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## Economics and management Ekonomika ir vadyba

# STRATEGIC ANALYSIS OF DUOLINGO LANGUAGE LEARNING PLATFORM

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**Abstract.** The rising number of Internet and mobile device users influence the growing demand for educational technology solutions. Duolingo is a commercial language learning platform that offers courses on the web and a mobile app, launched in 2012 as a free website with the goal of addressing social inequalities in education. This article aims to analyze the company's strategic capabilities which led to Duolingo being the top grossing education app since 2019. The evaluation was carried out by using methods of SWOT, VRIO, and Porter's Five Forces analyses. The results suggest that Duolingo targeted a wide market segment and developed an attractive product by gamifying the learning process, thus securing a large share of the market in a competitive sector by taking advantage of technological advancement and social media.

**Keywords:** Duolingo, edtech, language learning, strategy, gamification.

## Introduction

Education technology sector is currently growing rapidly. This is associated with a growing number of Internet and mobile devices users, as well as a growing demand for educational technology solutions. Approximately 4.9 billion people worldwide used the Internet in 2021 (International Telecommunication Union, 2021). Digital language learning industry can be expected to expand and grow, as the need for foreign languages grows. People learn foreign languages for communication, professional, and academic purposes, polyglots also learn for pleasure (Noprival et al., 2021). According to Harvey Arce and Cuadros Valdivia (2020), it was found that 81.03% of students are more inclined to use gamified digital tools and also 82.76% of students feel more motivated to learn a second language using this methodology. There is also a study by Meltzer et al. (2021) which demonstrated the efficacy of 4 months of smartphone-based language training on improving certain aspects of cognitive functions.

This article aims to analyze the strategic capabilities of the language learning platform Duolingo in order to understand what led to the company creating the top-grossing app in the Education category on both Google Play and the Apple App Store since 2019. For this purpose, four research tasks were identified:

1. Analysis of Duolingo characteristics, including vision, mission, values, resources, and competitors;
2. SWOT analysis of Duolingo internal and external environments;
3. Analysis of language learning software industry using Porter's Five Forces;
4. Analysis of Duolingo main resources and capabilities using VRIO method.

## 1. Research methodology

Businesses, operating in a complex and highly changing business environment, are faced with threats or opportunities while performing (Aygün & Sezgin, 2021). Strategic analysis evaluates the organization's internal and external environments and how the organization operates its business. Strategic analysis helps determine the functioning of the organization and how the goals and objectives set by the organization are met (Voxco, n.d.).

Secondary data analysis with the benefit of the breadth and depth of data is a convenient and powerful tool that helps answer broad questions on a large scale (Alchemer, 2021). The scientific approach and the methodology used for the strategic analysis of the Duolingo language

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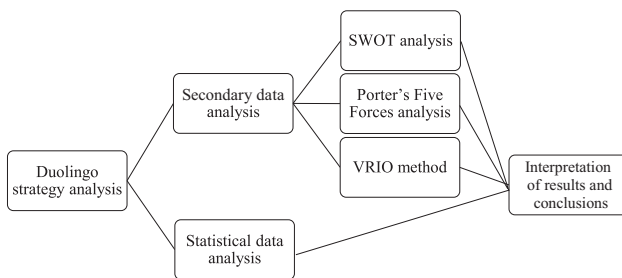


Figure 1. Research methodology (source: authors)

learning platform include statistical data analysis and secondary data analysis. The use of mixed secondary data analysis methods allowed us to obtain deeper insight into the company's strategy. For secondary data analysis, these methods were used: SWOT and Porter's Five Forces analyses, VRIO method (see Figure 1).

Data analysis is a fundamental tool for organizations to evaluate their position in the market and is widely used to analyze the internal and external environments of organizations (Wu, 2020). These analyses are a good tool that allows us to compare the business and performance of the company with that of its strategy, environment, competitors, which influences strategic decision making.

## 2. Characteristic of Duolingo company

Duolingo was founded in 2012 by Carnegie Mellon University computer science professor Luis von Ahn and his PhD student Severin Hacker. L. von Ahn grew up "in Guatemala, where learning English could double your income potential and change your family's life". S. Hacker came to the United States from Switzerland, a country with four official languages. Realizing the importance of language learning, Duolingo's founders assessed the potential of an untapped market and began looking for alternatives to language learning (von Ahn, 2020).

Duolingo is a language learning platform, accessible via a website and a mobile app. Each language "tree" consists of units, which are comprised of "skills" with six levels, each containing 4–6 lessons. Users learn by completing vocabulary, grammar, listening, or short story exercises. Duolingo has three types of accounts: free, Duolingo Plus, and Duolingo for Schools. Duolingo for Schools was created specifically for educational institutions and allows teachers to track the progress of each student. Duolingo Plus is a paid account without ads, can be used in offline mode, offers progress tests, personalized practice, unlimited hearts, etc.

The company actively participates in social networks: they use Facebook, Twitter, YouTube, TikTok. In addition, Duolingo has its own blog and a discussion forum. Duolingo Incubator is a platform where users can contribute to language courses.

The platform was launched with a mission to "learn a foreign language by translating the web" and initially taught four languages: English, Spanish, French, and German. Users learned new vocabulary and performed translation ex-

ercises to understand grammar and syntax. The software compared the translation results of several students and determined the final correct translation. The results were better than machine translation and almost equal to professional quality. Duolingo signed a contract with BuzzFeed and CNN in 2013 to sell them translations at 4 cents a word, compared to an average translation price of 6 to 10 cents at the time. In 2014 the company stopped expanding its translation business and eventually closed it down, focusing on the main goal: a language learning platform accessible everywhere to everyone (Product Habits, n.d.).

As of February 2022, Duolingo offers courses for 40 languages and has 41.7 million active monthly users (Duolingo, 2021). The company grossed 161.7 million USD in 2020 (Stock Analysis, n.d.). The company monetizes in three ways: subscriptions (about 73%), advertising (about 15%) and in-app purchases (about 2%), English test (about 9%), and also has a large number of investors (Duolingo, 2021).

Duolingo 2021 strategy was aimed at increasing the number of users as well as converting free users to paid ones, making the "Duolingo Score" the universal credential for language proficiency, teaching more effectively and to higher levels of proficiency, and expanding beyond language learning (Duolingo, 2021).

### 2.1. Vision, mission, and values

The aspirational goal of what the company wants to become is the driver for the strategies that are developed. Accomplishing the strategies and goals drives the organization toward achieving its vision. Thus, there should be alignment between the vision of the company, its mission, values, structure, culture, and the strategies its leaders select (Kennedy et al., 2020).

Duolingo presents itself as follows:

- "There are over 1.2 billion people learning a language and the majority are doing so to gain access to better opportunities. Unfortunately, learning a language is expensive and inaccessible to most.
- We created Duolingo so that everyone could have a chance. Free language education – no hidden fees, no premium content, just free.
- Duolingo is used by the richest man in the world and many Hollywood stars, and at the same time by public schools students in developing countries. We believe true equality is when spending more can't buy you a better education." (Duolingo, n.d.-a).
- Duolingo CEO and co-founder L. von Ahn (2020) writes about the company's values on the Duolingo blog:
- "For me, winning means making sure everyone in the world who wants to learn a language has access to learn for free on Duolingo. It also means making sure that Duolingo remains a place where everyone enjoys coming to work, a place where your contributions matter, and a place where doing good for others is rewarding for you, too. That's the kind of world I want to live in."

- Duolingo was founded with the noble goal of addressing social inequality in education. The company's founders are most proud of Duolingo becoming the most downloadable educational app in the history of the Apple App Store and being the highest-grossing educational app in the world, and they didn't have to give up their primary goal of universally accessible education to achieve it.
- Another core value is continuous product improvement. Everyone from interns to leaders has the opportunity to come up with ideas that affect millions of learners. The guiding principle is "learners first".
- "Diversity matters here." The company has employees from more than 30 countries who speak more than 30 languages. 40% of employees are women and 60% are men (Duolingo, n.d.-b). L. von Ahn (2020) cites the organization's culture as the reason why Duolingo's 95% retention rate is well above the industry average.

## 2.2. Financial resources

The growing market easily attracts investors. Digital language learning generates \$6 billion in revenue, and that number is projected to rise to 8.7 billion USD by 2025 (Adams, 2019). Revenue from language learning has grown 34–66% annually from 2016 till 2020 (see Figure 2).

Duolingo has had more than 100% revenue growth over the past three years (see Figure 3). Rising revenues provide an opportunity to spend more on research and development. While the gross margin since 2019 exceeds 70%, currently the company is not making a profit. In 2021 this was largely due to the costs associated with the IPO (Duolingo, 2021).

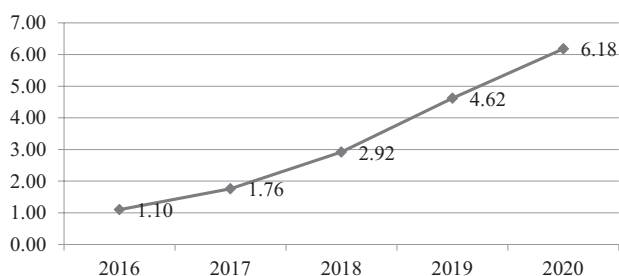


Figure 2. Revenue of language learning industry, M USD (source: Curry, 2022b)

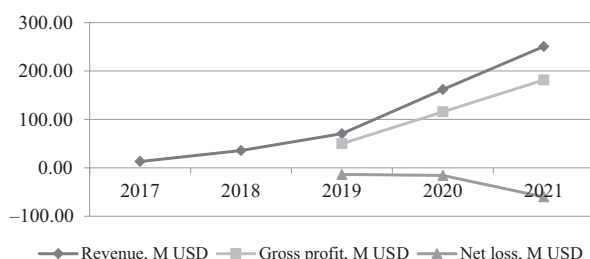


Figure 3. Overview of Duolingo financial resources (source: Curry, 2022a; Stock Analysis, n.d.; Duolingo, 2022)

## 2.3. Duolingo's competition

Before one can assess the relative strengths and weaknesses of rivals, or track competitive moves and countermoves, one must first identify the competitive set and develop an accurate sense of the domain in which strategic interactions are likely to occur (Bergen & Peteraf, 2002).

In terms of app downloads, Duolingo clearly outperforms its competitors (see Figure 4), but in a growing and fast changing market, it is important for Duolingo to monitor the competition and their activities, especially those offering learning opportunities that Duolingo does not have (see Table 1).

Statistical analysis of the company's data enables the evaluation of the company's state in the market share. Duolingo was the leading language learning platform in

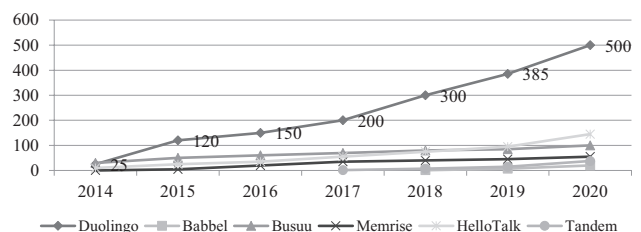


Figure 4. Language learning app downloads, millions (source: Curry, 2022b)

Table 1. Duolingo's main competition (source: Curry, 2022b)

Company	Comment
Babbel	Offers paid service only, had sold 10 million subscriptions until 2021. Revenue in 2021 was 10 million USD
Busuu	Popular in the EMEA region, with Russia and Turkey being two of the most active countries. Has 10,000 live tutors available. Revenue in 2020 was 40 million
Memrise	Designed by two experts in memory, Memrise has won multiple awards for its app, including Google's App of the Year 2017
Mondly	A Romanian-based language learning platform which has already launched multiple VR apps, and offers 33 language courses
HelloTalk	Instead of teaching the language through cards or voice, this app lets native speakers talk to each other, with real-time adjustments
Rosetta Stone	The most established language learning company, with hundreds of offline courses. It has 52 apps for all types of language teaching
Tandem	Similar to HelloTalk, Tandem is focused on conversations with native speakers. It includes sign and fictional languages
Drops Kahoot!	Users learn the language through identifying different images, with 45 languages available
LingoDeer	Unlike most language learning platforms which prioritize European languages, LingoDeer has several Asian courses available

terms of downloads, with 61% of total downloads across the top 10 most popular language learning apps in 2021, with the competition behind: Mondly with 9%, Babbel with 7%, Busuu with 6%, HelloTalk with 5%, Memrise with 3%, Tandem with 3%, and Rosetta Stone with 2% (Curry, 2022b).

### 3. SWOT analysis of Duolingo language learning platform

SWOT analysis is a strategic management technique used to evaluate organization's internal and external environments.

According to Ghazinoory et al. (2011), "this tool includes environmental analysis (the process of scanning the business environment for threats and opportunities) and the organizational analysis (the process of analyzing a firm's strengths and weaknesses). [...] It is essential to note that the internal factors are within the control of the organization, for instance, finance, operations, marketing, and other areas. On the other hand, the external factors are out of the organization's control, such as the economic and political factors, new technologies, and its competition."

#### 3.1. Strengths

*Selection of languages.* As of February 2022, Duolingo offers 40 languages. In addition to popular foreign languages like English, French, or Spanish, there is an opportunity to learn the endangered Hawaiian and Navajo languages, High Valyrian from the book series Game of Thrones, and Klingon from the TV series Star Trek.

*Gamification.* As users learn, they unlock higher levels, earn points for each exercise, compete in leaderboards, are rewarded with virtual tokens for achievements, win virtual currency (called gems) that can be used to purchase additional services, have a limited number of "hearts", user statistics and achievements are displayed in their accounts. Turning the learning process into a game involves users. According to L. von Ahn, Duolingo user retention level is comparable to that of games rather than learning platforms (Adams, 2019).

*Freemium model.* Users have access to a basic package of services, i.e., language lessons, and also have the option to purchase paid services. For an additional fee, users get unlimited lives, extra lessons, and the chance to skip levels.

*Crowdsourcing.* The first lessons were created by the company's founders themselves with the help of professional linguists. Later lessons were developed with the help of volunteers (Adams, 2019). During lessons, all users can offer alternative translations. Crowdsourcing and ad-supported content are the reasons why the company can grant free access to the platform.

*Intuitive, simple, and immersive design.* The app uses rounded shapes and is visually appealing, it is easy to sign up and get started. It is possible to follow other users and

send congratulations on achievements via the internal social network. There's also an active discussion forum. One lesson can be completed in 3 to 7 minutes, so it's easier to draw in users who may not have time for 30-minute lessons on other platforms. Since lessons are short and quick, users still end up spending a longer time on them overall.

*Technical skills and innovation.* Machine learning algorithm records and analyzes user actions and adapts the app to their habits. For example, a reminder is sent at a time when the user is normally practicing. The app is evolving gradually, new features are being added, and user impact is being thoroughly and consistently tested. The company has accumulated a huge amount of data on user habits and needs. With this data, they understand what users are reacting to, use user psychology accordingly, and create appropriate rewards and incentives. The company is not limited to technology development, but also shares its research experience by writing and publishing scientific articles.

*Understanding and relating to the target audience.* The app has become popular through user feedback and a humorous approach. Duolingo account on social media portrays the mascot, owl Duo, as a passive aggressive persecutor. Content of this nature helped to reach a large number of followers and their target audience quickly. Lessons also sometimes use strange, humorous sentences, such as "Whose robot ate my cake?" Or "I am eating bread and crying on the floor." A podcast is available in Spanish, French, and English.

*Efficiency and collaboration with universities.* 2012 study of the Spanish course showed that 34 hours of Duolingo lessons are equivalent to 1 semester at the university (Vesselinov & Grego, 2012). A 2014 study showed that Duolingo English language Test (DET) scores directly correlate with the TOEFL iBT standardized test scores (Ye, 2014). As of February 2022, more than 3,000 universities, including Yale, Cornell, and Columbia, accept DET as a substitute for TOEFL (Duolingo, n.d.-c).

#### 3.2. Weaknesses

*Technical defects.* Software errors are common, and the voice recognition algorithm is rather inefficient. Users have the ability to report bugs, but there is no way to contact technical support, and technical issues are usually resolved by restarting or reinstalling the app.

*Beginner / intermediate CEFR level content only.* Upon completion of the course, it is possible to reach an intermediate but not an advanced level. The content can be repetitive. Learning takes place by translating from one language to another, so users must know at least one of Duolingo's learning languages.

*No dialog practice.* There is no opportunity to develop speaking skills, which are essential to using a language. Active dialogue practice and sufficient immersion in language learning contexts are critical drivers of learner's communication competence and language proficiency (Huang et al., 2022).



*Intrusive commercials.* The advertisement on the website is displayed on the side, not intrusively. On the app it appears after each lesson, very often the same video is played. The ads are not tailored to potential consumers and there is no option to provide feedback on add relevance. The paid subscription is aggressively advertised, users have the option to turn it off only after 10 to 20 seconds.

*Frivolous image.* The platform differs in its image and methods from other learning platforms, which have created a more solid image. Duolingo is therefore sometimes criticized and ridiculed for its approach.

*User dishonesty.* Some users get involved in the competition rather than the learning aspect and try to score as many points as possible; for example, by repeating the same, easiest lessons instead of learning new skills, or by learning only the lowest level of all forty possible languages. Sometimes exercises are completed with the help of scripting. This demotivates other learners and at the same time shows the Duolingo app primarily as a game to be won at any cost, not as a learning platform.

### 3.3. Opportunities

*Growing education technology and language learning industry.* Duolingo revenue accounts for 2–3% of the language learning revenue. As the sector grows, the number of Duolingo users is likely to grow as well as the revenue they generate. Duolingo should enhance their products by adding new features and content in order to retain existing users and offer competitive services to new customers.

*Certified language tests.* Duolingo English Test could be offered as an alternative not only to TOEFL and IELTS. It is possible to develop equivalents for the Spanish DELE, French DELF / DALF, German telc and Goethe tests and ensure their acceptance at universities on an equal footing with their much more expensive counterparts.

*Artificial intelligence and chatbots.* Raising the level of language learning through technology, such as developing conversational competence. First chatbot, a dialogue software program that can interact with users and process their inputs using natural language, was developed more than half a century ago (Huang et al., 2022). Nowadays the technology is advanced and is used for customer support, the same algorithms could be introduced in speaking skills development.

*Single language learning.* Duolingo currently offers 40 languages for English speakers, 10 for Spanish speakers, and from 1 to 6 languages for speakers of other languages. A native speaker of a less popular language would still not have the opportunity to learn. Modifying lessons to provide learning without a second language could reach more users.

*Expansion to other educational areas.* Developing similar learning platforms for schoolchildren and students, such as preparation for the SAT (a standardized test used for college admissions in the United States).

*Business customers.* Corporate license and sales to corporations. During the COVID-19 pandemic, parents faced the challenges of teaching at home. As an employee incentive, some corporations bought subscriptions to tutoring platforms. They can also be offered a corporate Duolingo license.

*Remote learning and teaching.* The market for educational technologies is growing. Educational institutions are looking for more effective ways of teaching, companies are looking for ways to train and involve employees. The popularity of teleworking and remote learning is growing and has become particularly relevant during the COVID-19 pandemic.

### 3.4. Threats

*Market oversaturation.* The amount and selection of learning, gaming, entertainment, and self-improvement apps is nearly inexhaustible. The popular term and phenomenon FOMO (fear of missing out) of 2000–2010 is currently evolving into JOMO (joy of missing out). There is a certain risk that users who will tire of the constant pressure to accomplish everything and may want to disconnect from smart devices altogether.

*Open – minded content.* In some language courses, sentences and short stories often openly support LGBTQ, national minorities, gender equality, freedom of the press, etc. Some users are dissatisfied with this and express it aggressively in the discussion forum. In countries like Russia or China, this may reduce the popularity of the app or it may be banned, as has happened with some social media apps.

*Threat of competition from technology giants.* In June 2021 media reported that Alphabet Inc. (former Google) was developing a counterpart to Duolingo using its artificial intelligence competencies (Krouse, 2021). Companies like Amazon and Apple have state-of-the-art artificial intelligence technologies, allowing users to have conversations with virtual assistants Siri and Alexa; the same technology can be used to learn languages.

*Advancement of real-time translation technology.* Real-time translation technology is evolving and, although it's currently not advanced enough to compete with human translation, it is going to reach such a level in the future that the services of human translators or language skills may become obsolete.

## 4. Porter's five forces analysis of language learning software industry

Porter's Five Forces is a framework for industry analysis.

According to Anastasiu et al. (2020), Porter has demonstrated that there are five main forces that affect and influence the competition in a particular economic sector: competitors' rivalry, suppliers' power of negotiation, buyers' power of negotiation, threat of new entrants, and threat of substitutes.

If these forces are strong, the economic sector is not attractive, because it is hard for the competitors to make high profits or to return their investments. In reverse, if the forces are weak, the companies have opportunities for negotiations and for increasing profits (Anastasiu et al., 2020).

#### 4.1. Threat of new entrants: strong

Anyone can start teaching a foreign language. It does not require IT skills or technology investment. Anyone with a blog or a YouTube channel can upload lessons there, or take advantage of open source gaming apps. The language learning algorithm is not particularly complex, much of the content is publicly available. Competition can start with one or more languages. After having created the learning algorithm and content, adding new languages would be easier.

On the other hand, designing a learning platform with dozens of languages that adapts to user behavior through the analysis of A/B testing data would be difficult. Some patented technologies and the learning curve can also be a challenge: it can be difficult to adapt an algorithm to users' needs immediately, but this is not enough to deter potential competitors.

While there is no extra cost for users to change the app and there is no incentive to stay loyal to the brand, Duolingo has a team of loyal, dedicated followers who are not easy to lure.

Duolingo may be threatened by major technology companies, such as Alphabet, Amazon, or Apple, which have advanced machine learning, automation, and artificial intelligence technologies, as well as financial resources. Duolingo's initial business model – online translation with the help of foreign language learners – can be a way for such companies to translate their content into other languages cheaper and more efficiently.

#### 4.2. Threat of substitute products: strong

There is a choice of virtual lessons, distance and contact courses, various apps, websites, YouTube and TikTok channels, blogs, etc. for language learners, including even such rare languages as Navajo or Klingon.

Watching movies with subtitles or reading children's books can be an alternative to learning platforms. When choosing a learning alternative, there are no additional costs, the user is free to choose the free or paid option. In case of the paid option, the consumer chooses whether to renew the subscription or to choose another service provider.

#### 4.3. Bargaining power of buyers: weak

The need for language learning is growing since the need to communicate with people of different nationalities is growing, with international companies giving preference to multilingual employees.

According to International Association of Languages Centers (2016), more than 2 billion people were learning a foreign language in 2016. Thus, the potential consumer market is large and continues to grow.

Duolingo has 37 million monthly and 8.4 million daily active users, as well as 1.5 million paying subscribers (Duolingo, 2021), so a single user cannot influence the price.

#### 4.4. Bargaining power of suppliers: weak

Duolingo has several types of providers: technology providers and content creators. Learning content creators can be replaced. Technology, such as servers, cloud, hosting, can be changed. It would lead to additional costs and some inconveniences, but is not difficult to implement if needed.

App stores is one area where suppliers have some power. Duolingo app can be downloaded from Google Play and Apple App Store. Both stores charge a 15–30% in-app purchase fee. At the same time, these are the two largest app repositories with very few alternatives (for Google) or none at all (for Apple). However, any competitor providing language learning via an app would encounter this challenge.

#### 4.5. Rivalry among existing competitors: medium

There is a lot of supply in the market, prices range from zero to several hundred dollars per year, users do not incur additional costs to switch from one solution to another, but the market itself is growing and technology is evolving. Content creation can be automated.

Duolingo offers a unique product that is differentiated from other language learning options and currently has the largest market share among online learning apps in terms of number of users (see Figure 5).

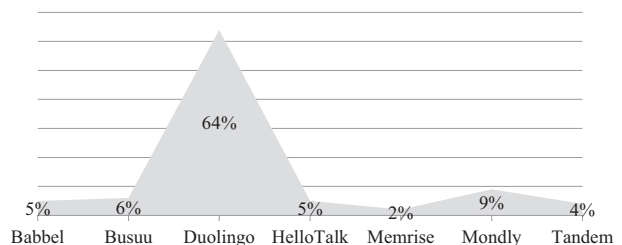


Figure 5. Distribution of users among the 10 most popular language learning apps, January–September 2021 (source: Curry, 2022b)

### 5. VRIO analysis of the Duolingo language learning platform

According to Fazrullah et al. (2019) Barney, through the VRIO framework, proposes four questions to analyze and evaluate company competencies. The questions are:

- Value: do a firm's resources and capabilities enable the firm to respond to environmental threats or opportunities?

- Rareness: is a resource currently controlled by only a small number of competing firms?
- Imitability: do firms without a resource face a cost disadvantage in obtaining or developing it?
- Organization: are a firm's other policies and procedures organized to support the exploitation of its valuable, rare, and costly to imitate resources?

Resources and capabilities that meet the above questions which represent four criteria are valuable, rare (rare/unique), costly to imitate (expensive to imitate), and organization (organized) referred to as core competencies (Fazrullah et al., 2019). This means that in order to achieve a sustainable competitive advantage, an organization's signature capability and resources should be valuable, rare, inimitable, and organizationally attached, or in other words, it can be exploited inside the organization (Kaukab et al., 2020).

Duolingo's strategic and competitive positioning is analyzed in Table 2 using the VRIO method.

## Conclusions

The language learning and the whole educational technology sector is competitive, consumers have many alternatives. Duolingo has targeted a large market segment and presently has a clear competitive advantage among language learning apps. Based on the statistical and strategic analysis of Duolingo, it can be stated that the long-term strong strategic aspects of competitive advantages are ensured by its advanced technology, content, brand and image, as well as user data acquired over a long period of time. This ensures that potential competitors would have to go through a significant learning curve to reach the same level.

Based on strategic analysis results, it can be said that the competition in the language learning sector is moderate for Duolingo because of the strong threats of competitors and substitutes, but the weak power of suppliers and buyers. The company should enhance its products in order

Table 2. Duolingo company's main resources and capabilities (source: authors)

Resources and capabilities	Valuable	Rare	Inimitable	Organized	Competitive advantage
<i>Accessibility.</i> Free access to the platform guarantees a steady user stream, however, there is a lot of free content available on the web	Yes	No			Competitive parity
<i>Addictive method.</i> The immersive experience is an innovation and has not been replicated so far to the extent of Duolingo, but it would not be difficult to copy the existing model	Yes	Yes	No		Temporary competitive advantage
<i>Duolingo English Test.</i> While the proctored online testing method or the test itself is not an innovation, its acceptance in 3,000 institutions is a rare asset, yet it can still be replicated	Yes	Yes	No		Temporary competitive advantage
<i>Duolingo for Schools.</i> Offering a free app for schools is consistent with Duolingo's mission and not a lot of companies offer a similar service. However, adapting existing content and algorithm would not be complicated	Yes	Yes	No		Temporary competitive advantage
<i>Language diversity and content.</i> The amount of languages offered and the volume of the courses attracts users, building such an amount of content takes years and therefore is not easily replicable. The company has the skills to maintain the level of quality to capture value	Yes	Yes	Yes	Yes	Sustained competitive advantage
<i>Brand recognition and image.</i> Duolingo has cultivated their image and social media presence over the years. Imitating that would not only take time and effort, but also specific social media skills	Yes	Yes	Yes	Yes	Sustained competitive advantage
<i>Accumulated user data.</i> Duolingo user data has been collected and analyzed via A/B testing. It's not something that can be acquired easily. The technology skills are organized around this capability	Yes	Yes	Yes	Yes	Sustained competitive advantage
<i>Patented algorithms.</i> Since Duolingo has the exclusive rights to their patented technology, a potential competitor would need to either get Duolingo consent to use it or develop a different enough algorithm to achieve the same effect	Yes	Yes	Yes	Yes	Sustained competitive advantage



to maintain its competitive advantage, by further developing courses, expanding learning methods, and offering advanced CEFR language levels.

An attractive, addictive product that turns the learning process into a leisure activity, as well as reliance on social media rather than traditional marketing tools, has helped the company to create a good image and establish itself in the market, but at the same time such strengths as gaming and humorous social media content become weaknesses and create a frivolous image, which may work against the company's goals of becoming a respected credential of education.

The company is well positioned to further improve its existing technology, expand its product offering, and increase the number of users. With such rapid market development, Duolingo's long-term strategy should also focus on creating value for investors. This would ensure market growth and the continuity to fulfill its mission and maintain its values by doing what it has done best so far: creating an inclusive language learning platform and attracting even more users from the growing sector.

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## „DUOLINGO“ KALBŲ MOKYMOSI PLATFORMOS STRATEGINĖ ANALIZĖ

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Santrauka

Augantis interneto ir mobiliųjų įrenginių vartotojų skaičius formuoja švietimo technologijų sprendimų paklausos augimą. Įkurta 2012 m., siekiant spręsti socialinę nelygybę švietimo srityje, „Duolingo“ yra komercinė kalbų mokymosi platforma, siūlanti nemokamus kursus interneto tinklalapyje ir mobiliuojoje programėlėje. Šiame straipsnyje siekiama išanalizuoti įmonės strateginius pajėgumus, dėl kurių 2019 m. „Duolingo“ tapo pelningiausia švietimo programėle. Vertinimas atliktas taikant SWOT, VRIO ir Porterio penkių jėgų analizės metodus. Rezultatai rodo, kad „Duolingo“ kompanija, pasinaudodama technologijų pažanga ir socialine žiniasklaida, orientavosi į platų rinkos segmentą ir sukūrė patrauklų produktą bei žaidimu paremtą mokymosi procesą, taip užsitikrindama didelę rinkos dalį konkurencingame sektoriuje.

**Reikšminiai žodžiai:** „Duolingo“, edukacinės technologijos, kalbų mokymasis, strategija, žaidimizavimas.