Educators' perceptions of Duolingo efficacy

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Abstract

Educator recommendations are an important influence in determining school curricula and individual consumers' use of educational technology. Yet, little systematic evidence is available regarding what educators think of Duolingo, the most downloaded language learning product in the world. One hundred sixteen North American educators working across different teaching contexts completed a survey on their familiarity, use, and opinions of Duolingo and other language learning apps. Educators in this sample were overall highly positive about the efficacy of language learning apps, and more familiar with Duolingo than with other apps. Over 90% of educators endorsed the efficacy of Duolingo for learning language skills (i.e., 97%) and learning a language faster (i.e., 96%), although just 78% thought it was helpful for learning real-world communication skills. Over 90% of educators thought Duolingo was a trusted way to help students learn a language (i.e., 97%), and said they would recommend Duolingo to language learners (i.e., 96%). One third of educators also held positive opinions of Rosetta Stone. Taken together, these results suggest that educators in this sample believe that Duolingo is effective.

Keywords

perceived efficacy, Duolingo, educators, teachers, mobile assisted language learning

1 Introduction

Duolingo is the most popular digital language learning product in the world based on monthly downloads (Statista, 2024), offering over 100 courses teaching over 40 languages. There are many research studies on Duolingo, demonstrating its efficacy in teaching language skills (e.g. Gonzalez-Fernandez, 2023; Jiang, Hopman, et al., 2024; Jiang, Peters, et al., 2024; Rodriguez-Fuentes & Swatek, 2023).

However, there is little systematic evidence about what educators think of Duolingo. In schools, educator recommendations determine what curricula and educational technology get implemented in the classroom. Educator recommendations are also a powerful motivator in individual consumers' choices, because teachers are seen as experts by learners and parents who trust their advice (Osorio-Saez et al., 2021). While there are many online reviews of Duolingo by educators (e.g. Common Sense Media, 2022), there is little published data on educators' opinions of Duolingo, an important factor in driving use of the platform. For instance, Finardi et al. (2016) surveyed students on their opinions of Duolingo, but only included 10 educators in their sample. The current survey aims to address this gap.

1.1 Research Questions

We asked the following exploratory Research Questions:

- What are educators' perceptions of Duolingo efficacy?
- Would educators recommend Duolingo for language learning?
- How do educators' views about Duolingo compare with other popular apps?

2 Methods

2.1 Participants

The participants were 116 North American self-identifying language educators: high school teachers, college professors, language school teachers, and others who participated in online discussion groups about language learning. They taught more than 13 languages, with Spanish being most common (42% of respondents). Most respondents had more than 5 years language teaching experience, with 33% teaching for 6-10 years and 38% teaching more than 10 years. Survey location data indicated that respondents were in North America. See Appendix A for respondents' demographic information.

2.2 Instrument

Participants were given a survey to complete. The survey had 9 items. The items asked for information on demographics (educators' teaching setting, the number of years in their role, the language they taught), opinions on language learning apps

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in general, familiarity with specific language apps, and opinions of those specific apps. See Appendix B for the full text of the survey.

2.3 Procedure

Data were collected between May 2 - May 12, 2023 in two waves. Educators were recruited through posts on Facebook, Reddit, and the American Council of Teachers of Foreign Languages listserv. Only surveys that were completed by May 12, 2023 were included in the analysis. One hundred and ninety-eight educators started the survey and 116 completed it, resulting in a 59% completion rate. The survey was administered in English. After participants took the survey, they were given $15 as compensation.

2.4 Analyses

Survey questions were analyzed descriptively. Responses to items on language learning app familiarity, educator personal app usage, and app usage with students were used to calculate percentages. Six statements assessed feelings about language learning apps in general (perceived efficacy, usefulness, etc.) and were rated on a 4-point Likert scale (strongly disagree, disagree, agree, strongly agree), which was collapsed into a binary measure for analysis (strongly agree and agree ratings were collapsed to "agree", while strongly disagree and disagree ratings were collapsed to "disagree"). Seven statements assessed endorsement of efficacy, trust, helpfulness, etc. specifically for four popular apps: Babbel, Drops, Duolingo, and Rosetta Stone. The percentage of respondents who endorsed these statements for Duolingo is reported. No systematic analysis was conducted on the open-ended response question, although specific themes that support the quantitative data are reported.

3 Results and Discussion

3.1 Educators' familiarity and usage of language learning apps

Respondents were familiar with a variety of language learning apps, with the greatest familiarity being with Duolingo (99%), followed by Rosetta Stone (76%) and Babbel (63%) (see Figure 1). Educators' opinions of apps were likely based more on their familiarity and personal experience using these apps than classroom use: only 67% of respondents used Duolingo with their students, followed by respondents who used Memrise (17%). Open-ended responses suggested that educator control over content students see, progress tracking, the importance of face to face communication were all reasons for using or not using language learning apps in their classrooms.

3.2 Educators' general opinions of language learning apps

Ninety-six percent of educators endorsed statements that digital language learning apps were effective. This indicates that in this sample, opinions of app efficacy in general were positive. Also, 96% trusted language learning apps and 95% felt that language learning apps along with classroom instruction could help students learn a language better than classroom instruction alone. While respondents also felt that language learning apps could help students increase their confidence (94%) and help beginning students learn faster (92%), they were less positive about language learning apps helping students learn real-world communication: only 54% of respondents agreed or strongly agreed that this was the case (see Figure 2).

3.3 Educators' perceptions of Duolingo efficacy

Data on educators' perceptions and recommendations of Duolingo can be seen in Figure 3. Ninety-seven percent of educators reported that Duolingo was an effective way to help students improve their skills. Of those who did not feel this way, none trusted digital apps to help their students learn a language, so this is unsurprising. This positive perceived efficacy of Duolingo is consistent with efficacy research showing that Duolingo teaches to the proficiency level of the content (e.g. Jiang, Hopman, et al., 2024; Jiang, Peters, et al., 2024) and increases learning as well as or more than classroom teaching (Gonzalez-Fernandez, 2023; Rodriguez-Fuentes & Swatek, 2023).

Ninety-six percent of educators reported that Duolingo helps students learn a language faster. These results align with studies suggesting that Duolingo is an efficient way to learn a language. In one study, learners achieved the same level of proficiency as university students after four semesters of language classes, with the Duolingo learners spending about half that time in the app (Jiang et al., 2021).

Seventy-eight percent of educators felt that Duolingo helps students learn real-world communication. While this percentage is still high, it is lower than for the other statements. Real-world communication was also a common topic for the open-ended response question, with educators suggesting that interacting with native speakers in the app would enhance real-world communicative abilities. Although there is less research on how well Duolingo teaches real-world communication, these moderately positive results are consistent with recent studies. Duolingo beginners demonstrate some conversation skills after just 4-6 weeks of app use (Kittredge et al., 2024), and more than two thirds of learners at the end of beginner-level content demonstrate speaking proficiency at the expected A2 CEFR level (Jiang, Hopman, et al., 2024). However, Duolingo learners' speaking proficiency is slightly lower than proficiency in other skills such as reading, writing, and listening (Jiang, Hopman,

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Figure 1

Educators' Familiarity and Use of Language Learning Apps

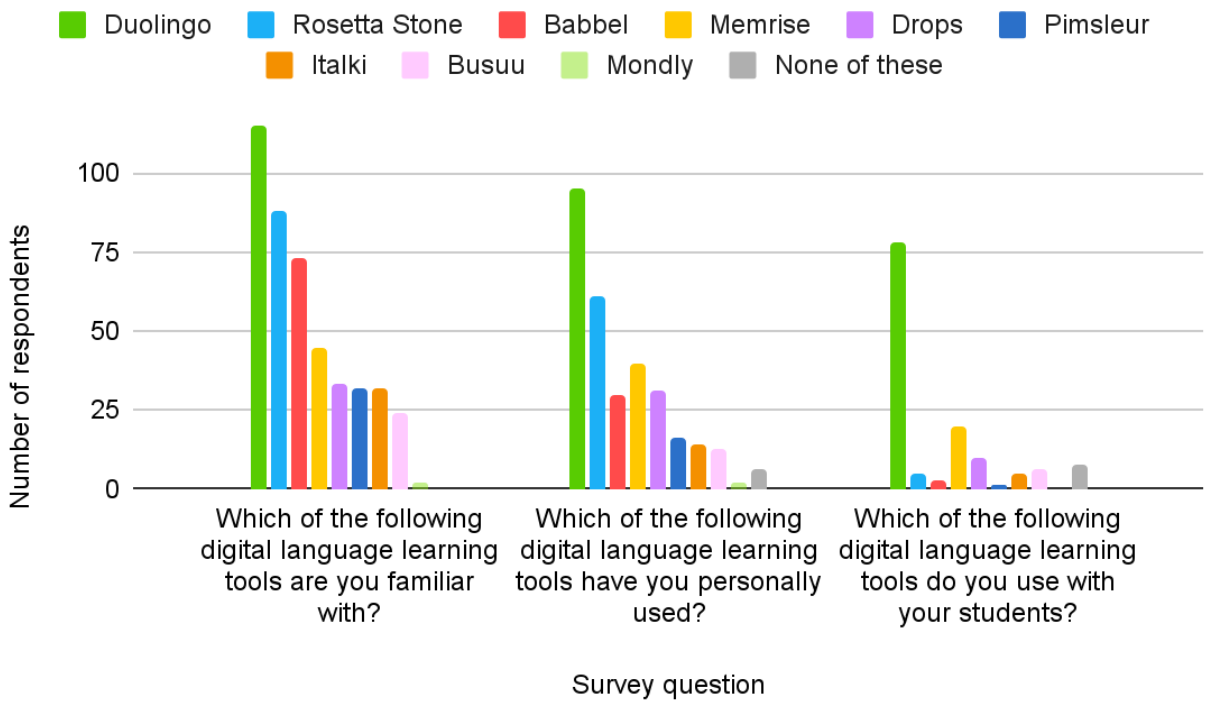
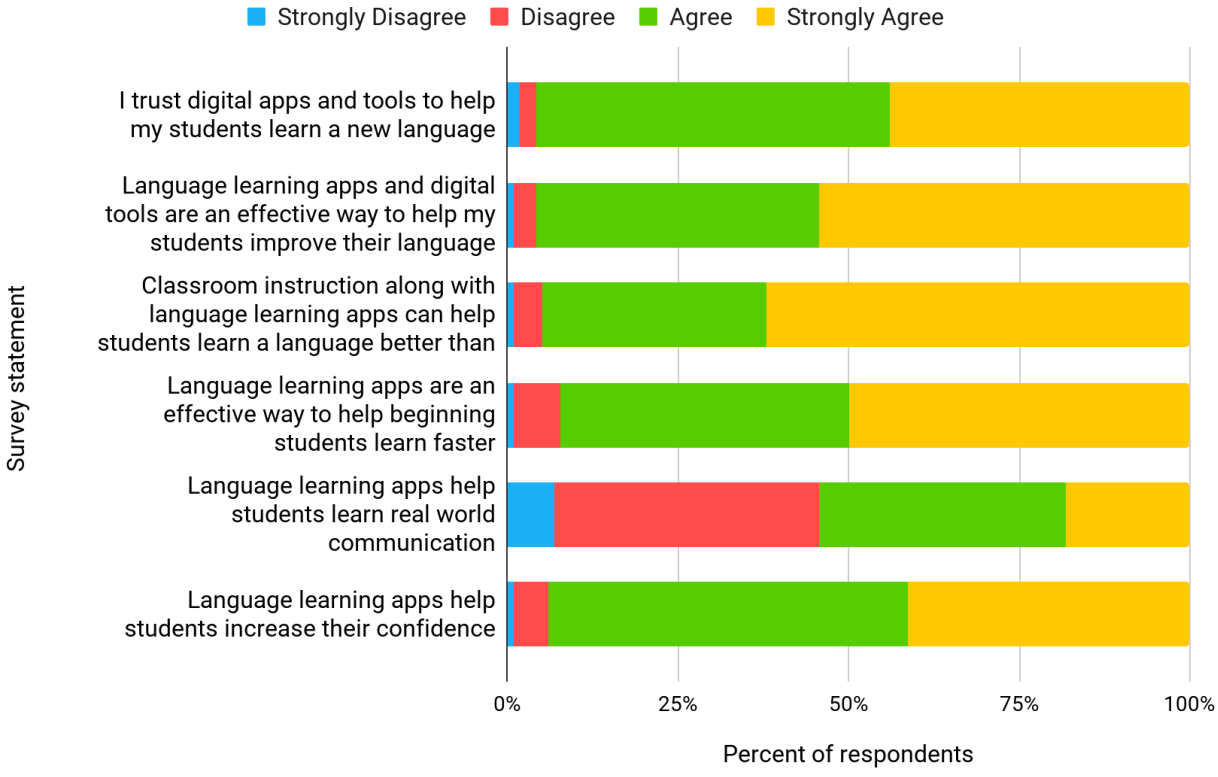


Figure 2

Educators' Perceptions of Language Learning Apps



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Figure 3

Educators' Perceptions and Recommendations of Duolingo

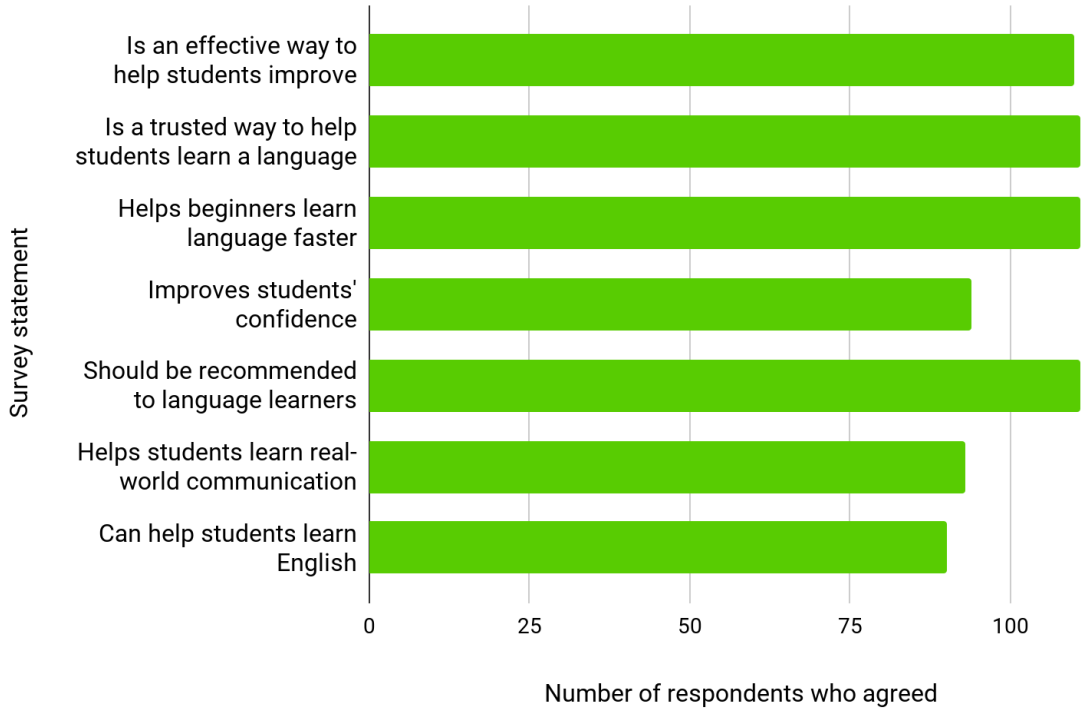
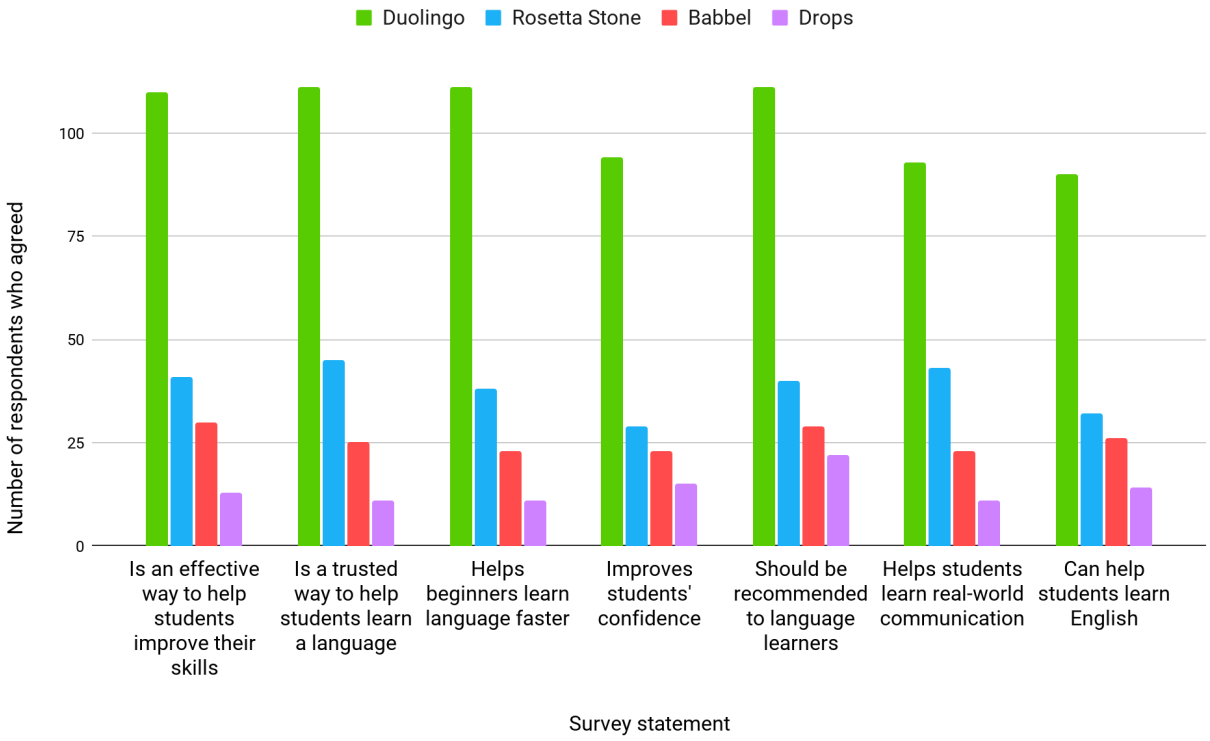


Figure 4

Educators' Perceptions across Language Learning Apps



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et al., 2024). This suggests that the Duolingo app could better support speaking, which is critical for real-world communication skills.

3.4 Educators' recommendations of Duolingo

Ninety-seven percent of educators reported that Duolingo was a trusted way to help students learn a language, and 96% of educators surveyed said they would recommend Duolingo to language learners. In open-ended responses, educators mentioned Duolingo for Schools and the fact that Duolingo was free as reasons for use in their classrooms. Moreover, 77% of educators would recommend Duolingo for their students who are learning English. These high recommendation rates are consistent with educators' high perceptions of Duolingo's efficacy.

3.5 Educators' views of Duolingo compared to other apps

To contextualize educators' feelings about Duolingo, we asked respondents to share their views on other apps. To reduce survey length, we focused on just four popular apps: Babbel, Drops, Duolingo, and Rosetta Stone (see Figure 4). However, this should not be interpreted as a direct comparison between apps, due to the respondents' high familiarity with and usage of Duolingo compared to the other apps. Duolingo was not the only app educators trusted, with roughly one-third also endorsing that Rosetta Stone was a trusted way to help students learn a language and could help students learn a language faster as well. A third of educators also felt Rosetta Stone supported real-world communication. These differences in perception across apps may be driven by familiarity and usage of the apps, where the app most respondents had prior experience with was Duolingo.

In open-ended responses, educators mentioned other apps that they used with their students, including Mango Languages, Yabla, and Conjuguemos.

4 Limitations and future directions

There were several limitations of this study. The participants were restricted to North American educators. Recruitment took place mainly through online social media, and so the sample may have been skewed towards people who are more interested in language learning apps than other types of language learning products, and participate in online forums about their use. Moreover, the difference in familiarity and use between Duolingo and the other apps may be the reason Duolingo had higher appraisal than other popular apps, such as Rosetta Stone, Babbel, and Drops. We did not track which platform (Facebook, Reddit, listserv) respondents came from, so the sample may be biased to better represent a particular platform's users. Since the sample size was small and not adjusted for app experience, the findings are limited in their generalizability.

5 Conclusion

A brief survey was conducted to understand 116 North American educators' familiarity, use, and opinions of popular language learning apps. The results revealed that educators had very positive opinions of apps in general, and believed that apps could help learners in various ways. Educators were most familiar with Duolingo, even when compared with other popular apps. The large majority of educators believed that Duolingo was effective in teaching language skills, and recommended it to others. Taken together, these results suggest that the educators in this sample are positive about language learning apps overall, and also believe that Duolingo is effective.

Author Biographies

Cassie Freeman is a Lead Learning Scientist at Duolingo, where she works on Duolingo Math. Cassie holds a Ph.D. in Comparative Human Development (University of Chicago, 2015) and, prior to joining Duolingo, held positions including Director of Learning Engineering at College Board, Harvard Strategic Data Project Fellow, and Postdoctoral Scholar at Teachers College, Columbia University.

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Appendix A – Respondents' Demographic Data

Table A1

Survey Respondents' Countries

	Educators
United States	106
Canada	7
Mexico	2

Table A2

Survey Respondents' Educational Settings

	Educators
Secondary (High School)	71
College or university	7
Dedicated language school or institute	20
None of these	18

Table A3

Survey Respondents' Years Teaching Languages

	Educators
0-2 years	14
3-5 years	20
6-10 years	38
More than 10 years	44

Table A4

Survey Respondents' Languages Taught

	Educators
Spanish	50
French	17
German	14
Portuguese	7
Chinese	3
Italian	3
Turkish	3
Dutch	1
Esperanto	1
Greek	1
Russian	1
None of these	37

Note: Languages with 0 respondents were removed

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Appendix B – The Survey

Thank you for your interest in completing this brief survey! We will first ensure that you meet our survey criteria and then ask you some questions about digital language learning tools. Please make sure you answer all questions completely to receive your payment.

To determine your eligibility for this survey, please answer the following 3 questions: In which setting do you teach second/foreign languages (including English)?

- Secondary (High School)
- College of University
- Dedicated language school or institute
- None of these

Which languages do you teach (select all that apply)

- Arabic
- Chinese
- Czech
- Dutch
- Esperanto
- French
- German
- Greek
- Hawaiian
- Hindi
- Irish
- Italian
- Japanese
- Korean
- Navajo
- Norwegian
- Polish
- Portuguese
- Russian
- Spanish
- Swahili
- Swedish
- Turkish
- Zulu

How many years have you been teaching languages?

- 0-2
- 3-5
- 6-10
- More than 10

Which of the following digital language learning tools are you familiar with?

- Babbel
- Pimsleur
- Drops
- Duolingo
- Rosetta Stone
- Italki
- Mondly
- Memrise

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- Busuu
- None of these

Congratulations! You qualify for our survey! This survey should take about 8 minutes to complete and we'll pay you $15 for your time.

We won't use your personal responses to our questions. Instead, we'll combine your answers with other respondents and report our findings in aggregate.

So that we can pay you for your time, please provide your name and email address below:

To be sure we have your correct email, please type it in again below:

Which of the following digital language learning tools have you personally used?

- Babbel
- Pimsleur
- Drops
- Duolingo
- Rosetta Stone
- Italki
- Mondly
- Memrise
- Busuu
- None of these

Which of the following digital language learning tools do you use with your students?

- Babbel
- Pimsleur
- Drops
- Duolingo
- Rosetta Stone
- Italki
- Mondly
- Memrise
- Busuu
- None of these

How much do you agree with each of the following? (strongly disagree, disagree, agree, strongly agree)

- I trust digital apps and tools to help my students learn a new language
- Language learning apps and digital tools are an effective way to help my students improve their language skills
- Classroom instruction along with language learning apps can help students learn a language better than classroom instruction alone
- Language learning apps are an effective way to help beginning students learn faster
- Language learning apps help students learn real world communication
- Language learning apps help students increase their confidence

[With Duolingo, Babbel, Rosetta Stone, Drops] For each app below, please select statements that apply:

- Is an effective way to help students improve their skills
- Is a trusted way to help students learn a language
- Helps beginners learn language faster
- Improves students' confidence
- Should be recommended to language learners
- Helps students learn real-world communication
- Can help students learn English

Is there anything else about language learning that you think we should know?

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