

Stanulewicz, Danuta; Radomyski, Konrad

Online language learning platforms and applications. Users' opinions

Andrzejewska, Ewa [Hrsg.]; Matthes, Eva [Hrsg.]; Schütze, Sylvia [Hrsg.]; Wiele, Jan van [Hrsg.]: *Bildungsmedien für Erwachsene*. Bad Heilbrunn : Verlag Julius Klinkhardt 2024, S. 231-241. - (Beiträge zur historischen und systematischen Schulbuch- und Bildungsmedienforschung)



Quellenangabe/ Reference:

Stanulewicz, Danuta; Radomyski, Konrad: Online language learning platforms and applications. Users' opinions - In: Andrzejewska, Ewa [Hrsg.]; Matthes, Eva [Hrsg.]; Schütze, Sylvia [Hrsg.]; Wiele, Jan van [Hrsg.]: *Bildungsmedien für Erwachsene*. Bad Heilbrunn : Verlag Julius Klinkhardt 2024, S. 231-241 - URN: urn:nbn:de:0111-pedocs-320384 - DOI: 10.25656/01:32038; 10.35468/6126-17

<https://nbn-resolving.org/urn:nbn:de:0111-pedocs-320384>

<https://doi.org/10.25656/01:32038>

in Kooperation mit / in cooperation with:



<http://www.klinkhardt.de>

Nutzungsbedingungen

Dieses Dokument steht unter folgender Creative Commons-Lizenz: <http://creativecommons.org/licenses/by-nc-nd/4.0/deed.de> - Sie dürfen das Werk bzw. den Inhalt unter folgenden Bedingungen vervielfältigen, verbreiten und öffentlich zugänglich machen: Sie müssen den Namen des Autors/Rechteinhabers in der von ihm festgelegten Weise nennen. Dieses Werk bzw. dieser Inhalt darf nicht für kommerzielle Zwecke verwendet werden und es darf nicht bearbeitet, abgewandelt oder in anderer Weise verändert werden.

Mit der Verwendung dieses Dokuments erkennen Sie die Nutzungsbedingungen an.

Terms of use

This document is published under following Creative Commons-License: <http://creativecommons.org/licenses/by-nc-nd/4.0/deed.en> - You may copy, distribute and transmit, adapt or exhibit the work in the public as long as you attribute the work in the manner specified by the author or licensor. You are not allowed to make commercial use of the work or its contents. You are not allowed to alter, transform, or change this work in any other way.

By using this particular document, you accept the above-stated conditions of use.



Kontakt / Contact:

peDOCS
DIPF | Leibniz-Institut für Bildungsforschung und Bildungsinformation
Informationszentrum (IZ) Bildung
E-Mail: pedocs@dipf.de
Internet: www.pedocs.de

Online Language Learning Platforms and Applications: Users' Opinions

Abstract

Sprachlern-Plattformen und Sprachlern-Apps sind in letzter Zeit bei erwachsenen Lernenden, die sich aus verschiedenen Gründen für die Online-Bildung entscheiden, sehr beliebt geworden. Die Plattformen bieten Kurse in Sprachen an, die in der internationalen Kommunikation verwendet werden, aber auch in weniger bekannten Sprachen, sowohl natürlichen als auch künstlichen. Mithilfe der Plattform Duolingo zum Beispiel kann man unter anderem Englisch, Spanisch, Französisch, Walisisch, Navajo, Haitianisches Kreolisch, Esperanto, Klingonisch und Hochvalyrisch lernen. Sie wird von über 500 Millionen Lernenden genutzt, die in verschiedenen Regionen unseres Planeten leben. In diesem Beitrag konzentrieren wir uns auf die Meinungen der Nutzer von drei beliebten Sprachlern-Plattformen im Google Play Store: Duolingo, Busuu und Memrise. Zum einen werden die Plattformen auf einer Skala von 1 bis 5 bewertet, zum anderen mit einem kurzen Kommentar versehen. Die Länge solcher Rezensionen variiert in der Regel zwischen einem Wort (z.B. gut oder fantastisch) und einem bis zu zehn häufig kurzen Sätzen. Einige Kommentare sind aus diesem Grund sehr allgemein, andere enthalten hingegen sowohl Vor- als auch Nachteile einer bestimmten Lernplattform und in manchen wird Bezug nur auf konkrete Sprache(n) und nicht auf die Plattform als solche genommen. Wir haben – nach dem Zufallsprinzip – ca. 25.000 Meinungen aus dem Google Play Store über jede dieser Plattformen extrahiert, die von ihren Nutzern im Zeitraum von 2011 bis 2022 abgegeben wurden. Mithilfe von AntConc, einem von Lawrence Anthony entwickelten Programm, haben wir einen Korpus der Meinungen zusammengestellt. Die Korpustools ermöglichen es uns, positive, neutrale und negative Meinungen zu identifizieren, was ihre Stimmungsanalyse erleichtert.

1. Introduction

Language learning platforms and applications¹ have recently become popular with adult students who – for various reasons – choose the online educational setting. Platforms offer courses in languages used in international communication as well as in lesser-known languages, both natural and artificial. For instance, the platform *Duolingo* teaches languages which have millions of speakers, both native and non-native, e.g. English, Spanish and

¹ It is possible to learn languages either via internet platforms or with related applications on mobile devices. For this reason, in the paper, we employ the following terms interchangeably: *platform*, *application* and *platform/application*.

French, languages with small numbers of speakers, e.g. Welsh, Navajo and Haitian Creole, and constructed languages: Esperanto, Klingon and High Valyrian.

In this paper, we concentrate on opinions voiced on *Google Play Store* by users of three popular language learning platforms: *Duolingo*, *Busuu* and *Memrise*. Apart from evaluating the platforms on the scale from 1 to 5, their users may also express their opinions. The length of such opinions ranges from one word (e.g. *good*, *fantastic*) to over ten, frequently short, sentences. Some opinions are very general, some contain both pros and cons of a particular platform and some also mention language courses. Besides, the users provide information on the languages they would like to learn on the platform.

We decided to obtain the research material from *Google Play Store*. We extracted – at random – 25,000 opinions written in English about each of these platforms, provided by their users in the period 2011–2022. Employing *AntConc*, a program designed by Lawrence Anthony (2023), we compiled a corpus containing the opinions. The corpus tools allowed us to identify positive, neutral and negative attitudes of the users.

2. The language platforms/applications selected for the study

As we have mentioned, we concentrate on the three language learning platforms/applications: *Duolingo*, *Busuu* and *Memrise*.

Busuu, available at <https://www.busuu.com>, was founded by Bernhard Niesner and Adrian Hilti in 2008. It has over 120 million users at present (<https://www.busuu.com/en/about>) who can choose between the free and premium plans. *Busuu* teaches 14 languages: Arabic, Chinese, Dutch, English, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Spanish and Turkish. The activities this platform offers include reading, writing, listening, vocabulary practice and translation. The home page advertises the platform as follows: “New language, new opportunities, new you”, “Learn with confidence”, “Learn for real life” and “Learn your way” (<https://www.busuu.com/en>).

Duolingo, available at <https://www.duolingo.com>, appeared online in 2011. Its founders, Luis von Ahn and Severin Hacker, formulate three pillars of their mission: “Personalized education”, “Making learning fun” and “Universally accessible” (<https://en.duolingo.com/info>). Over 500 million users learn 39 different languages: Arabic, Chinese, English, French, German, Hindi, Italian, Polish, Portuguese, Russian, Spanish, Swedish and Turkish, to mention a few (<https://duoplanet.com/duolingo-languages-list/>). The activities prepared for the learners include reading, writing, listening, speaking, vocabulary practice and translation.

Memrise, available at <https://www.memrise.com>, founded by Ed Cooke, Ben Whately and Greg Detre, was made available to the general public in 2012. Enjoying 65 million users, *Memrise* offers courses in the following languages: Arabic, Chinese, Danish, Dutch, English, French, German, Icelandic, Italian, Japanese, Korean, Mongolian, Norwegian, Polish, Portuguese (also Brazilian Portuguese), Russian, Spanish (also Mexican Spanish), Swedish, Turkish and Yoruba. The prospective user is encouraged to learn with *Memrise* as follows: “We push you to speak another language”, “Listen to real natives”, “Build your vocab”, “Practice speaking with MemBot” (<https://www.memrise.com>). The learners are engaged in the activities such as reading, listening, vocabulary practice and grammar practice.

All the three platforms offer free and premium versions. However, it is worth stressing that *Duolingo* provides all the content of the courses in both versions, one of the differences being the lack of advertisements in the latter.

The three platforms have received considerable attention from scholars interested in language teaching and learning. As regards previous studies on *Busuu*, researchers have investigated, among others, users' opinions on experience with its premium version (see Kétyi, 2013; Rosell-Aquilar, 2018; Valencia, 2016). As far as *Duolingo* is concerned, the following issues have been examined: the effectiveness of the study with this platform/application (e.g. Tsai, 2023; Vesselinov & Grego, 2012), the impact of using it as part of the classroom experience (e.g. Munday, 2016) and users' motivation to learn languages (e.g. Stanulewicz & Aleksandrowska, 2022). Users' opinions and experiences with *Duolingo* have been presented in scholarly publications as well (e.g. Aleksandrowska & Stanulewicz, 2019, 2020; Radomyski, 2022).

3. Methodology of the study

The procedure employed in this study included the following stages:

- (1) extraction of opinions from *Google Play Store*;
- (2) random selection of 25,000 comments for each platform/application;
- (3) categorization of the comments basing on the provided ratings: positive (5–4), neutral (3) and negative (2–1);
- (4) construction of the corpus containing the selected comments;
- (5) identification of the most frequent positively and negatively charged adjectives in the opinions concerning each platform/application.

The corpus we created includes 75,000 comments originally written in English (25,000 per one platform/application), and its size is 1,235,653 words (see Table 1). The unequal numbers of words in the subcorpora result from the varying lengths of the comments.

Table 1 Corpus structure

| <i>Platform/ Application</i> | <i>Number of comments</i> | <i>Number of words</i> | <i>Percentage</i> |
|----------------------------------|---------------------------|------------------------|-------------------|
| <i>Busuu</i> | 25,000 | 421,013 | 34.07 |
| <i>Duolingo</i> | 25,000 | 437,026 | 35.37 |
| <i>Memrise</i> | 25,000 | 377,614 | 30.56 |
| Total | 75,000 | 1,235,653 | 100.00 |

In our study we concentrate on positively and negatively charged adjectives most frequently used by the authors of the opinions. The data we provide include the absolute and relative frequencies of these adjectives. The absolute frequency of a word is the number of its occurrences in the corpus, while its relative frequency is the number of its occurrences usually per one million words (see e.g. Brezina, 2018, p. 46). The following formula is employed to calculate the latter:

$$RF = \frac{AF}{N} \cdot 1,000,000$$

where: RF = relative frequency,
 AF = absolute frequency,
 N = number of words in the corpus.

4. Results of the study: Quantitative data

All the three applications received predominantly positive opinions (rating: 5–4) from their users: *Busuu* – almost 80 percent of all the comments, *Duolingo* – almost 86 percent and *Memrise* – slightly over 88 percent. As regards negative opinions, *Memrise* obtained the smallest number of them, which constituted almost 8 percent of the comments. In the case of *Duolingo* and *Busuu*, slightly over 9 and 13 percent of their users expressed negative attitudes, respectively. Tables 2, 3 and 4 present the data concerning the particular applications.

Table 2 Opinions about *Busuu* – numerical and percentage data (own research)

| <i>Opinion</i> | <i>Number</i> | <i>Percentage</i> |
|------------------------|---------------|-------------------|
| Positive (rating: 5–4) | 19,941 | 79.76 |
| Neutral (rating: 3) | 1,788 | 7.15 |
| Negative (rating: 2–1) | 3,271 | 13.08 |
| Total | 25,000 | 100.00 |

Table 3 Opinions about *Duolingo* – numerical and percentage data (own research)

| | <i>Number</i> | <i>Percentage</i> |
|------------------------|---------------|-------------------|
| Positive (rating: 5–4) | 21,488 | 85.95 |
| Neutral (rating: 3) | 1,188 | 4.75 |
| Negative (rating: 2–1) | 2,324 | 9.30 |
| Total | 25,000 | 100.00 |

Table 4 Opinions about *Memrise* – numerical and percentage data (own research)

| <i>Opinion</i> | <i>Number</i> | <i>Percentage</i> |
|------------------------|---------------|-------------------|
| Positive (rating: 5–4) | 22,068 | 88.27 |
| Neutral (rating: 3) | 951 | 3.80 |
| Negative (rating: 2–1) | 1,981 | 7.92 |
| Total | 25,000 | 100.00 |

Another measure for comparing the opinions is the average rating. As can be seen in Table 5, all the three applications were evaluated positively, the average rating ranging from 4.21 to 4.48. The data presented in Table 5 corroborate the data from Tables 2, 3 and 4: It is *Memrise* that was perceived as the best of the examined applications.

Table 5 Average ratings – a comparison (own research)

| <i>Platform/Application</i> | <i>Average rating</i> |
|-----------------------------|-----------------------|
| <i>Busuu</i> | 4.21 |
| <i>Duolingo</i> | 4.42 |
| <i>Memrise</i> | 4.48 |

In conclusion, the users of the three platforms/applications – *Busuu*, *Duolingo* and *Memrise* – wrote predominantly about their positive learning experiences. The received negative feedback was fairly limited. The examination of the average ratings (4.21 to 4.48) affirmed the positive perception of the platforms.

5. The most frequent positively and negatively charged adjectives

Let us now present the most frequent positively and negatively charged adjectives employed in the users' comments. Tables 6–11 present the absolute and relative frequencies of these words. It needs to be clarified here that we eliminated adjectives preceded by the negative particle (e.g. *not good*, *not effective*, *not bad*). Moreover, on semantic grounds, we decided to treat comparative and superlative forms as separate lexical items, not variants of their basic forms (e.g. *better* and *best* vs. *good*).

5.1 Positively charged adjectives

Tables 6, 7 and 8 on this and on the following page present the frequencies of the most popular positively charged adjectives. It is worth emphasizing that some of them were used in the opinions about all the three applications.

Table 6 *Busuu*: Positively charged adjectives (own research)

| <i>Adjective</i> | <i>Absolute frequency</i> | <i>Relative frequency</i> |
|------------------|---------------------------|---------------------------|
| <i>good</i> | 4,323 | 10,268.09 |
| <i>great</i> | 3,028 | 7,192.18 |
| <i>best</i> | 1,681 | 3,992.75 |
| <i>nice</i> | 1,165 | 2,767.14 |
| <i>amazing</i> | 1,048 | 2,489.23 |
| <i>better</i> | 862 | 2,047.44 |
| <i>helpful</i> | 809 | 1,921.56 |

| <i>Adjective</i> | <i>Absolute frequency</i> | <i>Relative frequency</i> |
|------------------|---------------------------|---------------------------|
| <i>useful</i> | 804 | 1,909.68 |
| <i>excellent</i> | 644 | 1,529.64 |
| <i>awesome</i> | 588 | 1,396.63 |

Table 7 Duolingo: Positively charged adjectives (own research)

| <i>Adjective</i> | <i>Absolute frequency</i> | <i>Relative frequency</i> |
|------------------|---------------------------|---------------------------|
| <i>good</i> | 3,982 | 9,111.59 |
| <i>great</i> | 2,857 | 6,537.37 |
| <i>best</i> | 2,150 | 4,919.62 |
| <i>nice</i> | 1,542 | 3,528.39 |
| <i>amazing</i> | 1,177 | 2,693.20 |
| <i>helpful</i> | 812 | 1,858.01 |
| <i>useful</i> | 654 | 1,496.48 |
| <i>excellent</i> | 613 | 1,402.66 |
| <i>better</i> | 542 | 1,240.20 |
| <i>awesome</i> | 516 | 1,180.71 |

Table 8 Memrise: Positively charged adjectives (own research)

| <i>Adjective</i> | <i>Absolute frequency</i> | <i>Relative frequency</i> |
|------------------|---------------------------|---------------------------|
| <i>good</i> | 4,370 | 11,572.66 |
| <i>great</i> | 3,568 | 9,448.80 |
| <i>best</i> | 1,738 | 4,602.58 |
| <i>amazing</i> | 1,186 | 3,140.77 |
| <i>helpful</i> | 1,126 | 2,981.88 |
| <i>useful</i> | 877 | 2,322.48 |
| <i>better</i> | 793 | 2,100.03 |
| <i>awesome</i> | 774 | 2,049.71 |
| <i>excellent</i> | 542 | 1,435.33 |
| <i>perfect</i> | 399 | 1,056.63 |

There are three clearly dominant adjectives used in the opinions about the three applications indicating general positive feedback, that is, *good*, *great* and *best*. There are also

adjectives with lower frequencies that are common in the opinions, for instance, *amazing*, *helpful*, *excellent* and *useful*.

Let us quote some exemplary comments. The mistakes made by their authors have not been corrected because we have decided to preserve their original wording and spelling. We add emphasis to the positively charged adjectives by using the italic font.

An opinion about Busuu:

“Brilliant! By far the best language app I’ve used. So much better than Duolingo, and Babel. They don’t swamp you with ads, they give amazing encouragement, its so much more authentic than other apps I’ve used. You don’t feel like it’s all AI, it honestly feels like you’re in a community of learners, and they’re super prompt to correct your written (or spoken, though I haven’t tried this speaking option yet) attempts of new vocabulary. I’m using the premium version and I 100 % recommend it.”

An opinion about Duolingo:

“It’s so good a 10/10!! I learned the basics of Spanish so easily! But I have a very small complaint. It sometimes gets stuck in the middle of nowhere and I have to close it and come back but when I do the lessons again it’s again stuck. Please fix the problem this is an excellent app and I don’t want this to make it a bad app. 😊👍 EDIT: I wrote this review 2 years ago and I took a break, and now it’s better than ever! the problem I mentioned has been fixed too! ^^ recommenddd it a lot”.

An opinion about Memrise:

“The app is perfect! I’ve learned so much Portuguese. (Bar one or two words I’ve tried that doesn’t fully translate) The only faults I can think of is that there should be more of an online community, unless mine errors and doesn’t connect then there is no online community to chat and compete for in game achievements maybe. Also with Portuguese, there’s no grammar courses ... I’ve seen it on Russian and Spanish but not Portuguese, couldn’t this be added? Apart from that, I rate 4/5. Good app.”

The comments presented above show that *Busuu*, *Duolingo* and *Memrise* are positively perceived by their users, although some inconveniencias may be reported as well. Interestingly, the Duolingo user updated his/her rating, emphasizing that “the problem [...] has been fixed”.

5.2 Negatively charged adjectives

As has been signalled, while analyzing the uses of adjectives, it is crucial to consider negatively charged adjectives as well. Tables 9, 10 and 11 on this and on the next page present the frequencies of the most common adjectives of this kind in the comments.

Table 9 *Busuu*: Negatively charged adjectives (own research)

| <i>Adjective</i> | <i>Absolute frequency</i> | <i>Relative frequency</i> |
|------------------|---------------------------|---------------------------|
| <i>bad</i> | 266 | 631,81 |
| <i>wrong</i> | 218 | 517,80 |
| <i>annoying</i> | 153 | 363,41 |

| <i>Adjective</i> | <i>Absolute frequency</i> | <i>Relative frequency</i> |
|--------------------|---------------------------|---------------------------|
| <i>useless</i> | 79 | 187,64 |
| <i>frustrating</i> | 74 | 175,77 |
| <i>weak</i> | 65 | 154,39 |
| <i>worst</i> | 55 | 130,64 |
| <i>terrible</i> | 52 | 123,51 |
| <i>boring</i> | 47 | 111,64 |
| <i>buggy</i> | 45 | 106,89 |

Table 10 Duolingo: Negatively charged adjectives (own research)

| <i>Adjective</i> | <i>Absolute frequency</i> | <i>Relative frequency</i> |
|--------------------|---------------------------|---------------------------|
| <i>wrong</i> | 350 | 800,87 |
| <i>annoying</i> | 208 | 475,94 |
| <i>bad</i> | 190 | 434,76 |
| <i>frustrating</i> | 132 | 302,04 |
| <i>difficult</i> | 124 | 283,74 |
| <i>boring</i> | 78 | 178,48 |
| <i>repetitive</i> | 71 | 162,46 |
| <i>worst</i> | 58 | 132,72 |
| <i>useless</i> | 47 | 107,55 |
| <i>terrible</i> | 43 | 98,39 |

Table 11 Memrise: Negatively charged adjectives (own research)

| <i>Adjective</i> | <i>Absolute frequency</i> | <i>Relative frequency</i> |
|--------------------|---------------------------|---------------------------|
| <i>bad</i> | 190 | 503,16 |
| <i>wrong</i> | 134 | 354,86 |
| <i>boring</i> | 74 | 195,97 |
| <i>useless</i> | 71 | 188,02 |
| <i>terrible</i> | 60 | 158,89 |
| <i>awful</i> | 52 | 137,71 |
| <i>frustrating</i> | 52 | 137,71 |
| <i>confusing</i> | 49 | 129,76 |
| <i>repetitive</i> | 46 | 121,82 |
| <i>horrible</i> | 41 | 108,58 |

What needs to be mentioned in the first place is that negatively charged adjectives occur less frequently than the ones which are positively charged. This is congruent with the smaller number of negative comments. An analysis of the occurrences of negatively charged adjectives can provide insightful information regarding the weaknesses of each application. As in the case of positively charged adjectives, certain trends can be noticed as well.

The most common negative adjectives include *bad* and *wrong*. There are also less frequent adjectives which occur in the comments about the three applications, for instance, *terrible*, *frustrating*, *useless* and *boring*. Additionally, it is worth stressing that the lexeme *buggy* is used with reference to *Busuu*. The use of this word implies certain technical problems that the learners experience when they use the application. Moreover, the use of the lexeme *repetitive* in the case of *Duolingo* and *Memrise* suggests that the activities offered in the applications are found boring. Let us now consider several negative comments from the corpus.

An opinion about *Busuu*:

"I am very *upset* ... they said that you'd be notified before the subscription takes your money for the app ... I wasn't I woke up to a chunk of my bank account gone, withdrawn at 4 am. I want a refund. I never wanted to pay for it! very *inconvenient*!"

An opinion about *Duolingo*:

"I had a really good experience in beginning when I used to clear each league in a week, but after reaching Diamond, I stayed in it for five weeks, even though I successfully remained in the Diamond league every week, they still haven't updated it in my profile, and it still shows Week 5, when in reality I have cleared Diamond at least 11 times, once with a number 1 spot as well, but neither they gave me the title of winning Diamond, nor have they updated it. Really *frustrated*!"

An opinion about *Memrise*:

"[...] again, im really *disappointed* with this app. the way it works isnt better, it's worse. if you want to speed study you can't because you have to keep scrolling. the look is really *awful* as well. what was wrong with the old one? the new one is *obnoxious* and mixed with the way you guys changed it to work it's just *awful*. im probably gonna stop using memrise which is a shame because it was the best app id used, especially function wise.

The three negative comments show specific problems that the learners encountered while using the applications. These are issues regarding subscriptions, tracking one's progress in the course and the functionality of the application.

As already pointed out, the negatively charged adjectives might be helpful for the developers of the applications in identifying areas for improvement. Needless to say, this negative feedback may provide information about flaws in an application which may hinder the learning process.

6. Conclusions

The analysis has revealed that *Busuu*, *Duolingo* and *Memrise* are evaluated similarly. As far as the positive opinions are concerned, they clearly point to the fact that these applications greatly facilitate the language learning process. This is expressed by the use of the following lexemes: *good*, *great*, *best*, *nice*, *amazing* and *helpful*. On the other hand, certain disadvantages were observed by the users as well. In the negative comments, the following adjectives are used quite frequently: *bad*, *wrong*, *annoying* and *frustrating*. The negative experiences described in the comments usually make the process of learning a language difficult. Besides, they indicate that the users may lose interest in the application. Generally speaking, the analyzed comments point to the positive experiences adult learners may enjoy acquiring languages, as well as to their satisfaction with using the platforms/applications.

The paper has presented selected opinions of the users of *Busuu*, *Duolingo* and *Memrise*. We have concentrated on the use of adjectives; however, we plan to conduct a more detailed analysis of the comments about each application. Such an analysis would provide a better understanding of specific problems faced by language learners and help to create a list of recommendations for the improvement of the quality of the applications.

References

- Aleksandrowska, O. & Stanulewicz, D. (2019). O korzystaniu z internetowych platform do nauki języków (na przykładzie Duolingo). In M. Grabowska, J. Hinc, A. Jarosz & J. Mampe (Eds.), *Translatoryka i glotto-dydaktyka – od badań do praktyki* (pp. 119–135). Wydawnictwo Uniwersytetu Gdańskiego.
- Aleksandrowska, O. & Stanulewicz, D. (2020). Internetowa platforma do nauki języków Duolingo – opinie użytkowników. *Neofilolog*, 55 (1), 125–144. <https://doi.org/10.14746/n.2020.55.1.8>
- Aminatun, D. & Oktaviani, L. (2019). Memrise: Promoting Students' Autonomous Learning Skill through Language Learning Application. *Metathesis: Journal of English Language, Literature, and Teaching*, 3 (2), 214–223. <https://doi.org/10.31002/metathesis.v3i2.1982>
- Anthony, L. (2023). *AntConc, Version 4.2.4* [Computer Software]. Waseda University. <https://www.laurenceanthony.net/software>
- Brezina, V. (2018). *Statistics in Corpus Linguistics: A Practical Guide*. Cambridge University Press. <https://doi.org/10.1017/9781316410899>
- Kétyi, A. (2013). Using Smart phones in Language Learning: A Pilot study to Turn CALL into MALL. In L. Bradley & S. Thouéšny (Eds.), *20 Years of EUROCALL: Learning from the Past, Looking to the Future* (pp. 129–134). Research-publishing.net. <https://doi.org/10.14705/rpnet.2013.000150>
- Łuczak, A. (2017). Using Memrise in Legal English Teaching. *Studies in Logic, Grammar and Rhetoric*, 49 (1), 141–152. <https://doi.org/10.1515/slgr-2017-0009>
- Munday, P. (2016). The Case for Using DUOLINGO as Part of the Language Classroom Experience. *RIED: Revista Iberoamericana de Educación a Distancia*, 19 (1), 83–101.
- Nuralisah, A.S. & Kareviati, E. (2020). The Effectiveness of Using Memrise Application in Teaching Vocabulary. *Professional Journal of English Education*, 3 (4), 494–500.
- Radomyski, K. (2022). Opinie użytkowników aplikacji Duolingo. Analiza komentarzy z Google Play Store. *Języki Obce w Szkole*, 3, 102–112.
- Rosell-Aguilar, F. (2018). Autonomous Language Learning through a Mobile Application: A User Evaluation of the Busuu App. *Computer Assisted Language Learning*, 31 (8), 854–881. <https://doi.org/10.1080/09588221.2018.1456465>
- Stanulewicz, D. & Aleksandrowska, O. (2022). Zastosowanie wywiadu / ankiety z pytaniami otwartymi do badania motywacji użytkowników platformy Duolingo. In E. Andrzejewska & M. Wawrzyniak-Śliwska (Eds.),

- Metodologia badań w dydaktyce języków obcych: zarys problematyki* (pp. 77–95). Wydawnictwo Uniwersytetu Gdańskiego.
- Tsai, N. (2023). No Rewards on the Way: Studying Polish with Duolingo by Taiwanese Student – Learning Strategies and the App Appropriability. *Acta Universitatis Lodzensis: Kształcenie Polonistyczne Cudzoziemców*, 30, 163–188. <https://doi.org/10.18778/0860-6587.30.11>
- Valencia, J. A. (2016). Language Views on Social Networking Sites for Language Learning: The Case of Busuu. *Computer Assisted Language Learning*, 29 (5), 853–867. <https://doi.org/10.1080/09588221.2015.1069361>
- Vesselinov, R., & Grego, J. (2012). *Duolingo Effectiveness Study: Final Report*. <https://www.studocu.com/vn/document/truong-dai-hoc-ngoai-ngu-tin-hoc-thanh-pho-ho-chi-minh/english-language/duolingo-report-final/62581075>

Authors

Radomyski, Konrad, Ph.D.

University of Gdańsk
Institute of English and American Studies
ORCID ID: 0000-0001-6824-0439

Main focus of research: pidgin and creole languages, scientific terminology, foreign language learning and teaching (language learning platforms and applications, bilingual education)

E-Mail: konrad.radomyski@ug.edu.pl

Stanulewicz, Danuta, Dr. habil.

University of Gdańsk
Institute of English and American Studies
ORCID ID: 0000-0003-1792-3883

Main focus of research: semantics (colour terms, metaphors), endangered languages, pidgin and creole languages, second/foreign language learning and teaching (motivation, language learning platforms and applications, bilingual education)

E-Mail: dan.stanulewicz@gmail.com