performance (Proyer, 2011), Proyer states playfulness “may be explained by an interest in personal growth that facilitates the acquisition of further knowledge” (p. 115). In higher education, this would relate to not only passing the course but each individual aspect such as individual modules.

A third aspect of playfulness can be considered in respect of creativity. Proyer’s (2012) study on playfulness and ingenuity found a relationship between playfulness and creativity, expressiveness and spontaneity where “playful people seem to be aware of their potential for creative and new productions” (pp. 119-120). The aspect of creativity can relate to the environment, and what it offers, which was the focus of Rice’s (2009) qualitative study based on the concept of the *Dérive*. The

Dérive, as Rice (2009) explains “is a method of site analysis and appraisal, created by the Situationists in 1954” (p. 98). Using a case study strategy, the students were interviewed and found the main outcome of the research was a change the playful aspect of the Dérive and for a small number was a change in the way students viewed the environment. The environment was an aspect Tanis (2012) also considered in their study of higher education learning.

Tanis (2012) undertook a qualitative case study exploring the role of play and playfulness in higher education involving classroom observations and interviewing both practitioners and students. Their research, with a strong link to Lieberman (1977) identified similar factors, or personality traits as Barnett (2006) (fun, spontaneity, relationship and connection, silliness or goofiness, creative and imagination) which they stated were instrumental in the playful learning environment. Howard and McInnes (2013), in the context of professional practice, consider personality traits are static and independent of the environment, including the learning environment. Tanis (2012) found that playfulness, “created a safe environment which invited participation and provided a space to take risks” (p160) where playfulness manifested in the learning environment through risk taking, storytelling, and physical activities, points also identified by Nørgård, Toft-Nielsen & Whitton (2017).

Playfulness as an interaction between student and lecturer can be considered within the higher education learning environment: playfulness ‘motivates and challenges students, and finally, playfulness creates a safe environment where students feel free to participate and take risks to play around with ideas as they seek to make meaning’. (Tannis, 2012: p 158.) Although Tannis (2012) does not separate play and playfulness with many of the personal traits (my interpretation), the playful environment that provides a space for learning of a relaxed atmosphere (freedom and flexibility), safe place for taking risks, along with storytelling and physical activities are the factors which can combine the teaching approach and the student engagement in learning, what they term Ludic Learning Space (Tannis, 2012, p. 300) where:

The ludic classroom fosters a sense of safety, which creates an environment where students can engage in the emotional work needed to make meaning from their classroom experiences. Additionally, play/playfulness evoked significant positive emotions such as joy. (p. 302)

The ludic environment and playfulness was researched using a case study on a free-play softball league by Kolb and Kolb (2009) and developed from play theory, in particular Huizinga (1950) and the experimental learning environment. For the learner, Kolb and Kolb (2009) stated:

For a learner to engage fully in the learning cycle, a space must be provided to engage fully in the four modes of the cycle—feeling, reflection, thinking, and action. It needs to be a hospitable, welcoming space that is characterized by respect for all. It needs to be safe and supportive, but also challenging (p. 22).

Their case study found the learning of the rules and skills to play softball by the participants was supported by a playful environment where “players intentionally engaged in playful behavior to learn and develop the skill to play the game” (Kolb & Kolb, 2009, p.22). This aspect formed the basis of the softball team from its initial formation in the 1970’s where Kolb and Kolb (2006) suggest in a ludic (playful) environment, the experiential learning cycle is fully engaged by “allowing players to come back to the familiar experience with a fresh perspective” (p. 23). Although Kolb and Kolb 2006)

is not a study within a formal teaching environment (as was Tannis, 2012), this aspect of allowing players (or students) to come back to a familiar experience with a fresh perspective can be used within higher education through developing a playful environment for learning. This point of using playfulness within higher education has been reviewed by Nørgård, Toft-Nielsen & Whitton (2017) who state “there is growing interest in the sector in more general playful approaches to learning and teaching” (p. 273). Nørgård, Toft-Nielsen & Whitton’s (2017) developed a model for playful learning in higher education based on the analysis a review of the literature in conjunction with two qualitative studies on student enjoyment of learning. Their model, ‘a signature of pedagogy for playful learning in higher education’ reflects the three aspects of playfulness: individual personality traits, disposition and creativity within three levels termed surface, deep and implicit structures.

This paper is to evaluate the use of playful activities and more traditional teaching activities in the teaching of research methods on a postgraduate research module. The use of any task, whether playful or non-playful, must relate to the concept that it is being used for. The focus is not on whether playful activities promote better learners, it is an evaluation, and reflection of my teaching using both methods as part of my reflective practice (Kolb, 1984) and a consideration for the use of playfulness within higher educational teaching. The aim of the evaluation was to compare postgraduate students understanding of the research process to address the question: Is there a difference between the use of playful and non-play tasks in postgraduate students understanding and enjoyment of teaching the research process?

The Research Process

The research process is a cyclical interactive process where each part of the cycle has an impact on each other (Kumar, 1999). The research process involves: define the problem; literature search; research design; data collection, data processing; data analysis, interpretation and dissemination. For each part of the research process in relation to generating an idea, formatting a research question, data collection and data analysis, I use a series of individual and group task to illustrate the main part of the research process that is the focus of the lecture.

The learning and teaching approach can be split into two distinct types of tasks: playful tasks and non-playful (formal) tasks. I have defined a playful task as one where no clue or indication on how it relates to research, there is a clear element of surprise (or unpredictability) and prior to the task, a playful scenario maybe provided. A breakdown of each task and the research process is shown in the table below:

[Insert Table 1 Here]

Both the playful and non-playful tasks include working individually or within groups. Feedback from module evaluation provides some guidance on delivery and content of lectures; however I was interested in more detailed evaluation of the different tasks set within the module, in particular on the use of playful activities within module delivery. With discussion with the College Ethics Committee and the Programme Managers for the relevant courses, a specific task evaluation was undertaken after students had completed and submitted their assignment for a MA research

module. The evaluation focused on the tasks outlined above and asked students to score from 1 (not at all) to 6 (fully clear) to the following questions:

- Before starting the task, was it clear it related to research?
- After finishing the task, was it clear it related to research?
- Did the task match the research topic it was focusing on?
- Did you enjoy doing the task?
- Was the task helpful for your assignment?

The evaluation sheet was designed to address the question by comparing between playful and non-playful tasks as a between group study. In addition, a within group study for both playful and non-playful tasks was also undertaken.

The evaluation sheets were distributed after the students had received their mark for the module assignment. This allowed the chance for consideration for the last question in relation to the assignment. For students who were studying full time, the evaluation form was completed approximately two to four weeks after they had received their mark. For the part-time students, the evaluation form was circulated one year after completing the module and receiving their final mark. The evaluation was discussed with the Ethics Committee for approval as part of the teaching evaluation for the module and this was clearly explained to all the students. All evaluation questionnaires were anonymous and completion of them was entirely voluntary.

Sample

The sample consisted of Masters Students who completed a Foundation in Research module as part of their postgraduate course between January 2016 and February 2017. This did include both full time and part time students and there was no exclusion for gender or age. The inclusion criteria were students had to have attended the relevant sessions that included both the playful and non-playful tasks and completed a research proposal, which was the assessment for the research module. Prior to starting the module, the research knowledge and experience of the students varied between two extremes of students with no research knowledge and experience to others who had used research in previous (undergraduate) courses or through their respective work.

In total 31 evaluation forms were completed. From the 31 evaluation, 26 of the students completed the evaluation form fully, whilst 5 had some of the tasks left blank as they either did not attend that session, or did not complete all five aspects of the task that was being evaluated. The data from these 5 students was not used.

Results

Prior to any statistical analysis, data was screened to check for any potential anomalies that could influence the results. For example, when analysing the descriptive statistics, this showed an incorrect score of 8 was inputted into SPSS instead of 6 which was amended.

Once 100% data entry with no omissions was obtained from the descriptive statistics, then the inferential statistics was undertaken. A Cronbach Alpha was undertaken to estimate the reliability of the scale for the evaluation questionnaire. The Cronbach Alpha provided a value of 0.65, which does fall below the generally accepted value of 0.70.

Although the evaluation enabled a score from 0-6, the data collected can be considered as more ordinal rather than interval and there are conflicting opinions whether ordinal data can be used for inferential statistics (Norman, 2010). Norman's (2010) paper provides the argument for ordinal data to be used in T-Tests and ANOVA. This evaluation thus used two inferential statistics: t-test to consider differences between playful and non-playful activities and ANOVA to compare the four playful tasks and the four non-playful tasks separately.

Comparing Playful and Non-Play Tasks

Table 2 provides the mean score, standard deviation and t-test for both the playful and nonplayful tasks.

[Insert Table 2 here]

When comparing the five research topic questions between the playful and non-playful tasks (table 2), it was a clear there was a difference in score with Before Task and Helpful for Assignment. A t-test confirmed a significant difference in the scores for Before Task for playful ($M=3.86$, $SD=1.57$) and non-play ($M=4.42$, $SD=1.57$) tasks; $t(238)=2.89$, $p = 0.006$, and for Helpful for Assignment for playful ($M=4.81$, $SD=1.16$) and non-playful ($M=5.17$, $SD 1.11$) tasks, $t(238)$, $p=0.016$.

When considering the nature of each of the playful and non-playful tasks, the surprise element of the playful task indicates students did not link the playful activities with the research process. However once the task was completed, there was no difference to how students could relate the playful or non-play task to the specific aspect of research. This indicates that the playful task provides a different way of introducing a topic, but students can still see the relevance to the research. With regards to Helpful for Assignment, this involves students writing a research proposal. When considering this, the playful task is the Egg Drop, which introduces students to the concept of the research process, and the task of playing Pointless is a quick task to explain different research paradigms (quantitative and qualitative research). The assignment is for students to develop a research proposal considering the research process, but not necessarily to analyse the research process. This may explain why this playful task was not considered beneficial to the actual assignment of writing a research proposal.

When comparing the playful tasks to two of the non-playful task (literature review and critiquing the literature), the assignment requires a short literature review for students to critique relevant research papers. It is easily perceivable for students when writing their assignment to not consider the two playful tasks as helpful compared to the two non-play as students do not have to critique the research process or research paradigms. What was key is there was no difference between the playful and non-playful tasks with respect to relating them to research and matching the task to the aspect of the research process. The next consideration was to consider the individual tasks within the playful and non-play context.

Playful Tasks Only

Table 3 compares the means, standard deviation and ANOVA for the four playful tasks: the egg drop, pointless, throwing game and the quiz.

[Insert Table 3 here]

The results of the ANOVA showed a significant difference for Enjoy the Task $F(3,113) = 3.14$, $p = 0.028$ ($r = 0.16$) and for Help for Assignment $F(3,113) = 2.95$, $p = 0.035$ ($r = 0.16$). The effect size for both the Enjoyment and Helpful for Assignment was small ($r = 1.6$). The difference in enjoyment could relate to the whether the task was an individual or group activity. The Egg Drop and Throwing Game were both group activities, whilst the game of Pointless and the Quiz were individual tasks. The Quiz was based on the research topic of sampling; however this also provided the scope to test the students on aspects of the course. The throwing game was an introduction to quantitative variables and research designs (between and within groups). Whilst the students were undertaking the Egg Drop task or participating in the throwing game, there was a lot of talking and laughter between the students.

The relevance to the assignment with respect to the Egg Drop and Pointless task was discussed earlier. In relation to the Throwing Game, if the student's research proposal was a qualitative research design, then it would be easy to infer this task was not helpful for the assignment as identifying variables (independent, dependent and confounding) would not be required if the research proposal involved using interviews or focus groups.

Non-Playful Tasks

Table 4 compares the non-playful tasks of the literature review, critiquing the literature, observations and questionnaire design. Again, the average score, standard deviation and the ANOVA are shown.

[Insert Table 4 here]

The ANOVA only showed a significant difference on Enjoy the task $F(3,119) = 2.79$, $p = 0.04$ ($r = 0.15$). As with the ANOVA on playful tasks, the effect size was small ($r = 1.5$). The difference in enjoyment of the non-playful tasks could again relate to whether the task was an individual or group activity. The tasks of the Literature Review and Critiquing the Literature scored lower than the Observations and Questionnaire Design. For the former, this involved the individual student having to read articles and research papers using a critique framework. For the latter, this involved more active group participation, particularly the questionnaire design was a group task to design and pilot a questionnaire.

Discussion

The results indicate the use of playful and non-playful tasks when teaching a research methods module varies in students understanding of how the task relates to research before the task is undertaken and how the tasks were helpful to the assignment. However, once the task was completed, there was no difference between playful and non-play tasks on how they relate to research. When comparing playful tasks only, there was a difference in the amount of enjoyment and how helpful the task was to the assignment. For the non-playful tasks, there was only a difference in enjoyment. These results will be considered in relation to the three aspects of

playfulness: individual personality traits; disposition and creativity From the results, playful tasks may not provide an understanding to research prior to it being undertaken, but once the task is completed, they do have equal value to more traditional nonplayful methods. What playful tasks can provide is creativity, for example the Egg Drop task provides the scope for group participation to create a structure out of straws and tape to prevent an egg breaking when dropped from a height. Although students did not find the task as helpful for their assignment compared to the task of critiquing the literature, what the Egg Task can provide is to help create a relaxed atmosphere (Tannis, 2012) as not only do students talk with each other whilst making their contraptions from straw and tape, there is also genuine excitement and laughter watching the eggs being dropped, and more often than not being smashed. It is from here that the research process is then outlined, where the different aspects of the research process are explained through the other tasks. This relaxed atmosphere is a key aspect of play. Children and animals engage in play in what Burghardt (2005) termed as the “relaxed field” (p. 77) and this relates to the aspect of disposition, how students approach situations and activities. By having a playful task to start the module, this could provide the basis for ‘relaxing the student’ particularly as Onwuegbuzie’s (1977) study showed university students have anxiety when being asked to develop a research proposal.

Interestingly, the Egg Drop, although not considered the most useful to the assignment, did have the biggest difference between scores of Before the task (3.52) to after the task (5.56). It was evident the variation of enjoyment for both the playful and non-play tasks. This could relate to the aspect of playfulness of personality traits. It is clear from people’s reaction, as well as the formal module evaluation feedback that not all students like, or feel comfortable with playful activities, or indeed non-playful ones. This is why a balance between the two could be useful when using task-based activities. The student who enjoys playful tasks (and I have had verbal and written feedback to say they were fun) this enables them to engage in a way they are comfortable with. Conversely the student who finds playful activities uncomfortable (and this is a word I have come across within evaluation), the non-playful tasks along with the more formal use of PowerPoint slides enables them to engage in learning they are comfortable with. There is a place for both playful and non-play learning teaching. Nørgård, Toft-Nielsen & Whitton’s (2017) ‘signature pedagogy for playful learning in higher education’ has three levels: surface, deep and implicit levels. These three levels allow to “look beyond the surface structure of a lecture or class to focus on the deeper structures of teacher and student interaction and experience” (p. 276). It is within the implicit level, the deepest level, where a playful approach by both teachers and students is important. Although at first students may not see the relevance of a playful task, as shown in this evaluation, it was found that once the task was completed, there was no difference in students understanding of the task (either playful or non-playful) to the research process. The introduction of playful tasks enabled, for both myself as the teacher and the students, a fun and more relaxed way of introducing the research process, reflecting the implicit level where a risk of failure (eggs breaking) is considered an important part of learning (Nørgård, Toft-Nielsen & Whitton’s, 2017). In addition, when teaching more specific aspects of the research process (e.g. research design), using a playful task (e.g. throwing game for quantitative research designs) provided another fun way of introducing concepts such as the independent and dependent variable, which could be considered a more surface or deep level using what Nørgård, Toft-Nielsen & Whitton’s (2017) consider as flexible levels of challenge. The use of playful tasks not only has implications for teaching research, but other subject areas within higher education.

However, this may require the lecturer to teach outside their comfort zone, as well as students being receptive to a different learning experience. As a playwork practitioner and now a lecturer in higher education, reflecting on the use of playfulness in teaching does not feel to be a challenge. However for other lecturers (and students), this may be a challenge. There are some limitations to this evaluation. One limitation is the Cronbach Alpha value that was just below the accepted value of 0.70. With a larger sample size, this may have increased the value to above 0.70. Another limitation was the time students completed the module. The large span of January 2016 to February 2017 is some students studies the module as a part time student, so spreading their studies over three years, whereas others did their course in one year. When completing the evaluation, some students had to be reminded what the task involved. This aspect of recall could have influenced the scores provided. A third limitation is the content of their research proposal in relation to whether they chose to write a qualitative or quantitative research design. This could have had an influence on for example the Throwing Game where a qualitative research design would not have found this task helpful for their assignment.

Conclusion

Receiving the Fellow in the Higher Education Academy (HEA) requires the teaching practitioner to continually reflect on their professional teaching practice. This evaluation has enabled me to reflect, and in some cases rethink how both playful and non-playful tasks can be used when delivering modules around research. From both colleagues, and students alike, the term 'dry subject' has been applied to teaching research. From a teachers perspective, using playful tasks has been useful in making teaching of a 'dry subject' more enjoyable, and this has been reflected back to me by students who have said that from initially not looking forward to the module, they enjoyed it. But there is a balance, feedback on how the 'games' were not enjoyed does indicate that not all students like, or feel comfortable with 'playful learning'. What playful tasks can provide at the start of a module is to create that 'relaxed field' for learning to take place.

Playful tasks are not a replacement for non-playful tasks, but an addition where the two have their different uses in teaching. For higher education, adults like children can be playful, and although not all adults may have a playful personality, creating a playful environment can provide a disposition, a playful approach to a task and the scope for creativity. Playfulness in teaching has a place in higher education, not only within research methods, but any subject.

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