Empowering Underachieving Learners through ICT-Supported Praxis: A Self-Reflective Experience of Professional Development

Empoderando al alumnado con bajo rendimiento mediante la praxis apoyada en las TIC: Una experiencia de autorreflexión sobre el desarrollo profesional

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Resumen

Este artículo informa sobre la sistematización de una experiencia que se centró en una intervención para ayudar a tres estudiantes con bajo rendimiento en un curso de composición en inglés en una universidad pública de Costa Rica. Se implementaron ejercicios adicionales después de la retroalimentación mediante el uso de tecnologías de la información y la comunicación (TIC) para brindar a los alumnos la oportunidad de utilizar la retroalimentación recibida anteriormente. La experiencia consistió en documentar lo sucedido. El estudio también elabora una explicación de los hallazgos logrados como resultado de la intervención. El objetivo fue interpretar la experiencia de manera crítica para la autorreflexión y la futura mejora de la praxis pedagógica. El estudio utilizó técnicas de análisis cualitativo y un modelo de sistematización. Los resultados sugieren que 1) el uso de la retroalimentación en actividades adicionales contribuyó a la preparación y el progreso académico del estudiantado y 2) que la adquisición de nuevos conocimientos en habilidades digitales juega un papel importante en el uso correcto e integración de tecnologías digitales como herramientas TIC y aplicaciones (por ejemplo, Zoom y Kahoot!) para el proceso de desarrollo profesional docente y mejora de la praxis pedagógica. En conclusión, la implementación de una herramienta de TIC y una aplicación de aprendizaje permitió a los y las estudiantes con bajo rendimiento progresar académicamente. Además, el instructor logró la competencia digital en el uso de Zoom y Kahoot !. Este nuevo conocimiento obtenido durante la intervención ayudó al profesor del curso a reflexionar sobre su práctica profesional.

Palabras clave: Tecnologías de la Información y la Comunicación (TIC), tecnologías digitales, habilidades digitales, herramientas tecnológicas y aplicaciones, praxis pedagógica, auto-reflexión.

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Abstract

This article reports on the systematization of an experience that focused on an intervention to help three underachieving learners in a course of English composition at a public university in Costa Rica. Extra exercises after delayed feedback were implemented by using Information and Communication Technologies (ICTs) to provide learners with opportunities to use the feedback previously received. The experience consisted of documenting what happened. The study also elaborates on an explanation of the findings accomplished as a result of the intervention. The objective was to interpret the experience critically for self-reflection and future pedagogical praxis improvement. The study used qualitative analysis techniques and a systematization model. The results suggest that 1) delayed feedback use in extra activities contributed to learners' preparation and academic progress and 2) that the acquisition of new knowledge in digital skills plays a vital role in the correct use and integration of digital technologies such as ICT tools and applications (e.g., Zoom and Kahoot!) for the process of teacher's professional development and pedagogical praxis improvement. In conclusion, the implementation of an ICT tool and learning application allowed underachieving learners to progress academically. Besides, the instructor achieved digital competence in using Zoom and Kahoot!. This new knowledge obtained during the intervention helped the course's professor to reflect on his practice.

Keywords: information and communication technologies (ICT), digital Technologies, digital skills, technological tools and applications, pedagogical praxis, self-reflection.

I. Introduction

Underachieving language learners pose a challenge that requires English instructors to help them progress to learn a foreign language. Even though underachievement may be a challenge, it is the language instructors who, through their judgment of the learners' skills, identify students who do not perform according to what is expected in a subject or course (Akinkuolie & Sanni, 2016). Underachieving learners require the learning needs to be mediated by developing action plans that may help them succeed academically. For helping these learners, the language instructor should provide opportunities that go beyond feedback. Actions might be in response to help learners to improve language proficiency and succeed academically. In line with this, the language instructor should keep in mind that language proficiency is core for learners to develop well in academic scenarios and trajectories of language (López & Foster, 2021).

These actions for learners' improvement might be direct interventions. However, the experiences developed for the underachieving students should be helpful, caring, and have a sense of fitting (Akinkuolie & Sanni, 2016). In this regard, the intervention developed should be a remedial strategy that promotes an environment where the learners feel safe and understand that their mistakes are natural.

In this aim to provide learners with an intervention in which they experience safety, significant learning should embody the opportunities created to help the underachieving students. Significant learning is reached when the process is focused and centered on praxis (Burke, 2020). In this sense, the language instructors should be able to put into practice their skills in planning and managing the instruction process. These abilities are salient in pedagogical praxis to provide a safe climate in the class. In response to these instructors' aptitudes, the intervention may be developed based on the instructors' judgment and learners' record of progress and correspondence to the learners' auto-diagnosis of their needs.

In correspondence to the former and the latter, action research (AR) elements should be implemented to find the intervention based on a dialogical methodology that should lead to self-reflection. The element selected to found the intervention relies on a communal activity (Samaras et al., 2012), in which

learners and instructors participate to share their thoughts about the needs to not only express their viewpoints but also obtain understanding based on others' perceptions and negotiate proposals of intervention to overcome the learners' needs.

In this view, an intervention was agreed to help three underachieving learners in a group of eight students. They were students at Universidad de Costa Rica (UCR). The three underachieving students took the course LM-1245, English Composition II, which is a core course of the bachelor's program in English from the aforementioned university. LM-1245 is a one-semester course prepared for learners who have already taken LM-1235 English composition I. The course is intended to help learners to develop writing skills effectively to initiate the process of essay writing. The course also aims participants to apply principles of composition, for example, the study of elements such as synonyms, related words, and phrases. These elements of writing represent the learners' need for improvement and become the aim to define a remedial strategy for the intervention.

Since the intervention has a purpose of promoting improvements in the areas of professional praxis and student's learning, the results are directly discussed from the view of systematizing the experience of three students and their language instructor who went through a dialogical methodology to answer the following research questions (RQs): 1) how does delayed feedback use in extra activities contribute to learners' preparation and academic progress? 2) To what extent does the acquisition of new knowledge in digital skills play a vital role in the correct use and integration of different technological tools and applications (Zoom and Kahoot!) for the teacher's professional development and pedagogical praxis improvement? Besides, indirectly the results are also discussed in how this new knowledge obtained during the intervention embraces opportunities for reflection and discussion about the teacher's beliefs and practices.

The intervention presented as a remedial strategy finds its support in Action Research. Action Research turns out to be essential for professional development because this type of research achieves practical knowledge in teaching and learning improvement by involving analysis and change in all sides of the participants (Klima, 2020). In this concern, the language instructor and three learners worked together to identify their needs and design a proposal for improvement. They also agreed on the means used to implement the remedial strategy.

In this view, defining interventions to help underachieving learners has become a relevant strategy in teaching and learning today. Akinkuolie and Sanni (2016) have stressed the importance of identifying underachieving learners and designing remedial strategies for intervention. In the current context, the instructor does not necessarily propose these interventions, but they should be achieved by implementing dialogical techniques that include all participants. In this view, the AR elements become salient for studies because the instructors implement their actions for improvement, and then they have to write reflection reports "on the problems and constraints they faced in the process, and their suggestions for improvement" (Cheng, 2010, p. 122). In line with this, the interventions must be placed in a specific stage of teaching and learning; the remedial strategy is implemented once delayed feedback has been provided. Kim and Arbel (2019) have identified delayed feedback as that one where insights are administered once a task has been completed. The remedial strategy finds its justification in this stage because learners expressed that they are not evaluated to corroborate whether they show or not intake of the feedback received. The remedial strategies should not necessarily respond to a lecture class or similar. They can be devised by using Information and Communication Technologies (ICTs). Soler et al. (2017) have aimed at the importance of using blended-learning models that may work in building knowledge and identifying the positive impact of computers, learning platforms, and mobiles in the teaching-learning processes.

In this view, the remedial strategy resorted to technological tools and applications (Zoom and Kahoot!) to set the opportunities for learners to overcome their needs.

II. Theoretical foundation

This section focuses on the theoretical background. It develops the theories and concepts that offer a foundation for the study. It provides insights for the understanding of the development of remedial strategies to approach underachieving learners and help them improve and progress in the target language. Besides, it also addresses the discussion of concepts for referencing underachieving learners, differentiated learners' instruction, delayed feedback, digital technologies, and ICT tools. This discussion becomes relevant because it defines the research's approach for the study.

2.1. Underachieving learners

Language instructors teach courses that include different learners who show different skills and learning capabilities in the learning context. Some students may respond well to the course's objectives, but others may struggle to achieve those goals. In this view, a less skillful learner in learning a language may be considered an underachieving learner who is defined as that one "having academic abilities far behind those of the average student" (Chiang, 2019, p. 36). This fissure in learning does not allow the student to comprehend the teacher's educational contents and instructions. Consequently, learners' language and academic success might be affected. Even though identifying when underachieving occurs is hard (Akinkuolie & Sanni, 2016), instructors should use their training experience to assess and identify students' abilities. This instructor's professional skill to identify underachieving learners may contribute to determining appropriate strategies for helping learners progress and improve in language learning.

2.2. Differentiated Learners' Instruction

Now, with the aim to help underachieving learners, the type of instruction implemented plays a vital role. In learning environments, students respond to instruction differently in correspondence to each individual's needs. In this context, underachieving learners have difficulty trying to complete the tasks and accomplish the learning outcomes. One way to improve it is to implement individualized attention to those students who request extra help. For doing this, the instructor may find time and space to expand the topic by implementing extra activities to ensure learners achieve the learning outcomes. Shawer (2017) stated that "differentiated instruction cannot thus occur unless teachers employ multifarious learning modalities to adjust instruction to an array of learning styles and needs" (p. 298). In this view, providing learners with an extra class and learning activities in response to their needs becomes essential for the student's academic and language progress.

2.3. Delayed Feedback

Another element to help underachieving learners relies on how feedback is approached. Corrective feedback addresses the comments given on the correct students' comprehension or second language production (Li & Vuono, 2019). Corrective feedback can be implemented by resorting to immediate feedback or delayed feedback. For the purpose of this study, delayed feedback set the basis to start a proposal to help three underachieving learners in a language course. In the context of teaching and learning, delayed feedback was chosen over immediate feedback because it is supported in a study carried out by Metcalfe et al. (2009) in which they found that delayed feedback is superior to immediate feedback for taking final evaluations. In understanding that delayed feedback has superior benefits for learners, it stays worthy to implement it because there is an opportunity for learners' mistakes to vanish, and this may permit the internalization of the correct answer or language pattern studied.

2.4. Digital Technologies

In the path to help underachieving learners, language instructors may show skills to approach mediation, especially to implement strategies that include delayed feedback. At this point, language instructors should identify the mediation strategy's purpose carefully. For example, there are periods in learning when students have to work independently, which means that learners require additional practice. For these additional practices, language instructors should prepare extra language activities that help learners to review, ensure, and improve in some language topics after they receive delayed feedback. In line with this, digital technologies have become essential because their use promotes autonomous learning, which also allows language growth (Lee, 2016). Besides, the term *digital technologies* has been addressed in different studies (Gutiérrez & Serrano, 2016; Kali, et al., 2019; Moreno-Murcia et al., 2015; Tondeur et al., 2018), in which the authors have used different synonyms such as *digital literacy*, *literacy in ICT*, and *digital competencies*. These synonyms used to address digital technologies vary depending on authors, organizations, or institutions that analyze them. Nonetheless, the studies have shown benefits to promote learning.

Digital competencies are linked to a series of skills, knowledge, and capabilities (Muñoz-Osuna et al., 2016; Padilla-Zea et al., 2015; Sandí-Delgado, 2020). These digital knowledge and competencies are required to choose the appropriate digital tools for educational purposes that are implemented in correspondence to responsibility and creativity. These competencies and skills are relevant because they allow instructors to identify suitable technologies to help underachieving learners.

The concept of digital competencies used for the purpose of this study is the one proposed by (Sandi et al., 2018) who argued that digital competencies refer to:

> a set of knowledge related to the use and mastery of digital technologies and other related areas of knowledge, which through different attitudes and values allows people to know how to behave before an event to promote personal and professional improvement. In turn, it involves the ability to acquire new knowledge and the skill to know how to do and solve in the best way the activities related to the educational environment in which it operates. (p. 25)

The training of teachers in digital technologies is considered an essential factor to be considered to favor the use and application of different technological tools in teaching, research, social action, and at the management level. In line with this, teachers should be technologically and pedagogically competent to be able to use and integrate the different ICT tools to improve their pedagogical praxis (Prendes et al., 2018).

2.5. ICT Tools

After having discussed the importance of counting on instructors who are technologically and pedagogically competent, the process of choosing tools to help underachieving learners may be easier. In line with the instructors' digital competencies, the emergence of ICTs marked an era of significant changes in all areas of knowledge, namely, how to balance, analyze, process, and store information. In the educational field, the emergence of different technological tools has significantly influenced the training processes, mainly with innovative teaching methodologies (Cruz-Alvarado et al., 2017). In understanding this, language instructors may show skills to choose the tools and methods to mediate and help learners progress.

In higher education, innovative educational activities have been mainly thought to be developed by using different digital technologies (Cuberos de Quintero & Vivas, 2017). For example, in English classes as a Second Language (ESL), the ICTs have played an important role as measurers in the teaching-learning process, in which they have allowed a correct

integration between technological and didactic design. Besides, ICTs have been used as means to favor feedback between teachers and students and promote the acquisition and training of new digital skills and own self-regulation competencies (Cruz-Alvarado et al., 2019). In this view, instructors should go beyond and explore these ICT tools' scopes to help learners improve in learning.

2.6. Zoom

When instructors aim at underachieving learners to participate in differentiated instruction and extra activities requested to improve their learning, time and space become a limitation due to schedules and other commitments. Zoom is an ICT tool that helps instructors approach learners' needs and reduce the previous limitations mentioned for implementing extra activities. Zoom is an online media application that is helpful for video conferences because it is available in different gadgets ranging from iPhones, Android phones, PCs, and tablets (Cuaca et al., 2017). Different features should be considered when choosing an ICT tool for a webinar or an online conference, especially when learning is the purpose. Features such as sharing display, small group rooms, video chat, emoji sharing, and text chat become essential to favor learning environments. Considering these features, Cuaca Dharma et al. (2017) conducted a study to identify the advantages and disadvantages between Zoom and Skype. Their results showed that "Zoom is more recommended to be used for e-learning" (p. 273). The latter validates Zoom as a tool, so teachers can use it to help learners improve.

2.7. Kahoot!

In respect to delayed feedback, choosing a useful tool to help underachieving learners becomes relevant. There are different and free applications that can be used for the formative assessment of learners' knowledge that can help them improve and progress. However, before choosing any of the existing options, evaluating these applications'

feedback capability is essential. The application must use game elements, such as scores, badges, rankings, and rewards that lead students to engage with learning and motivate their behavior to achieve the class objectives. Kahoot! is an application with the last traits mentioned available for quizzes, gamification, surveys, and statistics indicators (Orhan & Gürsoy, 2019). These are some of the values that Kahoot! has when providing learners with feedback that may be useful to motivate learners and engage their learning. This purpose has been identified by Wang and Tahir (2020) in their study, in which they found that Kahoot! improves learning by boosting motivation, enjoyment, and concentration.

2.8. Remedial Strategy and Pedagogical Value

The instructors' digital competencies and appropriate digital tools may converge in developing a remedial strategy with pedagogical value to help underachieving learners.

Instructors' critical thinking and decision-making are skills required to boost "reasoning, problem-solving, creativity, alongside the ability to access, evaluate, and use information. All teachers need critical thinking skills to make informed decisions about student needs and use creative ways to address classroom dynamics" (Shawer, 2017, p. 300). These skills are necessary to tackle issues and achieve remedial instruction that favors learners' progress. Vicars et al. (2015) have identified the positive impact that students can have in learning and language when they can participate and negotiate in response to a need that requires remedial help by contributing to construct the remedial strategy.

A remedial strategy may be constructed based on the instructor's skills and learners' proposal integration. In designing remedial strategies, Akinkuolie and Sanni (2016) have addressed that "the students' experience should be caring, supportive and have a sense of belonging" (p. 88). Also, determining an appropriate pedagogical

value of the remedial strategy becomes salient. Elaborating pedagogical environments that respond to various learners' backgrounds to contribute to students' academic success is a difficult task. In this case, underachieving learners' challenges should be approached through instructors' and learners' negotiation in the best cases.

In this perception, the remedial strategy has a pedagogical or educational value where the participants think about the identified issues and come up with actual opinions about the right or wrong path to follow for improvement (Husu & Tirri, 2007). A remedial strategy that comes out of this negotiation also shows a pedagogical value of motivation because it has been shown that "students' motivation is influenced by their expectancy (both current and future expectations of success) and value (the extent to which they value the task or activity as interesting/enjoyable, useful, and important)" (Hu & McGeown, 2020, p. 2). The former and the latter address the opportunity to develop pedagogical values where students can be engaged with learning due to their participation to identify the issues and suggest the tasks that can be used in the intervention.

2.9. Pedagogical Praxis and Self-Reflection

Without underestimating the positive impact that traditional learning and teaching theories may have to construct remedial strategies, a focus on praxeological pedagogy may be more beneficial. Praxeological pedagogy can suit a remedial strategy to help underachieving learners to improve. In the aim to develop a remedial intervention with a focus on participatory action, pedagogical praxis presents better elements because it concentrates on "social action, and practice-based reflexibility" (Procter, 2012, p. 982). It means that approaching a remedial strategy through pedagogical praxis becomes thinking more outside the rubric. That is because once rubrics orient pedagogy, there is a danger of interpreting ... education as a form of

banking (Jacobs, 2008). The banking approach was rejected by Freire (1970) who stated that it was "an act of depositing, in which the students are the depositories, and the teacher is the depositor" (p. 72). In correspondence to the former and the latter, a remedial strategy should focus on a learning philosophy that allows participants to work in a process where interactive learning is promoted. Assessment is obtained through the participants' self-reflection. In line with this, technology has increasingly evolved, permitting innovative and interactive learning options that have required pedagogical innovation to encourage learner interactivity (Burke, 2020). This technological evolution has helped instructors to revert the transmission approaches.

2.10. Professional Improvement

Instructors should also count on adaptation as a skill for their professional improvement and growth. Learners may present different educational needs that require an instructor to think beyond a single teaching method or approach. Instructors are required to respond to that variety of educational needs. An adaptive mindset for professional improvement on adaptive teaching becomes urgent (Schipper et al., 2017). Through adaptive teaching, instructors can only identify their learners' needs, negotiate with them how to approach the challenges, and design remedial strategies that could help learners and allow the instructor to improve professionally.

III. Methodology

This section elaborates on the research approach followed and it identifies the study's participants. Besides, it also describes the research's techniques for the information collection and process of analysis.

3.1. Research Approach

The study followed a qualitative approach to gather the information. Creswell (2009) defined qualitative research as one in which the researcher collects detailed data from participants and then turns this data into themes or categories. These categories or themes are settled into broad patterns, theories, or generalizations. Then, they are compared with existing literature or personal experiences on the subject.

In addition, a method of systematization of experiences is used and is referred to not only data or information that is collected and ordered but also to obtain learning critics of the experiences (Jara, 2020). In this systematization of experiences, different elements are connected. Consequently, there is a drive to deducing it critically, obtaining learning, and refining the forthcoming practice. Table 1 presents the systematization model of five times proposed by Jara (2020), which is used in this study.

Table 1

Jara's Systematization Model

Times	Steps to consider
A. The starting point:	a1. Having participated in the experience. a2. Keeping the experiences' records.
B. The initial questions:	b1. Why do we want to do this systematization? (Defining the objective) b2. What experience (s) do we want to systematize? (Delimiting the object to be systematized) b3. What central aspects of these experiences are we interested in systematizing? (Specifying a systematization axis) b.4 What sources of information are we going to use? b.5 What procedures are we going to follow?
C. Recovery of the process experienced:	c1. Rebuilding history c2. Ordering and classifying information
D. The background reflection: Why did what happen, in fact, happened?	d1. Analyzing and synthesizing. d2. Making a critical interpretation of the process
E. The achievement points:	e1. Formulating conclusions e2. Communicating learnings

As is shown in Table 1, the model defines five times for the process of the study's systematization. The steps ensure the researcher identifies participants, keeps records, defines an objective, chooses concrete experiences, identifies a systematization alignment, establishes a chronological order of the experience, organizes the information into categories, and analyses critically. The analysis followed three stages:

- The first stage included an observational study in which three underachieving learners of an English course participated in identifying a need, the design of remedial strategy of two extra activities, and a reflection on the remedial strategy's scopes for their learning success.

- The second stage compared the initial situation of the experience and the final situation to identify changes in action by implementing the remedial strategy. It is essential to mention that this stage also aimed at identifying what elements allowed the changes and what elements did not.

- The third stage interpreted the perceptions of the participants and instructor involved in the experience. These actors' perceptions were included in the analysis to identify convergences and divergences related to the same aspects.

The model proposed for the systematization relied on an observational study in which critical analysis was implemented to interpret the experience. It is salient to consider that the remedial strategy's experience was limited to a Zoom differentiated class and a Kahoot! quiz.

3.2. Participants

The study subjects were three students who took the course LM-1245, English Composition II at Universidad de Costa Rica. The students were identified as underachievers and showed progress limitations in a content unit called *creativity and innovation*. The unit aimed at learners to understand the use of synonyms, related words, and phrases. The three students took this course as part of their career program in the English major. The course was a requisite for learners to continue with another advanced course. The participants were one female and two males whose ages ranged between 18 and 19 years old. Even though the course is designed for learners whose level is intermediate, the three students showed a lower level. This learners' lower level made it difficult for them to progress at the same classmates' rhythm.

3.3. The Techniques for the Information Collection and Process of Analysis

The information was collected by implementing techniques that were different depending on the sources where they were used. In this view, the collection of information required three times or parts. In the first part, the technique used was based on the instructor's observation and his experience to interpret and categorize the findings.

In the second part, the learner's perception was obtained by interviewing them using three open-ended questions. The answers were categorized in correspondence to theory and reflection. Then, in the third part of the process, the technique consisted of two sets of questions. A set of three open-ended questions was used to obtain the learners' perception about their participation in differentiated teaching, delayed feedback, and use of the ICT tools. Finally, a set of four open-ended questions was used to obtain the instructors' perception in implementing differentiated teaching, delayed feedback, and the use of the ICT tools. In this last part, the findings were interpreted through theory and reflection. Table 2 presents this relation to the sources and the techniques implemented.

Table 2

The Sources and Techniques for the Data Collection

Sources	Techniques
Differentiated instruction through a Zoom class	A1. Observing learners' attitudes towards differentiated instruction using extra activities and using the instructor's experience to categorize and interpret the findings.
Kahoot! Quiz	B1. Identifying the learners' perception about their progress in taking the Kahoot! quiz after receiving delayed feedback in correspondence to the differentiated class by using three open questions.
Focus group	C1. Keeping actors' record of participation Opinions and beliefs about differentiated teaching, delayed feedback, and use of the ICT tools. Two sets of open questions were used. A set of three questions for the learners and a set of 4 questions for the instructor.

In line with the result's analysis, two research questions (RQs) contributed to categorize and focus the analysis. These RQs were approached in the introduction, and they are answered in the conclusion.

The remedial strategy consisted of three parts. The first part required implementing a differentiated class for the three underachieving learners by using the platform Zoom. Technique A1 was used to monitor the learners' attitude and reaction to the first part of the remedial strategy. It also sought to identify the students' engagement with learning when using a differentiated class with extra activities based on their studied unit.

The second part of the remedial strategy consisted of collecting those elements of synonyms, related words, and phrases where students required delayed feedback provided by the instructor. Using these content elements, the instructor devised a quiz by resorting to the application Kahoot! for learners to monitor their understanding and achievement in using the content elements. Technique B1 aimed to interview learners to identify their perception about the Kahoot! scopes to help them motivate and improve using the feedback received. Finally, the experience's actors, the learners and the instructor, participated in a focus group to critically analyze the opportunities derived from differentiated teaching, delayed feedback, and the ICT tools for improvement, learning engagement, and professional growth.

IV. Results and discussion

As was explained before, the remedial strategy derived from the learners and the instructor who collaborated to identify the learners' needs and design a remedial strategy for the corresponding intervention. The implementation of this remedial strategy allowed obtaining results in three main domains.

4.1. Observation of Learners' Attitudes towards Differentiated Instruction

During the first part of the strategy, the instructor observed the learners' attitudes towards the extra activities designed for differentiated instruction. The first attitude observed was their reaction about using the platform Zoom for the class; learners showed to develop and respond well when using the different traits provided by the platform. For example, they used their cameras, microphones, shared screen, the chat, and participated in the breakout rooms. To achieve the use of the Zoom platform's benefits, the instructor designed activities and tasks where the different components of the platform were used. As Cuaca et al. (2017) identified that Zoom was available for many devices, the three students did not have problems accessing the class. In this view, Zoom's attractive characteristics could benefit the learners because they showed more confidence during the class. As mentioned, since it was a class for underachieving learners, their participation and cooperation in tasks were more salient than in their regular sessions with the rest of the class. As Shawer (2017) stated, different learning spaces could work better for the different learners' styles and needs. Besides, the instructor allowed the learners to participate without interrupting to correct their mistakes. Consequently, this opportunity for freedom of participation made learners more fluent during their interventions without hesitation or inhibition due to their mistakes.

The last part of the differentiated Zoom class consisted of providing learners with delayed feedback. It should be understood that the instructor kept a record of the mistakes made, and they were presented at the end of the activities. In doing this, learners showed to be more relaxed to ask for more examples and clarifications about their mistakes. Delayed feedback allowed an opportunity to expand the subjects studied by elaborating on the learners' examples and mistakes, which improved the learners' opportunities to progress. The former stresses what Metcalfe et al. (2009) identified as the superior benefit of using delayed feedback. In this view, if an instructor makes the study of the ICT tool and designs a differentiated class for learners with similar needs, the effectiveness to help learners improve can be higher than only keeping one modality of instruction.

4.2. The Learners' Perception about their Progress in Taking the Kahoot! Quiz

The second part of the pedagogical intervention consisted of using the observations collected for delayed feedback in the Zoom class about content elements of synonyms, related words, and phrases to devise a quiz using Kahoot!. This part of the intervention aimed to provide learners with an interactive platform that helps them to use the corrections received and discussed in the delayed feedback stage.

Three questions were used for identifying the learners' perception about the use of Kahoot! for extra practice and internalized the feedback received. The first question was "Do you think that the elements of scores, rankings, and rewards engaged you more with learning?" Students answered affirmatively to this question. Most of them agreed with two elements: 1) it was different because the music and counting time activated their enthusiasm, 2) they wanted to take the quiz more than once to get in a higher position in the ranking displayed.

They addressed how an interactive activity in which they sense competition and feel pushed but focused helps them more to progress than a passive mediation activity. The second question was "Do you think that you could concentrate more on taking the Kahoot! quiz than taking a paper and pen quiz?" All students said yes; their unanimous answer revealed that the music and counting time made them concentrate more. They identified how these particular elements helped them to forget more about surrounding distractions, what improved their task's assimilation, and consequently make better choices to answer or complete each language exercise. The last question was "Do you think the Kahoot! quiz helped you better learn from your mistakes than simply receiving observations?" The students' answer was affirmative. They agreed that the only way they can learn about their mistakes

is by practicing more. They also shared how a second quiz devised by the instructor based on the questions they failed the most helped them to understand and progress in learning through their mistakes. They summarized that the quiz using Kahoot! helped them to internalize and learn from their mistakes.

Reading the former and the latter, it may be said that the goal of Kahoot! is achieved in this intervention. This is supported by Wang and Tahir (2020) who identified that Kahoot!'s goal is to improve learners' performance by growing engagement, satisfaction, and motivation.

4.3. Actors' Record of Participation, Opinions and Beliefs about Differentiated Teaching, Delayed Feedback, the ICT Tools, and Professional Improvement

The last part of the intervention included a moment for reflecting on the learners' perception of the intervention by implementing the remedial strategy. The learners' results were achieved by asking three direct questions. Then, the instructor's perception was obtained by addressing four questions to him.

The first question asked to students was "Did you find the Zoom class and Kahoot! quiz helpful to improve your learning? Why?" The students replied affirmatively. Then, some of the reasons why the learners found the activities helpful were that:

1. They felt supported

2. The activities covered a topic they identified as difficult.

3. The activities motivated them to learn.

4. They considered their doubts, and mistakes were clarified and then mastered by them.

The second question was "How do you feel using interactive platforms and applications for learning?" Regarding this question, the learners' response was fine and comfortable. They mentioned not having problems, and the platforms did not represent any challenge for them. They also said that instructors should use these tools more for teaching.

The third question was "Were there changes for improving your learning, comparing your first class with the second differentiated class? Which ones?" The students also answered affirmatively to this question. Some of the unanimous answers were:

1. I understood more in the second class than in the first class.

2. In the second class, I could finish the tasks.

3. The Kahoot! activity was more interesting than the practices in the coursebook.

In this respect, the learners' responses to the three questions confirmed that the mediation strategy achieved the learners' expectation because they were more engaged with learning, the ICT tools did not represent any challenge for them, and they learned. The former showed that innovative teaching methodologies mentioned by Cruz-Alvarado et al. (2017) can highly influence learning when instructors give appropriate pedagogical use.

The instructor also answered four questions to determine his perception of the remedial strategy. The first question was "Do you think that ICTs used in the remedial activity favor feedback between teacher and students? Why?" The answer to this question was affirmative. The instructor mentioned that during the design of the activity, the learners contributed ideas for the tasks, and he used his experience to give the pedagogical value. Besides, the students also provided feedback about things to be improved to make the intervention more effective. In this concern, Cruz-Alvarado et al. (2017) addressed how ICTs favor feedback between teachers and students for improvement.

The instructor mentioned that he had a problem allowing a learner to share his screen, but another student told him what to do to solve it.

The second question was "Do you think that you as an instructor related your digital competency to teaching a language in the remedial activity? Why?" The instructor mentioned that he tried his best because after identifying the need with his students, he took time to explore the advantages and disadvantages of the ICT tools selected for the intervention. He said that he could not choose a tool to use without exploring its scope for the learners' help. In this concern, Prendes et al. (2018) mentioned the relevance that teachers become technologically and pedagogically competent.

The third question was "Did the remedial strategy have a correct integration between technological and didactic design? Why?" The instructor answered that he effectively ensured that integration. He added that the use of ICT tools should not be implemented as distractors without a purpose. In response to this, he studied the language content in the learners' need context and also studied the tools to ensure an integration that could facilitate learning and improvement. Prendes et al. (2018) argued that being competent in using and integrating ICT tools helps instructors improve their pedagogical praxis support.

The last question was "Did the designing and implementation of the remedial strategy help you to gain professional improvement? Why?" In this concern, the instructor answered affirmative and added a call for language instructors to use different teaching modalities that help learners respond to their needs. In this view, he noticed that three learners required differentiated attention, so he negotiated, sought, and designed an alternative extra to help the learners. Schipper et al. (2017) said that professional growth on adapting instruction becomes essential to support this.

V. Conclusion

The purpose of this article was to present the systematization of an experience that focused on an intervention to help underachieving learners by designing a remedial strategy focused on extra exercises using ICTs to provide learners with opportunities to use the feedback previously received. This article also aimed to answer two RQs: 1) how does delayed feedback use in extra activities contribute to learners' preparation and academic progress? 2) To what extent does the acquisition of new knowledge in digital skills play a vital role in using and integrating different technological tools and applications (Zoom and Kahoot!) for the teacher's professional development and pedagogical praxis improvement?

Regarding the first RQ, the study made evident that delayed feedback contributed to learners' preparation and academic progress by allowing them to understand, finish the tasks, and engage with learning in the remedial strategy. This delayed feedback contribution was made evident in the learners' answers to the questions about their satisfaction with the implementation of the remedial strategy to master the contents and achieve progress.

The study's results linked an affirmative answer for RQ2. The investigation showed that the instructor consolidated efforts to integrate technological and didactic design in the remedial strategy. The results verified that the instructor showed digital competence Zoom and Kahoot! which allowed him to develop and improve his pedagogical praxis. As future work, it is thought to devise a pedagogical manual in which technological tools and applications serve teachers with activities to help learners use the feedback received after instruction.

As future work, a pedagogical manual will be elaborated in which technological tools and applications serve teachers with activities to help learners use the feedback received after instruction.

VI. Study's limitations

As with the majority of studies, the design of the current study identified a limitation due to its small sample size. Nonetheless, this study approached the results ethically with confirmatory validity analyses. In this view, investigating a more significant number of subjects could provide more insight into the implications of the current study and its limitations in future research.

VII. References

Akinkuolie, A., & Sanni, R. (2016). Identification and Remediation of Factors Causing Underachievement of Students' Performance in Senior School Certificate (SSC) Biology. *Greener Journal of Educational Research*, *6*(3), 86–90. https://doi.org/10.15580/gjer.2016.3.040416072

Burke, K. (2020). Virtual praxis: Constraints, approaches, and innovations of online creative arts teacher educators. *Teaching and Teacher Education*, *95*, 1–10. https://doi.org/10.1016/j.tate.2020.103143

Cheng, V. (2010). Tensions and dilemmas of teachers in creativity reform in a Chinese context. *Thinking Skills and Creativity*, *5*(3), 120–137. https://doi.org/10.1016/j.tsc.2010.09.005

Chiang, T. (2019). How do underachieving working class students survive in the classroom? Critiques on the perspective of resistance. *International Journal of Educational Research*, *96*, 32–40. https://doi.org/10.1016/j.ijer.2019.03.007

Creswell, J. (2009). *Research Design:Qualitative, quantitative, and mixed methods approaches* (Third Ed.). SAGE Publications.

Cruz, M., Sandí, J., & Víquez, I. (2017). Diseño de situaciones educativas innovadoras como estrategia didáctica para fortalecer el proceso de enseñanza-aprendizaje. *Didasc@lia: Didáctica y Educación*, *8*(2), 99–116. https://dialnet.unirioja.es/servlet/articulo?codigo=6632895

Cruz, M., A., Sanz, C., & Baldassarri, S. (2019). Analyzing Experiences with Active Objects in Interaction-Based Educational Activities. *Proceedings of the XX International Conference on Human Computer Interaction,* Article No. 19, (pp. 1–2). https://doi.org/10.1145/3335595.3335616

Cuberos de Quintero, M., & Vivas, M. (2017). Relación entre didáctica, gerencia y el uso educativo de las TIC. *Revista Electrónica Actualidades Investigativas en Educación, 17*(1), 1–31. https://doi.org/10.15517/aie.v17i1.27198

Cuaca Dharma, H., Asmarani, D., & Dewi, U. P. (2017). Basic Japanese Grammar and Conversation e-learning through Skype and Zoom Online Application. *Procedia Computer Science*, *116*, 267–273. https://doi.org/10.1016/j.procs.2017.10.055

Freire, P. (1970). *Pedagogy of the Oppressed*. Continuum.

Gutiérrez, I., & Serrano, J. (2016). Evaluation and development of digital competence in future primary school teachers at the University of Murcia. *NAER. Journal of New Approaches in Educational Research*, *6*(1), 51–56. https://doi.org/10.7821/naer.2016.1.152

Hu, X., & McGeown, S. (2020). Exploring the relationship between foreign language motivation and achievement among primary school students learning English in China. *System*, *89*, 1–10. https://doi.org/10.1016/j.system.2020.102199

Husu, J., & Tirri, K. (2007). Developing whole school pedagogical values-A case of going through the ethos of "good schooling." *Teaching and Teacher Education*, *23*(4), 390–401. https://doi.org/10.1016/j.tate.2006.12.015

Jacobs, H. (2008). Information Literacy and Reflective Pedagogical Praxis. *Journal of Academic Librarianship*, *34*(3), 256–262. https://doi.org/10.1016/j.acalib.2008.03.009

Jara, Ó. (2020). Orientaciones teórico-prácticas para la sistematización de experiencias. *Revista DECISIO Saberes Para La Acción En Educación de Adultos*, *28*, 1–17. http://centroderecursos.alboan.org/ebooks/0000/0788/6_JAR_ORI.pdf

Kali, Y., Sagy, O., Benichou, M., Atias, O., & Levin-Peled, R. (2019). Teaching expertise reconsidered: The technology, pedagogy, content and space (TPeCS) knowledge framework. *British Journal of Educational Technology*, *50*(5), 2162–2177. https://doi.org/10.1111/bjet.12847

Kim, S., & Arbel, Y. (2019). Immediate and delayed auditory feedback in declarative learning: An examination of the feedback related event related potentials. *Neuropsychologia*, *129*, 255–262. https://doi.org/10.1016/j.neuropsychologia.2019.04.001

Klima, I. (2020). Action research as a methodology for professional development in leading an educational process. *Studies in Educational Evaluation*, *64*, 1–9. https://doi.org/10.1016/j.stueduc.2019.100826

Lee, L. (2016). Autonomous learning through task-based instruction in fully online language courses. *Language Learning and Technology*, *20*(2), 81–97. http://llt.msu.edu/issues/june2016/lee.pdf

Li, S., & Vuono, A. (2019). Twenty-five years of research on oral and written corrective feedback in *System*. *84*, 93–109. https://doi.org/10.1016/j.system.2019.05.006

López, L, & Foster, M. (2021). Examining heterogeneity among Latino dual language learners' school readiness profiles of English and Spanish at the end of Head Start. *Journal of Applied Developmental Psychology*, *73*, 2–11. https://doi.org/10.1016/j.appdev.2021.101239

Metcalfe, J., Kornell, N., & Finn, B. (2009). Delayed versus immediate feedback in children's and adults' vocabulary learning. *Memory and Cognition*, *37*(8), 1077–1087. https://doi.org/10.3758/MC.37.8.1077

Moreno, J., Silveira, Y., & Belando, N. (2015). Questionnaire evaluating teaching competencies in the university environment. Evaluation of teaching competencies in the university. *NAER. Journal of New Approaches in Educational Research*, *4*(1), 54–61. https://doi.org/10.7821/naer.2015.1.106

Muñoz., F. O., Medina., A., & Guillén-Lúgigo, M. (2016). Jerarquización de competencias genéricas basadas en las percepciones de docentes universitarios. *Educación Química*, *27*(2), 126–132. https://doi.org/10.1016/j.eq.2015.11.002

Orhan Göksün, D., & Gürsoy, G. (2019). Comparing success and engagement in gamified learning experiences via Kahoot and Quizizz. *Computers and Education*, *135*, 15–29. https://doi.org/10.1016/j.compedu.2019.02.015

Padilla, N., Medina, N., Gutiérrez, F., Paderewski, P., López, J., Núñez, M., & Rienda, J. (2015). Evaluación continua para aprendizaje basado en competencias: Una propuesta para videojuegos educativos. *Revista Iberoamericana de Informática Educativa*, *21*, 25–38.https://dialnet.unirioja.es/servlet/articulo?codigo=5113266

Procter, L. (2012). What is it about Field Trips? Praxis, Pedagogy and Presence in Virtual Environments. *Procedia - Social and Behavioral Sciences*, *55*, 980–989. https://doi.org/10.1016/j.sbspro.2012.09.588

Samaras, A., Gudjónsdóttir, H., McMurrer, J., & Dalmau, M. (2012). Self-study of a Professional Organization in Pursuit of a Shared Enterprise. *Studying Teacher Education*, *8*(3), 303–320. https://doi.org/10.1080/17425964.2012.719127

Sandí, J. (2020). Desarrollo de competencias digitales en el profesorado a través de juegos serios: un estudio de caso aplicado en la Universidad de Costa Rica (UCR). *E-Ciencias de la Información*, *10*(2), 1–27. https://doi.org/10.15517/eci.v10i2.38946

Sandí, J., & Sanz, C. (2018). Revisión y análisis sobre competencias tecnológicas esperadas en el profesorado en Iberoamérica. *Edutec. Revista Electrónica de Tecnología Educativa*, *66*, 93–121. https://doi.org/10.21556/edutec.2018.66.1225

Schipper, T., Goei, S. L., de Vries, S., & van Veen, K. (2017). Professional growth in adaptive teaching competence as a result of Lesson Study. *Teaching and Teacher Education*, *68*, 289–303. https://doi.org/10.1016/j.tate.2017.09.015

Shawer, S. (2017). Teacher-driven curriculum development at the classroom level: Implications for curriculum, pedagogy and teacher training. *Teaching and Teacher Education*, *63*, 296–313. https://doi.org/10.1016/j.tate.2016.12.017

Soler, R., Soler, J. R., & Araya, I. (2017). Diagnosis of Educational Needs for the Implementation of Blended Courses Based on the Blended Learning Model. The Case of the Social Sciences Faculty of the National University of Costa Rica. *Procedia - Social and Behavioral Sciences*, *237*, 1316–1322. https://doi.org/10.1016/j.sbspro.2017.02.216

Tondeur, J., Aesaert, K., Prestridge, S., & Consuegra, E. (2018). A multilevel analysis of what matters in the training of pre-service teacher's ICT competencies. *Computers & Education*, *122*, 32–42. https://doi.org/10.1016/j.compedu.2018.03.002

Vicars, M., Steinberg, S., McKenna, T., & Cacciattolo, M. (2015). *The Praxis of English Language Teaching and Learning (PELT)*. SENSE PUBLISHERS.

Wang, A., & Tahir, R. (2020). The effect of using Kahoot! for learning – A literature review. *Computers and Education*, *149*, 1–22. https://doi.org/10.1016/j.compedu.2020.103818