



CHAT2LEARN

Chatbot technologies for digital entrepreneurship education and adult learners

Project n. 2020-1-CY01-KA204-065974

*IO1: Developing a chatbot learning environment in the field of digital
entrepreneurship*

*1.1. Collecting best practices and tools on Technology Enhanced Learning and
creation of a resource library on topic*

PREPARED BY





Good practices template

Good practice definition

A “good practice” can be defined as follows:

A good practice is not only a practice that is good, but a practice that has been proven to work well and produce good results, and is therefore recommended as a model. It is a successful experience, which has been tested and validated, in a broad sense, which has been repeated and deserves to be shared so that a greater number of people can adopt it

Good practice criteria

The following set of criteria will help us to understand whether a practice is a “good practice”:

- **Effective and successful:**

A “good practice” has proven its strategic relevance as the most effective way in achieving a specific objective; it has been successfully adopted and has a positive impact on individuals and/or communities

- **Technically feasible:**

Technical feasibility is the basis of a “good practice”. It is easy to learn and to implement

- **Replicable and adaptable:**

A “good practice” should have the potential for replication and should therefore be adaptable to similar objectives in varying situations

- **Environmentally, economically and socially sustainable:**

A “good practice” meets current needs without compromising the environment and/or the social cohesion of the territories



Duolingo - A way to learn languages for free (What is the name that best describes the good practice?)	
2011 (When was the good practice documented/published/carried out?)	DUOLINGO (Who – person/organization – wrote/carried out the good practice?)
ASSET (who collected the practice)	

Element	Guiding question
Type of practice	An American language-learning website and mobile app, as well as a digital language proficiency assessment exam. In the last few years Duolingo started using chatbots
Publisher (optional)	website: https://university.duolingo.com/our-story ; wikipedia; newspapers
Target audience	<p>“What I wanted to do was create a way to learn languages for free” says the co-founder of Duolingo, Luis von Ahn (computer science professor at Carnegie Mellon University) in an interview to the newspaper “The Guardian ”.</p> <p>“If you look at language learning in the world, there are 1.2 billion people learning a foreign language... The problem is that they don’t have equity and most language courses cost a lot of money”.</p> <p>Learning a language once involved tutors, textbooks, and tons of cash. For many people around the world, this just didn’t work.</p>
Objective/Aim	In 2011, Luis von Ahn and Severin Hacker founded Duolingo: the free way to learn 30+ languages like Spanish, Chinese, and English. It gives the chance to take a digital language proficiency assessment exam.
Location/Geographical coverage	International
Description	What makes Duolingo different from the hundreds of other digital learning platforms? The founder believes its success is



	<p>down to a combination of clever, intuitive design aspects and constantly evolving teaching methods.</p> <p>Duolingo mimics the structure of video games in several ways to engage its users. It features a reward system in which users acquire "lingots" or gems, an in-game currency that they can spend on features such as character customizations or bonus levels (both available on the mobile app only).</p> <p>On public leaderboards, people can compete against their friends or see how they stack up against the rest of the world in randomly selected groupings of up to 30 users. The level system that Duolingo uses is XP (experience points), a numerical system that represents a user's skill level. Badges in Duolingo represent achievements that are earned from completing specific objectives or challenges.</p> <p>The study process in Duolingo combines various methods such as: listening to the pronunciation, reading sentences, voice recording, forming phrases by ordering words, and matching images to words.</p> <p>A couple of years ago Duolingo started to use chatbot characters, designed to respond differently to a range of possible prompts. If the user ever got stuck, they could hit the "help me reply".</p> <p>To make conversation as human as possible, Duolingo gives virtual teachers a touch of personality. In fact, as a teacher there will be a driver (Renée), an officer (Ada), a chef (Roberto) who will have the task of responding to messages and helping users to correct any errors. Learners can use them to practice French, German, and Spanish, respectively.</p>
<p>Methodological approach</p>	<p>"We've done a lot of work to improve how to teach", continues Von Ahn in the aforementioned interview. "For example, if we want to know whether we should teach plurals before adjectives, for the next 50.000 users, we'll teach half of them plurals before adjectives, half the other way and then we measure which of these groups learns better. We figure out in a couple of days which is more effective and then switch everyone to that".</p> <p>This constant data mining and huge user base mean the company has an interesting overview of language trends, demographics, constraints etc.</p>



Finance	National Science Foundation grant; Private funds
Constraints (optional)	<p><i>Duolingo has received criticism for its lack of effectiveness in helping students to fully learn a language. Duolingo's CEO, Luis von Ahn, promises only to get users to a level between advanced beginner and early intermediate.</i></p> <p><i>Despite the claim that the bots can respond to thousands of possible answers, you are unable to deviate at all from the script, or ask a question about what you are learning.</i></p> <p><i>So, while the bots are a move in the right direction, it's disappointing that Duolingo claim that such fake conversations could actually prepare users for what they might encounter in real life</i></p> <p><i>The interactions aren't meaningful enough, don't really give a sense of engaging with another person. Learners are not encouraged to try real-life chats or interact with other learners who they could have a conversation with.</i></p>
Outcomes	<p><i>When a new learner comes to a platform, they are usually faced with the question of where should they start. Some folks might have a basic understanding of the language, some might have none at all and most usually fall somewhere in between- but where exactly?</i></p> <p><i>Duolingo's AI-driven adaptive placement test probes users with questions and <u>determines exactly where they should start.</u></i></p> <p><i><u>Spaced Repetition</u> is where you repeat short lessons at various intervals rather than repeating the same information in a short time frame. Spaced repetition has been proven effective if one could determine if and how often to repeat a particular lesson. <u>Lag Effect</u> tells us that users can improve more if the gap between practice sessions is gradually increased.</i></p> <p><i>Duolingo employed AI fed by the tremendous amount of data they had about their users to tackle these questions. For each word in the curriculum, Duolingo's AI keeps track of how many times you've seen it, how many times you've gotten it correct, the modes under which you got it correct, and how long it's been since you've practiced it. The AI uses this information coupled with its learnings from the 300 million other users on</i></p>



	<p>Duolingo to determine how much space and lag is warranted for each lesson for each user.</p> <p>Whereas previous exercises were decontextualised and a bit odd, the chatbot provides a framework for the exchange, making the use of language more meaningful and more realistic. The input is comprehensible, matching what you have done in previous Duolingo lessons, offering therefore opportunities for recycling lexis and structures encountered before. There is also a good degree of scaffolding in the exchanges; you are able to click on words in the prompts and get a translation, and when replying you are given suggestions for what to write and can use the ‘help me reply’ button if you are really stuck.</p>
Replicability and/or up-scaling	<p>4</p> <p>The best practice (net of copyrights and patents) is easily replicable in other geographical and social contexts.</p>
Conclusion (optional)	
Opinion (optional)	<p>Express your opinion on a scale from 1 (=min) to 5 (=max) about:</p> <ul style="list-style-type: none"> ● Usability: 4 ● Relevance (the degree to which the problem addressed by the good practise is experienced as significant) : 5 ● Granularity (the degree to which the good practice is detailed): 5 ● Integration (the degree to which to good practice can be integrated into the Chat2learn project) : 4
Further considerations	