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A Review of Language Learning Applications

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Abstract: ***Language learning applications have the potential to transform the way languages are learned. This study examined the most popular commercially available language learning applications and evaluated them according to a wide range of criteria. The study found out that no application exists in the market that can teach the Indians or anyone in the world the desired Indian Regional Languages. Three major trends were found in the applications that teach languages to the users: first, apps tend to teach vocabulary in isolated units rather than in relevant contexts; second, apps minimally adapt to suit the skill sets of individual learners; and third, apps rarely offer explanatory corrective feedback to learners. Despite a pedagogical shift toward more communicative approaches to language learning, these apps are behaviorist in nature. Also we aim to create an application that will specifically teach Indian languages to the users in a more effective way replacing the old traditional way of learning.***

Keywords: Adaptive learning, Communicative Language Teaching (CLT), Mobile-Assisted Language Learning (MALL), assessment, Indian language, regional language learning, vocabulary instruction, grammar instruction.

I. INTRODUCTION

A remarkable number of people are turning to digital applications to learn a language. The global market for digital English language learning products, for example, reached $1.8 billion in 2013. Revenues are projected to surge to over $3.1 billion by 2018, with a compound annual growth rate (CAGR) over a five-year period of 11.1% (Adkins, 2008). Language learning apps like DuoLingo are immensely popular, with over 70 million sign-ups (Hickey, 2015). Mobile language learning approaches are clearly in demand and will continue to grow in use as more people turn to smartphones or tablets as a primary computing device. The rise of mobile app usage for language learning raises an important question: are current commercial mobile language learning apps effective tools for language learners, based upon what we know about research in L2 pedagogy, pedagogical design, and Second Language Acquisition (SLA) research? And further, given this information, how can the state of commercial applications inform academic research and vice versa? While the pedagogical uses and new opportunities of mobile technology for language learning have been studied in academic contexts, existing commercial mobile language learning apps have not been systematically evaluated and characterized. In this paper, we conduct and provide a comprehensive and systematic review of the most popular language learning apps available for iOS and Android phones. This sampling provides a broad characterization of the state of apps that are being used for mobile language learning. Specifically, we investigated:

1) What are the primary pedagogical focuses of popular language learning apps?
2) Do apps adapt to individual needs, language proficiency levels, and styles of learning?
3) How is corrective feedback employed in these apps?

II. BODY (SUBTOPICS BEING ADDRESSED)

A. Theoretical Framework

In making sense of what types of instructional design are most effective, the contributions of SLA and pedagogical research are indispensable. Theoretical models of language knowledge (e.g. Canale and Swain, 1980; Bachman and Palmer, 1996; Purpura, 2004) tease apart the differing components into a number of categories, such as grammatical knowledge, pragmatic knowledge, discourse knowledge, functional knowledge, and sociolinguistic knowledge, among others. To gain communicative competence in a language, one must develop a multifaceted range of knowledge; simply knowing words is insufficient. Pedagogical approaches to app development ought also to take this into consideration when determining what content to include, and how to assess learners, especially if the intention is to teach learners language and not just to teach learners words.

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Classical methodologies for classroom language teaching, such as the grammar translation method popular in the 1950s, have been characterized as behaviorist in nature, as they call upon skills such as memorization, drilling practice, and repetition (Brown, 2007). Language knowledge is objectively attainable, and exists outside of the learner; the role of the teacher is to help to develop and strengthen associations to words and grammatical rules. Though behaviorism has seen a resurgence in popularity and is certainly not without its merits, especially in language learning, it may be, on its own, insufficient to characterize how language is learned.

This study emphasizes the notion that language is a tool for communication with instrumental rather than ends-based value. Simply knowing words and structures does not itself enable a learner; rather, it is one's ability to use them meaningfully that makes them valuable. This idea, often referred to as the learner's communicative competence (Hymes, 1972), can be thought of "in terms of the expression, interpretation, and negotiation of meaning" (Sauvignon, 2002, p. 1) rather than mastery of words and forms. Or as Ur (2013) states, it requires a focus on "use" and not only "usage" (p. 2). This important distinction guides much of our analysis and discussion. With this in mind, we consider what values are embodied by the apps that are easily accessible on mobile phones. There are many ways to learn a language, and varying degrees and definitions of what it means to be "proficient." Many language learners find that a combination of drilling and communicative practice lead to communicative competence. Other learners may not intend to be fluent in a language, but perhaps only intend to learn some vocabulary. Our aim is to characterize apps currently available and to make recommendations that may help guide their future development.

III. METHODOLOGY

A. *Research Design*

This study examined the top commercial apps for Apple iOS and Google Android mobile phones, employing an exploratory-qualitative-interpretive approach (Grohtjahn, 1987). According to this approach, apps were selected and coded according to a grounded set of criteria, and data were analyzed to determine the most relevant trends and characteristics.

B. *Selection of Applications*

The apps were selected on the basis of their rankings on Google Play and in the Apple iTunes App Store by searching for the key phrase "language learning". App rankings were used for selection as they represent a metric for the most popular apps a typical user might find upon searching for "language learning." While the exact algorithms used by Google and Apple to calculate these rankings are not disclosed to the public, they are roughly based on the total number of downloads, reviews, and income earned from sales (Edwards, 2014).

C. *Instrument Design and Coding*

The survey instrument was carefully constructed during initial testing in order to answer our primary research questions. Questions on the survey were designed to capture a broad range of aspects. Topics covered included: languages taught, operating system, monetization, areas of assessment, modes of grammar instruction, corrective feedback, and types of input and output to the device. The final instrument resulted in 24 questions covering 149 subcriteria using selected-response checkboxes.

IV. RESULTS

Below we highlight findings which provide an overview of currently available languagelearning apps and address our three primary research questions.

A. *Languages Supported*

Most of the selected apps taught multiple languages. The top ten languages taught were English (36 of 50 apps, 72%), French (36 of 50 apps, 72%), Spanish (34 of 50 apps, 68%), German (33 of 50 apps, 66%), Chinese (28 of 50 apps, 56%), Italian (27 of 50 apps, 54%), Japanese (25 of 50 apps, 50%), Portuguese (21 of 50 apps, 42%), Russian (21 of 50 apps, 42%), and Arabic (19 of 50 apps, 38%). Twelve of the selected apps taught only a single language; one app taught a maximum of 200; the mean number of languages taught per app was 15.1.

B. *Platforms Supported*

While 25 of the apps selected were from the Apple Store (for iOS) and 25 were from the Google Play store (for Android), some of these apps were compatible with multiple platforms. Many Android apps were also available for iOS and vice versa. The total percentages were: iOS (40 of 50 apps, 81%), Android (34 of 50 apps, 69%), Windows Phone (5 of 50 apps, 8%), and Blackberry (2 of 50 apps, 3%).

C. User Input

While all apps used touch gestures, 16 of 50 (32%) included writing words using an onscreen keyboard and 12 of 50 (24%) allowed the user to speak into the device using the microphone.

D. Monetization

The majority of apps (29 of 50 apps, 64%) included a "pay to unlock" feature requiring users to pay a flat fee to access additional levels or languages. Other forms of monetization included a subscription payment system (7 of 15 apps, 15%) and in-app advertisements (11 of 50 apps, 23%). Only a minority of apps (6 of 50 apps, 14%) had no apparent monetization scheme.

E. Feedback and User Interaction

Corrective feedback occurs when an app assesses the user's language input and provides correction when necessary (Figure 1). The most common types of feedback given are visual (41 of 50, 82%) or sound effects (32 of 50, 64%). Some apps (14 of 50, 28%) offered simple textual corrections (i.e. providing the correct answer in the place of the wrong answer), yet only 3 of 50 apps (6%) provided any explanation as to why certain mistakes that were made were incorrect.

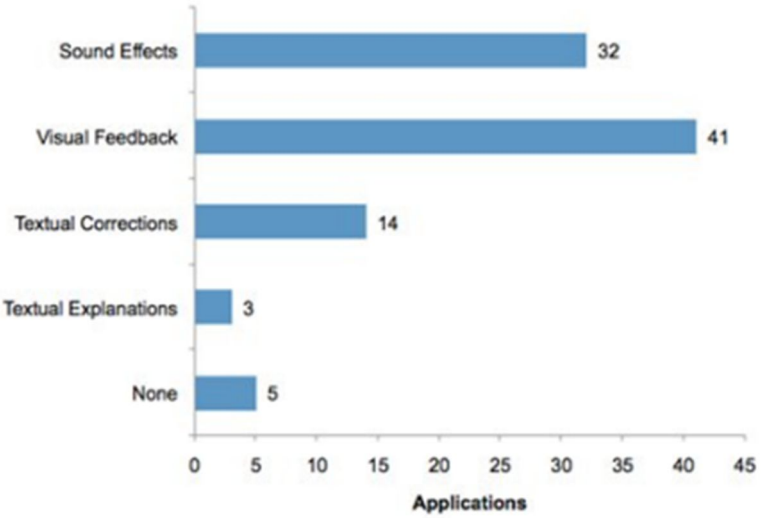


Figure 1. Corrective feedback in language learning apps.

F. User interaction – listening, reading and writing

We also examined the frequency and types of user interaction (listening, reading, or writing) with the apps, and categorized these by the level of language involved (e.g. words, sentences or passages) (Figure 2).

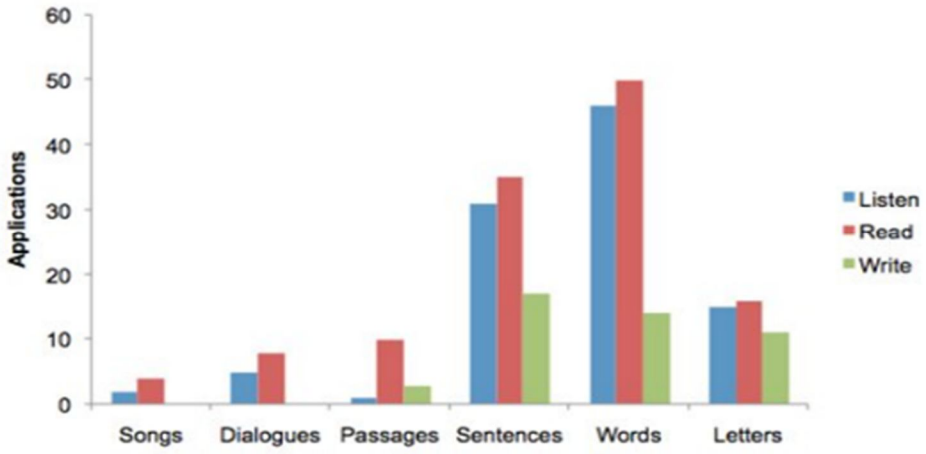


Figure 2. User interaction – listening, reading and writing

G. Performance Analysis

The screenshots from Mondly, Memrise, and Mindsnacks shown in Figure 6 display performance analyses shown upon user completion of levels. In some instances, these data are used to motivate the user to improve their performance, but are only minimally used to adjust the level of gameplay to match the level of the user. For instance, in Mondly (Figure 3, left), the user obtains experience points (XP) for completing levels, and users can log in via Facebook to compare their XP level to other users. This allows progress to be tracked from level to level, but nonetheless the path from level to level remains the same regardless of the user.

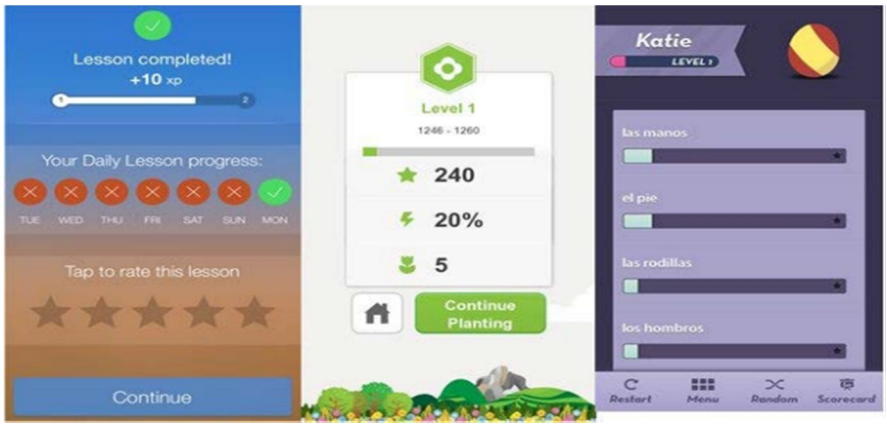


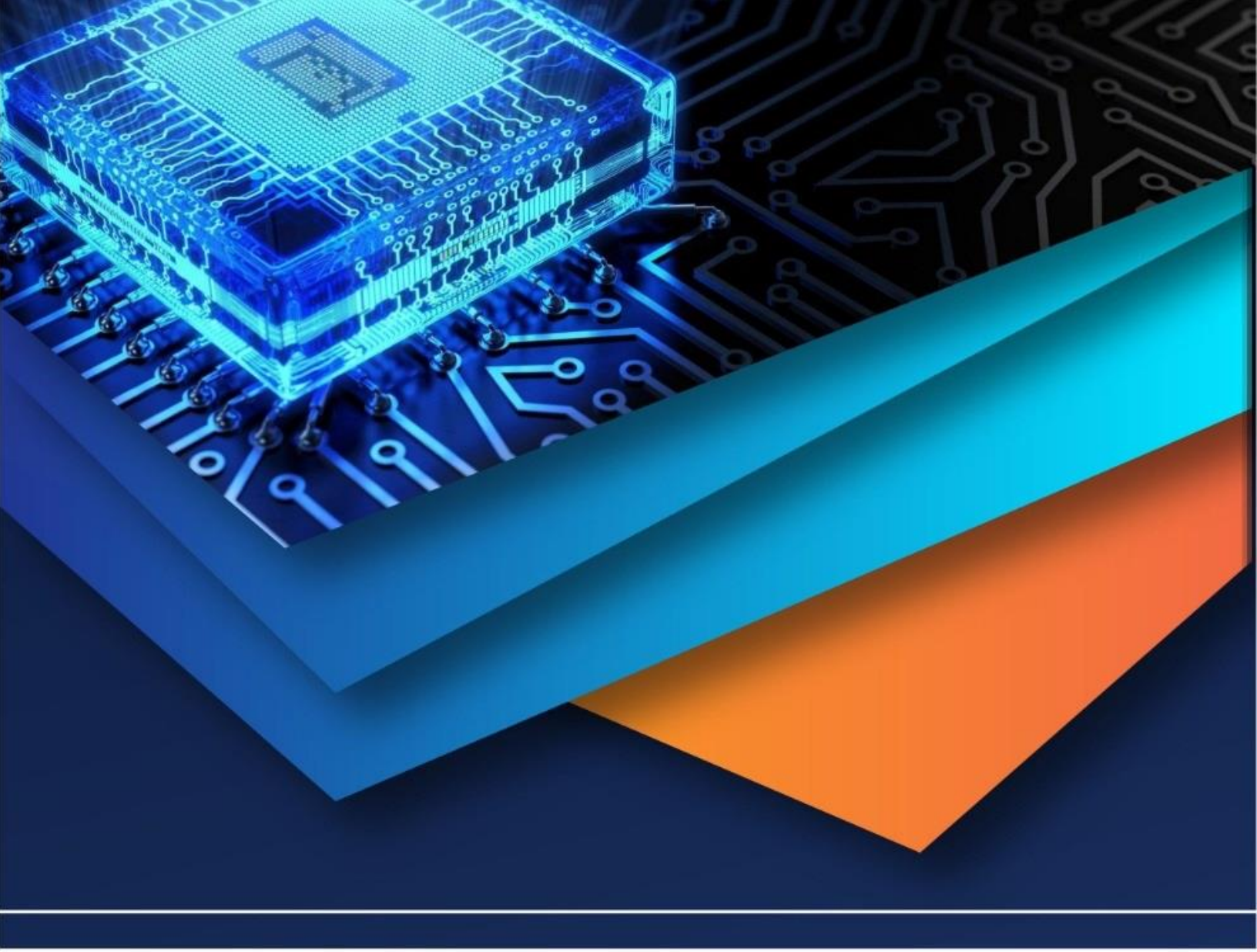
Figure 3. Performance analyses provided byMondly (left), Memrise (center), and Mindsnacks (right)

V. CONCLUSION

Our review has shown that, in the commercial app space, there is a predominant focus on teaching language as isolated vocabulary words rather than contextualized usage. Most use drill-like mechanisms and offer very little explanatory corrective feedback, and there is little adaptation to the needs of individual learners. Despite advances in language teaching that have stressed the importance of communicative competence in language learning, MALL technology is still primarily utilized for vocabulary instruction rather than fluency-building. This paper examined commercial applications; nonetheless, given the influence of academic research on commercial MALL application, the relevancy of these suggestions need to be considered. The focus on vocabulary instruction is prevalent in MALL research, as noted, but more focus on adaptive learning and intelligent design features in applications – especially those which highlight learning outcomes– would be useful target areas for future research. Overall, there is great opportunity to leverage emerging technologies for language learning; we suggest a stronger emphasis on intelligent commercial app design. By providing more contextualized, authentic written input, users will begin to process more than individual words and basic vocabulary. The incorporation of more adaptive learning features would provide a more personalized experience, both in terms of content delivered during instruction as well as feedback. NLP technologies could allow for more accurate recognition of written text. Such a design methodology would teach authentic usage of language with an end-goal focus of making learners communicatively competent in the language they intend to learn. In this way, language educational technology can move past "drill and kill" behaviorist-style instruction that has long-since been abandoned in language classrooms, and turn toward a more communicative, holistic model that reflects our current understanding of language ability and acquisition.

REFERENCES

[1] "A Review of the Top Language Learning Apps" by United Language Group.
[2] "Deep Learning" by Ian Goodfellow, Yoshua Bengio and Aaron Courville.
[3] "Master of Science Thesis" "Development of a Tourism Recommender System" by Emili Roger Ciurana Simo.
[4] A Brief History of Machine Learning by DATAVERSITY.
[5] "Machine Learning with Applications" by Prof.Dr. Binshan Lin,PhD.
[6] "Deep Learning" Yoshua Bengio, 2015.
[7] "Hands-on ML with Scikit-Learn, Keras & TensorFlow" by Aurélien Géron.
[8] "The Best Language Learning Apps" by Jill Duffy.
[9] "Review on Use of Mobile Apps for Language Learning" by R Gangaiamaran.
[10] "Found in Translation: How Language Shapes Our Lives and Transforms the World" by Jost Zetzsche, 2012.



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