Learning to design a mobile hunt on Actionbound: a complex task?

Carole Delforge[1], Julie Van de Vyver[2], and Alice Meurice[3]

Abstract. The research consisted in having an Actionbound mobile hunt for A1 learners of Dutch designed by a group of language Student Teachers (STs) within the framework of a second year course on foreign language teaching. The game was then implemented with two groups of fifth grade primary school pupils during their visit of the Hergé Museum in Louvain-la-Neuve, Belgium. These two steps allowed our multidisciplinary research team to analyse the use of the app from the perspective of not only the players but also the creators of the game. Research data was collected throughout the study via questionnaires, observations, and a focus group. A qualitative analysis of the STs' data allowed us to establish their digital profiles, thereby situating each of them in the digital integration process. The results suggest that integrating technology and content when designing a pedagogical activity is a complex task. Support and guidance from teacher trainers could therefore be recommended in order to propose a pertinent integration of technologies in the language classroom.

Keywords: mobile app, digital literacies, reading skills, gamification.

1. Context

In the framework of a government project funded by the Belgian French-speaking Community, our group of researchers in foreign language teaching and digital literacies from higher education institutions has designed a study that aims at analysing the use of the Actionbound mobile app in language learning – for further information, please refer to Meunier, Meurice, and Van de Vyver (2019). The study

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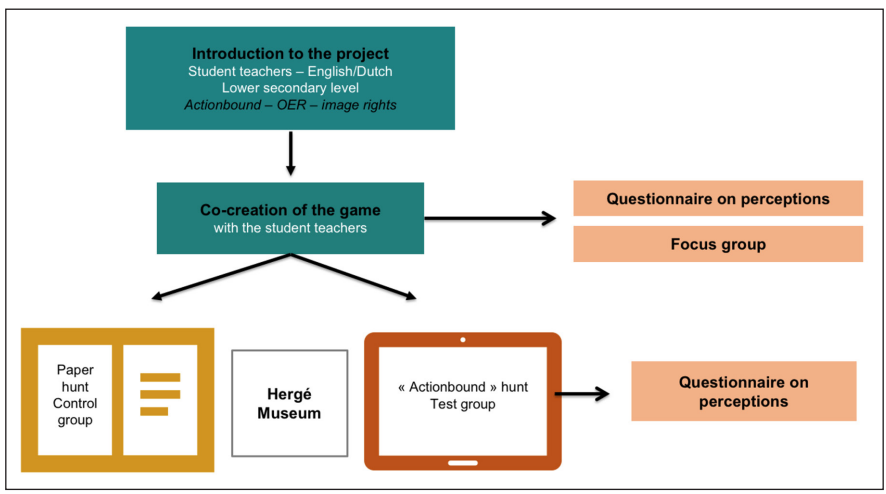
consisted in having ten language STs design both a mobile and a paper version of a hunt on L2-Dutch reading strategies in the Hergé Museum. The project was first introduced by the researchers to let the STs discover the tool and raise their awareness of various pedagogical aspects. The STs were then asked to create the two hunts and were accompanied by our research team throughout the process. The game was then implemented with 43 fifth-grade primary school pupils during their visit of the museum. The pupils were randomly distributed into two groups: a control group performed the hunt on paper (N=19); the test group played the game on tablets (N=24) after having discovered Actionbound through a short 'demo' hunt. The STs were in charge of welcoming and guiding the groups of pupils during the activity.

The present study intends to answer the following two research questions.

- What is the impact of the mobile hunt and the techno-pedagogical guidance on the ST's perceptions of the use of technology in a pedagogical context?
- What is the impact of the mobile hunt on the pupils' attitudes towards the activity?

2. Methodology

Figure 1. Data collection



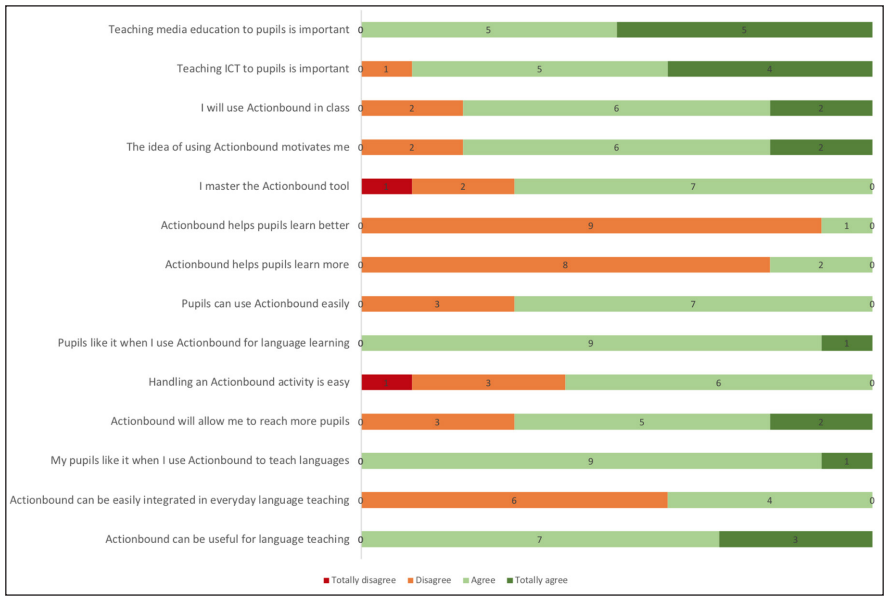
As depicted in Figure 1, different types of data were collected throughout the study. After the activity in the museum, the researchers held a focus group session with the STs. The discussion was organised very freely, with every ST expressing their opinions and impressions, and the researchers noting them down and sometimes directing the conversation. A post-questionnaire was also distributed to the STs to investigate their perception of the use of Actionbound and the integration of technology in the language classroom. The questionnaires had been built by the researchers based on Davis, Bagozzi, and Warshaw's (1992) Technology Acceptance Model (TAM), which predicts the intention of use of technology, and Niess et al.'s (2009) Technological Pedagogical Content Knowledge (TPACK) development model, which situates respondents on a scale of integration of technology, pedagogy, and content. The pupils filled in a short survey right after taking the hunt to give their opinion on the activity, and took a test on L2 reading strategies on paper the next day.

3. Results and discussion

3.1. What is the impact of the mobile hunt and the techno-pedagogical guidance on the STs' perceptions of the use of technology in a pedagogical context?

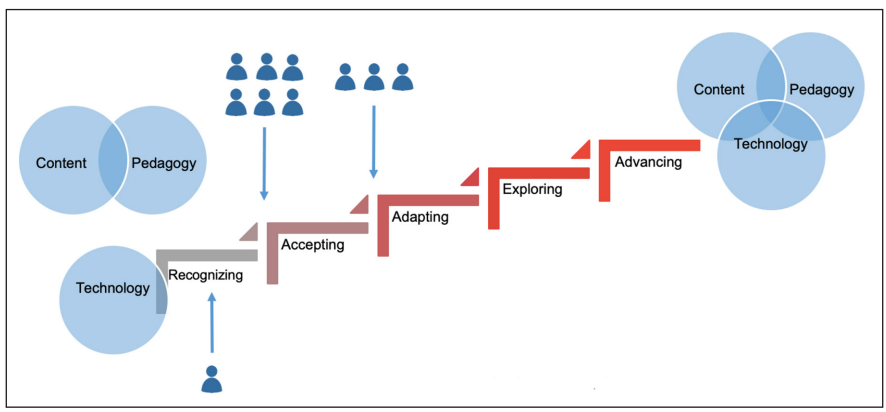
The STs' perceptions of the use of technology (based on TAM items) after the experimentation are on the whole positive, as shown in Figure 2. Teaching media education and Information and Communication Technology (ICT) is seen as important for the vast majority, and eight STs out of ten are motivated and intend to use the application in class. All of them believe Actionbound is useful for language teaching, although their attitude towards the ease of use of the tool is more nuanced. Three of them declare not mastering the tool, four of them consider an activity with Actionbound not easy to handle, and six of them do not think the mobile activity can easily be integrated into everyday practices. From these results, it seems that in our case, the usefulness of the tool plays a more important role in their intention to use it than its ease of use. When looking at the reasons why the use of the tool is seen positively by the STs, it appears that pupils' attitudes may be a key factor. While the vast majority of the STs do not think that Actionbound can help pupils learn better or more, all of them believe that their pupils appreciate their use of the app. Seven of them also assume the pupils can easily use the tool. The same number of STs view the tool as a way of reaching more pupils.

Figure 2. STs' perceptions – four point Likert scale questions



These figures show, in brief, some positive perceptions and acknowledgements of usefulness but no clear perception of the pedagogical added value of the tool. This is confirmed when examining the digital profile of each ST, illustrated in Figure 3.

Figure 3. STs' TPACK developmental profiles, based on Niess et al's (2009, p. 10)



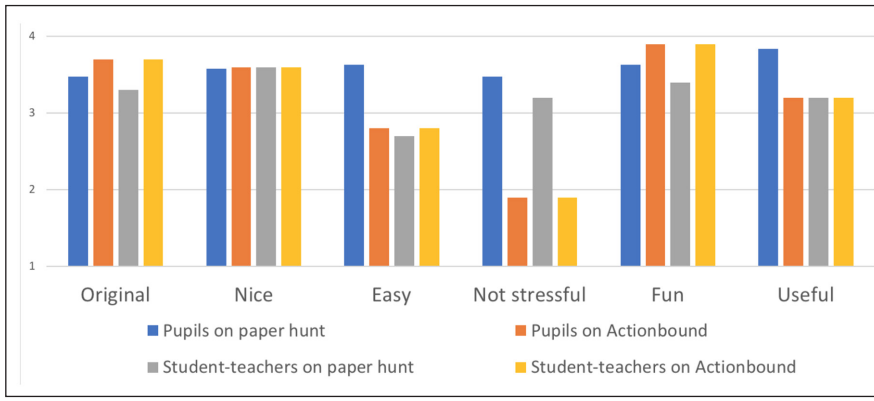
All the STs' data was analysed to establish their digital profiles based on Niess et al.'s (2009) TPACK developmental model. Each ST is situated in the digital integration process, and more precisely in the integration of Actionbound. In Figure 3, one ST is at Stage 1, recognising the use of the alignment between technology and content when teaching but not being in favour or against the integration of technologies and having no intention of use. This student sees technology as a complement to traditional teaching and assumes it is not easy to use for pupils. The majority of STs (N=6) are between Stages 1 and 2. They recognise the alignment of technology with content but consider it a motivational tool with no pedagogical added value. Still, they are in favour of the use of technology and believe it is important to use it adequately. The last group of STs (N=3) accept the alignment of technology with content. They are between accepting and adapting. They are in favour of the use of technology and are ready to get involved in the integration of ICT in activities as they see its pedagogical added value. These results suggest that aligning technology and content when designing a pedagogical activity (Mishra & Koehler, 2006) is complex, at least for STs, and that it requires techno-pedagogical support from experts.

The results from the focus group session confirm the previous observations. According to the STs, the mobile hunt is motivating, fun, and is different from a traditional activity, and according to some of them, it also provides challenges to the pupils and offers new tasks such as video recording or taking pictures. The groups of pupils were seen as autonomous during the game even though they sometimes needed to be guided. On the whole, they need some computer skills to navigate the app or some technical support during the activity. Likewise, the teachers need computer skills to provide guidance and technical help if needed.

3.2. What is the impact of the mobile hunt on the pupils' attitudes towards the activity?

Figure 4 shows that the STs' hypotheses on the pupils' perceptions were on the whole correct, the only exceptions being that the young learners found the paper hunt easier and more useful than the STs thought they would. As for the answers of the pupils who did the hunt on paper and those who did it on a tablet, they are often similar. The most significant gap highlights that the mobile hunt seemed more stressful. This might be explained by the immediate feedback given by the app after each answer. During the focus group session however, some STs postulated that this stress was positive and seemed to be a motivation factor for the pupils to keep playing, which is further illustrated in the adjectives *original* and *fun*.

Figure 4. Comparison of the pupils' perceptions and the STs' hypotheses on these perceptions



4. Conclusions

The results from the current study suggest that aligning technology and content in a pedagogical activity is a complex task which requires techno-pedagogical support from teacher trainers. An area for development would be to investigate the potential of professional learning communities (Vescio, Ross, & Adams, 2008) in raising STs' awareness and supporting them during the creation of ICT-integrated teaching sequences. The pupils' perceptions of the mobile and paper hunt did not differ greatly. This might be explained by our decision to make the two games almost identical, consequently not allowing for the full potential of ICT to unfold.

5. Acknowledgements

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References

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology, 22*(14), 1111-1132. https://doi.org/10.1111/j.1559-1816.1992.tb00945.x

Meunier, F., Meurice, A., & Van de Vyver, J. (2019). Empowering teachers and learners in and beyond classrooms: focus on OEPs in reading activities. In A. Comas-Quinn, A. Beaven & B. Sawhill (Eds), *New case studies of openness in and beyond the language classroom* (pp. 173-186). Research-publishing.net. https://doi.org/10.14705/rpnet.2019.37.974

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: a framework for teacher knowledge. *Teachers college record, 108*(6), 1017-1054.

Niess, M. L., Ronau, R. N., Shafer, K. G., Driskell, S. O., Harper S., Johnston, C., Browning, C., Ozgun-Koca, S. A., & Kersaint, G. (2009). Mathematics teacher TPACK standards and development model. *Contemporary Issues in Technology and Teacher Education, 9*(1), 4-24.

Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Educatio, 24*(1), 80-91. https://doi.org/10.1016/j.tate.2007.01.004

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