Chapter 50
Chatbot Experiences of Informal Language Learners: A Sentiment Analysis

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ABSTRACT

In 2016, a number of language applications released chatbots to complement their programmes. Used primarily in informal learning settings, chatbots enable language learners to engage in conversational speaking practice, which can be perceived as less threatening than face-to-face interactions with native speakers. This study takes a closer look at four second language (L2) chatbots—Duolingo, Eggbun, Memrise, and Mondly—and analyses the experiences which informal language learners expressed on various online platforms (e.g., Duolingo forum, Memrise community, Reddit). Results indicate a degree of curiosity and a willingness to engage in conversation with chatbots. However, learners expressed frustration if the dialogues did not correspond to their learning goals or if they were excluded from using the bots because of technical or payment issues, or discontinuation of services.

INTRODUCTION

Chatbots have come a long way since *Eliza*, the computer program developed in the 1960s, that gave users the (short-term) illusion of conversing with a Rogerian psychotherapist. Weizenbaum's (1966) aim was to study the "natural language communication between man and machine" (p. 36), yet it is the appealing idea of virtual personal assistants that has prevailed, having led to successful applications in business, personal development and education. Language learners, in particular, can benefit from this development to increase opportunities for conversational practice, starting with talking to their smartphone's voice assistant, or by using any general app in their second language (L2). For example, *Luka*

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advises on restaurants, weather and news; *Lark* is a pocket coach and nutritionist; *Penny*, a virtual bank manager; or *Hello Hipmunk*, a reactive travel consultant. These virtual assistants not only provide good language practice if used in the L2, they also have real-life relevance.

In technology circles, 2016 has been named the year of the chatbot (Olson, 2016). As Dale (2016) points out, a lot has changed in 50 years of chatbot history. The contemporary AI-powered therapy chatbot *Woebot* illustrates the advances in chatbot development, and in people's attitudes towards the virtual assistants. Unlike *Eliza*, who relied on pre-programmed responses (such as: *Can you elaborate on that?), Woebot* uses natural language processing to adapt and personalise its replies, providing advice based on principles of Cognitive Behavioural Therapy (CBT). With the development of technology, people have changed their modes of communication, and short typed interactions have become an everyday occurrence (Dale, 2016). Significantly, people are comfortable turning to a machine to talk about their problems. It is not only the convenience of accessibility; people seem to feel less judged talking to a bot rather than talking to a human (Lucas, Gratch, King, & Morency, 2014).

A keen learner of English might well make use of *Woebot* to get additional speaking practice. For learners of other languages, a range of L2 chatbots became available in 2016, either as stand-alone apps or as add-ons for language applications. Similarly, these bots enable language learners to engage anytime in language practice, also providing a safe space to hone conversational language skills. Accessible as apps on smartphones, L2 chatbots are not only available to language learners in educational settings, but to anyone who seeks to practise an L2. Godwin-Jones (2017) sees smartphones as the principal enabler of the growth of informal language learning, that is self-initiated and self-directed learning outside a formal institutional setting (Lai, 2019; Lange, 2019). The rise in informal online learning, also referred to as the *digital wilds* (Sauro & Zourou, 2019) is a topical issue in Computer Assisted Language Learning (CALL) (Dressman & Sadler, 2020). The use of language chatbots in informal language learning, however, is underexplored.

L2 Chatbots

Chatbots are software programs that simulate human conversations (Berns, Mota, Ruiz-Rube, & Dodero, 2018; Fryer, Ainley, Thompson, Gibson, & Sherlock, 2017; Wang & Petrina, 2013). Stewart and File (2007) assert that language learners often struggle in social conversations in the early stages of learning a language as they have little opportunity to practice. However, computer dialogue systems which expose learners to social conversations could offer a good environment for L2 learners to practice their social conversation skills (Stewart & File, 2007). Such systems can be seen as earlier versions of language learning chatbots. Some criticism has centred on the inability of bots to simulate natural conversations, as responses were frequently selected from a list of options (see Chiu, Liou, & Yeh, 2007; Coniam, 2008a; Sha, 2009). Stewart and File (2007), however, argued that conversations in real life are formulaic and that systems allowing users to select responses therefore do not deviate much from normal conversation. Coniam (2008b) highlights the convenience factor of using chatbots for L2 speaking practice, as they are more accessible to many language learners, especially beginners, than human conversation partners. Chatbots provide a convenient platform for written or spoken conversations (Macayan, Quinto, Otsuka, & Cueto, 2018). Fryer and Carpenter (2006) found that language students enjoyed using chatbots. They expressed being more comfortable in conversation with the chatbots than with human partners. Chatbots also provide a dialogue partner that is patient, can handle multiple learners and is not too critical (Kes-