

ASSISTANCE FOR MOBILE LANGUAGE LEARNERS

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Abstract: The paper reflects on the evolution of mobile language learning and maps the emerging territory of mobile and smart assistance. The concept of ‘mobile assistance’ is a useful way to frame the ways in which mobile devices and applications can provide ad hoc or ongoing support to language learners inside and outside the classroom. The paper outlines various forms of assistance. As intelligent assistants become increasingly available, the learning landscape continues to evolve. An intelligent assistant might amplify human capabilities, or it might hinder their development. Language learners and their teachers are thus caught up in complex scenarios of newly available technologies that are impacting learning practices.

Keywords: M-Learning, Learner support, Informal learning, Intelligent assistants

1. INTRODUCTION

Language learning has traditionally been separated into, on the one hand, structured and supervised activities such as language lessons and courses, and on the other, self-directed or self-managed learning through access to language resources and informal conversational practice with native speakers [1]. Technology-enabled learning, especially mobile language learning, has broken down this distinction, blurring boundaries between formal and informal learning [2]. In doing so, it has put the spotlight on the changing role of language teachers and tutors, as well as new online communities of language learners, within an increasingly diverse and rich ecology of technological tools and resources that can provide different types of (additional or alternative) assistance in the course of language learning or communication in a target language. In parallel, there is interest in the difficulties that some learners have in assuming a self-directed stance [3][4], which can hinder them from being able to benefit fully from the tools and resources that are now available. Assistance may be required both in the process of language learning and in the development of learning skills and attitudes. It is therefore important to understand more about forms of assistance that may be required. This is currently an under-researched topic, and a key aim of this paper is to give it greater prominence in order to encourage further investigations.

2. EVOLUTION OF LEARNING AND MOBILE LANGUAGE LEARNING

The digital age has been referred to as “an age of abundance in terms of resources, opportunities and networks” [5], which invites educators to re-think their pedagogy. Rapid technological advancements as well as evolving social attitudes and more diverse approaches to teaching and learning have produced a vast array of pedagogical innovations that educators can choose from, at least in principle [6]. Mobile learning as a pedagogical approach emerged in response to the availability of mobile phones and other portable devices, but it has increasingly

emphasized the mobility of the learner [7], as the digital age has also become a ‘mobile age’ for many people [8]. Mobile language learning soon became one of the leading areas of research and development within the field of mobile learning, and it also became an everyday practice engaged in by anyone wishing to learn a new language or improve their language skills with the help of free apps and online resources. Mobile language learning includes both the use of very simple applications such as flashcards on smartphone screens [9], and increasingly sophisticated systems that incorporate knowledge about learners, their goals and behaviours and can make recommendations and suggestions to their users [10] [11]. Most mobile applications, however, are between these extremes: they provide some content and interaction, but they vary in complexity and may be ambiguous as to whether language learners can and should use them independently or with some human guidance and supervision.

Studies have shown that learning with the use of smartphones, tablets and other mobile devices brings numerous benefits to the process of language learning. To start with, there are many applications that support language learners in the four fundamental skills of reading, writing, listening and speaking. Furthermore, studies show that there is often increased learner motivation by being connected through mobile social media to other learners, there are better opportunities for revision and practice, and it is easier to memorize new vocabulary or dialogues through frequent repetition in the course of the day. Learners can review what they learned in class, gain increased exposure to the target language, and add variety and enjoyment to their learning [12][13]. Mobile games can motivate students and sustain their engagement, resulting in better learning [14]. Multimedia vocabulary lists may be jointly created by learners, in the form of shared notes, photos and audio recordings. Researchers emphasize features such as portability of learning, social connectivity and interaction, context-relevance and personalization [15]. Mobile learning also offers more ways of supporting collaboration in language learning for joint task completion and for speaking and writing practice

as well as a means of reducing learner nervousness and embarrassment [16].

3. THE CONCEPT OF MOBILE ASSISTANCE

The concept of ‘mobile assistance’ seems to be a useful way to frame the ways in which mobile devices and applications can provide ad hoc or ongoing support to language learners inside and outside the classroom. The idea of ‘assistance’ started to feature in mobile learning in the era of so-called ‘personal digital assistants’ (PDAs) [17] [18] around the turn of the century, and it has re-emerged thanks to the rapid rise of smart virtual assistants in commercial transactions encountered in everyday life. The idea is also in tune with growing awareness of many learners’ special needs and disabilities requiring the use of assistive technologies, and the assistance needs of ageing populations across the globe who may benefit from being helped by human-like robots and other kinds of technological support.

As has been explained in more detail in [19], a learner might require assistance to get over an unexpected hurdle, to enable them to progress in their learning or to reflect on their progress. Mobile phones are a convenient everyday means of summoning help in emergencies and getting in touch with people who can offer support, as well as a means to access specific resources. Assistance may be needed as a matter of urgency, or on a more continuous basis to support the process of learning and reflection on progress.

4. FORMS OF MOBILE ASSISTANCE

Based on a literature review of mobile learning projects and further conceptualisation of mobile assistance, [19] offered an initial classification of types of mobile assistance, encompassing: motivation, support for well-being, progress monitoring, direct help, sustained help, cognitive support, organisation of learning, social support, personal development, individual requirements, mediation, communication and enrichment. Although these forms of assistance may not always be specific to mobile learning, they make use of the affordances of mobile technologies as well as learner mobility. For example, motivational support can be an ongoing activity, thanks to the ability to stay in touch with the learner and offer regular support. Sustained help can relate to actions such as helping learners to develop good language learning habits. Cognitive support can be focused on assisting learners with noticing how language is used in their everyday environments. Enrichment can be offered through use of augmented reality to add layers of helpful or challenging information to a learning task.

An interesting case of integrated mobile assistance was developed through the MASELTOV project (www.maseltov.eu, 2012-15). The project developed a prototype suite of integrated smartphone services and tools aimed at mobile populations, especially people arriving in Europe. The services and tools, which were accessed through a single mobile app, were devised with the purpose of fostering social inclusion, in particular by facilitating language learning and practice. They provided users with information for emergencies, help with navigation around

a city, access to short language lessons, a translation tool, playful cultural learning, several means of social interaction, and personalised recommendations based on learners’ movements and interests. The research in the MASELTOV project also addressed the issue of how people such as teachers, friends, volunteers, mentors and an online community could support learners who were using the services and tools provided via the app, helping them in their daily language practice and cultural learning.

5. ASSISTANCE GETS SMARTER: INTELLIGENT ASSISTANTS

Technological advances continue to change the face of mobile learning. For language learners, the ability to practice communicating in the target language, and to have access to help when attempting to communicate, have always been important. In the age of artificial intelligence, smart assistants might become one way to support these requirements. Intelligent assistants that respond to questions and instructions are now commonly found on smartphones. They are found in some cars and in smart home devices. They may also be encountered on wearables such as watches, glasses and clothes. Furthermore, they are starting to make an appearance as social robots. Researchers have claimed that a ‘wearable affective robot’ might recognize students’ emotions and improve education efficiency and quality [20]. Interactions with intelligent conversational agents and assistants are certainly not unproblematic and could be compared with having a very bad PA (human personal assistant) [21]. These services are constantly improving, however, and there is growing evidence of successful applications, for example with children learning to read [22]. In another example, [23] describe a humanoid robot playing with children in a game that helps them learn new vocabulary. An intelligent assistant or robot teacher, in whatever form, might amplify or improve human capabilities, but it might also hinder their development. Unlike an experienced human teacher, an artificial agent does not have the capability to exercise sound judgment.

6. CONCLUSION

This paper offers a brief and consequently broad-brush overview of an important new direction in the development of mobile language learning. There is scope for much more research on different forms of assistance for mobile language learners and evaluation of its acceptability and effectiveness. The paper also highlights that increasingly smart technologies might assist language learners. There is a fine line between smart technologies acting as ‘teachers’, and those that may offer specific targeted types of assistance, which raises many questions that will need to be investigated by researchers, in collaboration with learners and with language teachers.

REFERENCES

- [1] Gremmo, M. J., & Riley, P. (1995). Autonomy, self-direction and self access in language teaching and learning: The history of an idea. *System*, 23(2), 151-164.

- [2] Kukulska-Hulme, A. (2015). Language as a bridge connecting formal and informal language learning through mobile devices. In L-H Wong, M. Milrad and M. Specht (eds) *Seamless learning in the age of mobile connectivity* (pp. 281-294). Springer, Singapore.
- [3] Isbell, D., Rawal, H., Oh, R., & Loewen, S. (2017). Narrative perspectives on self-directed foreign language learning in a computer-and mobile-assisted language learning context. *Languages*, 2(2), 4.
- [4] Lai, C., & Zheng, D. (2018). Self-directed use of mobile devices for language learning beyond the classroom. *ReCALL*, 30(3), 299-318.
- [5] Beetham, H., & Sharpe, R. (Eds.). (2020). *Rethinking pedagogy for a digital age: Principles and Practices of Design*. 3rd edition. London: Routledge.
- [6] Ferguson, R., Coughlan, T., Egelanddal, K., Gaved, M., Herodotou, C., Hillaire, G., ... & Misiejuk, K. (2019). *Innovating Pedagogy 2019: Open University Innovation Report 7*.
- [7] Winters, N. (2007). What is mobile learning. In M. Sharples (Ed) *Big issues in mobile learning*, Kaleidoscope. Report of a workshop by the Kaleidoscope Network of Excellence Mobile Learning Initiative. pp.7-11.
- [8] Sharples, M., Taylor, J., & Vavoula, G. (2007). A theory of learning for the mobile age. In: Andrews, Richard and Haythornthwaite, Caroline (eds.) *The Sage Handbook of E-learning Research*. London, UK: Sage, pp. 221–247.
- [9] Steel, C. (2012, November). Fitting learning into life: Language students' perspectives on benefits of using mobile apps. In M. Brown, M. Hartnett & T. Stewart (Eds.), *Proceedings of ASCILITE - Australian Society for Computers in Learning in Tertiary Education Annual Conference 2012*. Australasian Society for Computers in Learning in Tertiary Education (pp. 875-880).
- [10] Khemaja, M., & Taamallah, A. (2016). Towards situation driven mobile tutoring system for learning languages and communication skills: Application to users with specific needs. *Journal of Educational Technology & Society*, 19(1), 113-128.
- [11] Kukulska-Hulme, A., Gaved, M., Paletta, L., Scanlon, E., Jones, A., & Brasher, A. (2015). Mobile incidental learning to support the inclusion of recent immigrants. *Ubiquitous Learning: an international journal*, 7(2), 9-21.
- [12] Demouy, V., Jones, A., Kan, Q., Kukulska-Hulme, A., & Eardley, A. (2016). Why and How Do Distance Learners Use Mobile Devices for Language Learning? *The EuroCALL Review*, 24(1), 10-24.
- [13] Lai, C., & Zheng, D. (2018). Self-directed use of mobile devices for language learning beyond the classroom. *ReCALL*, 30(3), 299-318.
- [14] Castañeda, D. A., & Cho, M. H. (2016). Use of a game-like application on a mobile device to improve accuracy in conjugating Spanish verbs. *Computer Assisted Language Learning*, 29(7), 1195-1204.
- [15] Sung, Y. T., Chang, K. E., & Yang, J. M. (2015). How effective are mobile devices for language learning? A meta-analysis. *Educational research review*, 16, 68-84.
- [16] Kukulska-Hulme, A. and Viberg, O. (2018). Mobile collaborative language learning: State of the art. *British Journal of Educational Technology*, 49(2) pp. 207–218.
- [17] Kukulska-Hulme, A. (2002). Cognitive, Ergonomic and Affective Aspects of PDA Use for Learning. In: *European Workshop on Mobile and Contextual Learning* (mLearn 2002), 20-21 Jun 2002, Birmingham, University of Birmingham.
- [18] Pinkwart, N., Hoppe, H. U., Milrad, M., & Perez, J. (2003). Educational scenarios for cooperative use of Personal Digital Assistants. *Journal of Computer Assisted Learning*, 19(3), 383-391.
- [19] Kukulska-Hulme, A. (2016). Mobile Assistance in Language Learning: A critical appraisal. In: Palalas, Agnieszka and Ally, Mohamed eds. *The International Handbook of Mobile-Assisted Language Learning*. Beijing: China Central Radio & TV University Press Co., Ltd., pp. 138–160.
- [20] Chen, M., Zhou, J., Tao, G., Yang, J., & Hu, L. (2018). Wearable affective robot. *IEEE Access*, 6, 64766-64776.
- [21] Luger, E., & Sellen, A. (2016, May). Like having a really bad PA: the gulf between user expectation and experience of conversational agents. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 5286-5297). New York: ACM.
- [22] Xu, Y., & Warschauer, M. (2019, April). Young Children's Reading and Learning with Conversational Agents. In *Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems* (p. CS10). New York: ACM.
- [23] Schicchi, D., & Pilato, G. (2018, January). A Social Humanoid Robot as a Playfellow for Vocabulary Enhancement. In *Second IEEE International Conference on Robotic Computing (IRC)* (pp. 205-208). IEEE.