BRITISH COUNCIL

PARTNER
CONFAP
Conselho Nacional das Fundações
Estaduais de Amparo à Pesquisa

UK-Brazil
EnglishCollaborationCall

UK-Brazil
EnglishCollaborationCall

📍 **Fortaleza – CE**

Learning English at Brazilian
public schools with new
technologies

🏛 Federal University of Ceará
🎓 Bournemouth University

Learning English at Brazilian Public Schools with new technologies

The advancement of technology has changed the way we communicate, learn and use languages. Information is now spread rapidly. A variety of sources of knowledge is available in the palm of our hands. Previously, research in the classroom environment was restricted to consulting encyclopedias. In contrast, currently students can reach every kind of information with just one touch, through their smartphones. Since 2016, the Internet has been used more in mobile devices such as tablets and smartphones than on personal computers (HEISLER, 2016). This data indicates the importance of adapting to this change and harnessing the potential provided by widespread mobile device availability in teaching and learning in the school environment.

In Brazil, public English education has a reputation of being inefficient. For example, there have been cases of students claiming to have learned no English words or grammar except for the verb *"to be"* despite having attended seven years of English classes throughout their school education (from the 6th grade of elementary education to the 12th grade in high schools). There is a wide spread belief that English cannot be learned to an acceptable standard in Brazilian public schools, which has been present for decades, at least since the promulgation of the LDB from 1961 (Law on Brazilian Educational Guidelines and Bases) which made foreign languages optional at high school (FINARDI, 2016).

In the present study, it was proposed the inclusion of Duolingo application in the teaching of English at public schools both as a motivational factor and as an

opportunity to provide students from less affluent backgrounds equal opportunities to learn English (WARSCHAUER; KNOBEL; LEEANN, 2004). More specifically, we aimed to test whether a short-term intervention using the Duolingo app can improve English skills in Brazilian public school students compared to a traditional classroom-based intervention.

The participants were 84 6th graders from two public schools in Fortaleza. The study was approved by the Ethics Committee of the Federal University of Ceara and we obtained informed consent from all students and their parents.

Before implementing the intervention plan that consisted of five (40 minute) extra-curricular EFL lessons, we collected data through a general questionnaire. In order to establish a common baseline for all students, the first three sessions were the same for all students. All lessons followed the same teaching plan (Presentation using PowerPoint slides, oral practice, ending with a short, written production exercise). The themes introduced were related to *greetings*, *families* and *school*, based on the low general level of English skills of the students. For both schools the diagnostic questionnaire and the pre-test were administered during the second lesson. In lessons four and five, we split the participants into an experimental group using the Duolingo app and a control group that continued with the traditional intervention. Because the schools involved share the policy that students are not allowed to use mobiles during class, we first needed to inform the director/principal and request authorization. As we were unable to provide mobile devices to the students, the group assignment had to be made according to which students had mobile devices to bring to school. Both schools are public and located in neighborhoods considered vulnerable for their low-income status. As a result, the number of students who were able to bring mobile devices was lower than we had originally anticipated (16 out of 84). During the Duolingo intervention, students were instructed on how to install the Duolingo app and worked independently through as many lessons as they could in the available time. They were also encouraged to keep using Duolingo at home in between the sessions. All students completed the post-test (paper based) during the final meeting. The post-test was identical to the pre-test. Again, this was due to the low baseline knowledge of English we expected.

Out of the 84 students who signed up for the project, only 47 completed both the pre-test and the post-test. Thirteen students completed the pre-test, but not the post-test, and two post-test responses had missing names and could not be associated with a pre-test. This illustrates how difficult it was to involve students in an after-school activity and keep them engaged. However, all of the 16 students in the experimental Duolingo learning condition completed both tests. This may suggest a higher engagement in those students. Of course, the fact that these students were allowed by their parents to bring mobile phones to school may point to an overall higher level of parental engagement and interest in the project.

BRITISH COUNCIL

PARTNER
CONFAP
Conselho Nacional das Fundações
Estaduais de Amparo à Pesquisa

UK-Brazil
English**Collaboration**Call

The pre- and post-test contained a total of nine vocabulary questions. Students were asked to fill in the correct word in English (e.g. "father") by hand. Student responses were scored as correct if spelling was accurate and as incorrect if a different word was filled in, no word was filled in, or if there was a spelling mistake. We used a generalized linear mixed model with a logit-link to predict student responses on each question. Random intercepts were used to model systematic differences between individual students and questions. Predictor variables were test (pre-test vs. post-test) and condition (Duolingo vs. traditional instruction). We found a significant improvement between pre-test (58% of responses correct) and post-test (72% of responses correct) for all students ($b = 0.635$, $SE = 0.197$, $t = 3.229$, $p = .001$). However, we did not find a significant difference between the experimental conditions (which would have pointed to a baseline difference in English skill), nor, critically, did we find an interaction between the experimental condition and test, which would have indicated a difference in efficacy between the Duolingo intervention and the traditional teaching intervention. It should be pointed out that there was a numerical trend in the right direction (Pre-test traditional: 57% correct, pre-test Duolingo: 61% correct, post-test traditional: 70% correct, post-test Duolingo: 76% correct), so perhaps the reason why we were unable to find a significant effect was due to lack of statistical power. Even if this was the case, we can conclude the following:

1. Language learning interventions in public schools, even if they are relatively short-term and small-scale (one hour per week for five weeks), have a beneficial effect on learning regardless of whether they use new technology or traditional methods. For this study, it is fair to say that 47 6th graders improved their knowledge as English Language Learners.

2. In the short term, an intervention using mobile technology and language learning apps does not show a large advantage over traditional interventions. However, we cannot exclude the possibility that there may be a smaller advantage (which our study was unable to detect due to design and organisational restrictions) or that an intervention using language learning apps over a longer period of time might show greater advantages. For instance, when new technology tools are associated to study skills in language learning, students' attitudes and behaviour seem to gain a positive effect.

3. Interventions in Brazilian public schools, especially those in economically impacted areas, are likely to suffer high dropout rates. Student motivation and engagement are likely to be key to a successful intervention. The use of apps can benefit students and teachers involved by providing better and more effective use of class time, creating individualized learning opportunities and fostering empowerment as students gain new control over their learning.

4. An important barrier to mobile technology learning interventions is the low availability of even cheap mobile devices to public school students. A future

intervention study may consider providing inexpensive devices to the students, at least during intervention sessions.

REFERENCES

FINARDI, K. R.; PREBIANCA, G. V.; MOMM, C. F. Tecnologia na educação: o caso da internet e do inglês como linguagens de inclusão. **Cadernos do IL**, Porto Alegre, n.º 46, junho de 2013. p. 193-208.

HEISLER, Y. **Mobile internet usage surpasses desktop usage for the first time in history**. Available at: http://bgr.com/2016/11/02/internet-usage-desktop-vs-mobile/. Accessed on June, 4th, 2018.

WARSCHAUER, M.; KNOBEL, M.; LEEANN, S. Technology and Equity in Schooling: Deconstructing the Digital Divide. **EDUCATIONAL POLICY**, v. 18 n. 4, September 2004.