Chapter 16
Brazilian FL Teachers through the Lens of the Diffusion of Innovations Theory: A Technological Profile

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ABSTRACT
This chapter describes the technological profile of foreign language (FL) teachers from Modern Languages university courses of the state of Paraná, Brazil. Several features were investigated: teachers’ personal characteristics, teachers’ beliefs and attitudes towards technology, teachers’ digital literacy, teachers’ prior CALL/technology education and Rogers’ (1995) adopter categories. The theoretical framework used was the Diffusion of Innovations theory. A quantitative methodological approach was employed to collect data and a survey questionnaire was developed. Statistical analyses examined the relationships between attitudes and digital literacy, adopter categories and attitudes, adopter categories and personal characteristics. The results provided a detailed picture of the ones responsible for the education of future FL teachers in Brazil. With this technological profile, it was possible to reveal the “who” in the process of CALL integration.

INTRODUCTION
Computer assisted language learning (CALL) is a complex and overwhelming field. It is made up of several dimensions, which frequently overlap and intersect each other. Change happens constantly and at an accelerated pace. The field has ambiguities, contradictions, different views, approaches and theories that address diverse issues. There are innumerable technological tools available and new ones do not stop emerging. Each one has advantages and limitations, multifarious...
pedagogical uses and objectives for language teachers and students, and they can be used in a variety of contexts.

However, according to O'Bryan and Hegelheimer (2007), we are far from Bax’s (2003) normalization stage or Integrated CALL phase – the stage/phase when CALL is invisible and part of teachers’ normal everyday practice. Despite the generalized presence of Information and Communication Technologies (ICTs) in educational institutions, CALL is still an innovation in the language area in various contexts and for language teachers in several parts of the world (Carless, 2013; Chambers & Bax, 2006; Van den Branden, 2009). This is the situation in different settings in Brazil, where true and meaningful integration of CALL remains at the very beginning stages (Barsotti & Martins, 2011; Reis, 2012).

Language teaching and technology have been closely connected for a long time, even before the emergence of the CALL field. The use of technology is a tradition in the area of languages, not a new issue. The need to bring native speaker voices into the classroom made teachers in the first half of the 20th century use the gramophone. From then on, different types of resources – reel-to reel tape recorders, microphones, the language laboratory, audiocassette recorders, slide and film strip projectors, film projectors, television, video players, cameras, etc. – found their way in the language classroom in an effort to improve learning. Some of these resources are fully integrated into courses. Teachers know how, when and why to use them (Hewer & Davies, 2012).

With all this experience, why is the integration of CALL different? According to Hewer and Davies (2012), the difference is in its diverse facets, some of them not necessarily immediately obvious to teachers. And another point that the authors emphasize is that there was no political imperative to use traditional media in the classroom as there is now in educational institutions. Universities are under increasing pressure to innovate – by the government and by students. New technologies, changes in demographics, and the complex global economy are creating a new competitive context for higher education (Grunwald, 2002). This type of pressure did not occur, for example, with regard to the use of tape recorders in the classroom. Therefore, the situation now has to be viewed differently and CALL integration should be analysed considering all the new variables and context.

The integration of CALL is sine qua non for CALL to exist (McCarthy, 1999). In the CALL field, Levy and Stockwell (2006) define integration as a process and a goal: “the ways in which the various elements influencing the use of new technology in language learning are brought together and managed in order to create successful CALL environment.” (p. 228). Appropriate CALL integration is a critical factor for the success of CALL. For this reason, this is an important topic in the field (Levy & Stockwell, 2006). CALL integration, however, is still a challenge due to the multiple variables involved (Bax, 2003; Egbert, Huff, Mcneil, Preuss, & Sellen, 2009; Hong, 2009; Lam, 2000). To study all the angles, perspectives and factors involved in the process of CALL integration is beyond the scope of any research. One possible solution is to focus on one of the elements involved.

Several researchers emphasize that teachers play a crucial role in the classrooms that use CALL (Bordbar, 2010; Hubbard, 2008; Hubbard & Levy, 2006; Kim, 2008; Levy & Stockwell, 2006). They are the ones who select the tools that will support their teaching practices and who determine to what CALL applications language students will be exposed to and how they will use them. For this reason, in the present study, the choice was to focus on the teachers. Teachers’ decision to integrate CALL in their classrooms is also influenced by several factors: teacher education, beliefs, attitude towards technology, age, context, workload, among others. According to