

ANALYSIS OF THE FACTORS ASSOCIATED WITH THE CURRICULAR INTEGRATION OF ONLINE BILINGUAL DICTIONARIES IN EFLT

ANÁLISIS DE LOS FACTORES ASOCIADOS A LA INTEGRACIÓN CURRICULAR DE DICCIONARIOS BILINGÜES EN LÍNEA EN EILE

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Abstract

The current increase in the use of mobile devices in the foreign language classroom has expanded the presence of lexical tools such as free-access online bilingual dictionaries. Unfortunately, their use is not adequately explained and regulated yet. This lack of pedagogical intentionality gave rise to a research study focused on the curricular integration of these types of dictionaries in the context of teaching English as a foreign language at the higher education level. This article documents the process that was carried out to design and implement a triangulation matrix that allowed an integrative synthesis of the data provided by the sample made up of four EFL university teachers through three data collection

instruments. This integrative synthesis facilitated the identification of a series of factors associated with the curricular integration of bilingual online dictionaries. This identification led to a series of administrative, pedagogical, and didactic proposals aimed at strengthening said process in foreign language teaching contexts.

Keywords: ICT Curriculum integration, online bilingual dictionaries, foreign language teaching, education.

Resumen

El actual incremento en el uso de dispositivos móviles en el aula de lenguas extranjeras ha ampliado la presencia de herramientas léxicas como los diccionarios bilingües online de libre acceso. Desafortunadamente, su uso aún no está adecuadamente explicado y regulado. Esta falta de intencionalidad pedagógica dio lugar a un estudio de investigación centrado en la integración curricular de este tipo de diccionarios en el contexto de la enseñanza del inglés como lengua extranjera en el nivel de educación superior. Este artículo documenta el proceso que se llevó a cabo para diseñar e implementar una matriz de triangulación que permitió obtener una síntesis integradora de los datos proporcionados por la muestra conformada por cuatro docentes a través de los tres instrumentos de recolección de datos utilizados. Esta síntesis integradora permitió identificar una serie de factores asociados al proceso de integración curricular de los diccionarios bilingües en línea. Lo anterior condujo a la elaboración de una serie de propuestas administrativas, pedagógicas y didácticas tendientes a robustecer dicho proceso en contextos de enseñanza de lenguas extranjeras.

Palabras clave: Integración curricular de TIC, diccionarios bilingües en línea, enseñanza de lenguas extranjeras, educación.

1. Introduction

As a result of the rapid and constant development of new technologies, there have been numerous innovations in various fields of education, including the teaching of foreign languages. For almost four decades (Ghavifekr et al., 2016), teachers have used different types of information and communication technologies (hereinafter ICT) in their classes to enrich the language teaching-learning processes. The design and improvement of a variety of digital mobile devices, such as tablets and mobile phones, raised awareness about what is now known as mobile learning or M-learning (Kukulska-Hulme, 2010; Pedro et al., 2018). The principles of M-learning are largely based on the greater access that students have, at different times and spaces, to a wide variety of ICTs that can offer them the support they require during the aforementioned learning process.

One of the tools associated with M-learning that has gradually appeared in the foreign language teaching process is free-access online bilingual dictionaries (hereinafter FAOBD). Although numerous studies have focused on the characteristics and role of bilingual dictionaries as language teaching and learning resources (El-Sayed & Siddiek, 2013; Gonzales, 2009; Loucky, 2013; Marckwardt, 1973; Ng, 2016), the technological peculiarities of their online versions and their potential as a teaching tool warrant further study. Delving into the FAOBD characteristics, functionalities, use requirements, and the users' profiles and needs, will facilitate their effective integration into the curriculum of diverse foreign language teaching programs. With this in mind, this article seeks to describe in depth the process followed by the authors of this article to design and implement a data triangulation matrix focused

on the FAOBD curricular integration process. It will also show how some conclusions that led to proposing concrete actions at the administrative, pedagogical and didactic levels were drawn. The purpose of those actions was to favor and strengthen such integration process. The detailed description begins with the most relevant aspects of the three data collection instruments and the analysis strategies used are detailed. Next, the article describes the thematic axes, extracted from the comparison and contrast of the information collected and used to design the triangulation matrix itself. Finally, the article explains the findings obtained through the matrix integrative synthesis and some of its most relevant contributions regarding the phenomenon of curricular integration of the FAOBD.

2. Review of literature

2.1. ICT in the teaching of foreign languages

Education and, more specifically, the teaching of English as a foreign language, have not been immune to the evident impact of permanent technological advances on all spheres of life. This has generated a prevailing need for adaptation and renewal to offer a kind of teaching compatible with the challenges posed by the knowledge society (Dedja, 2015). ICT is influencing the teaching of a foreign language (Garrido, 2015; Herrero, 2013; López & Londoño, 2013; Morchio, 2014) and the emergence of educational trends, such as M-learning, that promote the incorporation of new ICTs such as the online bilingual dictionaries (Jin & Deifell, 2013). This kind of dictionary, in particular, has great potential as an innovative teaching resource if teachers manage to integrate it effectively into their classes (Buitrago, 2018).

Information and communication technologies play a crucial role in foreign language teaching. These tools favor collaborative access and creation of authentic materials; grant a more realistic approach to a foreign language; promote meaningful and respectful learning through different learning styles; and transform the traditional teachers' roles (Callister & Burbules, 2006; Eastment, 1999; Velasco et al., 2012). This transformation of the teachers' functions has revealed the relevance of their perceptions on the use of ICTs as teaching resources. This is explained by the perception of teachers as accountable for the use of technologies in their classrooms (Kinik, 2014). The massive use of the Internet and ICT has also affected the students' lives since these students now discern the benefits of using these digital tools when dealing with increasingly globalized societal processes and challenges (Dedja, 2015).

The following is a compilation of advantages of using ICT in TEFL (Dedja, 2015; Ruíz, 2014; Velasco et al., 2012):

- Effective and motivating integration of the acquired knowledge.
- Meaningful practice of language concepts and skills.
- Development of new technologies applied to language teaching.
- Further development of receptive and productive language skills.
- Implementation of autonomous, cooperative, interactive, and dynamic learning strategies.
- Accessibility to knowledge that generates greater inclusion.
- Increased conceptual and perceptive skills that facilitate learning.
- Promotion of intercultural communication skills.
- Creation of new teaching resources by manipulating digital information.
- Facilitation of synchronous and asynchronous communication and learning.

- Provision of authentic communication situations through social networks.
- Possibility of consulting new words through online dictionaries.

Researchers have concluded that the systematic and planned use of ICT will help students to successfully face an academic and work future strongly influenced by the use of various types of technological resources (Ruiz, 2014; Velasco et al., 2012).

2.2. Mobile Learning and Mobile-Assisted Language Learning

Mobile Learning started in the 70s and 80s with the invention and development of the first portable devices, which have experienced notable advances in the last years (Cui & Wang, 2008). Studies on Mobile Learning or M-learning began in the first decade of the 2000s when the potential advantages of using new mobile technologies in the field of education were examined. Subsequently, research focused on the teachers' education, experiences, and concerns when using mobile technologies in the classroom (McConatha et al., 2008). Synthesizing scholarly contributions, M-learning can be described as an educational modality that facilitates the construction of knowledge, the resolution of learning problems, and the development of various skills or abilities autonomously and ubiquitously thanks to the mediation of portable mobile devices (Deegan & Rothwell, 2010; GATE, 2013). For its part, UNESCO (2013), defines M-learning as the use of mobile technology, either alone or in combination with other ICT, to support learning at any time and in any place.

The need to implement the principles of M-Learning in the foreign language classroom has promoted the appearance of the model called Mobile Assisted Language Learning (hereinafter MALL) or Language Learning Assisted by Mobile Devices. MALL

transfers the functions of the computer to those of portable devices such as laptops, mobile phones, or tablets and promotes new forms of learning that emphasize the autonomy, continuity, and spontaneity of access from different contexts of use. Its implementation in the foreign language classroom may imply benefits and limitations. Among the advantages that Yaman and Ekmekci (2017) attribute to MALL are greater student autonomy, an increase in the motivation of digital natives, and an almost unlimited wealth of teaching resources. However, these same authors perceive as disadvantages the gaps that can occur in ease and quantity of access to technologies and the Internet and the limited training of language teachers in terms of technological aspects, among others.

Despite MALL's growing popularity, more research is necessary to enrich the learning environments designed with its pedagogical principles and suggested technological resources so that progressively innovative teaching practices can be implemented. As the need for independent and autonomous learning increases, so does the need to use teaching strategies and resources associated with MALL (Mosavi & Nezarat, 2012).

2.3. The role of bilingual dictionaries in language teaching

Dictionaries are lexical tools that have been classified into different typologies according to criteria such as format, function, or number of languages used. The design of these lexical tools must always be based on a comprehensive and accurate knowledge of the dictionary users' characteristics and specific usage needs (Lima, 2018). Some of the criteria considered when defining the profiles of users of bilingual dictionaries include the users' mother tongue and their need to use both languages. Pasfield-Neofitou (2009) distinguishes between

online dictionaries, glossaries, and translators. According to this author, each one of these lexical tools has distinctive functions that are described in table 1:

Table 1: *Classification of lexical tools*

| Type of lexical tool | Functions |
|------------------------|---|
| Bilingual dictionaries | They allow searching for words and offer lists of possible translations. Some more advanced ones offer examples of the different meanings of words in context, their pronunciation, and their definition. |
| Glossaries | They allow locating a word or text fragment in word catalogs within a specific category, with definitions, explanations, or comments. |
| Online translators | They allow entering a word in one language and providing its translation in another. |

Currently, there are various types of dictionaries with a series of functions that fit the specific needs of both teachers and students. To offer a classification, the lexicographer Beril T. Atkins (1996) mentions three types of dictionaries according to the number of languages involved: monolingual, bilingual, and multilingual. According to this author, each type of dictionary offers the user different levels of information, from the briefest to the most detailed and complex. Since these tools are lexical, multilingual, and hypertextual resources, they must have these three components (Atkins, 1996):

- Real monolingual databases.
- Real links, including metalanguage and instructions, between elements of monolingual databases.

- Virtual dictionaries.

Undeniably, this is not the only existing classification. Based on the contributions of a series of researchers (Burkhanov, 2004; Kung, 2015; Tahriri & Ariyan, 2015), the following typology of dictionaries is also established: monolingual, bilingual, and semi-bilingual. As for the benefits and limitations that each of these dictionaries can offer, there are divergent opinions. While some authors prioritize the use of monolingual dictionaries among their students, others emphasize the advantages of using bilingual dictionaries to help them acquire both linguistic and cultural information (Tahriri & Ariyan, 2015).

Bilingual dictionaries allow their users to make queries and answer questions related to lexical elements of a foreign language, learn about its linguistic properties through the translation of its semantic-pragmatic equivalences represented by the lemmas, and enhance the writing style (Burkhanov, 2004; Lima, 2018; Lukáč, 2011; Tight, 2017). Regarding the types of relevant user situations, Tarp (2009) describes three categories that comprise communicative situations that (a) require text production, reception, translation, and reception; (b) systematic cognitive situations; and (c) operational situations related to user instructions.

In activities related to the teaching of English as a foreign language, language learning can be promoted by designing tasks that involve the need for coding and decoding, in oral and written format, and that take advantage of its corpus as study material. In this type of situation, online bilingual dictionaries become very useful and versatile tools thanks to their computer support, organization, ease of access, and high capacity to store information (Nicolás, 2009).

2.4. Models of curricular integration and ICT acceptance

The undeniable, accelerated, and necessary changes that the use of ICT has brought to educational contexts have transformed and improved education through the design of enriched learning environments. This transformation offers an opportunity to modernize, renew and enable educational systems to respond to the demands generated by the technological revolution through the design, implementation, and evaluation of learning experiences upgraded by ICT (Piedrahita & Lopez, 2005). To achieve this goal, teachers need to acquire some skills to help their students to become (UNESCO, 2008):

- Competent ICT users.
- Information seekers, analyzers, and evaluators.
- Problem solvers and decision-makers.
- Creative and effective users of production resources.
- Communicators, collaborators, publishers, and producers.
- Informed, responsible citizens capable of contributing to society.

This need to generate enriched learning environments that involve the intentional, focused, and effective use of ICT, requires a twofold intervention from the educational institutions: in the institutional and pedagogical fields (López-García, 2019). This imperative has led various scholars to propose models that consider the pedagogical aspects and the different stages associated with the use of ICT in educational processes.

These models, which combine the characteristics of ICT with the curricular and methodological aspects within which their use is framed (Parra & Pincheira, 2011), fundamentally seek to help teachers to use ICT intentionally in their work (López-García, 2019).

To accomplish this task, these models must focus on didactic aspects that directly relate the pedagogical use of digital resources with the academic content taught to the students (López, 2015). Some of the best-known curricular integration models are the TIM, SAMR, TPACK, the Sandholtz, Ringstaff, and Dwyer Model, and the Jacobs, Fogarty, and Sánchez Model (Cabero, 2014; Flores et al., 2018; Koehler, 2012; Laura et al., 2015; López, 2015; López-García, 2019; Parra & Pincheira; 2011).

The primary objective of any ICT acceptance model is to elicit a positive decision regarding the innovation that is to be incorporated. This acceptance needs to start with a solid knowledge of the factors that affect such a decision. This raises the first question about what leads individuals to accept new technologies. The answer to this question will lead to an improvement of the methods used to design, evaluate, and predict the response of users to the new technologies. To deepen the understanding of the acceptance, adoption, and use of technologies, a variety of models and theories have been designed and implemented (Taherdoost, 2018). Many of those acceptance models are structured with sociology, cognitive psychology, and social psychology paradigms (López-Bonilla & López-Bonilla, 2011).

Some scholars have defined the adoption process as the one through which the adopting individuals go from a phase of awareness to the total acceptance of a new product, procedure, or idea (López-Bonilla & López-Bonilla, 2011). In the case of ICT, two differentiating factors that undoubtedly affect the decisions of users, namely innovation and uncertainty, must be considered. Among the most studied technology acceptance models are the TAM model and its variations TAM2 and TAM3, the UTAU model, the DOI, and the TAU.

3. Methodology

The design of the data triangulation matrix was an essential component of the analytical strategy of the qualitative, educational, descriptive, constructivist, and applied research carried out with a multiple case study design (Tetnowski, 2015).

3.1. Sample

The sample consisted of four higher education teachers, three of them Colombian and one Russian, with bachelor's degrees in modern languages and master's degrees in education, who hold different positions and responsibilities, in the languages program of the university where the study was carried out. Each of them had over twenty years of teaching experience as an EFL teacher. The sample was chosen by using a non-probability for convenience sampling method. Their selection was heavily founded on their particular professional profiles and the quality and quantity of data they can offer. Confidentiality of the contributions provided by each of them was duly granted.

3.2. Instruments and procedures

The data collection instruments used in the study were a questionnaire, a semi-structured interview, and an online course evaluation form (Corral, 2010). The questionnaire was designed and administered online through the software Survio. It was structured with some constructs extracted from ICT integration and acceptance models. As for the semi-structured interview, it was conducted online through the Microsoft Teams platform. This interview considered aspects related to the curricular integration of free access online bilingual dictionaries from the perspective of language teaching and

the previously mentioned models. Finally, the design of the online course evaluation form factored in the contributions of some models of curricular integration and technology acceptance. Such design granted an assessment of both the instructional design of the courses and of levels of integration of the online bilingual dictionaries. A multidisciplinary team evaluated these data-gathering instruments to strengthen their design and validity.

For the analysis of the data collected through the online questionnaire, descriptive statistics techniques were used. According to Becerra (2010), this branch of mathematics deals with the collection, presentation, and characterization of a series of data to offer an appropriate description of its numerous characteristics. This author describes two types of statistical variables: (a) qualitative or categorical, which cannot be measured numerically, and (b) quantitative, which has a numerical value.

The data obtained through the four semi-structured interviews were analyzed with the qualitative data analysis software Atlas. Ti. This type of analysis is based on the Grounded Theory (Vollstedt & Rezat, 2019). This theory, proposed by Glasser and Strauss, offers a different way of approaching social reality inductively and allows, based on the analyzed data, to develop theoretical contributions, rather than tests of theories, about the phenomenon studied (Páramo, 2015). The Grounded Theory is characterized by the emergence of theories, concepts, and hypotheses that deepen the understanding of the subject studied thanks to the adaptation of the findings to its specific characteristics (Páramo, 2015; Vollstedt & Rezat, 2019). The codification and analysis of the information obtained from the interviews generated 15 semantic networks that comprised 261 codes.

Regarding the analysis of the data gathered through the online course evaluation form, the indicators described by Colás et al., (2002) were taken into consideration from a sociocultural perspective. These indicators provided constructs linked to the concept of curricular integration of ICT such as domain, privilege, reintegration, and appropriation of ICT, control of the activity carried out with technologies, forms of interactivity proposed, representation of goal and responsibility in the task. Likewise, the perspective of Anderson (2004) who argues that virtual educational environments favor collaborative, critical, and reflective learning, was also considered.

The evaluation of the online English courses was carried out, from the perspective of the use and curriculum integration of the FAOBD, in three well-defined stages. Those stages were: (a) a diagnosis of the objectives and contents of the course; (b) a formative evaluation to improve the courses' instructional design as they were implemented; and (c) a final evaluation to determine the levels of integration of these lexical tools. The criteria and descriptors of some ICT integration and acceptance models included in the design of this form later allowed the triangulation of the data obtained from the questionnaire and the interview.

3.3. Design of the data triangulation matrix

As a fundamental part of the analytical strategy, a matrix was designed to (a) triangulate the information gathered through the three instruments and (b) to heighten their internal validity. A valuable contribution of this type of analytical strategy, in addition to reducing possible biases, is that, as Okuda and Gómez (2005) argue, the similarity in the data obtained facilitates the corroboration of findings. Alternatively, a discrepancy in the findings may lead to an

enriching reformulation of previously exposed approaches. As a result, this data triangulation allowed us to examine the curriculum integration of the FAOBD in depth and with a valuable subjectivity level reduction (Oliver-Hoyo & Allen, 2006).

Since this research was designed as a case study, some approaches made by Yin (2009) were contemplated. This author advocates for the use of multiple sources of information to guarantee the implementation of an adequate and authentic case study where the findings confirm and validate each other. Yin also states that this type of qualitative methodology strengthens the validity of the findings when a triangulation strategy is implemented since it allows reviewing the integrity of the inferences made by the researcher.

According to the definitions and classification provided by Aguilar and Barroso (2015), both a data triangulation and an intra-method triangulation were involved in the design of this matrix. A data triangulation uses various strategies and sources to contrast the information obtained, while an intra-method triangulation uses a single methodology, at different times, with the application of various data collection and analysis strategies. To design this matrix, five fundamental aspects or axes were taken into consideration. These axes were extracted from the comparison and contrast of the constructs used in each of the three instruments and of the codes and categories, common to the three instruments, resulting from the said analysis. These axes were: FAOBD user profile, types of usage and usage needs, instruction needs, facilitating and hindering factors of the curriculum integration of these lexical tools, and the advantages and disadvantages of these dictionaries. After establishing these axes, the analysis of the findings obtained with each instrument was thoroughly screened and the pertinent conclusions were drawn for

each of these axes. Subsequently, the second screening of those conclusions was made to obtain the integrative synthesis of the findings for each proposed axis (see table 2).

Table 2: *Data triangulation matrix*

| Analysis axis | Questionnaire | Interview | Course Evaluation | Integrative synthesis |
|------------------------------------|---------------|-----------|-------------------|-----------------------|
| FAOBD user profile | | | | |
| Usage and usage needs | | | | |
| Instruction needs | | | | |
| Facilitating factors | | | | |
| Hindering factors | | | | |
| FAOBD advantages and disadvantages | | | | |

4. Results

The results of this triangulation are presented below. The integrative synthesis was broken down to provide an individual analysis of each of the matrix axes.

4.1. FAOBD user profile

The teachers, with extensive work experience, high educational level, and expertise with the use of printed dictionaries, positively valued the FAOBD as relevant and compatible tools with their teaching activities. They also perceived this kind of dictionary as necessary for their students' English learning process. Due to their older age, these educators oscillated between openness and resistance to the changes

that the use of any ICT entails. Being less tech-savvy than their younger colleagues, they had been forced to adapt themselves to their workplace demands of innovation without fully discarding the traditional teaching methods they were trained to use. At the time of this research, they had been receiving support and training to face the challenges derived from the changes caused by the Covid-19 pandemic which forced them to teach their lessons online. These teachers attributed their students' propensity to use online translators, which they resignedly tolerated, to some factors such as laziness, ease, and lack of commitment. Results revealed that these teachers' tolerance to the use of online translators was probably caused by the additional workload, in terms of lesson planning and activities and resources design that the use of FAOBD entailed for them. Besides, their students required specific guidance and support to use these lexical tools with ease and efficiency.

4.2. Usage and usage needs of FAOBD

This axis showed that, on the one hand, all teachers used the FAOBD, especially WordReference and Linguee, to consult meaning, pronunciation, definition, and, in some cases, application examples. Colloquial and contextualized use of certain terms, especially the polysemous ones were also looked up when translating texts. On the other hand, there was little use of the FAOBD to design didactic materials or activities, although the majority expressed their intention to plan activities that required their use to improve their students reading and writing levels. According to the teachers, the written and oral production activities were the ones that most encouraged the use of FAOBD.

It was observed that the teachers generally used this kind of dictionary as a resource for consultation and preparation of classes rather than as a teaching tool in class where, on the contrary, they deterred their use among the students. By and large, there were low intention levels among the teachers concerning the use of the FAOBD as a didactic resource. There was also limited clarity regarding the criteria to consider when selecting the FAOBD that best suited their students' needs of use when carrying out specific tasks.

Regarding the students, their preference for using online translators could be attributed to their lack of motivation, instruction, and support to use the FAOBD, which they perceived as more difficult to explore and use as an English learning resource than the online translating tools. In other words, since the students did not require explanations or supervision to use the online translators, they could use these resources with a higher degree of autonomy. On the other hand, using the FAOBD demanded the students have high levels of mother tongue, foreign language, and consultation skills. In general, the correct interpretation of the information consulted caused the students to become dependent on their teachers help to corroborate the meanings of the new words.

When the students used the FAOBD, they generally did so to look up meanings and pronunciation and tended to replicate their teachers' usage patterns. From the perspective of their teachers, the students required persuasion, direction, and vigilance to use the FAOBD instead of online translators. In fact, all of the participants described using deterrent tactics such as banning the use of smartphones in some activities or penalizing classwork done with such translators. This situation tended to generate a conflict of interests and needs between the teachers, who wanted their students

to benefit linguistically from the use of FAOBD, and the students, who wanted to complete class assignments quickly and easily using the online translators disregarding the quality of their production. Essentially, this analysis established that the students used the FAOBD less frequently, less voluntarily, less enjoyably, and less effectively than their teachers.

This axes analysis also showed that three possible factors that discouraged teachers from using the FAOBD as a didactic resource in their classes were the need to avoid: (a) conflictive and exhausting situations with their students, who preferred online translators; (b) the increase in workload that this implied for them; and (c) situations that negatively affected their image of authority in front of their students.

Results revealed that the students used the FAOBD in class, as direct substitutes for their printed counterparts, and that only on some occasions were they induced to explore and exploit some of their other functionalities. Since the instructional design of the courses did not promote or facilitate the use of these dictionaries, the frequency and manner in which the students used them greatly depended on the teachers' decision-making power, their degree of voluntariness to use these tools, and the level of support they gave to their students.

4.3. Instruction needs

The analysis of this thematic axis showed that all teachers needed some training in the use of FAOBD as teaching resources, their characteristics, structure, classification, functions, pedagogical uses, and selection criteria. The training needs expressed by the teachers included the provision of short, gratifying, and theoretical-practical courses, which would offer them instruction on designing and using

didactic activities and resources focused on teaching their students how to use these tools as a consultation source.

Although the teachers had a positive attitude and had self-taught how to use the FAOBD, this learning initiative had trained them only to use these lexical tools as a reference resource. Therefore, they still required to learn how to take advantage of the potential that these tools offered as a didactic resource in foreign language teaching-learning situations. As for the students, they needed training and guidance to improve their query and information interpretation skills to reduce consultation errors. The analysis of the course instructional design showed that it did not take into consideration either the teachers' or the students' training needs.

4.4. Facilitating factors

The data analysis led to the identification of the following factors as the ones that could most contribute to the advancement of the curriculum integration of the FAOBD in the higher education context where this research was conducted.

In the first place, the teachers used the FAOBD with efficiency, confidence, ease, serenity, and enjoyment in activities that were relevant and compatible with their professional training, their teaching English job, and their students' learning processes. Second, there was a perceived positive impact of these digital tools on the quality and effectiveness of the teachers' class planning. To a lesser degree, the teachers recognized that the quality of their students' oral and written production improved as well. For instance, they believed using the FAOBD contributed to the students' acquisition of new vocabulary which, in turn, positively influenced their reading comprehension skills. The teachers especially valued the

contextualized sample sentences provided by some FAOBD since they helped the students to choose the best-fitting meaning for the word they were looking up.

A third facilitating factor was the teachers' and students' low anxiety levels when using the FAOBD according to their specific needs. The teachers' positive attitudes towards these dictionaries, and the recognition of their advantages, as a result of their familiarization with these tools, their functions, and integrations was another potentially favoring factor. In fact, each of them acknowledged using these digital lexical tools spontaneously and easily, without any formal training, to get better prepared to teach their lessons. Three of them specifically mentioned that listening to the pronunciation of unfamiliar words and ensuring mastery of polysemous words when planning their lessons boosted their confidence levels in class.

Finally, there is a change in paradigms regarding the use of mobile devices in class, due to the Covid-19 pandemic and the subsequent need to offer a virtual teaching modality. This is an important factor since it might decrease the resistance to change and the teachers' authoritarian, decision-making power that limits the students' freedom to choose, explore and use the lexical tools they need to comply with their academic tasks.

4.5. Hindering factors

As for the factors that could hinder or slow down the progress of the curriculum integration of the FAOBD, the following were found:

First, the marked difficulty experienced by students in exploring and using the FAOBD due to their low mother and foreign language proficiency and their low levels of perceived relevance of

use. These factors reduced the enjoyment, effectiveness, and willingness to use these lexical tools. Autonomy in their use was affected by the lack of initial teachers' instruction regarding the strategies that their students had to implement to interpret the located information efficiently.

Another factor that hindered the curriculum integration of these dictionaries was the teachers' reluctance to make an additional effort and spend extra time in planning and implementing specific actions that would allow their students to optimize the use of these resources. In addition, the removal of WordReference from the lists of suggested learning resources for each assessment activity in the online courses negatively affected the visibility and relevance that this lexical tool could have for the students. This removal also affected the teachers' willingness to plan learning activities that intentionally involved the use of the FAOBD.

4.6. FAOBD Advantages and disadvantages

The integrative synthesis carried out with this triangulation matrix offered a clearer overview of the advantages and disadvantages the teachers attributed to the FAOBD.

Among the most notable perceived advantages of these lexical tools were their fast, free-of-charge, and playful nature, as well as the provision of contextualized, relevant, reliable, illustrative, and sufficient information. The teachers agreed that these dictionaries favored a reduction of time and effort of use and that they contributed to improving the quality of their work and that of their students. This improvement in the quality of the students' production was associated with an increase in vocabulary, greater retention of concepts, and, in general, the strengthening of their linguistic skills in English.

On the other hand, the teachers unanimously mentioned as the three greatest disadvantages (a) the inappropriate use of these dictionaries by students due to difficulties in exploring and interpreting information, (b) the limited knowledge of use they possessed, and (c) the disruption their use might cause in the classroom. Regarding the characteristics of this particular type of dictionary, some disadvantages highlighted by the teachers were the demand for connectivity and memory capacity of the mobile device used, a low degree of contextualization of the words, limited use of visual information, and insufficient information related to neologisms and regionalisms. All this, from the teachers' perspective, affected the level of efficiency with which the students interpreted the information consulted.

Additionally, other negative aspects associated with the use of the FAOBD included the generation of dependency on these tools among their students that would prevent them from developing contextual interpretation skills of the words, the need for teacher support that allows optimizing their use among the student body, and the limitation in the development of some cognitive activities.

5. Conclusions

The design and implementation of the data triangulation matrix as an analytical strategy made it possible to collect relevant aspects regarding the profile of the two types of FAOBD users considered throughout the investigation: the teachers and their students. The evident difference between the perceptions and usage preferences of each of the two profiles is a factor that must undoubtedly be considered when designing and implementing training programs that meet their specific interests and needs.

A general conclusion was that the lack of clear policies regarding the ICT in general, and the FAOBD in particular, offers both teachers and students a high degree of freedom to decide whether or not to use these dictionaries in their classes and that, consequently, both kinds of users end up avoiding their use and exploitation as a teaching resource. Most of the teachers' pedagogical decisions and use avoidance affect the students' proficiency to explore and use these online dictionaries. The integrative synthesis obtained through this triangulation matrix offered a broader panorama of the factors that probably affect the current degree of integration level of the FAOBD and allowed to put forward some relevant theoretical, administrative, pedagogical, and didactic considerations.

Some of those considerations allowed to propose specific measures such as establishing clear usage policies, proving teachers' incentives to use the FAOBD; revising the online courses' instructional design to encourage the use of these tools; and planning training courses for teachers and students to further the curriculum integration process of these dictionaries. As a first effort to incentivize the use of the FAOBD as a didactic tool, a short course that included background knowledge on their characteristics, macro, and microstructure, functions, and integrations was designed. This course also included ready-made teaching resources such as presentations and worksheets that could be used with different kinds of student populations to help them improve their bilingual consultation skills with these tools.

The analytical strategy implemented through the triangulation matrix facilitates the corroboration of findings and further analysis of emerging variables. The design of this type of analysis favors a more holistic visualization of the phenomenon

under study and strengthens the validity of the information collected and analyzed. In this particular case, a deeper and less subjective understanding of the FAOBD curriculum integration was achieved.

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