

Digital Technical Language Teaching ---- Teaching/Learning Principles of Duolingo

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Abstract: Duolingo is a free online language learning app. It adapts to the needs of “mobile learning” and allows language learners to take full advantage of “fragmented” time for language learning, using gamification and adaptive learning techniques to teach foreign languages. Once on the start screen of Duolingo, 16 language courses will be presented in English. Learners can control four learning modes and choose their learning styles. Beginners can start from basic courses. If you are not a beginner, take a five-minute placement test to match your placement. In addition to the 16 languages mentioned above, there are 38 language learning combinations (English < Spanish, English > French, English > German or English > Portuguese, etc.). The system will prompt the user to create a personal profile to save the learning progress, and be able to set the learning, practicing content and learning time. Duolingo is as effective as any leading language learning software. As a language-learning app, Duolingo can be used as a tool for self-study or blended learning context.

Keywords: Duolingo Mobile Learning; 16 Language Courses; Placement; Learning Combinations; Self-study; Blended Learning Context

1. Duolingo exhibits partial artificial intelligence

According to Hockley’s (2016) study, in the area of learning technology for English teaching, the use of computers is probably the area most affected by developments in the hardware and software industries. Until the early 1980s, technology began to gain some attraction in language teaching. With the advent of cheaper personal computers and color displays, the advances in computer hardware have influenced the development in this area. Duolingo is not only an app version, but also a web version. Personally, when it is judged as a web version, I think it belongs to the second stage of call: “communication call” (Warschauer, 1996, cited in Hockly, 2016)/ “open call” (Bax 2003, cited in Hockly, 2016). This technology happened during 1980s-1990s. It allows for more complex interactions between the learner and the computer, providing more complex feedback mechanisms, more valuable information can be supplied than simply “right/wrong”. In this stage, technology can act as a partial mentor, guiding learners to discover language rules and encouraging limited language production and recognition.^[1] According to the Hockly (2016), this technology enables students to have more situational language practice in communicative activities. These new activities reflect a communicative view of language, that is, language is a means of communication, rather than a formal system requiring memory. Duolingo reflects a kind of language cognitive view, encouraging learners to think about language, build your increment of language understanding, encourage the learners to explore and produce language, the most important thing is, it can allow for more open communication with computer and other users. Except that, it allows and strongly encourage the learner to do peer competition, such opportunities for online socialization increase and real materials assessment are consistent with social constructivist approaches and situational learning.

When Duolingo is used as a mobile app, it undoubtedly belongs to MALL technology. Mobile language learning (MALL) first appeared in the English teaching sector in 2009 with the mobile app language learning activity hosted by the British council, followed by the major English teaching publishers producing independent and coursebook-related apps (Hockly, 2016).^[2] According to the summary of the Pegrum (2014), mobile learning refers to the mobility of learners. When Duolingo can let people learn through it anytime and anywhere, or it also means that the portability/mobility of mobile devices themselves. The ability to learn on the move of it, include both in-class formal learning and out-of-class informal learning, spanning countless devices in a variety of physical and temporal. Pegrum (2014) argues, that interaction with mobile devices is only part of the technology; In any discussion of m-learning, the most important thing is the interactions it supports and the way those interactions lead to learning.^[3]

2. How does Duolingo functions and benefit learners through its teaching process

In terms of the pedagogies, I think Duolingo’s learning theory follows the PPP teaching method. According to the summary of Jarvis (2015), in the mid-1960s, PPP dominated teaching area and became the most prominent teaching approach. Not only does it dominate most business textbooks, but also we can find traces of it in many MALL resources. In the Duolingo using process, the page will present you a language term, which can be a grammatical structure or a vocabulary set. In this stage, learners can practice in a controllable range to increase the accuracy of the language. Finally, learners will product the language in a smaller controllable range.

The goal of this final stage is to replace accuracy with language fluency. In the accuracy phase, Duolingo typically involve building dialogue and do practice for users, while in the final output phase, more activities intend to increase communication fluency. The presentation and practice stage involve audiolingualism, behaviorism and a structure-based of education, with the learning assumed to occur through repetition of the correct model. In contrast, in the production stage, there are more communicative activities such as language games and pair work, to enhance learners' ability of language use. The final stage is to complete "automatization" (Ellis 2005, cited in Jarvis 2015), or the spontaneous use of a language term. In the final production stage of Duolingo, the communicative method is summarized as the cognitive phase in the MALL, and the peer or group competition where students interact with others through computers can be called as socio-cognitive phase.^[4-5]

"Teaching through lively activities" is one of the learning concepts of Duolingo, which makes language learning "gamification" and helps to mobilize learners' enthusiasm and initiative. Vygotsky (1978, cited in Rachels, & Rockinson 2018) believed that every individual has a region that cannot master a task alone, and this region needs the help of more knowledgeable people to learn (Vygotsky, 1978). Wood, Griffiths, and Parke extend the idea, pointing out that this area needs a scaffolding, its role is to be able to let the students face those tasks which beyond their ability, to help him (or her) pay attention to complete those factors within his ability range (Wood, et al., 2007, cited in Rachels, & Rockinson 2018). with the help from more knowledgeable people learners can master a task. Eventually scaffolding can be removed and students can complete the task themselves (Vygotsky, 1978, cited in Rachels, & Rockinson 2018). As technology advances, both intelligent adaptive learning and adaptive learning systems enable technical tools to provide such scaffolding (Rachels & Rockinson 2018). When people use Duolingo, adaptive learning system starts from a very simple level, and gradually increases the difficulty with the improvement of students' mastery. It encourages users to "fight their way through difficult pass, get red hearts, and earn linguo-horn", showing an 80 percent mastery of the concepts at the learner's level before allowing players to move on to the next level, at the same time, learners need to punch in to reduce the "truancy rate". Learners need to challenge themselves to succeed on the learning task and cannot skip the task to the more difficult part, in here the design prevents players from entering levels beyond their most recent development area. Continuous challenges, immediate feedback, and opportunities to tackle bigger challenges are part of the fun of the game (McGonigal, 2011, cited in Rachels, & Rockinson 2018). When people are engaged in challenging and meaningful work, they tend to forget time, enjoy a high level of happiness and be very engaged. Duolingo users can be engrossed in practiced games, they will experience the integration of behavior and consciousness. This combination can give people clear goals and feedback, and help people know whether they are successful or not (Csikszentmihalyi 1991, cited in Rachels, & Rockinson 2018). In Duolingo, oral expression pressure can be mitigated by gamification when learners interact with the device rather than speaking separately in class. They can experience happiness and excitement in the game, thus improving their sense of self-efficacy.^[6]

3. Summary

This paper only analyzes some teaching/learning principles of Duolingo and does not evaluate them in detail according to the language learning app evaluation framework. As for the advice given to Duolingo, I think Duolingo is more suitable for novice users (PPP mode and characteristics of gamifications). WebCAPE test as a language layout test has its limitations and cannot effectively deal with very advanced language learning users. Therefore, to retain high-level users, Duolingo needs to develop more aspects of difficulty improvement and capability testing, as well as adjust its existing real-time feedback algorithm.

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