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Needs Analysis to Design an English Blended Learning Program: Teachers' and Administrators' Voices

Análisis de necesidades para diseñar un programa de inglés en modalidad semipresencial: voces de profesores y administradores

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This needs analysis study sought to identify the contextual requirements to design and implement a blended learning program in English at a Colombian public university. Data on teachers' and administrators' perceptions were gathered through a questionnaire, interviews, and focus groups and analyzed using grounded theory. Findings revealed the need to invest considerably in new personnel and e-infrastructure. Likewise, students' context should be considered to design EFL blended programs. Teachers and students should be offered ICT and methodological professional development. Finally, the program should carefully balance the integration of face-to-face and online modalities. This investigation can help the academic community of language educators and curriculum designers carry out needs analysis studies for creating contextualized blended learning programs.

Keywords: blended learning, English as a foreign language, needs analysis, program design, university curriculum

Este análisis de necesidades buscó identificar los requisitos para diseñar e implementar un programa de inglés en modalidad semipresencial en una universidad pública colombiana. Los datos sobre las percepciones de profesores y administradores —obtenidos mediante un cuestionario, entrevistas y grupos focales— se analizaron siguiendo la teoría fundamentada. Los hallazgos mostraron que es necesario invertir en nuevo personal e infraestructura tecnológica, considerar el contexto de los estudiantes para el diseño de programas de inglés en modalidad semipresencial y ofrecer oportunidades de desarrollo profesional en metodología y tecnología a profesores y estudiantes. Finalmente, el programa debe equilibrar la integración de las modalidades presencial y en línea. Esta investigación puede ayudar a los profesores de lenguas y diseñadores curriculares a crear programas semipresenciales contextualizados.

Palabras clave: análisis de necesidades, aprendizaje semipresencial, currículo universitario, diseño de programas, inglés como lengua extranjera

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Introduction

This study was conducted at a Colombian public university's main campus and eight regional campuses in 2019 and 2020. This institution has designed and implemented language policies for its undergraduate and graduate students in the context of globalization and linguistic and educational reforms in Colombia (Usma-Wilches, 2009). The university's latest foreign language policy for undergraduate students was renewed in 2014 and materialized in the Institutional English Program (IEP). This program seeks to promote the development of communicative competence and linguistic and study skills in English. This policy resulted from a context and needs analysis assessment research project based on the model *context*, *input*, *process*, and *product* (Stufflebeam, 2003).

The project above sought to evaluate an English reading comprehension program that existed before the IEP through questionnaires, focus groups, and interviews with teachers, students, and administrators. Findings revealed both strengths and weaknesses in the program; more importantly, the research identified the need to renew it with a new methodology, focusing on developing the learners' communicative skills needed for their personal and academic life (Quinchía-Ortiz et al., 2015). The findings of this project led to the creation of the IEP, which included, for the first time, new modalities of instruction for language learning, namely, online and blended learning, in the context of undergraduate studies.

Materials and resources for the face-to-face (f2f) and online learning modalities for the IEP have already been developed and deployed at the university's main and regional campuses. However, designing and implementing a blended learning modality for this program is still a pending task. Consequently, a needs analysis was done as a preparatory stage for designing and implementing a blended learning modality for the IEP, especially for the university's regional campuses, where it needs to be better implemented as contextual conditions require special consideration.

Therefore, this needs analysis study sought to assess technological and methodological aspects; teachers', administrators', and students' needs and infrastructure and connectivity requirements to design and implement the blended version of the IEP. This research provides the institution with updated data to make informed instructional, administrative, and financial decisions. Furthermore, as stated by Johnson and Marsh (2014), "investigation into the delivery and assessment of course content through blended formats has become an important and emergent field of study" (p. 23). Thus, this research enriches language learning methodologies and broadens the scope of information and communication technologies (ICT) integration into language learning and teaching for local and international contexts. Even though data were gathered from all stakeholders, this article focuses on partial findings from surveys of teachers and program and campus administrators, addressing the following research questions:

- What is the status of the e-infrastructure available in the university's regional campuses for teaching activities in a blended learning English program?
- What are the teachers' and program or campus administrators' views regarding academic, methodological, and contextual needs to implement a blended learning English program at the university's regional campuses?

Literature Review

Blended Learning: Towards a Conceptualization

Blended learning refers to integrating f2f teaching or a classic form of contact teaching with any online teaching experience that can be used online or offline (Garrison & Kanuka, 2004; Hubackova & Semradova, 2016; Whittaker, 2013). Ginns and Ellis (2007) and Picciano (2009) agree with this definition and point out that the online component does not necessarily have to be based on written communication. Hence,

different activities and means can set a *blend* to promote meaningful learning, student motivation, cooperative learning, and increase language performance (Shih, 2010; Singh, 2003), for example, video-conferencing sessions, podcasting, wikis, blogs, and vlogs (Ginns & Ellis, 2007; Picciano, 2009). In this sense, blended learning can also be considered "learning that happens in an instructional context which is characterized by a deliberate combination of online and classroom-based interventions to instigate and support learning" (Boelens et al., 2015, p. 2).

Blended learning has been considered a complete modality of instruction (Driscoll, 2002, as cited in Bernard et al., 2014). The key in this modality is finding the right combination by differentiating between resources and activities that should take place in a traditional instructional context and those that should be delivered through a technological device or e-learning platform.

Among the reasons to integrate and use blended learning in higher education, the literature points out that "learners nowadays expect technology to be integrated into their language classes" (Whittaker, 2013, p. 15). Likewise, they expect flexibility to study and work or do other activities, primarily when students work or study part-time. Blended learning provides these students with such opportunities, granting them an active role in their learning processes, which is the desired outcome. It is expected in institutions where language learning implies a constructivist or social-constructivist perspective. Caulfield (2011) states that "hybrid courses place the primary responsibility of learning on the learner, thus making it the teachers' primary responsibility to create opportunities and foster environments that encourage student learning" (p. 4).

Notwithstanding, blended learning does not only use digital resources; some of its implementations use analogical resources as they were used, for example, in the correspondence model of distance education (e.g., printed textbooks). Combining digital and analogical resources allows for different blends and resource integration for a particular context. Therefore, with blended learning, higher education institutions might offer the best of f2f and online education.

Lastly, it should be noted that learning in a blended learning program happens in three scenarios (Christensen Institute, 2015, as cited in Tucker et al., 2016). The first one, where students learn partially through online learning with a control element such as place or pace; the second scenario, where they learn under supervision in a traditional classroom setting or institution; and the third one, where interconnected modalities enhance their learning experience.

In line with these scenarios, Tucker et al. (2016) claim that a successful implementation of blended learning may yield some benefits for teaching and learning practices, such as personalization, agency, authentic audience, connectivity, and creativity.

Tucker et al. (2016) define each one of these benefits as follows:

- Personalization: providing unique learning pathways for individual students
- Agency: giving learners opportunities to participate in key decisions in their learning experience
- Authentic audience: giving learners the opportunity to create for a real audience both locally and globally
- Connectivity: giving learners opportunities to experience learning in collaboration with peers and experts locally and globally
- Creativity: providing learners individual and collaborative opportunities to make things that matter while building skills for their future. (p. 6)

In teaching English as a foreign language (EFL), scholarship has devoted efforts to studying what makes blended learning successful. For example, Neumeier (2005) and Motteram (2006) argue that blended learning courses can only be successful if they are designed considering the voices and nature of all communities involved. Comas-Quinn (2011) states that teacher professional

development in online technologies is paramount for blended learning success. For this author, a professional development strategy designed for teachers' needs should allow them to concentrate on improving their digital skills and understanding how online teaching and learning work.

Finally, in agreement with Grgurović (2017), blended learning could be the favored language teaching and learning approach in the future, as newer technologies will keep molding newer learning contexts for students. As stated by Quitián-Bernal and González-Martínez (2021), research in blended learning concurs that combining f2f and online settings stimulates the development of better pedagogies to improve classroom work.

Needs Analysis Studies in Language Learning

The origin of the term "analysis of needs" appeared first in India in the 1920s to differentiate two things: "(i) what learners will be required to do with the foreign language in the target situation, and (ii) how learners might best master the target language during the period of training" (West, 1994, p. 1). Later, in the late sixties, the term reappeared, linked to the new development and interest in English for specific purposes, for which needs analysis became a key instrument. Then, in the early seventies, these types of studies began to take place, and ever since, they have evolved to answer questions related to adapting the teaching to the kind of learning audience, on the one hand, and training the learner on how to learn, on the other (West, 1994). Needs analysis studies (NASs) also attempt to shed light on proper learning needs and goals, wants, and limitations in each context, as well as on appropriate learning strategies and materials.

External researchers initially carried out NASs without considering the opinion and knowledge of those directly involved in educational programs. It started to be problematized by perspectives such as Jasso-Aguilar's (1999), which points out the "'value of insiders' perspectives in needs analysis (NA) research for language teaching" (p. 27). This author adds that those directly involved, that is, teachers, learners, and program administrators—the insiders—, provide valuable information for improving a given program far beyond what external auditors do.

However, it is necessary to use multiple sources and methods to identify learners' needs and triangulate the information obtained to validate its reliability regardless of its provenience, either from insiders or outsiders (Jasso-Aguilar, 1999). In this sense, Long (2005) points to the need to include more primary respondents in NASs beyond learners. For example, domain experts, language teachers, and materials writers. The reason for this is the existence of an "urgent need for courses of all kinds to be relevant . . . to the needs of specific groups of learners and of society at large" (Long, 2005, p. 19). Long describes learners as sources of information regarding their learning styles, preferences, and skills. Still, other insiders, such as administrators and teachers, are needed to obtain information about what language learners need to function successfully in their target discourse domains (Long, 2005). All in all, there should be multiple sources to extend and deepen the analysis and allow for the triangulation of sources to properly validate findings (González-Lloret, 2016; Jasso-Aguilar, 1999; Long, 2005).

More recently, NASs have included another element to adequately answer questions about the students' needs for a given learning program: technology (González-Lloret, 2016). Such inclusion of technology in the education realm originated from the design of technology-mediated or technology-supported learning programs. Yet, drawing from technology, an NAS requires an analysis of not only learner's needs, wants, goals, and possible learning tasks but also technology needs, possibilities, and limitations. For instance, in the task-based language teaching curriculum and program design frame, González-Lloret (2016) suggests that analysis should find the technological tools needed to develop a task, participants' digital

literacies, technological accessibility, resources, and technical support available.

NASs should "acknowledge the role that technology plays in achieving the task, just as much as the language" (González-Lloret, 2016, p. 20). For technology to work correctly in NASs, two aspects exist to consider. First, the resulting needs out of the intersection between technology and tasks; second, the technology-mediated environment needed to perform, support, and help execute the tasks and the general moderation of the course. In this vein, González-Lloret (2016) selects four aspects that should be analyzed in a NAS for a technology-supported program: (a) *tasks*, (b) *tools*, (c) *digital literacies*, and (d) *access to technology*, which are addressed as follows.

In terms of *tools*, González-Lloret (2016) suggests that an NAS should discover the most effective technologies for completing a task since selecting a particular technological tool defines the language skills required. In turn, using these tools requires specific *digital literacies* that should be recognized and defined for learners to develop. These literacies imply employing a variety of hardware and software to perform different communicative tasks, accessing information, and, overall, using technology for general-life tasks and academic or professional tasks. Hand in hand with this, *access to technology* and e-infrastructure are crucial to developing digital literacies and participating in a technology-supported program. The educational institution might provide this access to technology, or, possibly, learners can access different kinds of technologies at home. Both cases need to be identified and clarified as this is relevant for developing this program. To sum up, tools, digital literacies, technological accessibility, technical support, access to technology, and the identification of the type of task that learners prefer, as well as the understanding of what they need to do with the language, are fundamental to the design of a language learning program mediated by technology (González-Lloret, 2016).

Method

This investigation is an NAS (Creswell & Plano Clark, 2011; Jasso-Aguilar, 1999) framed in a descriptive and interpretive paradigm (Creswell, 2007) that resorts to data triangulation to ensure the validity and reliability of the study's findings (Creswell & Plano Clark, 2011).

Participants

The participants of this study were 27 English language teachers, five program coordinators, and seven regional campus coordinators. Most English teachers have a bachelor's degree in language education (77.8%). There are also a few professionals with bachelor's degrees in translation (7.4%), philosophy (3.7%), natural sciences (3.7%), cultural studies (3.7%), and computer education (3.7%). Most of the teachers hold a graduate degree (81.5%). Table 1 summarizes this information.

Table 1. English Language Teachers' Professional Background

		Frequency	%
Undergraduate degree	Bachelor's degree in language education	21	77.8
	Bachelor's degree in translation (English, French)	2	7.4
	Bachelor's degree in philosophy	1	3.7
	Bachelor's degree in cultural studies	1	3.7
	Bachelor's degree in natural sciences	1	3.7
	Bachelor's degree in computer education	1	3.7
Last degree obtained	Graduate degree	22	81.5
	Undergraduate degree	5	18.5

These participants have an average teaching experience of 18.7 years in f2f learning contexts; their experience with blended learning environments is 3.5 years and with online learning environments is 1.9 years, as Table 2 shows. Finally, these participants' average age is 46.6 years, the minimum being 33 and the maximum 64.

Table 2. English Language Teachers' Experience

	Mean	Standard deviation	Minimum	Maximum
Experience with f2f learning contexts	18.7	6.4	9	35
Experience with blended learning environments	3.4	3.9	0	16
Experience with online learning environments	1.9	2.2	0	8

The second group of participants consists of five program coordinators and seven regional campus coordinators with varied professional backgrounds and experience and an average of 14 years of experience in education. Three program coordinators are engineers at the university's Faculty of Engineering and coordinate how the main courses are offered and implemented at the regional campuses. The other two coordinators carry out the same task, one with a master's degree in education and the other in a technical program in agriculture. The former holds a bachelor's degree in education and the latter in animal husbandry engineering. Lastly, regarding the seven regional campus coordinators, three of them have graduate degrees in education, one holds an MBA, and the rest hold bachelor's degrees in psychology (1), engineering (1), and plastic arts (1). Table 3 synthesizes this information.

Table 3. Regional Campus Coordinators' and Program Coordinators' Profiles

Aspect	Characteristic(s)
Experience	An average of 14 years
Professional backgrounds	• 4 hold a bachelor's degree • 5 hold a master's degree • 2 hold a graduate certificate
Academic areas	• Organizational psychology • Agriculture and animal husbandry • Economy • Linguistics • Administration • Plastic arts • Education • Telecommunications • Informatics

Data Collection Instruments

This section describes the three data collection instruments employed in this study: an electronic questionnaire, semi-structured interviews, and focus group interviews.

Electronic Questionnaire

Teachers who had worked as English teachers at any undergraduate program were invited to participate in the study. The first step was taking an anonymous electronic questionnaire. Sixty English language teachers were invited to take it, and 27 answered. This instrument gathered demographic data; information about the types of internet and devices teachers use; internet connection speed and stability; and the teachers' expertise in employing Microsoft Office, picture, audio, and video editing software, and some e-learning platforms. Finally, it collected information about teachers' use of technology in their practices and preferred language teaching methodologies. At the end of the electronic questionnaire, participants were asked if they wanted to participate in more data collection activities for the project. Those who manifested interest in participating in semi-structured interviews or focus groups were called to do so.

Semi-Structured Interviews

Semi-structured interviews were conducted through Zoom video calls lasting from 20 to 45 minutes. The interviewees were 11 teachers who manifested interest in participating after answering the electronic questionnaire, two program coordinators, and seven regional campus coordinators. The program coordinators were sent a direct invitation via email to participate in the semi-structured interviews. The interviews used a protocol divided into three sections to guide the conversation. The first section aimed to present information about the project. The second section explained the purpose of the interview, its implications, how data would be recorded and reported, and how long the interview could last. Finally, the third section contained closed and open-ended questions framed in the same categories underpinning the electronic questionnaire. These interviews resulted in 638 minutes of recordings transcribed verbatim and analyzed with the computer software Nvivo 12 (Windows version).

Focus Group Interviews

Two focus group interviews were conducted with two English teachers interested in participating after answering the electronic questionnaire and three program coordinators. The program coordinators were sent a direct invitation via email to participate in the focus group interviews. These interviews followed the same protocol as the semi-structured interviews and resulted in 158 minutes of recordings that were also transcribed to facilitate analysis. Transcripts from semi-structured and focus group interviews were originally in Spanish, with only selected excerpts translated into English.

The semi-structured and focus group interviews asked differentiated questions for teachers and program and regional campus coordinators. On the one hand, teachers were asked about their technological resources to teach, their opinions about technology affordances, their pedagogical use of technology, their professional development needs regarding the use of technology, their skills to teach in online environments, and the institutional support they obtain to integrate technology into their pedagogical practices. On the other hand, program and regional campus coordinators were asked about how they administer their programs, the technological and human resources they have to coordinate their programs, how they perceive students' quality of internet access and technological competencies, their most common academic and administrative problems and how they solve them, and the institutional support they have for program management. Finally, teachers and program and regional campus coordinators were asked how a blended learning English program should be designed and offered considering their experience and expertise.

Ethical Considerations

All participants signed a consent form detailing the study's characteristics; how data would be treated, reported, and analyzed; the strategies to guarantee their anonymity; the potential risks; and their right not to participate in the study if they chose so. This study obtained approval from a research committee, an advisory board, and ethics committee for social sciences.

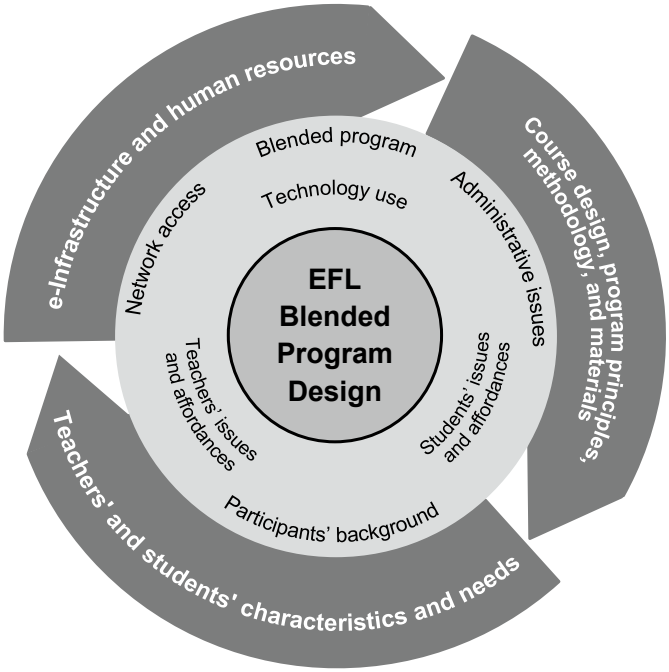
Data Analysis

Data analysis drew on grounded theory and was refined as the analysis advanced following the open, axial, and selective coding processes, which allowed us to code with a code system based on the literature review conducted for the project; the code system was reviewed and adjusted as the analysis advanced (Charmaz, 2006; Strauss & Corbin, 1998). We relied on the qualitative data analysis software NVivo 12 for this analytical process.

Grounded theory allows for the development of substantive and formal theories (Glaser & Strauss, 2006). In our case, this study is limited to a substantive theory and does not connote formal theory. In this vein, findings corresponding to the first level of analysis permitted a description and understanding of the situations under examination by presenting a coherent set of conceptual categories and their corresponding analysis.

Aligned with the preceding considerations, the code system was initially fed with *in vivo* codes that we discussed and adjusted as the analysis advanced; once a preliminary analysis was conducted, we agreed upon a fixed system of codes to analyze and make sense of the data (Miles et al., 2014). In this sense, 58 codes were used in the initial coding in NVivo 12, which were later grouped into seven dimensions: participants' background, network access, blended program characteristics, students' issues and affordances, teachers' issues and affordances, use of technology, and administrative issues. Finally, these were organized into three categories: (a) e-infrastructure and human resources; (b) course design, program principles, methodology, and materials; and (c) teachers' and students' characteristics and needs. Figure 1 presents the study's categories and dimensions, described in the next section.

Figure 1. Categories and Dimensions of the Analysis



Findings

As mentioned before, three main categories and seven dimensions emerged from the findings. An analytical matrix (Miles et al., 2014) was used to validate, verify, and summarize the findings and their relationships. Hereunder, these relationships are explained.

e-Infrastructure and Human Resources

Electronic infrastructure (also known as e-infrastructure) refers to "all ICT-based resources (i.e., distributed networks, computers, storage devices, software, data, etc.) and support operations which facilitate the collaboration among research communities by sharing resources, analysis tools and data" (Barbera et al., 2009, p. 248). These ICT-based resources are crucial for all activities at the university and, particularly, for teaching. Regarding computers and software, teachers reported that these tools are available to students for most regional campuses. However, computer and software quality are not as good as expected to support teaching and other activities. For example, at Regional Campus 1, one of the teachers said the following about the computers' quality:

> I would say it is not great as computers are rather old. We have been working with them for about three or four years, maybe more. [Teachers and students] sometimes complain about the quality of computers and wireless internet connection. (Teacher 1, interview)[1]

It means that technological resources in computer rooms are outdated and probably do not work best for online or blended courses if students use university campus resources. Furthermore, some teachers manifested that, on some occasions, they must bring their technological equipment to teach:

> Teachers have opted for bringing their computers to class . . . in my case, once, I had to change computers because the numeric [keypad] was not working, which made things difficult, so I decided to bring my own. (Teacher 2, interview)

However, even if most regional university campuses do not have updated computers and software, all teachers agreed that there is some e-infrastructure to support teaching, research, and extension activities and that computers have a wired and sometimes wireless connection to the internet.

Regarding internet access at the university's regional campuses, there are still connectivity and speed issues, which should be considered a limitation for the design of the blended program. Most opinions from teachers and administrators evidence this. For instance, one of the coordinators at Regional Campus 1 asserted: "It may work during the day but intermittently. . . . There are moments when it won't work, but half an hour later it is back to normal . . . it is very [unstable]" (Coordinator 1, interview).

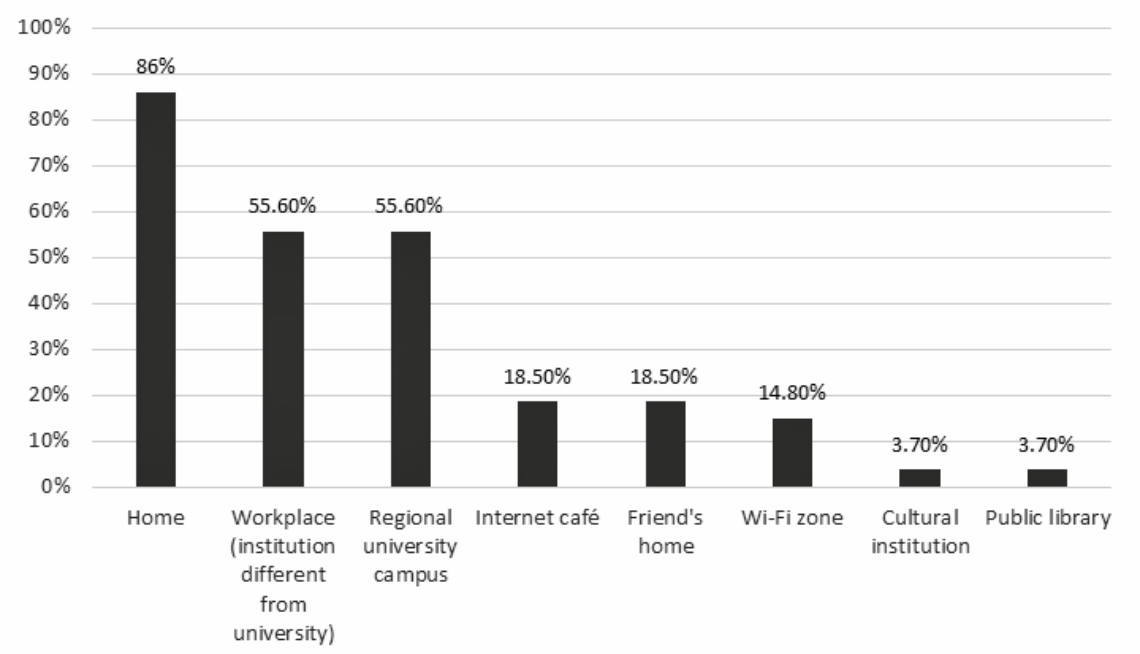
These connection problems also affect telephone communications since they work with the Voice over Internet Protocol (VoIP), which is vital for several administrative activities that support the university's mission: "Sometimes, when the network is down, it is frustrating because phones do not work; and, if phones do not work, we do not have contact with the main campus" (Coordinator 1, interview).

Even if internet connectivity is still an issue for most regional campuses, the situation with Regional Campus 2 is different. Conditions there allow for better internet connectivity, which is, according to teachers and administrators, more sophisticated and comparable in quality to the main campus. In this line, the campus coordinator claimed: "I think [internet speed and connectivity] are generally good. Here, we have a good connection" (Coordinator 2, interview).

1 The excerpts have been translated from Spanish.

However, according to the information obtained through the electronic questionnaire (see Figure 2), teachers access the internet mainly from home, where they have a better internet connection, so internet access from regional campuses is a secondary option. They reported their workplace and regional university campus as their second and third places to access the internet since they have a better internet connection at home.

Figure 2. Teachers' Internet Access Locations



Finally, in terms of human resources, administrative staff hired by the university to support teaching, research, and extension activities seem insufficient in most regional campuses. In this regard, most program and campus coordinators agreed on the need for more support personnel at the university's regional campuses, especially for new programs. One campus coordinator affirmed:

> It gets complicated at times when [working] conditions are not clear because in the . . . regional campus, I work at an office; but in two other regional campuses where I also have to work, I have to borrow a computer and do things here and there [since I do not have an office]. I cannot do much about it or find a solution. (Coordinator 3, interview)

Table 4 synthesizes this section's findings through an analytical matrix (Miles et al., 2014).

Course Design, Program Principles, Methodology, and Materials

Regarding the second category, the teachers interviewed agreed on the importance of students' contextual conditions when designing an EFL blended program. Such conditions include internet access, technological tools availability, and online learning training. One of the teachers asserted:

> In regional campuses, especially, the most complicated issue is related to students who live in remote rural areas with no internet access. If a blended program were to be created, students should be able to use computers lent by the university or work in a university's computer room. (Teacher 3, interview)

Table 4. Summary of the Findings for e-Infrastructure and Human Resources

Participants' background	Computer and software quality at the university's regional campuses might not be as needed to support online and blended teaching and other activities.
Network access	There are connectivity and speed issues at the university's regional campuses.
Blended program characteristics	Designing and implementing a blended learning program requires proper hardware and software.
Students' issues and affordances	Students' technological resources can be a starting point for accessing content and materials in a blended learning program.
Teachers' issues and affordances	Teachers' technological devices can help them moderate their blended learning courses from home.
Technology use	Technology is already used for teaching purposes at the university.
Administrative issues	Implementing an EFL program in blended learning modality would require a solid investment in e-infrastructure and hiring new personnel.

The teachers also pointed out that students, not the teacher, should be the central figures in the classroom and the virtual learning environment (VLE). They stated that they ought to be knowledgeable of technological tools and educational platforms and flexible to new methodologies and working materials. Likewise, they should participate in the design of the program content, foster students' autonomy, and be able to work in groups or teams. In this train of thought, one teacher manifested: "I think tutors should have excellent skills to use programs, platforms, and technology. They should know those tools very well; otherwise, they would be in serious trouble" (Teacher 4, interview).

On the other hand, when talking about methodological suggestions, some teachers believed that the new program should allow students to experience an interdisciplinary academic education, which, in turn, may benefit interaction in the classroom. One teacher affirmed: "When an academic program can interact with different areas of knowledge, [students'] interaction, classroom management, and [language] production are greatly enhanced" (Teacher 5, focus group interview).

Regarding materials and content, teachers reported that these should be graphically attractive, motivating, with clear instructions, and should discuss topics related to students' personal and professional contexts. Furthermore, teachers suggested that traditional materials be considered alongside digital media to present content. Teachers claimed that materials and content for the program, which are available through a website or an e-learning platform, should also be offline or printed (e.g., a printed textbook). Also, online materials could be made offline through USB drives or SD cards. One teacher commented:

> We often believe a blended learning program requires internet access, but that is not the case. We have other resources that can make blended learning feasible for regional campuses with difficult or no internet access since we have other materials (traditional or analog) that can provide ways for content acquisition without needing a computer or Wi-Fi network. (Teacher 11, interview)

Finally, some coordinators agreed that institutional commitment is essential for implementing a blended learning program. Central administrations should be concerned about supporting methodologies adapted to general and particular contexts for the current, fast-changing language teaching and learning realities. Table 5 synthesizes this section's findings through an analytical matrix (Miles et al., 2014).

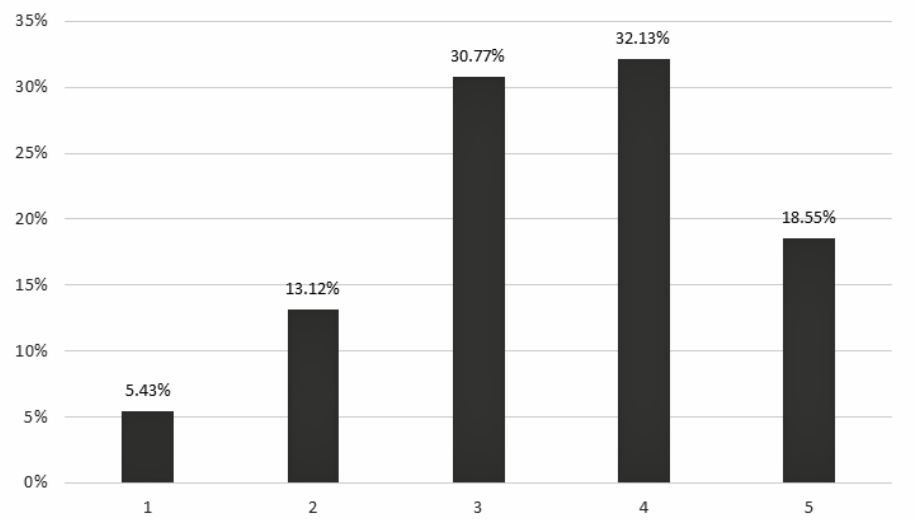
Table 5. Summary of the Findings for Course Design, Program Principles, Methodology, and Materials

Participants' background	Program contents should discuss topics close to students' personal and professional contexts.
Network access	Materials and content should be accessible both online and offline.
Blended program characteristics	• The program should allow students to experience an interdisciplinary academic education. • Program materials should be motivating, graphically attractive, and have clear instructions. • The program should be scaffolded and foster students' autonomy.
Students' issues and affordances	Several students have a good disposition toward online and technological learning.
Teachers' issues and affordances	• Teachers should participate in the design of the program content. • Teachers require training and professional development on methodological issues to properly work on an EFL blended program.
Technology use	• The program must carefully balance the integration of face-to-face and online components. • Tutors require training and professional development in technical and pedagogical ICT skills.
Administrative issues	Implementing an EFL program in a blended learning modality requires institutional commitment.

Teachers' and Students' Characteristics and Needs

As for teachers' and students' characteristics and needs, teachers and administrators agreed that many students show a good disposition towards online learning and learning in general through technological means. They asserted that some learners exhibit good technical skills in their classes (see Figure 3).

Figure 3. Students' Virtual Learning Environment Usage Skill Level From 1 (Lowest) to 5 (Highest)



According to teachers and administrators, students' competencies in technology depart from the fact that the latter is already used to support f2f teaching and learning practices. In this line, one teacher posited: "There are outstanding students for online learning because they are passionate about technology, they feel motivated by it, and that is why they like it so much" (Teacher 7, interview).

The preceding is important because it allows content designers to use different technological tools to operationalize a teaching methodology in a VLE. Nonetheless, according to one of the teachers interviewed, some students are experts when using social media, but not much for VLEs, although using them can be learned quickly: "Even if we think today's students are technology experts, they seem to be experts when it comes to social media, but not so much when it comes to using VLEs" (Teacher 8, interview).

Another teacher added that older students need more assistance when doing online activities: "There are also non-digital native students. They are the older students in their classrooms, 30-year-olds or older who have difficulties [learning online] and need a lot more assistance [from the teacher] than others" (Teacher 9, interview).

Concerning teachers, even though they indicated that their VLE usage skills are good (40.74%) or outstanding (37.04%; see Figure 4), most of them agreed that they need training on the use of these kinds of environments before, during, and after their courses; the latter as a follow-up strategy to check on their technological skills learning. This is a recurrent theme for teachers and administrators as they also pinpointed that training should be included in their working hours and offered not only at the main campus but also at regional campuses. One teacher affirmed: "At the regional campuses, we are surprised to see the considerable professional development programming the School of Languages offers, but only for the main campus teachers" (Teacher 10, interview). Table 6 synthesizes this section's findings through an analytical matrix (Miles et al., 2014).

Figure 4. Teachers' Virtual Learning Environment Usage Skill From Level 1 (Lowest) to 5 (Highest)

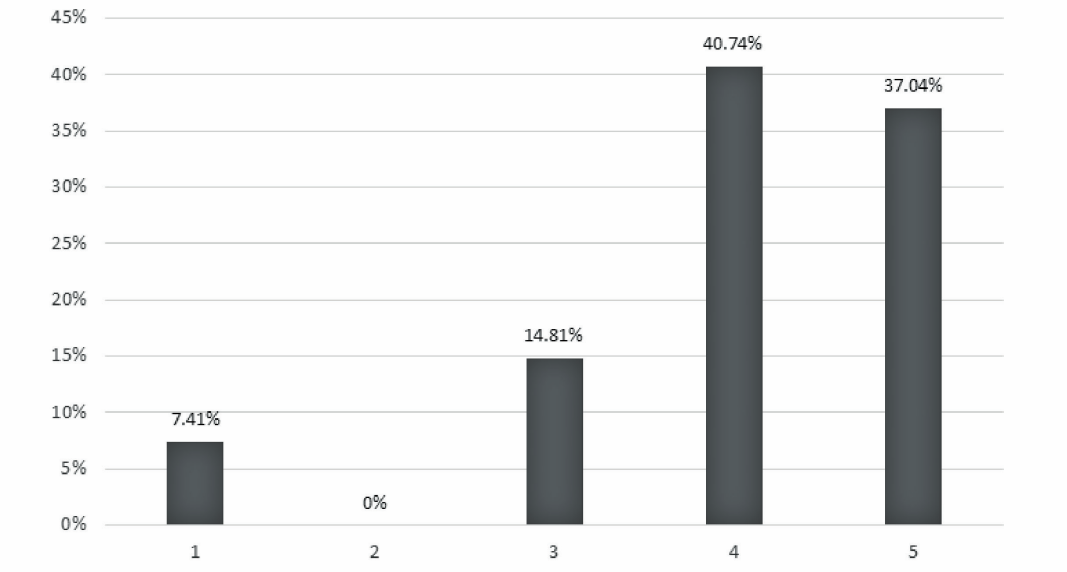


Table 6. Summary of the Findings for Teachers' and Students' Characteristics and Needs

Participants' background	Teachers and students already use technology to support their f2f educational practices.
Network access	Teachers access the internet mainly from home, so it could be considered the primary option for teachers to work in a blended learning program initially.
Blended program characteristics	• Students should be the central figures in the classroom and the virtual learning environment. • Considering students' context to design an EFL blended program is fundamental.
Students' issues and affordances	Students need training on ICT academic use and online learning.
Teachers' issues and affordances	Teachers need to further their professional competencies in ICT use for teaching purposes.
Technology use	• Some students exhibit good technical skills. • Students are skilled in social media use.
Administrative issues	Logistics are needed to integrate blended learning preparation into the existing teachers' professional development program.

Discussion and Conclusions

The results of this study suggest that students should be the leading roles in the classroom and VLEs when designing a new EFL blended program. Similarly, materials and content should be motivating. These results align with other studies that have shown that this aspect is critical for designing a blended learning program since "motivation is key to successful learning in blended learning environments" (Bernard et al., 2014, p. 117).

These results further highlight the importance of students' contextual conditions when devising an EFL blended program. Such conditions include recognizing their contextual possibilities and needs and designing a program that carefully integrates f2f and online components. For this new program, an online component should focus not only on an e-learning platform but also on analog or traditional means, as supported by other studies that claim that an analysis of context is critical for the success of online and blended language learning environments (González-Lloret, 2014; Russell & Murphy-Judy, 2020).

Findings also suggest a careful design for the program's online component that should be accessible when there are connectivity issues. In addition, the program design should consider the need for students and teachers to gain digital literacy, as it is of paramount importance. Results suggest that students are experts when using social media but not necessarily when using VLEs. Research has shown that a blended learning program design requires students to learn skills to work in the e-learning platform and with the technological tools chosen by the instructional designers for the program (Bernard et al., 2014). This instructional design must be complemented by proper training on ICT use, which does not entail preparing teachers for teaching online but training them to become online teachers (Comas-Quinn, 2011).

Besides, findings suggest that implementing an EFL program in a blended learning modality requires a solid investment in e-infrastructure and hiring new personnel. While e-infrastructure would require proper hardware, software, and connectivity improvements, hiring new personnel should accompany this investment to support teachers, administrators, and students. This investment in e-infrastructure could be carried out gradually, in any case, because teachers have devices and

access to the internet at home, which might help pilot the program, whereas the institution further develops its e-infrastructure.

Furthermore, results also reveal that a blended learning program should be scaffolded and foster students' autonomy. These results align with Bernard et al.'s (2014) idea that "assignments that help students find value in goal setting, strategic planning, self-observation (i.e., self-reflection), etc., among the primary pillars of educating students in self-regulation, need to be promoted in the blended learning environment" (p. 117).

Findings suggest that the scaffolded learning experience should contain graphically attractive materials with clear instructions, discussing topics related to the students' personal and professional contexts, which should be appropriately integrated into the program's online component. According to Bernard et al. (2014), successful integration of the online component of a blended program "seems to add a dimension of independence from time and place that may turn out to be both more motivating and more facilitative of the goals of instruction than either CI [computer instruction] or DE/OL [distance education/online learning]" (p. 116), which is essential for the context where the new program could be implemented.

Following findings, a new higher education EFL blended learning program implies a paradigm shift in which teachers are tutors, facilitators, and guides—instead of knowledge holders and spreaders—that require both training and professional development on methodological issues and technical skills. In this sense, even though there is already a multimodal professional development strategy to cope with teachers' needs at the institution (Gómez-Palacio et al., 2018), this strategy would have to be updated and specifically tailored to the new blended learning program. This training should engage teachers and students to explore topics related to ICT use and methodological issues to implement them, evidencing that participants can understand and apply blended learning principles as intended by the institution and specific context (Hockly, 2018). All in all, teachers and students need to learn how to be successful in blended learning environments, which "requires development of learning skills and strategies by careful guidance . . . and e-tutoring, training and opportunity for practice" (Neumeier, 2005, p. 168).

In conclusion, this NAS substantiates academic, professional development, and contextual conditions needed to design and implement an EFL program in a blended learning modality. These conditions have been established thanks to the existing English program teachers' and coordinators' voices. They play a crucial role in blended learning course design as long as instructional designers consider them. The teachers' and administrators' perspectives on needs and limitations for implementing an EFL blended learning program presented here could help the community of language educators and curriculum designers conduct NASs for creating blended learning programs in their contexts.

As per the study's limitations, students' perceptions were not included in the analysis of this paper since we plan on discussing them in an upcoming publication. Also, the number of teachers who participated could have been more significant; even though we invited all teachers working for the IEP at the regional campuses, only a little less than half participated in the study. All the teachers' opinions could have given us a deeper understanding of their needs and perspectives. Due to COVID-19 travel restrictions, visits to the regional campuses were impossible. Had we visited the regional campuses, we would have broadened our perspective first-hand on the e-infrastructure of these campuses.

Further research is needed to better understand contextual conditions in different educational settings to implement blended learning English programs and better integrate technology into f2f environments. Also, there is a need to explore teachers' professional

development on ICT and methodological issues concerning implementing blended learning language programs, as this instruction modality keeps developing in our educational institutions. Finally, more research is needed to further our understanding of balancing the integration of f2f and online modalities of instruction for English blended learning programs.

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