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Corresponding Author	Family Name	<b>Agulló</b>
	Particle	
	Given Name	<b>Gloria Luque</b>
	Suffix	
	Division	
	Organization/University	Universidad de Jaén
	Address	Jaén, Spain
	Email	gluque@ujaen.es
Author	Family Name	<b>Ruiz</b>
	Particle	
	Given Name	<b>Encarnación Almazán</b>
	Suffix	
	Division	
	Organization/University	Universidad de Jaén
	Address	Jaén, Spain
	Email	ealmazan@ujaen.es
Abstract	<p>The use of mobile applications for English as a Foreign Language (EFL) teaching and learning has become widespread at all educational levels, increasing the difficulty in identifying the most technically and pedagogically suitable application for a specific teaching context. Although digital skills should be a central component in (prospective) FL teachers' qualifications as one of their twenty-first-century skills, teachers may be inadequately prepared to select, evaluate, and use some of the newer technologies, namely mobile apps, to improve the language learning process within their teaching frameworks. Although there is a growing body of research on the evaluation of apps using checklists, very few studies focus on easily applicable, hands-on criteria for selecting and evaluating apps specifically for TEFL. Therefore, this chapter aims to provide a functional, accessible checklist to evaluate apps, enabling prospective and novice teachers to incorporate them into their instruction. The checklist considers technical, methodological, and linguistic features but maintains a focus on pedagogically relevant criteria.</p>	
Keywords (separated by “ - ”)	Foreign language teaching - Mobile learning - Applications - Evaluation - Checklist	

# A Checklist Proposal for Assessing the Potential of Language Teaching Apps 1 2

Gloria Luque Agulló and Encarnación Almazán Ruiz 3

**Abstract** The use of mobile applications for English as a Foreign Language (EFL) 4  
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**Keywords** Foreign language teaching · Mobile learning · Applications · 18  
Evaluation · Checklist 19

## 1 Introduction 20

Some decades ago, technology was incorporated into Foreign Language Teaching 21  
and Learning. So much so that new technologies have become an essential tool both 22  
inside and outside the classroom. The emergence of applications designed specifi- 23  
cally for language teaching and learning has enriched the traditional teaching 24  
approach using these digital tools in the FL classroom. However, the wide variety of 25

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G. L. Agulló (✉) · E. A. Ruiz  
Universidad de Jaén, Jaén, Spain  
e-mail: [gluque@ujaen.es](mailto:gluque@ujaen.es); [ealmazan@ujaen.es](mailto:ealmazan@ujaen.es)

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26 available mobile applications (apps henceforth) makes it especially difficult for  
27 teachers to decide which application meets the requirements of their students.

28 Today more than ever, the need to incorporate these digital tools in the classroom  
29 has become essential in many parts of the world. In fact, due to the COVID-19 cri-  
30 sis, teaching had to move to an online environment in many countries, disregarding  
31 both the digital literacy of teachers and also the uncertain availability of technologi-  
32 cal resources tools in the case of learners. Even though technology was previously  
33 used with varying frequency, there has been a proliferation of usage in most educa-  
34 tional contexts after the COVID lockdown, including EFL materials.

35 In line with this increased use of technologies, recent European proposals  
36 (Digital Education Action Plan, 2020; Redecker, 2017) have contemplated the need  
37 to improve the use of digital literacies not only for students but also for teachers as  
38 part of their training since they constitute one of the twenty-first-century skills.  
39 Besides, teachers are assumed to “be able to effectively use digital technologies for  
40 teaching” (Redecker, 2017, p.15). Consequently, digital skills must be part of the  
41 training qualifications of prospective English language teachers, who may have  
42 experience using apps as learners but lack the preparation to include them as part of  
43 their teaching framework (Norris & Kukulska-Hulme, 2017).

44 This paper aims to raise teachers’ awareness of using digital tools in the foreign  
45 English classroom and foster their critical stance on how these apps may constitute  
46 a means towards the final aim of effective language learning. Similarly, it attempts  
47 to provide a functional and accessible checklist to evaluate apps in view of their  
48 technical, pedagogical, and linguistic features while focusing on effective language  
49 teaching. The ultimate goal of presenting this checklist is to enable (prospective)  
50 teachers to incorporate apps into their instruction successfully.

51 This paper introduces the different types of mobile applications and reviews their  
52 use in FL learning and teaching, as well as their advantages and disadvantages. In  
53 the next section, a review of various proposed taxonomies to assess the apps’ suit-  
54 ability is developed. Afterwards, a checklist is presented as a proposal to evaluate  
55 apps for EFL teaching. Finally, some conclusions are drawn.

## 56 **2 Theoretical Background and Literature Review**

### 57 **2.1 Types of Mobile Apps**

58 When introducing mobile apps in the teaching and learning processes, it would be  
59 necessary to distinguish the more suitable app for students and the purpose of their  
60 use. Moreover, according to Khaddage et al. (2016, p.18), it is advisable to distin-  
61 guish between the learning that happens in a formal setting and the learning that  
62 occurs in an informal one. In general, formal learning happens inside the educa-  
63 tional centers, and it follows a formal curriculum. On the other side, informal learn-  
64 ing happens outside with the lack of any formal curriculum. Recently, proposals

have been presented showing how valuable it is to integrate informal learning in the formal environment and the usefulness of apps. (Khaddage et al., 2016, p.18). Likewise, Godwin-Jones (2011, p.8) states that “learning becomes more real and permanent when tied to learners’ lives outside the academic environment”, and indeed, mobile devices are a very useful tool to achieve it.

However, as previously mentioned, it is not always easy to decide which type of app is the most appropriate one. Therefore, knowing the different types of applications can be advantageous in determining their suitability and helps the teacher to prepare in advance the technological support and specific device students may need to run the selected app. Besides, the teacher should not assume that all students have a smartphone or that they all use the same operating system on their mobile device. Nonetheless, in the literature, there is a wide agreement distinguishing three main types of apps (Delia et al., 2019; Guler, 2019; Khaddage et al., 2016):

Firstly, *native apps* consist of a software program designed to be operated on a particular platform. In addition, the type of device, its operating system, and the version used must be considered. According to the operating system, users get these apps in the Google Play Store<sup>1</sup> for Android systems and App Store<sup>2</sup> for Apple’s iOS. Once the user has downloaded it to their device, the app runs without connecting to the Internet. Secondly, *web apps* work in any browser installed on an electronic device and need a connection to the Internet. However, one of their advantages is that users always run the most recent version of the app (Delia et al., 2019, p. 2) without any downloading requirement (Guler, 2019). Many of these web apps, such as Google Apps, are open use. They offer a wide range of possibilities for “education and communication” (Amin, 2020, p.400) since they allow users to share files with others and work collaboratively. Thirdly, *hybrid apps* “are mobile web applications packed into a native app” (Serrano et al., 2013, p. 249) because they share properties from both native and web apps. More specifically, users run them on their mobile devices, but they can also be operated on different platforms such as Windows, Android, and iOS.

In addition to classifying the apps according to the operating system, the type of device, and whether an Internet connection is required, it is advantageous to know other classifications made of the apps. As far as the categories of the apps are concerned, users can find up to 24 app classifications in the Apple App Store and 32 in the Google Play Store. However, they can be grouped within the most conventional category list: Educational, lifestyle, social media, productivity, entertainment, and game (Poetker, 2019). Within the apps designed for language learning, Gangaiamaran and Pasupathi (2017) offer a different classification according to learner age: apps for primary learners, secondary learners, and tertiary learners. As previously stated, being aware of these types of apps and different categories constitutes a fundamental step in deciding about their pedagogical use.

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<sup>1</sup><https://play.google.com>

<sup>2</sup><https://www.apple.com>

## 105 2.2 *Using Apps for Language Learning and Teaching:* 106 *Advantages and Disadvantages*

107 The rapid advancement of technology and the proliferation of apps in the market  
108 make their inclusion in the language teaching-learning process almost unavoidable  
109 in many educational contexts around the world. Although the use of apps can be  
110 advantageous in learning any foreign language, in this section, we will focus mainly  
111 on the English language as there is more literature and it is the most widespread  
112 language in the world. However, many of the aspects highlighted below may be  
113 valid for learning and teaching other languages.

114 In the EFL classroom, it has become frequent to introduce the use of apps in  
115 combination with other materials and resources. In a study related to adult learning  
116 of a foreign language, Chen (2016, p. 49) states that “mobile learning apps provide  
117 different multiple channels and modalities [...] to practice language skills”. In his  
118 research, apart from offering a theory-based rubric to evaluate the strengths of the  
119 English language learning apps selected for the study, the author evaluates those  
120 learning apps and classifies them into three categories: vocabulary, language skills,  
121 and entertainment.

122 According to Kusmaryani et al. (2019, p.2), technology provides students with  
123 language resources that can help them practice the basic language skills. Besides,  
124 using apps offers them the chance to practice the language in formal and informal  
125 settings, helping them become independent learners. As a matter of fact, many stu-  
126 dents use apps in out-of-class time to improve their level in the foreign language and  
127 use them as support in their learning process (Steel, 2012). As a result, apps have  
128 become an essential part of the blended learning approach that combines formal and  
129 out-of-class teaching (Amin, 2020; Kacetl & Klímová, 2019; Son, 2016).

130 Klímová (2018) reviewed a selection of articles on mobile phones and their apps  
131 for teaching English. On the whole, the author states that students perceive in a posi-  
132 tive light the use of apps for learning EFL. In addition, Klímová (2018, p. 1097)  
133 maintains that students feel more motivated to learn in the formal classroom envi-  
134 ronment and become more independent outside the classroom when using apps.  
135 Similarly, Kacetl and Klímová (2019) reviewed several studies related to using apps  
136 for FL teaching. Their research reveals that m-learning, in general, and the use of  
137 apps, in particular, is undeniable in today’s education. Likewise, multiple benefits  
138 are pointed out, such as increased motivation, student autonomy, and individualized  
139 learning.

140 In a more recent study, Klímová and Poláková (2020) research students’ percep-  
141 tions when using an app designed specifically for learning English vocabulary and  
142 phrases. The study revealed students’ positive perceptions about the app, given its  
143 availability anywhere. Besides, the app was helpful for them to prepare for their  
144 final exam. As a result, students agreed to implement the app in other courses.

145 As mentioned above, not only educational apps can be helpful in the English  
146 classroom. Gamlo (2019) examined the effect of game-based language learning  
147 apps on students’ motivation. The study showed that integrating these apps into

traditional instruction helped increase the students' motivation. However, teachers should choose the apps "according to students' level and needs" to accomplish good learning results (p. 54). Similarly, Amin (2020) reviews the use of Google apps to teach and learn English. The results show that these apps are considered user-friendly and affordable. Moreover, they increase motivation, as they can be used collaboratively and are suitable for student-based learning.

As previously stated, many studies have researched the impact of mobile apps on the teaching-learning process. According to Khaddage et al. (2016), informal learning must be integrated into the twenty-first-century educational system, and mobile apps are suitable for bridging both settings. The availability of the apps allows students to access the learning material at the time they need both inside and outside the classroom (Senior, 2019, p. 140). As a result, students can use them at their own pace, anywhere and anytime. In general, introducing apps in the FL classroom reports a positive attitude, which is advantageous since learners usually increase their motivation (Zou & Li, 2015). Apart from this, Klímová (2020) indicates that mobile apps contribute to improving not only students' cognitive capacity but also their confidence and autonomy. Besides, the author highlights that apps can benefit lower-level students to help them achieve learning objectives. Since using apps can motivate them, they may "spend more time studying outside the classroom" (Kacetyl & Klímová, 2019, p.4), improving the learners' effort in the achievement of learning goals.

The interactivity of language apps is also presented as a plus since users can discover new content through communication with the app and other users (Khaddage et al., 2016; Klímová, 2018). Likewise, some applications allow users to collaborate and work towards a common goal, which encourages their motivation and reduces their anxiety when learning a language (Amin, 2020). Besides, mobile apps can create a learning community among students, encouraging interaction and communication even outside the classroom (Kusmaryani et al., 2019, p. 2).

Although apps are presented as practical tools to develop the four basic skills, the language component of vocabulary seems to be the most prominent one in the language apps (Klímová & Poláková, 2020). By the same token, Kusmaryani et al. (2019) state that introducing apps in FL learning can improve students' speaking skills and critical thinking since "mobile-assisted learning is connected to constructivist learning" (p. 5). Thus, students create their own knowledge by interacting and experiencing.

Although to a lesser extent, when using apps for teaching EFL, there are also several drawbacks mentioned in the literature. Firstly, it should be considered that many apps are not designed by language experts, which implies certain risks (Kacetyl & Klímová, 2019, p.6). As a result, teachers should guide their students in using the app for language learning purposes. Secondly, there could be a lack of pedagogical justification for using the apps in the teaching-learning process (Klímová, 2018); therefore, teachers should be cautious because the incorrect incorporation of these new resources may confuse learners regarding the purpose behind their use. To our knowledge, this lack of justification can be one of the major threats when introducing the use of any app in the FL classroom. As Steel (2012, p. 879) advises, students

AUI

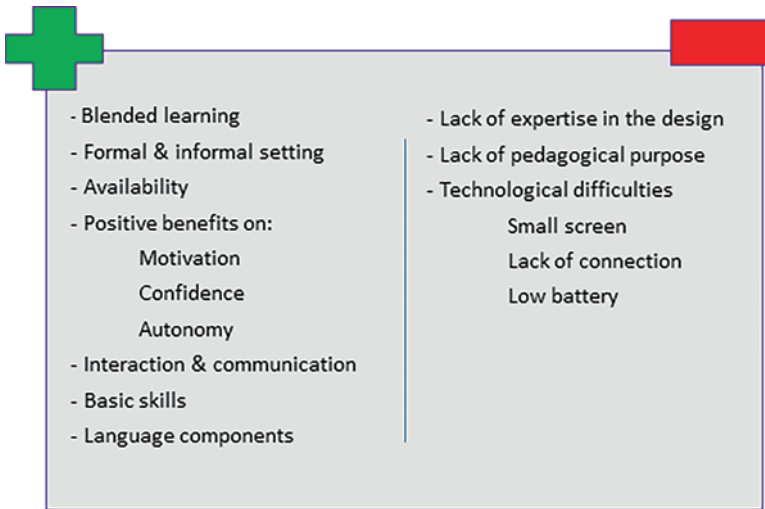


Fig. 1 Advantages and disadvantages

193 need guidance and recommendations to achieve learning benefits and know how to  
 194 extend them. Thirdly, there can be some technological inconveniences teachers may  
 195 not be aware of, such as the small screen size of the mobile device (Kaceti &  
 196 Klímová, 2019). In addition, some technical difficulties can appear as the lack of  
 197 Internet connection or low battery (Klímová, 2018). Finally, yet importantly, teachers  
 198 and students should be cautious with the addictive nature of mobile devices and  
 199 always consider whether there is a clear and relevant educational purpose of introducing  
 200 apps in the teaching-learning process (Klímová & Poláková, 2020) and  
 201 whether pedagogical benefits outweigh potential technical difficulties and the risk  
 202 of overuse.

203 Figure 1 summarizes the main advantages and disadvantages mentioned above  
 204 when introducing mobile apps in FL teaching:

### 205 2.3 Apps Evaluation Rubrics in Literature

206 Although there is a widening corpus of research on app use in the classroom, they  
 207 tend to focus on technical aspects or their effectiveness for the purpose they address.  
 208 However, few studies have included in their framework pedagogical issues oriented  
 209 towards how those apps may tackle the teaching process (however, see Chen, 2016;  
 210 Eppard et al., 2016; Fernández-Pampillón Cesteros et al., 2013; Martín-Monje  
 211 et al., 2014; Rosell-Aguilar, 2017). Without underestimating less recent studies, former  
 212 frameworks have been regarded as less operational for the present chapter, due  
 213 to the swift technological improvement in the app's functionalities in recent years.  
 214 Accordingly, the categorizations included for this section fulfill two basic criteria:

they have been developed in the last decade, and they address, visibly or covertly, pedagogical matters focused on how and what type of teaching would be developed when using the app (see Chen, 2016; Eppard et al., 2016; Son, 2016; Martín-Monje et al., 2014; Rodríguez-Arancón et al., 2013; Rosell-Aguilar, 2017).

Rodríguez-Arancón et al. (2013) adapted the taxonomy to evaluate open resources developed by Fernández-Pampillón Cesteros et al. (2013) to be used for educational apps. They incorporated ten categories: pedagogical ones such as *cognitive value and pedagogic coherence*, which refers to “the application’s goals and the specification of its target users and skills developed” (Rodríguez-Arancón et al., 2013, p. 1193); *content quality, capacity to generate learning*, or whether the app achieves the goals proposed; *interactivity and adaptability*, and, finally, *motivation*. Technical categories include *format and layout, usability, accessibility, visibility*, or whether it is organized in modules that may be reused and allow creating new materials, and, finally, *compatibility* for different devices and systems. Although the framework is very detailed and introduces relevant pedagogical issues, it misses out on categories such as *feedback, sharing, or price*, essential for app use in the classroom. Additionally, elements such as motivation, visibility, or capacity to generate learning may present difficulties for being quantified in a checklist.

Martín-Monje et al. (2014, p. 568) also adapted their taxonomy from Fernández-Pampillón Cesteros et al. (2013), focusing on educational and linguistic aspects. This framework is distinguished from similar ones since it incorporates the CEFR dimensions (Council of Europe, 2001). As in other taxonomies, pedagogical and technical issues are taken into consideration. However, *interactivity and adaptability* are considered as technical issues and refer to whether the learner may adapt contents and modify his/her learning, regardless of the teaching methodology used in the app (for a detailed comparison, see Table 1).

In his taxonomy, Son (2016, pp. 167–169) presented fifteen evaluation criteria, implicitly addressing pedagogical and technical aspects of language learning apps. These criteria include *purpose*, or whether the content is in line with its aim, *accuracy*, indicating if the content, language, and cultural elements used are correct; *usefulness; flexibility; authenticity; engagement; feedback; integration*, or whether the content is relevant to the course, *support*; if it provides online help, updates, and assistance, *price, reliability*, or whether it is free of bugs, breaks, and the app remains stable without crashes; *presentation*, so that the user interface is attractive and friendly; and finally, *organization, easiness of navigation* and use of *multimedia*. Although this author has not considered pedagogical criteria explicitly, he includes some relevant technical elements: *price, support* in the form of instructions, and *reliability*, or whether its use would not be recommended because it is not consistent.

Eppard et al. (2016, p. 22) included six aspects (see the fourth column), also divided into pedagogical and technical issues. In their taxonomy, *relevance* refers to the app focus for the students; *customization* (or flexibility, in other taxonomies) examines whether the app allows altering contents; *engagement* relates to the inclusion of motivating elements, and *sharing* refers to whether the users’ output can be saved and exported for an audience. The taxonomy is pedagogically solid since it

**Table 1** Recent taxonomies evaluating apps for language teaching

	Chen (2016)	Martín-Monje et al. (2014)	Eppard et al. (2016)	Rosell-Aguilar (2017)	Son (2016)	Rodríguez-Arancón et al. (2013)
t1.1			Thinking skills	Pedagogy		Capacity to generate learning
t1.2		Capacity to generate learning				
t1.3			Relevance	Scaffolding		
t1.4			Engagement	Teaching (rather than evaluation)	Usefulness Purpose	
t1.5		Motivation	Feedback	Engagement	Engagement	Motivation
t1.6				Progress	Feedback	
t1.7				Description		Cognitive value and pedagogical coherence
t1.8				Differentiation (levels)		
t1.9				Use of media		
t1.10				Content quality	Accuracy Authenticity Integration	Content quality
t1.11		Cognitive value and pedagogical coherence		Subject-specific		
t1.12				Skills & components		
t1.13				Cultural information		
t1.14				Language varieties		
t1.15				Visual content		Interactivity and adaptability
t1.16						
t1.17						
t1.18	Content quality	Content quality				
t1.19						
t1.20		CEFR descriptors				
t1.21						
t1.22						
t1.23						
t1.24						
t1.25						
t1.26		Interactivity and adaptability				
t1.27						
t1.28						

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Technical criteria	Chen (2016)	Martín-Monje et al. (2014)	Eppard et al. (2016)	Rosell-Aguilar (2017)	Son (2016)	Rodríguez-Arancón et al. (2013)
Customization	Customization	Customization	Customization	Technology	Flexibility	Visibility Compatibility
Usability	Usability	Usability Interoperability Accessibility	Usability	Navigation Interface	Navigation Organization	Usability Accessibility
Interactivity and adaptability	Interactivity and adaptability	Interactivity and adaptability	Sharing			
Sharing	Sharing	Sharing	Sharing		Multimedia	
Format and layout	Format and layout	Format and layout			Presentation	Format and layout
Support				Support	Support	
Stability				Stability	Stability	Reliability
Instructions				Instructions	Instructions	
Gamification				Gamification	Gamification	
Offline work				Offline work	Offline work	
Price				Price	Price	
User experience				User experience		
Registration				Registration		
Interaction				Interaction		
Advertising				Advertising		
Sharing				Sharing		
Badging				Badging		

t1\_29

t1\_30

t1\_31

t1\_32

t1\_33

t1\_34

t1\_35

t1\_36

t1\_37

t1\_38

t1\_39

t1\_40

t1\_41

t1\_42

t1\_43

t1\_44

t1\_45

t1\_46

t1\_47

t1\_48

t1\_49

260 includes aspects related to *feedback* and addresses *higher-order thinking* skills such  
 261 as creating, evaluating, and analyzing. However, it leaves aside other pedagogical  
 262 issues concerning content or language, and technical ones such as format.

263 Chen (2016, pp. 41–42) focused on a two-fold framework based, firstly, on lan-  
 264 guage acquisition theories such as social interactionist models (for feedback and  
 265 self-correction) and Krashen’s affective filter hypothesis (to reduce anxiety and  
 266 increase motivation). Secondly, his framework also addresses the pedagogical  
 267 dimension, obtaining seven categories (see Table I) also considered in the majority  
 268 of the checklists reviewed. His explicit focus on language acquisition theories  
 269 makes this study different and relevant for our purposes.

270 Rosell-Aguilar (2017) provided a framework consisting of four general areas and  
 271 a set of criteria within those areas, advancing a very exhaustive checklist. In this  
 272 paper, these four general areas (*pedagogy*, *subject-specific*, *technology*, and *user*  
 273 *experience*) have been grouped into pedagogical criteria (the first two areas), and  
 274 technical ones (the last two categories) (see Table 1). What makes this framework  
 275 relevant is the focus on linguistic aspects, including *skills*, *language components*  
 276 and contents related to *culture*, *visuals* and *language varieties*. Additionally, it deals  
 277 with methodological issues such as whether the app provides *scaffolding*,<sup>3</sup> namely,  
 278 if different difficulty levels or previous explanations are provided. The technologi-  
 279 cal dimension is also very comprehensive, enquiring about additional aspects apart  
 280 from those considered by other checklists, such as whether there is *interaction*  
 281 (among learners), *interactivity* (with the app), whether the user needs to *register*, or  
 282 the presence of *advertisements*. Finally, in contrast to other classifications (see Son,  
 283 2016), visual content and media use are considered pedagogical elements, referring  
 284 to its quality rather than how it is integrated or supports contents. Consequently, its  
 285 comprehensive inclusion of diverse pedagogical aspects makes this checklist one of  
 286 the most suitable ones to apply to language teaching apps. However, it would require  
 287 a more detailed description of the categories to be used for evaluation.

288 Table 1 offers a summary of the aforementioned taxonomies. As shown, when  
 289 different frameworks evaluate similar aspects, they appear in the same row.  
 290 Sometimes different wordings have been used to refer to the same issue, so they  
 291 stand connected. Namely, within pedagogical aspects, see, for example, *relevance*,  
 292 *teaching*, and *usefulness*, in row three. Something similar happens in row four  
 293 (*motivation*, *engagement*) or five (*feedback*, *self-correction*, *progress*). For techni-  
 294 cal criteria, *customization*, *flexibility*, *compatibility*, *interoperability* refer to an anal-  
 295 ogous notion: whether the app allows changes and adapts to diverse environments.  
 296 *Navigation*, *usability*, *accessibility*, and *interface* also stand for a similar concept,  
 297 the level of difficulty involved when interacting with the app. Likewise, *stability* or  
 298 *reliability* denote a comparable idea, that of how stable the app may be when used.

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<sup>3</sup>This technique, first used by Wood, Bruner and Ross in 1976 (Gibbons, 2013), consists of a special transitory help provided by a teacher, classmate, or, in this case, a computer/mobile phone which enables the learner to achieve a complex task, activity or process he/she would be unable to do alone.

Additional criteria for all the taxonomies are enumerated in Table 1, both including issues unique to a single checklist or elements akin to most rubrics.

A number of prevalent criteria are included in the frameworks considered above. Pedagogical issues such as the capacity to generate learning, relevance, feedback, motivation/engagement, or content quality are considered in several taxonomies. As regards technical aspects, navigation, support, flexibility/customization, price, format and layout, sharing, and stability/reliability are also considered by two or more taxonomies.

As illustrated above, the use of apps has been incorporated in language teaching, creating a need for the evaluation of those resources by means of rubrics. Most of these rubrics have started to include not only technical but also pedagogical aspects, also in response to their use outside and inside the classroom. However, recent frameworks still lack a deeper focus on pedagogical issues related to Teaching English as a Foreign Language (TEFL), particularly for prospective and/or novice teachers, who might be digital natives and used to apps as learners but may still lack specific methodological knowledge on which apps follow an appropriate pedagogical scheme (Council of Europe, 2001; 2020; Bueno & Luque, 2015). Additionally, previous checklists lack a hands-on focus for systematically evaluating concrete apps, detailing options, levels, ratings, and arriving at a detailed tool to be used for deciding which apps should be used in the classroom.

Thus, the following section develops a rubric looking into the aspects mentioned above while at the same time attempting to maintain sufficient clarity and ease of use.

### 3 Checklist Proposal

Since our objective is to increase prospective and/or novice teachers' awareness of the pedagogical usefulness of language teaching apps for foreign language learning, a checklist is proposed (see the Appendix for the full version of the checklist). This checklist has been developed and justified following recent literature (Chen, 2016; Eppard et al., 2016; Martín-Monje et al., 2014; Rodríguez-Arancón et al., 2013; Rosell-Aguilar, 2017; Son, 2016) and an expert judgment. In addition, as in Rosell-Aguilar's work (2017), an earlier version of the checklist was tested in the last teaching semester of 2020 with a group of 45 students (prospective teachers) specializing in TEFL.<sup>4</sup> Although numerous rubrics for evaluating educational apps have been developed in the last decade (see references above), several reasons make the checklist presented in this chapter relevant for the educational context. First, it contemplates an extensive scope of criteria, including, as previous tools, both

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<sup>4</sup>Some of the apps selected by prospective teachers to be evaluated with the checklist were: *ElsaSpeak*, *Ted*, *Spell Up*, *Ankidroid*, *Discord*, *Talk with Andy*, *New York Times app*, *Word of the day*, *English for Everyone*, *Wordbit*, *Nearpod*, *Duolingo*, *Grammarly*, *Speeko*, *Word Up*, *Voscreen*, *Falow*, *Forbo*, *Busy Teacher*, and *Superproof*. These apps were chosen either because they had been previously used, or because they were "popular for English learning", in the users' words.

334 technical and also pedagogical specifications. However, in this checklist, the second  
335 group of specifications has been further developed, incorporating a more detailed  
336 array of pedagogical aspects which had not been previously considered in-depth  
337 (Council of Europe, 2020). Thus, the checklist updates technical issues to adjust to  
338 the swift technological development of apps in recent years and establishes a more  
339 detailed analysis and evaluation of pedagogical aspects (see Sections III and IV of  
340 the checklist). Besides, it enables teachers to develop a more comprehensive view  
341 of a specific app and its use in the classroom. Accordingly, the checklist is organized  
342 into six sections, including *technical specifications* (Section I), *requirements*  
343 (Section II), *general teaching information* (Section III), *specific methodological*  
344 *information* (Section IV), *advantages and disadvantages* (Section V), and *how it*  
345 *works* (Section VI).

346 Section I (see Table 2) refers to the practical aspects of the app. It has been  
347 included in view of what is reported in the literature, specifically, the fact that many  
348 apps present a variety of technical problems when they are downloaded or used.  
349 Consequently, in order to find out some of these technical aspects that can under-  
350 mine its use, we included in our checklist several items, such as the *type of app*  
351 selected, its *category*, *data plan required*, *price*, the quality of *multimedia* incorpo-  
352 rated, *interface design* or the presence of *software errors*. Namely, establishing the  
353 type of app (described in Sect. 2.1.) and its function—educational, lifestyle, social  
354 media, productivity, entertainment, and game—(Poetker, 2019) will help educators  
355 make pedagogical decisions based on these criteria. The next component requires  
356 searching for other user’s ratings of the app and giving a personal rating (other  
357 users’ ratings and overall personal rating). External Ratings are useful in the sense  
358 they may inform prospective users, in this case teachers, helping them discard those  
359 apps with low ratings. However, they are only valid as alternative opinions, as this  
360 type of assessment should then be compared with the users’ personal evaluation of  
361 the app. The fifth component considered within this section refers to the *mobile data*  
362 *plan* required, which depends on the type of app and whether it requires an internet  
363 connection to be used (see Sect. 1). *Price* constitutes an additional component,  
364 including five options: whether the app is completely *free*; if it allows a *free trial* for  
365 a certain period of time but with restrictions on its use; *affordable price* when it can  
366 be downloaded for a small amount; *expensive*, typically those mobile versions of  
367 traditional dictionaries, textbooks or grammar tests, and, finally, *maintenance fees*,  
368 if it requires regular payment (also see Rosell-Aguilar, 2017; Son, 2016). The next  
369 two sections involve evaluating additional aspects of the app, such as the *use of*  
370 *multimedia*, including graphics, sound and color, and *user-interface design*, which  
371 concerns aspects such as the format, appearance, or whether it is user-friendly.  
372 Finally, three more elements are considered: if *instructions* about its use are pro-  
373 vided and whether *advertising* or *software errors* have been ascertained. Each of  
374 these last three aspects requires a yes/no answer.

375 Section II (see Table 3) contemplates the level of technological knowledge  
376 required when using the app from a two-fold perspective. The user’s role (teacher vs  
377 learner) has been considered, given the breach between digital natives—most learn-  
378 ers—and those who are not—many senior teachers—. In addition, it contemplates

A Checklist Proposal for Assessing the Potential of Language Teaching Apps

<b>Table 2</b> Technical specifications						t2.1
Name of the app. Web site/server						t2.2
Section I. Technical specifications						t2.3
Type of app						t2.4
	Native app					t2.5
	Web app					t2.6
	Hybrid app					t2.7
Category						t2.8
	Educational					t2.9
	Game					t2.10
	Lifestyle					t2.11
	Social media					t2.12
	Entertainment					t2.13
	Productivity					t2.14
Other users' rating <sup>a</sup>						t2.15
	1	2	3	4	5	t2.16
Overall personal rating						t2.17
	1	2	3	4	5	t2.18
Mobile data plan required						t2.19
	Basic					t2.20
	Average					t2.21
	Unlimited data					t2.22
Price						t2.23
	Free version					t2.24
	Free trial					t2.25
	Affordable					t2.26
	Expensive					t2.27
	Maintenance fees					t2.28
Use of multimedia (graphics, sound, and color)						t2.29
	Yes					t2.30
	No					t2.31
Multimedia quality. Rate						t2.32
	1	2	3	4	5	t2.33
User-interface design						t2.34
	1	2	3	4	5	t2.35
Instructions						t2.36
	Yes					t2.37
	No					t2.38
Advertising						t2.39
	Yes					t2.40
	No					t2.41
Software errors						t2.42
	Yes					t2.43
	No					t2.44

<sup>a</sup>1 – very low, 2 – low, 3 – average, 4 – high, 5 – very high

379 the possibility of determining which electronic device is the most suitable for the  
 380 correct operation of the application. As mentioned above, knowing the type of app  
 381 can be helpful to decide what device the students would need for running the app.  
 382 Finally, it also considers whether a webcam is required for its use.

383 Section III (see Table 4) is explicitly oriented to its pedagogical use, concerning  
 384 global aspects regarding the mode of instruction allowed by the app design. First,  
 385 there is a general question on whether the app can be employed for *learning, teach-*  
 386 *ing, testing*, or more than one option (also see Rosell-Aguilar, 2017). Then, the  
 387 checklist considers the type of instruction allowed, *synchronous, asynchronous*, or  
 388 *both*. The next aspect, *customization*, refers to whether the app offers the possibility  
 389 of being modified to meet the teacher's or the students' needs, specifically regarding  
 390 contents or design of activities. A further item, *collaborative*, entails having con-  
 391 nectivity with other users to work together. Finally, *sharing* considers whether the  
 392 content can be shared, downloaded, and/or revised by the teacher or an audience  
 393 (Eppard et al., 2016).

394 Section IV (see Table 5) involves *specific methodological information*. It deals  
 395 with the more concrete pedagogical aspects of the checklist when deciding whether  
 396 to implement its use in the classroom, whether it fits the teacher and the syllabus  
 397 needs, and, on grounds of the information considered, *how* and *when* it may be used.  
 398 The different categories developed in the three main areas of this section are based  
 399 on current pedagogical trends for L2 teaching. They reflect how skills and compo-  
 400 nents should be developed (Council of Europe, 2020) and whether different cogni-  
 401 tive processes (Krathwohl, 2002), activity formats (Bueno & Luque, 2015), and  
 402 feedback have been incorporated in the app design.

**Table 3** Requirements/conditions

Section II. Requirements/conditions			t3.1
Level of technological knowledge required as a teacher			t3.2
	Low		t3.3
	Medium		t3.4
	High		t3.5
Level of technological knowledge required as a learner			t3.6
	Low		t3.7
	Medium		t3.8
	High		t3.9
On which electronic device(s) can the app run? (and the one recommended?)			t3.10
	Actual	Recommended	t3.11
	Computer		t3.12
	Tablet		t3.13
	Smartphone		t3.14
	Other		t3.15
Webcam required?			t3.16
	Yes		t3.17
	No		t3.18
			t3.19

**Table 4** General teaching information

Section III. General teaching information			t4.2
Can it be used for ...			t4.3
	Testing		t4.4
	Learning		t4.5
	Teaching		t4.6
Type of instruction			t4.7
	Synchronous		t4.8
	Asynchronous		t4.9
	Synchronous & Asynchronous		t4.10
Can it be customized?			t4.11
Yes		Content	t4.12
		Design of activities	t4.13
No			t4.14
Collaborative			t4.15
	Yes		t4.16
	No		t4.17
Sharing			t4.18
Yes		Synchronously	t4.19
		Asynchronously	t4.20
No			t4.21

First, several practical issues are included, such as the *topic* of the app, the expected *length* of the exercises provided, or the *classroom stage* where it can be used. The second area (adapted from Luque-Agulló, [forthcoming](#)) examines basic skills —*listening, speaking, reading, and writing*— and linguistic components —*grammar, vocabulary, and pronunciation*— and it also includes how they are developed. As more than one skill or component may be implemented simultaneously, the checklist provides a non-exclusive multiple option set of answers. Regarding their design, several aspects have been taken into account. Firstly, its *language objective* provides two excluding options, *accuracy* or *fluency*; that is to say, whether there is a focus on providing correct answers or the focus is placed on meaning and not on precision. Then, regarding written production, the checklist also scrutinizes whether this production focuses on *controlled* writing, involving formal and mechanical aspects such as spelling, punctuation, and the like; *guided* writing, in which learners are provided with specific instructions, input and language to be used, and *free* writing, in which some help and strategies may still be provided but where the writing task is more extended and focused on content/meaning. Thirdly, if the app includes the pronunciation component, activities might be *receptive*, involving the recognition of aural elements, and/or *productive*, practicing the production of specific isolated or connected linguistic elements. Finally, the *learning path* deals mainly with the grammar component, and it refers to whether rules are provided and then practiced —*deductive*—, or, alternatively, whether there is

<b>Table 5</b> Specific methodological information		t5.1
Section IV. Specific methodological information (Teaching point of view)		t5.2
Specific content/topic developed (i.e. language, culture...)		t5.3
Length/realization time		t5.4
If it allows synchronous instruction, when can it be used?		t5.5
	Warm-up	t5.6
	Ice-breaker	t5.7
	Wrap-up	t5.8
	Core	t5.9
	Other	t5.10
Skills & linguistic components practised (primary and secondary)		t5.11
	Listening	t5.12
	Speaking	t5.13
	Reading	t5.14
	Writing	t5.15
	Grammar	t5.16
	Vocabulary	t5.17
	Pronunciation	t5.18
Language objective		t5.19
	Fluency	t5.20
	Accuracy	t5.21
Type of writing		t5.22
	Controlled	t5.23
	Guided	t5.24
	Free	t5.25
Pronunciation		t5.26
	Receptive	t5.27
	Productive	t5.28
Grammar		t5.29
	Inductive	t5.30
	Deductive	t5.31
Cognitive processes		t5.32
Remember	Recognize	t5.33
	Recall	t5.34
Understand	Give examples	t5.35
	Classify	t5.36
	Summarise	t5.37
	Make inferences	t5.38
	Compare	t5.39
	Explain/give reasons	t5.40
Apply	Implement	t5.41
	Perform/enact	t5.42

(continued)

**Table 5** (continued)

Section IV. Specific methodological information (Teaching point of view)						
t5.43	Analyse	Differentiate				
t5.44		Organize/classify				
t5.45		Assign				
t5.46	Evaluate	Revise				
t5.47		Criticize				
t5.48	Create	Plan				
t5.49		Produce				
t5.50	Activity/task format					
t5.51	Same format					
t5.52	Information gap	With options				
t5.53		Without options				
t5.54	Matching					
t5.55	Ordering					
t5.56	True/false					
t5.57	Multiple-choice					
t5.58	Finding mistakes or differences					
t5.59	Rewriting					
t5.60	Short answer					
t5.61	Long answer					
t5.62	Feedback					
t5.63		Yes	Provides explanation			
t5.64			No explanation			
t5.65		No				
t5.66						
t5.67	Rate feedback usefulness	1	2	3	4	5

some practice so that rules have to be inferred or are to be found elsewhere –*inductive*-. 424  
425

The third area involves *cognitive processes*, *activity format*, and *feedback*. 426  
Cognitive processes follow Bloom’s taxonomy (1956), updated by Krathwohl 427  
(2002), and they involve six categories: from the lower-order processes such as 428  
*remember*, *understand* or *apply* to the higher-order ones such as *analyze*, *evaluate* 429  
and *create*; in turn, these six categories have been subdivided into more specific 430  
cognitive operations. For instance, lower-order processes such as *remember* have 431  
been further divided into two categories: *recognize* and *recall*. Higher-order pro- 432  
cesses such as *evaluation* involve *revising* and *criticizing*. These categories are crucial 433  
because they examine what the student has to do when completing a task within 434  
the app. Moreover, higher-order processes are rarely considered in any pedagogical 435  
analysis of the activities found in apps or other educational materials. They usually 436  
include only mechanical ones such as comprehension, recall, and memorization (as 437  
an exception, see Eppard et al., 2016). However, following education guidelines 438  
(Council of Europe, 2020) and twenty-first century skills (Digital Education Action 439

440 Plan, 2020), learners must develop both types of processes and, accordingly, teach-  
 441 ers should include both in their classroom practice. The following section is also  
 442 related to the design of activities and tasks, considering, this time from a simpler  
 443 perspective, whether the *format* of these exercises is varied or not and, when there  
 444 is variation, which activity formats are exploited, namely, *information gap*, *multiple-*  
 445 *choice*, *long and short answers*, *finding mistakes*, *matching*, *classifying*, etc. (also  
 446 see Bueno & Luque, 2015). Finally, the last category considers whether the *feed-*  
 447 *back* is developed and how this process is accomplished. Namely, some apps just  
 448 say whether an answer is incorrect or correct, making the feedback function very  
 449 limited (Kacetyl & Klímová, 2019). In contrast, other apps may integrate users'  
 450 incorrect answers to provide further explanations or additional exercises. Given the  
 451 importance of providing appropriate feedback for pedagogical purposes, the next  
 452 item asks teachers to rate feedback usefulness from 1 to 5.

453 Section V (see Table 6) offers the possibility of providing more extended and  
 454 open-ended answers, in the sense they allow the app user, namely, the teacher, to  
 455 enumerate positive aspects and setbacks.

456 Finally, section VI (see Table 7) also requires a more extensive answer, allowing  
 457 the user to explain how the app operates. For instance, the user may comment on the  
 458 different options provided by the app, the steps to be followed, or how to navigate  
 459 through the different levels or steps offered by the app.

460 The teacher should complete all these sections, circling one or more options,  
 461 depending on whether they are inclusive or exclusive, and providing additional  
 462 information (see Sections V and VI). In this way, s/he may arrive at a more compre-  
 463 hensive view of the checklist being evaluated, the technical requirements needed for  
 464 its use in or outside the classroom, and the pedagogical aspects implicit in the app  
 465 design, which may inform him/her on aspects related to its implementation, namely,  
 466 if it should be used, when, how, at what stage in the teaching process, which com-  
 467 ponents would be developed, or which cognitive processes might be achieved by  
 468 means of the app.

16.1 **Table 6** Advantages and disadvantages/drawbacks

Section V. Advantages & Disadvantages/Drawbacks (Add more lines if needed)	
Positive aspects	Negative aspects

t7.1 **Table 7** How does it work? Illustrate

VI. HOW DOES IT WORK? ILLUSTRATE

## 4 Conclusions

469

Mobile apps can provide numerous benefits to students as they can be used as a learning tool both outside and inside the FL classroom. However, the rapid and constant appearance of new apps on the market can imply a challenge for novice or prospective FL teachers since deciding which mobile app is technically feasible and, more importantly, pedagogically relevant for their classes can be a difficult task.

Hence, it would be convenient for teachers to have a tool that will help them determine which mobile app follows pedagogically relevant criteria while fulfilling their educational goals for a particular classroom context. For that reason, this paper aims to provide an easy-to-use checklist that helps (prospective) teachers select a specific app for their classes. As explained above, there are not many research studies that focus on easily applicable criteria for the selection and evaluation of apps for teaching. Thus, the checklist presented in this chapter has been developed and justified following recent literature (Chen, 2016; Eppard et al., 2016; Fernández-Pampillón Cesteros et al., 2013; Martín-Monje et al., 2014; Rosell-Aguilar, 2017), an experts' judgement and the evaluation of a preliminary version by a group of 45 prospective teachers specializing for TEFL in the last teaching semester of 2020 at the University of Jaén, in Spain. Given the lockdown situation, the use and evaluation of the checklist for the different apps selected by the students was virtual, and participants evaluated its usefulness, clarity, and other issues by means of a questionnaire created with Google Forms, which was taken into consideration to refine the checklist. They also provided oral feedback by means of short online presentations carried out through Google Meet.

It goes without saying that more research is needed to refine the checklist. First, its use should be piloted by having several groups of (prospective) teachers apply the checklist on the same apps. A second step would involve fine-tuning the comprehensibility and effectiveness of the checklist based on the conclusions of those (prospective) teachers but keeping in mind other studies and an experts' judgement. This, in turn, may improve the design of effective EFL apps in terms of pedagogical, linguistic, and technical criteria, and as a consequence, enable (prospective) teachers to make sound pedagogical choices for their use inside and outside the classroom. Finally, although the checklist developed in this chapter is addressed to (prospective) teachers of English as a Foreign Language, following recent specialized literature, a revised version might potentially be used for evaluating apps intended for additional foreign languages.

503

504 **Appendix**

Name of app. Web site/server						t8.1
Section I. Technical specifications						t8.2
Type of app						t8.3
	Native app					t8.4
	Web app					t8.5
	Hybrid app					t8.6
Category						t8.7
	Educational					t8.8
	Game					t8.9
	Lifestyle					t8.10
	Social media					t8.11
	Entertainment					t8.12
	Productivity					t8.13
Other users' rating <sup>a</sup>						t8.14
	1	2	3	4	5	t8.15
Overall personal rating						t8.16
	1	2	3	4	5	t8.17
Mobile data plan required						t8.18
	Basic					t8.19
	Average					t8.20
	Unlimited data					t8.21
Price						t8.22
	Free version					t8.23
	Free trial					t8.24
	Affordable					t8.25
	Expensive					t8.26
	Maintenance fees					t8.27
Use of multimedia (graphics, sound and colour)						t8.28
	Yes					t8.29
	No					t8.30
Multimedia quality. Rate						t8.31
	1	2	3	4	5	t8.32
User-interface design						t8.33
	1	2	3	4	5	t8.34
Instructions						t8.35
	Yes					t8.36
	No					t8.37
Advertising						t8.38
	Yes					t8.39
	No					t8.40
Software errors						t8.41

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Name of app. Web site/server		t8.42
	Yes	t8.43
	No	t8.43

<sup>a</sup>1 – very low, 2 – low, 3 – average, 4 – high, 5 – very high t8.44

Section II. Requirements/Conditions			t9.1
Level of technological knowledge required as a teacher			t9.2
	Low		t9.3
	Medium		t9.4
	High		t9.5
Level of technological knowledge required as a learner			t9.6
	Low		t9.7
	Medium		t9.8
	High		t9.9
On which electronic device can the app run?(and the one recommended?)			t9.10
	Actual	Recommended	t9.11
	Computer		t9.12
	Tablet		t9.13
	Smartphone		t9.14
	Other		t9.15
Webcam required?			t9.16
	Yes		t9.17
	No		t9.18

Section III. General teaching information			t10.1
Can it be used for ...			t10.2
	Testing		t10.3
	Learning		t10.4
	Teaching		t10.5
Type of instruction			t10.6
	Synchronous		t10.7
	Asynchronous		t10.8
	Synchronous & Asynchronous		t10.9
Can it be customised?			t10.10
	Yes	Contents	t10.11
		Design of activities	t10.12
	No		t10.13
Collaborative			t10.14
	Yes		t10.15
	No		t10.16

## Section III. General teaching information

## Sharing

	Yes	Synchronously	t10.17
		Asynchronously	t10.18
	No		t10.19
			t10.20

510

## Section IV. Specific methodological information (Teaching point of view)

			t11.1
Specific content/topic developed (i.e. language, culture...)			t11.2
Length/realisation time			t11.3
If it allows synchronous instruction, when can it be used?			t11.4
		Warm-up	t11.5
		Ice-breaker	t11.6
		Wrap-up	t11.7
		Core	t11.8
		Other	t11.9
Skills & linguistic components practised (primary and secondary)			t11.10
		Listening	t11.11
		Speaking	t11.12
		Reading	t11.13
		Writing	t11.14
		Grammar	t11.15
		Vocabulary	t11.16
		Pronunciation	t11.17
<b>Language objective</b>			t11.18
		Fluency	t11.19
		Accuracy	t11.20
<b>Type of writing</b>			t11.21
		Controlled	t11.22
		Guided	t11.23
		Free	t11.24
<b>Pronunciation</b>			t11.25
		Receptive	t11.26
		Productive	t11.27
<b>Grammar</b>			t11.28
		Inductive	t11.29
		Deductive	t11.30
Cognitive processes			t11.31
Remember		Recognise	t11.32
		Recall	t11.33

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Section IV. Specific methodological information (Teaching point of view)

t11.34	Understand	Give examples				
t11.35		Classify				
t11.36		Summarise				
t11.37		Make inferences				
t11.38		Compare				
t11.39		Explain/give reasons				
t11.40	Apply	Implement				
t11.41		Perform/enact				
t11.42	Analyse	Differentiate				
t11.43		Organise/classify				
t11.44		Assign				
t11.45	Evaluate	Revise				
t11.46		Criticise				
t11.47	Create	Plan				
t11.48		Produce				
t11.49	Activity/task format					
t11.50	Same format					
t11.51	Information gap	With options				
t11.52		Without options				
t11.53	Matching					
t11.54	Ordering					
t11.55	True/false					
t11.56	Multiple choice					
t11.57	Finding mistakes or differences					
t11.58	Rewriting					
t11.59	Short answer					
t11.60	Long answer					
t11.61	Feedback					
t11.62	Yes	Provides explanation				
t11.63		No explanation				
t11.64	No					
t11.65						
t11.66	Rate feedback usefulness	1	2	3	4	5

512

Section V. Advantages & Disadvantages/Drawbacks (Add more lines if needed)	
Positive aspects	Negative aspects

513

<b>VI. HOW DOES IT WORK? ILLUSTRATE</b>

514

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# Author Query

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Queries	Details Required	Author's Response
AU1	The reference citations Senior, (2019), Zou & Li, (2015), Council of Europe, (2020) have been cited in text but not given in the reference list. Please provide details in the list.	

Uncorrected Proof