

Duolingo, Gamification and the Changing Style of Language Learning

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1. Introduction

Duolingo is a language learning application for smartphones or computers that is very popular for learning languages. There are more than 39 different languages and 40 million active monthly users. The founder of Duolingo Yu Kai Chou is one of the earliest pioneers in the industry of gamification merging learning, game design, game dynamics, behavioral economics, motivational psychology, neurobiology and technology platforms, to enhance learning and make it more engaging and increase learning success. He is also the designer of the Octalysis Framework for Gamification and Behavioral Design which forms the basis for apps like Duolingo (Bilham, 2021).

Duolingo first came to my notice when my teenaged daughter started learning German using the app. Then her younger brother also decided to try learning Spanish after he saw how easy and user friendly the Duolingo app was for learning a language. They both seemed to enjoy learning languages with this app, and I was curious to know why they enjoyed it and kept a consistent daily learning habit because the way they can be immersed in a non-native language is completely different from how traditional learners pre-Internet, such as my father and myself, have been immersed in them to learn languages.

For example, due to my German background I wanted to learn German and I studied German for 3 months in Bremen, Germany with the Goethe Institute a famous language learning institute with campuses around the world when I was 20. Intensive language classes were held every morning only in German and then after lunch we would make cultural visits to museums, art galleries and other places of interest where we would be able to listen to real German in context. I also did a homestay where I was immersed in German with my homestay parents. Likewise, my father, who can speak 6 languages with reasonable fluency, would visit family friends in Denmark. There, he learned Danish which has many similarities with German. As is obviously clear, the way they immersed themselves in a language they want to learn is completely different, but still they both enjoy learning languages to the extent that they can use the language to communicate with others. This article, therefore, aims to reveal some of the important concepts for reaching and learning languages in the university setting by analysing the learning strategies that Duolingo offers its users.

2. Duolingo's Eight Human Focused Design Elements

My father's main motivation was having a sense of community and being able to communicate with these communities. He liked meeting many people and enjoyed learning about different cultures and this drove his interest in learning languages so that he could have adventures and meet other like-minded individuals. The ability to communicate and make positive connections increased his interest in learning more and learning new languages for new adventures. He learned by what could be called full immersion in the language environment. This kind of learning is immediate with the main goal being communication. Mistakes are just a way to learn. Motivation is connected to the need to function in the environment and achieve other simple daily life tasks like shopping, ordering a meal, traveling, building relationships, and so on. These tasks are enjoyable and bring us life pleasures. They are an intrinsic motivator that empowers our language learning from the core. On the other hand, the key founders of Duo Lingo, Yu Kai Chou, wanted to help people to learn languages by gamifying the language-learning process. When he was doing it he realized that:

"Duh! There's a game that we're all playing right now whether we know it or not—the game of life. If I could figure out how to level up, gain EXP (experience), and get my friends to join me, then I wouldn't need to play video games anymore because real life would be so much more fulfilling" (Bilham 2021)

Therefore, there is a connection between the way my father learned languages in his time and the way Chou tried to help people to learn languages. Both had a connection through motivating the learner to learn languages through enjoyable tasks that bring us pleasure. My father wanted to merge language learning with new experiences traveling the world and having exciting adventures. Chou wanted to find a way to merge gaming and playing exciting video games with language learning. The similarities are so obvious when you reflect upon them.

Chou proposes human focused design elements, which are shown in Figure 1 (Bilham, 2021). These are the elements that can make language learners addicted to the app in good ways. What if we could take all the addictive elements of games and apply them to the real world or productive tasks? Which of these elements could be applied to our teaching within university environments to improve our teaching results?

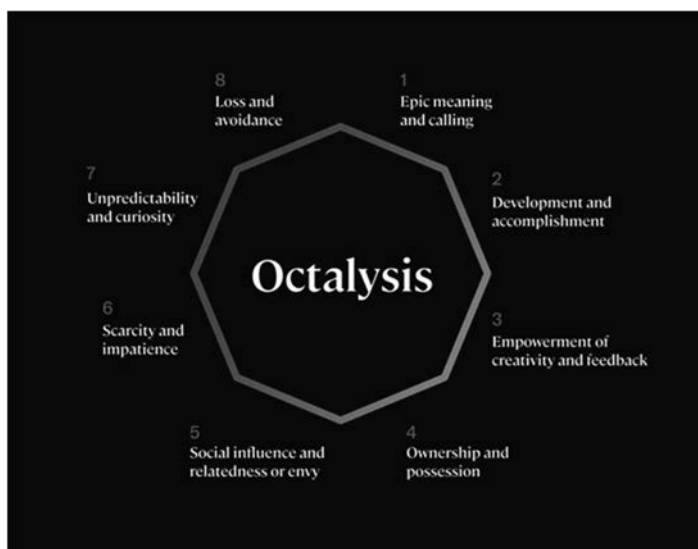


Figure 1. Human Focused Design Elements suggested by Chou (Bilham, 2021)

(1) Epic Meaning and Calling

Duolingo uses notifications to make friendly reminders to continue studying. This makes the user feel valued and important. The users feel that what they are doing has meaning. Could notifications on Manaba or some other online system be used to remind students of activities to do during the week? Also breaking down activities or homework into manageable daily chunks could be useful. A PowerPoint of daily activities that are shared with students to study less than 10 minutes per day could be a way of achieving this consistency.

(2) Development and Accomplishment

Breaking the activities into levels and celebrating every stage of accomplishment creates a feeling of accomplishment and pride in learners' achievement. Little badges are presented to the user such as "Lesson Complete!", "5 in a row!", or "You're acing this skill - Do you want to jump to level 3?" They also provide levels of progression and rewards such as experience bars, progress bars and streaks. A streak is a daily continued streak of time engaging with the learning platform. There is pressure not to break the streak with notifications reminding you to continue your streak and there are also bonuses for streaks. Encouraging completion of homework activities or celebrating students who complete work consistently in the classroom may be a way to reinforce the student's enjoyment of learning and progress. It is interesting to note that the country with the most learning streaks on Duolingo is Japan which confirms that the encouragement and motivation model of Duolingo seems to be working particularly well with Japanese language learners.

(3) Empowerment of Creativity and Feedback

Errors are shown with a simple red colored pop up which allows users to notice their mistakes. The app also offers the user the opportunity to try Duolingo Plus a paid subscription if they would like more feedback or they can choose to continue using the free version. Giving feedback to students is an important part of language learning. Sometimes teachers do not want to correct students' mistakes because they think it will cause students to lose motivation but if students are taught that mistakes are a part of learning then they can start to enjoy mistakes and it can be an opportunity to learn. Creating a classroom environment where mistakes are acceptable and encouraged can allow students to feel more comfortable in the classroom.

On the other hand, being too critical of mistakes, particularly with younger learners, can cause them to lose interest in studying a language. So, it is important to find a balance depending on the learner's development and ability. Could there be a way for us to reward our university students for making mistakes in the classroom?

(4) Ownership and Possession

Personalized profiles create a sense of ownership for the user. You can create a profile picture and customize it to your personality. Gems are offered for completing tasks and these form a kind of digital currency that can be used to purchase more time or continue your learning streak. Personalization of profiles and individuation are important factors in the attraction of social media use. People can create an online profile that highlights only the positive traits. Think about Instagram posts that only show the user looking happy and beautiful all the time. This can also have a negative effect in that it encourages narcissistic tendencies. But a healthy ego is important to student confidence so allowing students in the classroom to express their identities and personalities in the classroom could be a way to encourage student ownership of their learning. An example of this could be asking students to cook their own favorite meal at home and then sharing the recipes in English with other students in the class.

(5) Social Influence and Relatedness

Duolingo relies on the positive aspects of social media such as comparing your progress of learning against your own friend's progression which creates competitive motivation. Also league tables show your progress against other learners and notifications remind you that you should study more to stay in the top 10 or top 20 of learners. This can be a strong motivation to continue your language study. Comparing scores against each other can encourage some learners to study more. However, for some students this can be demotivating.

(6) Scarcity and Impatience

Sale ends tomorrow is a common example of marketing tools that create a sense of scarcity or impatience. Duolingo uses these tools through notifications to encourage you to study more or longer. The app creates a sense of urgency in studying which causes you to feel a slight increase in stress which can be alleviated by studying. So, this stress can be seen as a good thing. In the classroom giving students deadlines is a simple but effective way to create a sense of urgency. Many students, however, will often leave the work until the last day to complete. Therefore, as mentioned above, breaking down activities into small chunks and more regular completion dates could be an effective way to encourage student learning.

(7) Unpredictability and Curiosity

Allowing users to try challenges that will increase their level creates a desire to test themselves. Will they be able to pass the challenge? This is something that could be easily implemented in a university language learning classroom. A short, non-assessed test of 5 quick questions out of the blue could motivate and excite students. A hands up review to compare student scores. For example, hands up who got 5 out of 5, 4 out of 5, 3? This could also encourage students to want to study harder to increase their score.

(8) Loss and Avoidance

Loss of the daily learning streak is a big motivator on Duolingo. Positive affirmations and visual celebrations occur when you reach a streak learning milestone. In the classroom celebrating achievement of homework or study goals with students could help to increase extrinsic motivation of students. However, this kind of extrinsic motivation may or may not be so effective.

3. **Conclusion**

There are many psychological, social, and motivational techniques used in the Duolingo language learning app that have made it extremely popular for millions of language learners around the world. Many of these ideas can be applied to language learning in the university classroom to improve our student's enjoyment and success. Creating a sense of purpose, challenging students, giving clear feedback are some of the ways to enhance students' language learning outcomes. It would be good to try some of the ideas in the classroom to see how effective these ideas could be for learners in the classroom. Some of these ideas may have already been used by teachers or perhaps there are some new ideas that may have been influenced by the concepts mentioned above that we could try out for ourselves. These ideas could also warrant further research.

References

Bilham, J. (2021, July 13). Case study: How Duolingo utilises gamification to increase user interest - Raw.Studio. Raw.Studio. <https://raw.studio/blog/how-duolingo-utilises-gamification/>

Bilham, J. (2021a, February 5). 8 ways you can use gamification in your design - Raw.Studio. Raw.Studio. https://raw.studio/blog/gamification/#Wrap_up

Yu-kai Chou: Gamification & Behavioral Design. (2023, September 6). Pioneer of gamification & behavioral design -Yu-kai Chou. Yu-kai Chou - Learn How to Use Gamification to Make a Positive Impact on Your Work and Life. <https://yukaichou.com/>

TED. (2023, October 26). How to make learning as addictive as social media | Luis von Ahn | TED [Video]. YouTube. <https://www.youtube.com/watch?v=P6FORpg0KVo>