'Creative weird': Exploring gamification of communication and listening skills through play

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Introduction

Gamification has been a key emerging pedagogic approach in developing multiple skills through playful learning. In this article, we hypothesise that using a narrative-driven physical card game improves communication and listening skills in players through building an encouraging and engaging user experience. Our evaluation from two player groups of students revealed engagement and confidence improvements in both communication and listening skills development. Our findings also showed improvement of player self-awareness of these critical skills as well as highly reflective commentary related to communicating in professional contexts. We conclude there are more elements of interprofessional and interpersonal learning that can be improved and supported through similar playful learning approaches achieved through use of gamification-based interventions such as we describe here.

Introduction

Defining 'gamification' used to be simple, it was the application of game-like mechanisms in non-game contexts, and it was everywhere from supermarket points collections cards to collecting-based hobbies such as philately (Pantarotto *et al.*, 2018).

Once the Higher Education sector better embraced gamification as a concept, that definition further evolved to encompass a range of approaches − from leader boards and competitions to library-based escape rooms and digital/physical educational cards and board games − but in essence, remains mostly true to the original definition (Limantara *et al.*, 2019; Aynsley *et al.*, 2017, 2018, 2019). As Jane McGonigal, game designer and book author notes, 'Games give us unnecessary obstacles that we volunteer to tackle', which all academics will recognise as one of the pinnacles of engagement behaviour change (McGonigal, 2011). Taking that idea one step further, there seems to be a schism in the literature, either by accident or design, and a rift has appeared, namely: 'gamification' which has somehow changed in its perceptual meaning to refer to a more targeted execution, and 'playful learning' which is often espoused as being in aid of a more holistic learning experience (Whitton, 2018).

Whether you agree or not that there is meaningful difference in subsets of the terminology around gamified learning, there are some immutable benefits that have convincingly emerged in recent years in the literature, with user experience (UX) increasingly featured prominently (Dubbels, 2018). Here we hypothesise that using a narrative-driven physical card game can improve communication and listening skills in players through

building an encouraging and engaging user experience. This evaluation seeks to determine player perceptions within a pilot group of students enrolled in a Health and Social Care degree, and explore their views, opinions, and feelings about the gameplay experience using our game, Braincept: Oracle, to support their communication and listening skills' development. This group in particular, are likely to be going into roles where well-developed skills in listening and communication are essential.

Braincept: Oracle

Braincept is a range of educational games designed to facilitate learning in both further and higher education, using a gamification approach to encourage, support and drive student learning through play (Aynsley and Crawford, 2017). Our games are physical in nature and provide an interactive way to explore and scaffold learning (Aynsley *et al.*, 2019). Our previous work has focused on gamified approaches to a range of skills, from subject specialisms such as pharmacology learning, to more general learning contexts such as interprofessional education, where our approach has shown reproducible positive student gains from play (Aynsley and Crawford, 2017; Aynsley *et al.*, 2018).
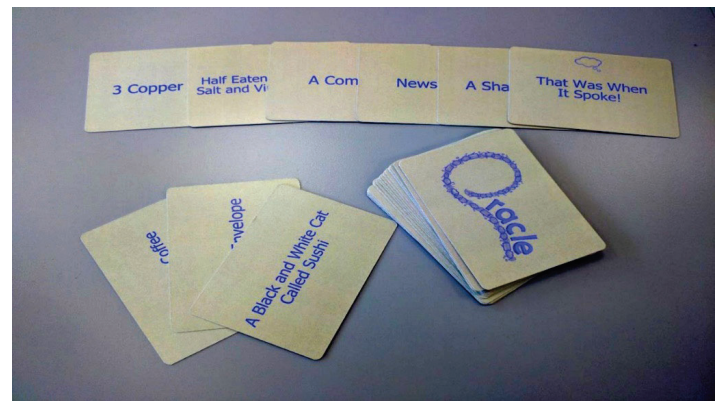

Figure 1   Braincept: Oracle

Within Oracle each player continually has three cards (Figure 1, bottom left) they can play; as the narrative story unfolds (left to right on top) the cards are incorporated into the story until an 'ending' card is drawn randomly (top right) from the deck (bottom right). At this point the players have to craft the remaining story through one more turn each to reach the ending.

The pedagogic rationale of Oracle as a gamified tool is to engage players in active listening and communication skill development through narrative-driven group play (Aynsley *et al.*, 2019). Players continuously build and develop a 'living narrative', essentially a self-generated story using the trigger game cards and, in this manner, scaffold and evolve

their story. This research explores whether student players would perceive enhancements in their confidence through both progressing a shared narrative (*i.e.* interpreting this as enhancing their communication skills) and/or improvement in thinking and planned use of game cards to effectively communicate and steer the narrative, in real time (*i.e.* a proxy for enhancing and engaging listening skills).

Methodology

For information, data collection took place just prior to Covid-19 restrictions. Focus groups were used to explore students' views of Oracle. All data from the two focus groups was fully transcribed and anonymised. Two members of the research team independently read and analysed the transcripts using thematic analysis and indicative quotes in support of identified themes (Braun *et al.*, 2006).

An evaluation tool was applied, designed for use with Oracle, consisting of three questions using a 5-point Likert scale (Bowling and Windsor, 1997; Likert, 1932), and space provided for additional free-text comments. This allowed collection of data around self-evaluated player perceptions of confidence associated with overall enjoyment, listening and communication skill development post-gameplay.
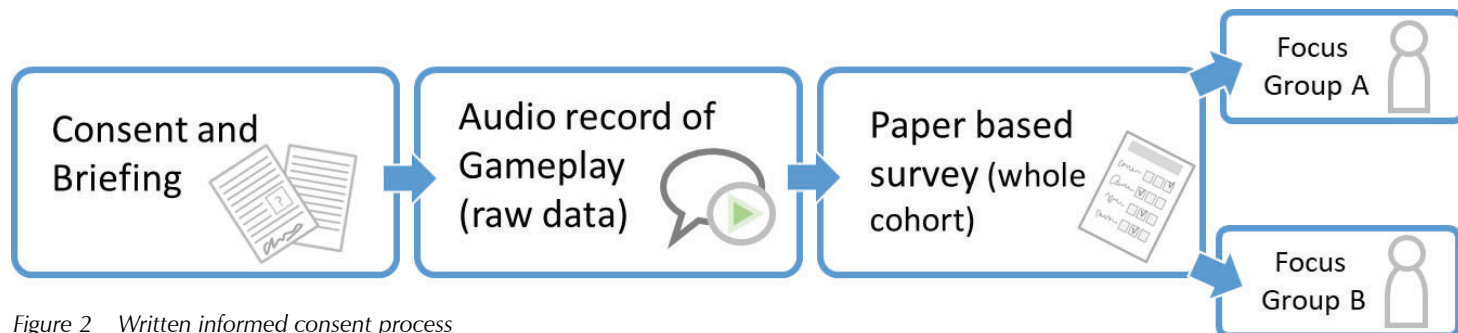

Figure 2   Written informed consent process

Written informed consent was secured after a short briefing (Figure 2) about the game and our research aims. All consenting participants formed into two small groups to play the game, which was audio recorded. After playing the game, all participants completed the anonymous paper-based feedback survey and then joined a focus group with the other players from their group to discuss their perceptions of playing Oracle.

Results

Ten Level 4 Health and Social Care students (9 female and 1 male) consented to play two rounds of Oracle as part of a larger teaching session based on developing communication skills. The purpose was to explore their perceptions of a game-based approach intended to aid development of these skills. Once they had played Oracle, the students were randomly split into two focus groups. Only one student did not participate due to not having glasses, so they were unable to read the cards. All other students participated in the evaluation. They all agreed for these groups to be audio recorded and for anonymised representative quotes to be used.

Questionnaire data

Although it was a small number of participants, Oracle had an overall positive effect on confidence in skills and enjoyment. But the disagreeing participant (see Figure 3) said that the game was 'too easy and not complicated enough for uni students'.
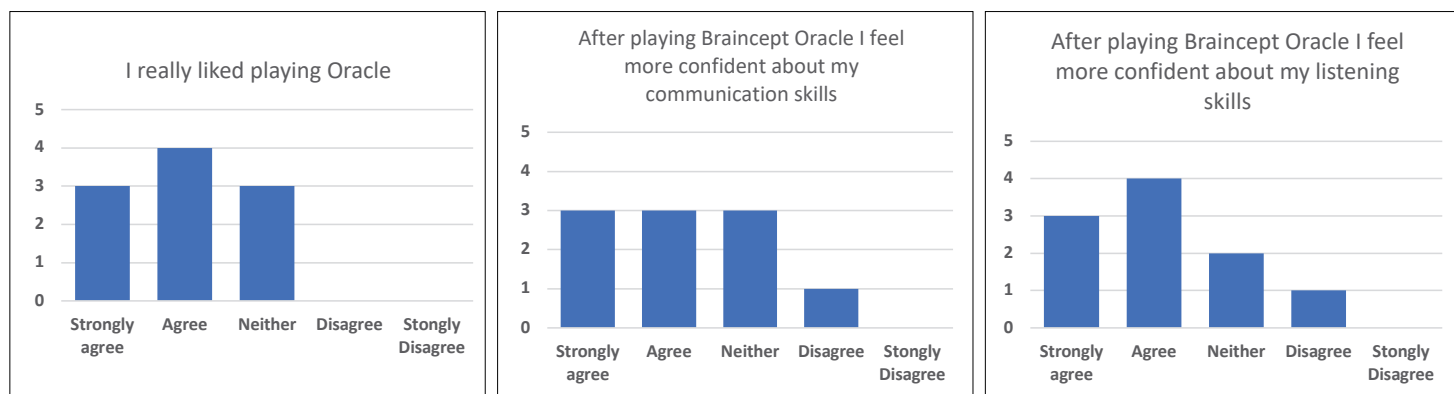

Figure 3   Participants' responses towards Oracle as a communication tool

Focus group themes and associated quotes

Analysis of the focus group transcript revealed several important themes which have been grouped under three core higher order themes – Professional awareness, Impact on skills and Use of gamification (Table 1).

Main theme	Sub theme	Representative quote(s)
Professional awareness	Understanding needs	Because you're going to be working with a range of people, patients and other employees and you need to make sure you can communicate the right information and also listen to the right information.
	Preventing failure	It's vital for people because that patient's life is in your hands, so you need to communicate so nothing bad happens by mistake.
	Adapting communication	You need communication skills because you have to speak to people anyway, so if you don't communicate, you're not much good. You have to communicate for wants and needs.
Impact on communication skills	Collaboration	Instantly went into supporting someone with communication issues, which was great. It's a good team building and communicating exercise.
	Speaking	It was interesting, you saying about you didn't want to appear stupid. But you could have gone as crazy as you wanted. So, I think maybe something about being non-judgmental around the way people use the cards.
	Listening	Making sure you're listening but you are actually listening in the moment and not thinking about your own thoughts first. Active listening skills, you're using there. You needed to listen to what somebody just said. You needed to listen to what the next one was. You needed to listen the whole time so you could follow it on.
	Confidence	I think you're thinking of what you're going to say first, before you say it…you don't want to sound stupid, and you want the story to make sense, make it easy for the next person to link it as well.
Gamification	Game play	It was funny having the contrast of trying to add the different scenarios into one and make it a story. So, you're actually doing something that's quite complex then, without realising it.
	Setting	Definitely a good icebreaker. If you're with a group of people you don't know and you're not very comfortable talking to, then it'd be brilliant for that.
	Improvements	If the cards were maybe a bit more in detail. Perhaps a setting for each of the stories may have supported a bridge. I'm massively visual. So, if you have a sword but not just the writing a sword, if you had an actual sword…

Table 1   Grouping of higher order skills

Discussion

The purpose of Oracle is as a tool to engage participants in improving their communication skills. Our hypothesis asked if Oracle would generate a positive user experience and if so, would that lead to engagement and ultimately an increase in awareness of an individual's communication skills and context for improvement?

The core aim of Oracle was to hit several key objectives in providing a gamified tool to increase confidence and ability in speaking and listening skills. To be successful at this we aimed to create an environment which was an encouraging and engaging user experience. To succeed here the game itself must be fit for purpose to engage with but also to enhance skills in participants. The functional nature of the game as an educational tool can be examined through the use of the

Serious Games Design Assessment Framework (Table 2), which takes content, mechanics, narrative, aesthetics, and framing, which are all jigsaw pieces that work either with or against 'game purpose' in this context.

The SGDA framework (*Mitgutsch and Alvarado, 2012*)

Game design elements	Explanation & Assessment criteria
Game purpose	The intention of a designer to design the game.
Content & Information	The information or data offered and used in the game. All of the given information should be valid, easily approachable and fact-based.
Mechanics	The methods invoked by agents for interacting with the game world, general rules, in-game challenge, learning curve, and reward system.
Fiction & narrative	The created fictional space, relationship between story and game purpose.
Aesthetics & Graphics	The audiovisual language used in the game and its impact on the player.
Framing	The framing of other elements in terms of the target group, their play literacy and the broader topic of the game.

Table 2   The Serious Games Design Assessment Framework

In this regard, application of the SGDA framework to Oracle is a good metric of relative success resting on a multitude of learning-relevant facets. In applying the framework, perceptions of the game as a functional tool indicated our participants were broadly positive about the ease with which the game could be picked up and learned. Interestingly, the perceptions of the difficulty of the game varied between our two focus groups and much of this seems to be due to the starting levels of player confidence in each group. Those who started more confident naturally and were outspoken felt it was engaging whilst those who expressed a lack of confidence said they struggled with the game. Interestingly, these perceptions did change post-gameplay with a positive inflection which we are interpreting as 'gains from play' and speaks to our design intent (purpose) of the game.

Impact on communication skills

Initial focus group questions asked participants for their perception of the importance of communication and listening skills. This clearly revealed a set of professional expectations in the participants, who recognised that listening and communication skills are essential across a breadth of practices that they may choose to go into, but also that they were critical from a societal perspective. This is an important finding from playing Oracle, as the rationale beneath the game was to encourage individuals to engage in a game-structured (*but not limited in any other way*) conversation, which would then raise their self-awareness and, as a result, communication and listening skills would be developing through a more self-efficacious awareness emerging from play.

Several members of one group felt that more complicated game cards would enhance the game and improve learning, and whilst we had designed the game to be inclusive and have a basic level of English on the cards, it was interesting to us as researchers that this driver towards more complexity emerged after only just two playtests. We are interpreting this desire for complexity to be both a boost in players' confidence with the format and benefits of the game, as well as looking for more freedom to explore the boundaries we have provided with Oracle, to better help their listening and communication skill development. When asked about the ease of the Oracle rules, groups shared that they like the freedom of the narrative and evolving story, but some members also expressed a desire for a way of sorting cards or a similar device built into the game, that gives them something to anchor the narrative to, almost like a scaffold or spine to hang their creativity upon.

Professional awareness

Reflecting on communication skills post-gameplay, the students identified several important themes around the core ideas of professional awareness. They shared their understanding of the need for enhanced communication and listening skills in a variety of professional contexts, and their shared awareness of the importance of this was a significant positive we observed from introducing them to the game. Particularly with concepts of 'respect for communication needs' and 'effective communication to prevent failure', where both these important areas were identified by the groups as being considerable in any professional rôle. Indeed, respect for others' communication needs was clearly in evidence throughout their play, with these groups of students helping those who were less comfortable within their groups with the meanings of unfamiliar words and in helping each other to recap the story's progress during the game sessions. This was both observed and expressed in the transcript from the students and in our interpretation, and keenly speaks to both narrative and framing when applied against the SGDA framework.

Gamifying learning and gains?

One of the first gameplay-related themes that emerged when the groups started to discuss their experience was a divergence on perceptions of difficulty of the game, with some considering it very simple and others finding challenges in creating their narratives. Player comments also homed in on reflections that whilst the rules of Oracle may be simple, they were engaging in a range of complex interactions that rewarded player investment in narrative, encouraged by the group play experience. From our perspective, this might be a metric of player engagement (as in, less engaged players may not get as much out of the game due to lack of investment in the evolving narrative), but it could equally be an indication of the difficulty in finding meaningful links between cards, which would determine whether the narrative made 'sense' to the group or whether it devolved towards randomness. In either case, from a framework perspective, 'content and information' were clearly key to finding 'meaning' through gameplay, based on the comments here.

We feel there is potential in this application of Oracle which we had not previously considered, where, with some minor modifications to the rules, Oracle might offer a useful tool to

initiate communications as much as it was designed to help development of them. From a framework lens, we are looking therefore at 'framing' Oracle's use to different outcomes, thereby hinting at transferability of the game as well as new ways to apply its mechanisms.

The final theme to emerge in this study was, of course, around improvements to Oracle. Our further work will therefore explore the concepts surfaced, as we consider both word and style variations on Oracle that offer optionality for complexity in future versions of the game, as well as exploring built-in ways of sorting cards or similar devices. This might aid players in anchoring their narratives as a scaffold for creativity but also as an enabler for the less engaged to become more so as they play. Ideas we are exploring on this would be game-based ways of helping players to help each other recap to where their story has progressed during the game sessions.

Summary and perspectives

Here we hypothesise that using a narrative-driven physical card game, which we have called Braincept: Oracle, improves communication and listening skills in players through building an encouraging and engaging user experience. Our findings with two pilot groups of students revealed their engagement and confidence in improving their communication and listening skills development. Our findings also showed player improvement of self-awareness of these critical skills as well as quite reflective comments from the players with respect to communicating in professional contexts.

From this work, we feel there are future elements of interprofessional and interpersonal learning which can be improved and supported through play, and our findings are that Oracle might be a useful tool to achieve this.

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Groupwork – Could policy help, if so in what form?

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Introduction

This article focuses on how universities support staff and students with groupwork through the development of policy. Do any institutional policies contain statements relating to groupwork, and if so, what do they focus on? How and what might be the recommendations for policy? How does this help us to think of what we might need to do to help staff and students?

This article will provide a framework for understanding the ways in which some institutions across the sector are supporting students and how this might support or hinder the teaching and learning development community in its work. In recent years, I have been working on our assessment and feedback policy with a stakeholder group drawn from across the institution. However, a key question for me as a learning and teaching developer is whether this is an important process in developing practice. I am also very interested in improving the experience of group learning.