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Children's and teachers' views on digital games in the EFL classroom

Julie Waddington and Daria Bannikova Charikova

At a time marked by the increasing use of technologies in education, the study presented in this paper explores and compares teachers' and children's views on the use of digital games in class. A case study is presented in a primary school setting where tablets have been fully integrated into the EFL classroom. A mixed method approach was used to collect and analyse data from teachers and students through interviews and questionnaires. Findings are presented which compare and contrast student and teacher views on; important elements to take into account when teaching/learning English; student behaviour; affective states; the effects of digital games on learning. Contrasting perceived positive and negative effects of using digital games, findings support claims that more work is needed to incorporate new technologies within classroom practice in ways which foster learner-centred models and facilitate the learning and wellbeing of all students.

Keywords: game-based learning; technology in ELT; motivation; student wellbeing; inclusive education

Introduction

As the educational community has adapted to the Covid-19 pandemic, the role of digital devices including smartphones and tablets has attracted increasing attention. Experts suggest that the innovations introduced during the pandemic may change education altogether, with technology playing a bigger role than ever before (Broom 2020). Highlighting the need to lever technology effectively, the OECD's Director of Education and Skills suggests that the current health crisis has fast-tracked the technological shift which will mark education in this century, changing not only methods of teaching, but also ways of conceiving teaching (Schleicher 2020). In this respect, technological advances are viewed as a strong ally in the move towards a teaching culture which conceives teachers as facilitators and mentors - co-creating rather than imparting knowledge - and learners as active participants in the co-creational process of learning. These observations are accompanied by a cautionary note reminding us that 'the heart of learning is not technology - it is pedagogy and ownership' (Schleicher *ibid*) and that teachers should be trained, above all else, 'to build a sense of individual responsibility for the learning and wellbeing of all the students in their care'. This paper addresses this need to balance the drive towards using technology in the EFL classroom, presenting a case study conducted in a primary school in Catalonia.

Digital games in the English classroom

An article published in a previous edition of *ELT Journal* highlighted the need to examine young learners' game-playing behaviours and their relationship with learning outcomes, since 'we know little about how young learners interact with technology to learn a foreign language' (Butler, Someya, and Fukuhara 2014: 266). Reviewing previous work, they highlight three main reasons for the growing interest in using games as instructional tools:

- Learning through games aligns well with the recent shift in educational philosophy from a traditional teacher-centred model to a learner-centred model, where learners are expected to play an active role in their own learning
- Evidence indicates that games can be effective for enhancing users' learning and understanding of complex subjects.
- Due to their potential for intensely engaging users, games may increase users' motivation for learning. (Butler, Someya, and Fukuhara *ibid*)

Reporting 'complicated relationships between the attractiveness of the games and their effectiveness', the authors warn that while games may attract children, they may not necessarily contribute to learning, or may have unpredictable effects. Referring specifically to affective factors such as motivation, they conclude that over-attractiveness or over-excitement might sometimes hinder learning (Butler, Someya, and Fukuhara 2014: 273-274). In a review of studies exploring learning outcomes related to digital game-based L2 learning, Acquah & Katz (2020) highlight the potential benefits of digital learning games (DLGs hereafter) on learners' language acquisition, affective/psychological states, competences and participatory behaviour. In relation to affective states, a frequent claim concerns children's limited attention span and the idea that games reduce boredom and disconnection within the language class. This idea is explored by Dicheva et al., who conclude their review by highlighting the inconclusiveness of current findings and the need for more substantial empirical research to demonstrate the effectiveness of digital game-based methods (2015).

Considering other affective states, some studies suggest that games may increase foreign language anxiety or contribute to nervousness or even depression, in cases where students become the target of correction or even ridicule from their peers. Although Horwitz, Horwitz and Cope established the theoretical framework for research into foreign language anxiety over three decades ago (1986), and despite the attention given to the phenomenon in adults, work considering its possible manifestations in children has taken longer to emerge, due, to some extent, to the widespread myth that children learn languages easily and are immune from the anxieties reported by older learners (Authors 2019; Kiaer, Morgan-Brown, and Choi 2021). In the context of digital game-based learning, a recent study suggests that anxiety is an essential part of the learning process (Yang, Lin, Chen 2018), while other authors claim that digital game-based learning reduces anxiety and promotes cooperative climates (Chen 2005). Dicheva et al. (2015) prompt us to treat these claims with caution, and to wonder if some games could diminish the importance of collaboration, inadvertently introducing adverse effects into the classroom.

Given the inconclusiveness of current findings, and bearing in mind the increasing use of technology and DLGs in classrooms, we decided to conduct a study to explore the role and effects of DLGs in foreign language learning. Our study aims to foreground the voices and experiences of the main participants in the learning process, as advocated in a recent study examining secondary school students' perspectives on the use of tablet PCs in education in the Republic of Ireland (Coyne, McCoy 2020). Within our specific context, we decided it could be particularly interesting to compare and contrast the perspectives of teachers and students in a classroom setting where digital games have already been fully integrated into the EFL classroom.

The Study

Method

The school where the study has been carried out has demonstrated a strong commitment to using technology across subjects, investing in tablet PCs for students to use in class. Within this context, our study compares children's and teachers' views on the use of digital games in English classes. A mixed method approach was designed to be applied with students in their final year (51 students split into two groups) of primary education and the two English teachers responsible for these groups.

Data collection process

Ethical requirements were adhered to strictly and the informed consent of all participants was obtained before and during data collection. Data was collected in two separate phases: Phase 1, employing an interview technique to a) obtain qualitative data and b) inform the questionnaires administered in Phase 2.

Participants

In phase 1, interviews were conducted with the two English teachers: one male with 12 years' experience (MT) and one female (FT) who had recently started working as a teacher. After close observation and consultation with the teachers, one female (S1F & S3F) and one male student (S2M & S4M) from each group were interviewed. This selection was determined by the children's demonstrated capacity to express themselves clearly and without inhibition, and their willingness to reflect on issues that are of concern to them, their classmates, and their younger peers. After applying this purposeful sampling procedure to conduct the first phase (Palinkas et al. 2015), we extended participation to include all students from the two groups (51 children between 11 and 12 years old), all of whom had been receiving English classes since they were 3 years old in a low-exposure context (two 1-hour classes per week). We also extended participation and invited 6 teachers with English language teaching experience to complete the questionnaires.

Phase 1

Interview design and data collection

Semi-structured interviews were conducted individually with teacher and student participants. Interviews were structured around pre-formulated questions which had been validated and modified in line with expert opinion (see Appendix 1). The aim in all cases was to create a comfortable environment, giving participants the opportunity to share their opinions about the topic in a confidential space. Interviews were recorded, transcribed and translated for subsequent analysis.

Data analysis

Interview transcriptions were read and reread to obtain an overall picture of participants' views, before proceeding to categorise responses according to the themes covered in the interview questions. Focusing on the effects of DLGs, responses were categorised into perceived positive or negative effects.

Phase 2

Questionnaire design and data collection

A first draft of the questionnaires was created at the same time as the interview script. The initial draft included questions on a 4-point Likert scale which aimed to cover the same themes as those explored in interviews. This initial draft was subsequently modified and extended to incorporate further issues or questions that emerged during our analysis of the data from Phase 1. This led to the addition of eight specific themes, enriching the scope of our initial focus and homing in on issues of interest or concern raised by participants themselves: being faster prioritised over learning; drops in participation with large groups; perception that time goes faster with games; embarrassment; anxiety; boredom when games too easy; increased confidence when games completed successfully. An introductory question on the role of games in learning was also included, asking participants to select the five most important elements out of a choice of twelve: the list of elements was also informed by our analysis of Phase 1. A closing question was also added asking participants to select from the two classroom environments suggested: one using coursebooks/activity books (the other dominant approach used in their English classes) and another using games. After adapting the two versions of the questionnaire (teacher version and student version) and modifying them further after expert validation, they were then administered to participants (see Appendix 2 and 3) in digital format. The teachers completed the survey at their own convenience, while children were given time within their English classes, using class tablets to access the survey and asking the researcher and/or English teacher to clarify any doubts.

Data analysis

The quantitative data obtained from the questionnaires was extracted and represented in bar chart format in the case of Question 1 (multiple choice), and in pie charts for the remaining questions (Likert scale where 1=strongly disagree and 4=strongly agree), enabling us to measure and contrast teacher and student responses. For student responses, we show statistical results as percentages of the total sample (51). Given the low number of teacher participants (6), we consider it more appropriate to show results in numerical format ($N=X/6$).

Interpretation and presentation of findings

Bearing in mind the research objectives, and after completing the two phases described above, we analysed the findings, drawing on both the qualitative and quantitative data obtained. Our presentation of the findings therefore combines statistical results from questionnaires with findings extracted from teacher and student interviews. The findings are organised in line with the following themes: important elements when teaching/learning English; student behaviour; affective states; effects on learning. Finally, we present the results of our thematic analysis of interview responses to identify and contrast the perceived positive and negative effects of using DLGs in English learning/teaching.

Findings

Mixed data analysis

Important elements when teaching/learning English

Responses to the first question, asking participants to choose the five elements they consider most important when teaching or learning English, indicate some divergence between teacher and student views (see Table 1).

Insert Table 1. Approximately here

According to most teachers surveyed (N=5/6), student motivation is *the* most important element to consider when teaching English. This view also emerged in interviews, with both teachers stating that they use games primarily because they help motivate students. While a significant number of students (57.7%) agree that motivation is important, the majority (69.2%) consider 'understanding everything that is being explained' to be more of a priority. Although 'making sure students understand everything' was included on the list of elements provided, it was not selected by any of the teachers. Despite this, their efforts to promote understanding can be inferred from the 3rd (making the learning process easy for students) and 5th (giving enough time to think/read/write the correct answers) elements selected. The choices shown in Table 1 indicate that both groups consider aspects that facilitate learning to be one of the keys to successful teaching or learning. Interview responses provide further insight, with both teachers highlighting the importance of selecting games carefully and in line with specific learning objectives. FT emphasised the need to find the right level and to ensure that games are neither too easy nor too difficult for students. This is strongly supported by student responses, with all four interviewees indicating that this is an important aspect that affects their learning. S3F makes a clear link between this point and the question about whether learning is more effective with coursebooks or DLGs: 'if the game helps me learn and it's at my level, then I prefer the game, but if the game's boring and I find it too easy, then I prefer the book'. S2M makes a similar point, explaining that 'I like harder games because they make me think and that way I practice more'. When asked whether he could see any benefits in

playing what he perceived to be 'easy games', he distinguishes clearly between performing to obtain good grades and advancing in his learning:

It depends. I mean, yes, because everything counts towards your mark, so if it's easy, all the better. But if I find it really easy, then no. It might help refresh my memory, but I won't improve by just refreshing my memory.

All four interviewees counterbalanced the view that games are sometimes too easy (for them) by explaining that some of their classmates struggle to understand. From this perspective, 'finding the right level' becomes a considerable challenge when taking into account the whole class. Both teachers interviewed referred to this challenge, emphasising the need to take into account *all* children, including those with special needs. For FT, one of the benefits of using games is that they offer all children opportunities to improve in some way and obtaining successful results can help build self-confidence. This view is counterpoised by student reflections on what happens when results are *not* successful (see Affective states).

Student behaviour

According to the teachers interviewed, 'finding the right level' is not only the key to successful learning and teaching, but also influences student behaviour. Reflecting on the behavioural effects of game playing, MT explains that children 'sometimes start to do silly things because they can't see the relevance of what they're doing'. FT also refers to the potentially disruptive nature of game-based learning, emphasising the need for the teacher to control the situation and to plan the procedure carefully to prevent or minimise 'troublesome behaviour'. Both teachers agree that children's behaviour changes when playing games and that they need to adapt to this and not expect to be able to 'control' the group as if they were 'doing a traditional class'. This shared view is not reflected in responses to question 3 of the Teacher Questionnaire, where most respondents (N=4/6) strongly disagree with the statement that 'using games to teach English can make students overexcited and then they don't work well'. The view is reflected, however, in student responses, with over half the children (65.4%) agreeing (34.6%), or strongly agreeing (30.8%) with the statement. When discussing this aspect in interviews, all 4 students confirmed that the 'freer' context and excitement of playing often results in 'more unpleasant' behaviour and that sometimes their classmates get 'over motivated' or 'over excited' and 'end up learning nothing' (S4M).

Affective states

The suggestion that games can help build self-confidence by offering all children opportunities to improve was explored further in questionnaires. While teachers agreed with this statement unanimously, students were divided on whether this was the case or not. Similar divergence was found in relation to another issue that emerged in student interviews. Commenting on the negative effects, one student introduced the issue of shame, suggesting that this increases when you visibly fail in front of your classmates:

For example, the science games we play in English, or whiteboard games, or those where you have to match something. Well most kids think that whatever they do they won't know the answer or anything, and then obviously the game isn't much

fun. I mean there's a good chance you'll be picked or that you'll have to go to the front and then there's the shame, because, I mean when there's like 26 or 25 of you, and you go to the board and you get it wrong and everyone shouts out that you've got it wrong – 'noooooooo, that's not it!'. So it's obvious that over the years that shame grows, and it keeps growing, and if they carry on getting at you then you don't feel too great. Maybe that's the thing that's the hardest about playing in class. (S4M)

Testing out agreement with this view in questionnaires (Q.11), we found that teachers' responses were split evenly on the matter, with 3 agreeing and 3 disagreeing. More consensus was found in student responses, with the majority (65.4%) agreeing (26.9%) or strongly agreeing (38.5%) that 'if you get something wrong in front of the class, your sense of embarrassment or shame increases over time'.

Effects on learning

Responses to the last question on teacher and student questionnaires provides an indicator of overall perceptions of the effectiveness of DLGs for learning English (see Figure 1).

Insert Fig 1. Approximately here

Only 1 of the teachers surveyed selected the coursebook option, with majority responses (N=5/6) suggesting that game-based environments generate more learning. This majority view contrasts with the student response, with more than half indicating that they learn more from coursebooks than with digital games. This divergence was also detected in interview responses. Both teachers reported that they would recommend the use of games to other teachers, and MT suggested that 'if they aren't doing it yet, they have to', since 'students learn more through game-based activities than through traditional classroom activities using coursebooks and associated activities'. This suggestion was called into question by student responses, with three of the four interviewees claiming they learn more using a coursebook and notebook than with games. One student provided an interesting reflection that the effectiveness of the method depended on the learner: 'for some children in class, with a game they might not understand things properly. On the other hand, the coursebook explains it well and you've got the teacher who explains it to you if you don't understand' (S3F). One of the concerns raised in student interviews suggests that the objectives of the game sometimes end up being prioritised over learning. Analysis of questionnaire responses shows some divergence between teacher and student views on this question. While most teachers (N=4/6) agree ('agree', *not* 'strongly agree') that students prioritise winning, 33.3% strongly disagree with this suggestion. This contrasts with results from student questionnaire responses, showing a clear majority either agreeing strongly (53.8%) or agreeing (42.3%). An explanation for this shift in priorities from learning to winning is provided by one of the interviewees:

It is more fun playing games, but you learn more with a notebook and coursebook because sometimes, when you're playing a *Kahoot*, you get more bothered about

the points, about winning, than about knowing what you're being asked, about understanding the question and answering well (S4M).

Another student provides more insight into why the problem is particularly pronounced in the case of *Kahoot* (a quiz-based digital platform referred to frequently by teacher and student participants):

They get more bothered about points in a *Kahoot*. They're more bothered about doing it fast, to get more points, than about reading and looking whether they've put the right answer. For example, in the *Kahoot* we did the other day, the last answer was obvious. Well there were some who just clicked the first thing they saw and didn't even bother to read anything. Just to get more points (S3F).

The 'who can click fastest' issue was also raised by S2M, who suggested that 'while you may have fun in general and learn 'some things' playing games, you don't learn other skills, like writing, or practicing pronunciation, 'because you only have to click buttons and you don't have to say anything'. Testing out responses to this statement in questionnaires, we find that most students agree (65.4%), while all but one of the teachers disagree.

Thematic analysis of interview responses

This final section consolidates the findings reported above by contrasting the perceived positive and negative effects of using DLGs in English learning/teaching. Our analysis of interview data indicates that student and teacher views coincide in relation to motivation, finding the activities fun/enjoyable, and considering that games help speed up the learning process (see Figure 2).

Insert Figure 2 approximately here

While views about positive effects tend to converge, we find a different picture when focusing on the negative effects (see Figure 3).

Insert Figure 3 approximately here

Although the teachers and students interviewed do share some common concerns, a notable divergence emerges when contrasting reflections on negative effects, with students raising more concerns and identifying issues which had not been contemplated in the pre-design phase of the study.

Discussion

The findings reported above have been obtained within the context of a small-scale exploratory study. Although they may be pertinent to current debates about the role and

effects of DLGs in the foreign language classroom, caution should be exercised when generalising or transferring these results to other contexts, given the small size of the sample and our specific focus on learner and teacher perceptions. The suggestion (offered by students) that attention shifts from learning to winning is a particularly noteworthy finding which coincides with warnings that games can diminish the importance of collaboration and introduce adverse effects into the classroom (Dicheva et al. 2015). Concerning the need to select games carefully in line with learning goals (teacher views) and ability levels (teacher and student views), we wonder to what extent this finding reveals a tendency to incorporate new technologies into existing practice, instead of using these technologies to transform practice and develop more personalised learning environments in which new technologies provide opportunities to adapt to the needs of each and every student (Chowdhury and Eslami 2014). Harnessing such opportunities to adapt classroom management strategies (working in small groups instead of as a whole class, for example) could help alleviate some of the behavioural problems highlighted in our study, and reported previously in other contexts (Butler, Someya, and Fukuhara 2014). More personalised learning strategies could also help reduce the negative effects associated with failing visibly in front of the class, and the potential anxiety that this may generate (Waddington 2019; Kiaer, Morgan-Brown, and Choi 2021). Questioning the claim that anxiety is an essential part of the learning process (Yang, Lin, Chen 2018), we would stress the need to develop strategies that incorporate DLGs in ways that positively reduce anxiety and promote cooperative climates (Chen 2005).

Conclusions

Our aim throughout this study has been to explore the role and effects of using DLGs in the foreign language classroom. Taken in conjunction with recent literature, our hope is that the findings contribute to stimulating reflection on the issues raised, prompting teachers to reflect on current beliefs and practices, and highlighting areas for further research. Considering effects on learning, the divergence found between teacher and student views supports previous work recommending a cautionary approach when establishing direct correlations between 'being motivated' and learning (Butler, Someya, and Fukuhara 2014) and aiming to develop teacher understandings of motivation in the language classroom (Waddington 2018). Contrasting teacher and student views has proved insightful and has helped pinpoint specific areas that we would encourage both teachers and researchers to reflect on and investigate further within their own contexts. The points of convergence found regarding perceived positive effects support claims that learning through games can align well with the recent shift in educational philosophy from a traditional teacher-centred model to a learner-centred approach (Butler, Someya, and Fukuhara 2014: 266). Nevertheless, the points of divergence concerning potential negative effects suggests that much work remains to be done to harness DLGs and other technologies effectively and appropriately within classrooms (Chowdhury and Eslami 2014; Schleicher 2020). Despite the limitations of our study, the instruments applied have helped foreground the voices and experiences of the main participants, as advocated in recent studies prioritising qualitative data collection methods (Coyne, McCoy 2020). While our strategy of triangulating qualitative and quantitative data has aligned well with our present goals, the nuances and details provided by the qualitative data have been particularly insightful, inclining us toward the use and improvement of qualitative methods in future studies.

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The authors

Julie Waddington is a (Serra Húnter) lecturer in language and literature education at the University of Girona, Catalonia (Spain), where she teaches on the BA programmes in Early Childhood and Primary-School Education, and the MA in Attention to Diversity in

Inclusive Education. Her main research interests focus on learner and teacher identities, children's literature in language learning, and EFL in the early years.

Email: julie.waddington@udg.edu

Daria Bannikova Charikova graduated in 2019 from the dual degree program in Early Childhood and Primary-School Education with a focus on foreign language teaching at the University of Girona, Catalonia (Spain). She also holds the title of teacher of music education at the Conservatory of Music L'Energia (Catalonia), since 2018. She currently teaches as part of the Early Learning Center team at the Berlin Metropolitan School, which follows the International Baccalaureate (IB) system of education. Her research interests include approaches and methods of language learning, second language acquisition in general, and the use of mother tongue as a learning resource.

Email: dasha.bannikova17@gmail.com