Project-based learning to develop reading comprehension in English in teacher trainees of “Nuestra Señora de Chota” Higher Pedagogical Institute

Aprendizaje basado en proyectos para desarrollar la comprensión lectora en inglés en profesores en formación del Instituto Superior Pedagógico “Nuestra Señora de Chota”

Abstract

One of the biggest problems presented by the teacher trainees in the professional career of Languages, Specialty of English of Nuestra Señora de Chota Higher Pedagogical Institute was the low levels of reading comprehension in English. For this reason, the general objective of this research was to create a didactic proposal based on project-based learning to develop reading comprehension in English at
the literal and inferential levels in the teacher trainees of Nuestra Señora de Chota Higher Pedagogical Institute, located in the province of Chota. This study adopted a quantitative approach with a descriptive – propositional design, using the pedagogical test as a technique and the objective test as a data collection instrument; The study sample was made up of 18 teacher trainees of the fourth year of the professional career of Languages, specialty of English of the same institution. As a result of the study, it was revealed that after applying the objective test, a vast majority of teacher trainees (77.78%) were at the start level; However, a very low proportion (16.6%) were at the in-progress level, a minimum proportion (5.56%) were at the accomplished level and there were no students (0%) at the outstanding level regarding the development of reading comprehension in English in its literal and inferential dimensions at an intermediate level (B1); In conclusion, given these alarming results, a didactic proposal was created based on project-based learning to develop reading comprehension in English, which was validated through expert judgment.

**Keywords:** didactic proposal, project-based learning, reading comprehension

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**Resumen**

Uno de los grandes problemas que presentaron los docentes en formación de la carrera profesional de Idiomas, especialidad Inglés del Instituto Superior Pedagógico Nuestra Señora de Chota fue los bajos niveles de comprensión lectora en inglés. Por tal razón, la presente investigación tuvo como objetivo general crear una propuesta didáctica fundamentada en el aprendizaje basado en proyectos para desarrollar la comprensión lectora en inglés en los niveles literal e inferencial en los docentes en formación del Instituto Superior Pedagógico “Nuestra Señora de Chota”, ubicado en la provincia de Chota. Este estudio adoptó un enfoque cuantitativo con un diseño descriptivo – propositivo, utilizando la prueba pedagógica como técnica y la prueba objetiva como instrumento de recolección de datos; la muestra de estudio estuvo compuesta por 18 docentes en formación de la carrera profesional de idiomas, especialidad Inglés de dicha institución. Como resultado del estudio se descubrió que luego de aplicar la prueba objetiva, una gran mayoría docentes en formación (77.78 %) estuvieron en el nivel inicio; sin embargo, una proporción muy baja (16.6%) estuvieron en el nivel en progreso, una mínima proporción (5.56%) alcanzaron en el nivel logrado y no hay ningún docente en formación (0%) en el nivel destacado respecto al desarrollo de la comprensión lectora en inglés en sus dimensiones literal e inferencial a un nivel intermedio (B1); En conclusión, ante estas alarmantes cifras, se creó una propuesta didáctica fundamentada en el aprendizaje basado en proyectos para desarrollar la comprensión lectora en Inglés, la cual fue validada mediante juicio de expertos.

**Palabras clave:** propuesta didáctica, aprendizaje basado en proyectos, comprensión lectora

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INTRODUCTION

During the latest years, the world has suffered many changes in different fields such as technology, science, education, economy, and so forth and these changes require that we must be kept up-to-date. Also, it is necessary to know that cognitive skills are no longer considered an absolute element that defines learners' success. It is imperative for contemporary learners to possess an awareness of the dynamic nature of the future and to actively cultivate the essential competencies required to navigate the more demanding circumstances that lie ahead. To survive in this competitive period, learners must think critically so that they can find initiatives and reflective solutions when problems arise (Andriansah et al., 2019).

In the contemporary period, networking has emerged as a crucial factor for achieving success. Consequently, those seeking to thrive in this context must possess proficient communication skills, expert reading comprehension abilities, and a capacity for effective collaboration. In order to effectively adapt to the rapid pace of change, individuals must demonstrate creativity and innovation. In line with that, Puspitasari (2020) mentions that these qualities prepare learners for success in career, education, and citizenship, which generated project-based learning (PBL) as a promising educational design to improve skills.

One of the biggest problems presented by the teacher trainees in the professional career of Languages, specialty of English of Nuestra Señora de Chota Higher Pedagogical Institute was the low levels of reading comprehension in English, having problems in comprehending different types of texts in English at B1 or upper level, comprehending different types of texts in English at literal and inferential levels and identifying general and specific ideas, deducing meaning from context, predicting and inferring information and other.

The improvement of English reading comprehension skills is crucial for anyone working in different field, particularly in education. Proficiency in reading comprehension not only enhances language proficiency but also enables teacher trainees to effectively engage with academic texts, expand their knowledge, and develop critical thinking skills. One method that has gained significant attention in recent years is project-based learning (PBL), which offers a promising methodology for promoting reading comprehension skills in an interactive and meaningful manner.

The primary aim of this study is to research the use of project-based learning as a means to enhance the development of reading comprehension skills in English at literal and inferential levels among teacher trainees who are pursuing a major in English. By adopting a project-based learning method, teacher trainees are immersed in real-life tasks and authentic reading materials that require active engagement, collaboration, and critical thinking. Through this didactic proposal, teacher trainees can deepen their understanding of English texts at literal and inferential level, improve their vocabulary, and enhance their ability to comprehend and analyze complex written information at least at intermediate level (B1).

The importance of this study lies in its potential to address the current challenges in English language learning and teaching methodologies. As the demand for English proficiency continues to rise in our globalized world, equipping future English teachers with effective teaching strategies is essential. By incorporating project-based learning into the curriculum, we can provide teacher trainees with practical experiences that develop their reading comprehension skills while fostering their creativity, problem-solving, critical thinking, and communication skills.

Moreover, the significance of this study beyond the confines of academia. In contemporary society, the aptitude to read and engage in critical analysis of written information in the English language has become an indispensable competency for persons seeking success across a range of professional and
social domains. Through the use of project-based learning, there is potential to enhance reading comprehension abilities, so better equipping teacher trainees to effectively facilitate students’ language development. This, in turn, enables teacher trainees to acquire the essential skills required for their personal and professional advancement.

In relation to the setting, it has been noted that there has been significant progress in the implementation of project-based learning for enhancing reading comprehension skills on a global scale. As backgrounds of the study, we state to Sari & Prasetyo (2021) examined the effects of project-based learning on the development of critical thinking skills within the context of a critical reading course. The research study utilized a quasi-experimental approach, incorporating pre-test and post-test measurements, to examine the data gathered from two distinct groups of learners. The experimental group was exposed to project-based learning, while the control group got conventional learning methods. The research findings indicated that the utilization of project-based learning yielded a notable enhancement in learners’ critical thinking abilities in comparison to traditional learning methods. The experimental group demonstrated a higher level of critical thinking skills compared to the control group. Additionally, the project-based learning approach provided an interactive and student-centered learning environment that fostered their motivation to learn and enhance their critical thinking skills.

The research findings indicate that the implementation of project-based learning in a critical reading course is an effective strategy for improving students’ critical thinking abilities. Hence, it is desirable for teachers to include project-based learning into their instructional methodologies as a means to enhance students’ aptitude for critical thinking. The research suggests that project-based learning can be a beneficial teaching and learning approach to improve learners’ critical thinking abilities in various contexts.

This study emphasizes the educational significance of project-based learning (PBL) in enhancing critical thinking abilities within critical reading curricula. The use of PBL not only enhanced the learners’ critical ability but also fostered a more interactive and student-centered learning environment, increasing their motivation to learn. This finding suggests that the incorporation of PBL could be particularly beneficial in contexts where reading comprehension in English is essential.

Anggraini (2021) in his research, which the objective was to examine the potential disparities in the reading proficiency of 10th-grade students at SMA Srijaya Negara Palembang, both prior to and subsequent to their exposure to Project-based Learning (PBL) instructional approach. Furthermore, the objective of the study was to investigate potential disparities in reading performance between the experimental group, which received instruction through PBL, and the control group, which did not receive PBL instruction. Lastly, the study aimed to investigate the perspectives of students on the use of PBL in learning reading. The study involved 72 10th-grade students who were divided into an experimental group (n=36) and a control group (n=36) using purposive sampling. Data collection for the experimental group involved the utilization of a pre-test, post-test, and questionnaire. The researcher employed the pair sample t-test and independent t-test to conduct data analysis.

The findings of the study indicated a statistically significant enhancement in the reading proficiency of the experimental group following the implementation of PBL, as evidenced by a p-value of 0.000, which is less than the predetermined significance level of 0.05. Therefore, the research findings indicate that the integration of PBL methodologies can lead to enhanced reading proficiency among 10th-grade students enrolled at SMA Srijaya Negara Palembang.

The research presents empirical evidence supporting the efficacy of implementing PBL in improving reading proficiency among 10th-grade students. This is evidenced by a notable increase in reading scores among students who received PBL instruction at SMA Srijaya Negara Palembang, in comparison
to their counterparts who did not receive such instruction. This suggests that adopting PBL methodologies can be a potent tool for boosting reading comprehension outcomes.

Sari et al. (2021) conducted a study with the principal aim of investigating if there existed a statistically significant disparity in reading comprehension and writing proficiency between students who received instruction through project-based learning and those who did not. The research utilized a quasi-experimental design with a nonequivalent control group. The participants in this study were chosen using purposive sampling and consisted of third-semester students enrolled in the English Study Program at Tridinanti University. The instruments utilized in this study were reading comprehension and essay writing examinations. The data was analyzed using paired and independent sample t-tests.

Findings indicated that both experimental and control groups showed improvement in writing essays, with most students progressing from the developing category in the pretest to the proficient and basic categories in the posttest. However, the experimental group performed better than the control group in the post test in making more structured essay writing. Regarding reading comprehension achievement, there was no statistically significant disparity observed between the experimental and control groups. However, it is noteworthy that the experimental group exhibited a statistically significant enhancement in reading comprehension achievement through the utilization of project-based learning.

This study presents empirical findings regarding the efficacy of project-based learning, specifically in the domains of reading comprehension and essay writing. The results of this research support the idea that while project-based learning may not consistently surpass conventional approaches in terms of enhancing reading comprehension, it does demonstrate promise in significantly augmenting this skill.

Puspitasari (2020) the primary aim of this study was to research the impact of project-based learning on the development of 21st-century skills among pre-service English teachers. The research utilized a qualitative research design, specifically employing a case study approach, to examine the data gathered from pre-service English teachers who were involved in a project-based learning initiative. The research findings indicated that the adoption of project-based learning had a noteworthy influence on the enhancement of 21st-century abilities among pre-service English teachers. These skills encompassed teamwork, communication, creativity, and critical thinking. The pre-service English teachers were able to work collaboratively and communicate effectively with their peers during the project-based learning program. They also showed creativity and critical thinking skills in completing the tasks given in the program. The research findings indicate that the implementation of project-based learning is a viable and efficacious method for fostering the development of 21st-century abilities within pre-service English educators. Therefore, it is recommended that teacher education programs should incorporate project-based learning to prepare pre-service teachers for the challenges and demands of 21st-century education.

Overall, the research suggests that project-based learning is a promising teaching and learning approach that could enhance the development of 21st-century skills in pre-service English teachers.

The contribution of this study is that highlights the deep impact of project-based learning on cultivating essential 21st century skills in pre-service English teachers, examples of important skills in various fields include teamwork, communication, creativity, and critical thinking. This research accentuates the broader applicability and advantages of project-based learning, suggesting it’s not just limited to improving reading comprehension, but also fostering a holistic development of skills crucial for modern educators.

Bakar & Razali (2019) carried out a quasi-experimental research to examine the efficacy of PBL activities as a pedagogical approach for enhancing the oral communicative proficiency of English language learners in Malaysia. The research consisted of a sample of 44 diploma students who were
currently registered in a Communicative English course at a technical college in Peninsular Malaysia. These participants were deliberately chosen for the purpose of this research. The intervention included a series of 12-week sessions that incorporated eight PBL exercises as the primary instructional approach. The data in this research were obtained by the administration of pre-tests and post-tests, specifically in the form of a speaking exam and a listening test. Additionally, a student questionnaire was administered at the conclusion of the study to gather further information. The data analysis involved the utilization of the MANOVA approach, in addition to the inclusion of descriptive statistics such as the mean, standard deviation, and percentage.

The findings of the investigation indicated a notable enhancement in the learners' comprehensive oral communication proficiency, accompanied by a strong positive perception of PBL among the learners. The study's findings indicate that the use of PBL as a teaching technique yields positive outcomes in enhancing the oral communicative skills of English language learners. Consequently, the research suggests the adoption of PBL as an appropriate instructional approach for technical students, who typically exhibit limited proficiency in the English language.

The study aims to provide empirical evidence supporting the effectiveness of PBL in enhancing the oral communicative proficiency of English language learners, particularly those with initially low proficiency levels, this study offers a broader perspective on the versatility of PBL; it is not solely beneficial for reading comprehension, but also holds promise in amplifying oral communicative skills.

The research conducted by Andriansah et al. (2019) aimed to investigate the impact of project-based learning on students' reading comprehension. The study employed a quasi-experimental research design with pre-test and post-test measurements to analyze the data collected from two groups of students: The experimental group was exposed to project-based learning, while the control group was subjected to conventional learning. The research findings indicate that the utilization of project-based learning yielded a notable enhancement in students' reading comprehension when compared to traditional instructional methods. The experimental group had a superior level of reading comprehension in comparison to the control group. Furthermore, the use of project-based learning methodology facilitated a dynamic and participatory educational setting for students, hence cultivating their intrinsic drive to acquire knowledge.

The research findings indicate that the use of project-based learning strategies effectively improves students' reading comprehension skills. Therefore, it is recommended that teachers incorporate project-based learning in their teaching practices to improve students' reading comprehension skills. The research suggests that project-based learning can be an innovative and beneficial teaching and learning approach to improve students' reading comprehension abilities.

The research provides empirical evidence supporting the effectiveness of PBL in significantly enhancing students' reading comprehension over traditional methods, this study directly correlates with the focus, emphasizing the tangible benefits of PBL in reading comprehension. Furthermore, the research accentuates the secondary advantages of PBL, such as creating an engaging learning environment and boosting student motivation.

Sirisrimangkorn (2018) carried out a study which primary aim was to research the efficacy of project-based learning, with a specific focus on incorporating drama, in improving the oral proficiency of English as a Foreign Language (EFL) learners. The study included participants who were students pursuing a major in English and were currently enrolled in a course titled Learning English through Drama. The research used a mixed-methods approach, applying both quantitative and qualitative data collection methods, to examine the effects of PBL with a specific emphasis on theater on the oral communication abilities of the participants. The findings derived from the analysis demonstrated a
notable enhancement in the oral proficiency of the students as a result of the use of project-based learning and theater techniques.

Furthermore, the research underscores many advantages of including project-based learning and theater as effective strategies for facilitating language acquisition and enhancing learners' oral proficiency. Based on the aforementioned findings, it is recommended that language classes integrate project-based learning centered around theater as a means to offer learners an enjoyable and interactive environment in which to enhance their speaking abilities and advance their overall language skills.

As a national background, Castro & Villacres (2021) who aimed primarily to demonstrate the influence of the project-based learning program on the composition of various types of English texts among fifth-grade secondary students at Coronel Pedro Portillo Educational Institution in Pucallpa in 2020. The research employed a quantitative methodology, especially adopting an experimental design with a pretest and posttest framework, utilizing a singular group. The total population consisted of four sections, totaling 149 students, with a simple random sample of 34 students drawn from a single section. The questionnaire technique was employed, and the knowledge test served as the assessment tool. After applying the non-parametric Wilcoxon test for related samples, it was concluded that the p-value of 0.000 is less than α = 0.025. Therefore, we can affirm that the project-based learning program significantly enhances the composition of various types of English texts among fifth-grade secondary students at Coronel Pedro Portillo Educational Institution in Pucallpa in 2020.

This study presents significant empirical findings that contribute to the ongoing discussion regarding the effectiveness of project-based learning in the context of English language education. Specifically, the study accentuates the positive impact of this pedagogical strategy on the ability of fifth-grade secondary students to compose diverse types of English texts, this insight offers a foundational understanding that such methodologies can tangibly boost English literacy skills, reinforcing the potential merit of the thesis’s focus on reading comprehension within a similar pedagogical framework.

In his study, Caipo (2020) aimed to determine the extent to which project-based learning enhances English language competencies among students at José Abelardo Quiñones Educational Institution in the Nuevo Chimbote District. The study employed a quasi-experimental design, employing an experimental methodology. The study population encompassed first-grade secondary school students at José Abelardo Quiñones Educational Institution, totaling 92 individuals -30 from 1st A, 31 from 1st B, and 31 from 1st C. From this population, an intact sample of 61 students from 1st A and 1st C was selected. To assess the data collection and competency enhancement, the statistical program SPSS 2016 was employed. Pretest and posttest were conducted, employing Kolmogorov’s normalization and the Mann-Whitney U-test, with a significance level of P ≤ 0.05 to derive results. In a comprehensive analysis, the results showed the scores and means attained in the pretest by both the experimental and control cohorts. The control group’s score was 12.19, indicating a lack of significant difference between the two groups. Similarly, the posttest scores were 17.05 for the experimental group and 13.05 for the control group. Evidently, there was a pedagogical gain of 8.74 in the experimental group, while no significant difference was noted in the control group. This finding suggests that project-based learning has definitely enhanced English language proficiency.

This research makes a significant contribution by emphasizing the concrete effectiveness of PBL in improving English language skills among students in the first grade of secondary education. Based on the notable pedagogical advancements noticed in the experimental group in comparison to the control group. Also, this research suggests that PBL is a powerful instructional method for reinforcing English comprehension skills.
Finlay, Regalado (2019) in his research proposed the utilization of project-based learning to enhance formative research skills among Pedagogy students. This research is situated within the sociocritical and interpretive paradigm, representing applied educational research. The study incorporated a sample of two teachers and thirty students, utilizing a non-probabilistic sampling procedure as defined by the researcher. During the fieldwork phase, a semi-structured interview guide was administered to teachers, students were provided with a questionnaire, and a pedagogical test was conducted. The diagnostic phase revealed the prevalence of traditional methods that fail to foster research-oriented training, and it exposed the academic weaknesses exhibited by pedagogy students. The learning process should initiate from the student’s intrinsic interest, encouraging them to propose solution alternatives for authentic issues with the aim of drawing them closer to research activities. Therefore, the primary outcome depends on the implementation of PBL, facilitating advancements in formative research and the cultivation of communication abilities. To summarize, it can be concluded that the proposal's implementation contributes to an elevation in research skills and brings Pedagogy students closer to real-world issues.

The contribution of this research is the explanation of how PBL can serve not only as a tool for language acquisition but also as a possibility for enhancing formative research skills among Pedagogy students. By spotlighting the drawbacks of traditional teaching methods and underscoring the importance of fostering student-initiated inquiry, this study accentuates the broader educational potential of PBL. In addition, it suggests that this approach can holistically nurture both linguistic and research skills, which makes it particularly relevant for students of a Higher Pedagogical Institute.

From this perspective, the need arose to create a didactic proposal to develop reading comprehension in English at the literal and inferential levels in teacher trainees of “Nuestra Señora de Chota” Higher Pedagogical Institute, looking for approaches, methods, with their respective strategies and activities. that can be applied to respond this problem presented to teacher trainees. Given what was stated, the research problem was formulated: How will a didactic proposal based on project-based learning develop reading comprehension in English at literal and inferential levels in the teacher trainees of “Nuestra Señora de Chota” Higher Pedagogical Institute?

This study is important because the didactic proposal seeks to promote the development of strategies, techniques and activities based on project-based learning that allows developing reading comprehension in English in the teacher trainees in the fourth year of training at the same institution; since, if project-based learning and reading comprehension strategies in English are not put into practice, achieving reading comprehension in English at the literal and inferential levels at an intermediate level will not be possible, which is why correctly designed strategies must be applied for this purpose.

Therefore, the general objective of this research is to create a didactic proposal based on project-based learning to develop reading comprehension in English at literal and inferential levels in the teacher trainees of “Nuestra Señora de Chota” Higher Pedagogical Institute. And as specific objectives:

Measure through an objective test the level of reading comprehension in English at literal and inferential levels in the teacher trainees. Establish the theoretical basis of the Project-based learning to support the proposal.

Design a didactic proposal based on Project-based learning to develop the level of reading comprehension in English at literal and inferential levels in teacher trainees. And finally,

Validate the didactic proposal through expert judgments.
Likewise, in this research, the following hypothesis was raised: If a didactic proposal based on project-based learning is designed, it will develop the reading comprehension in English at literal and inferential levels in the teacher trainees of “Nuestra Señora de Chota” Higher Pedagogic Institute.

Finally, the study was structured in five chapters: In Chapter I presents the theoretical design, wherein we can find the state of the art, epistemological foundations, the backgrounds of the study, and theoretical and conceptual bases are expounded; in Chapter II presents study outlines the methodological design, encompassing the type and design of the research, population and sample, techniques and instruments of data collection, procedures, and ethical aspects employed in the research. In Chapter III, the results are reported based on the data collected using the utilized devices; In Chapter IV, the discussions are shown, and in Chapter V, the didactic proposal is presented. Furthermore, the research’s conclusions and recommendations are offered; finally, the bibliographic references and appendices are considered.

**METHODOLOGY**

**Type of research**

This research is quantitative, carries out descriptive studies, is sequential and evidentiary, strictly following the research steps. The research is cross-sectional since data is collected at a specific time, its objective being the description of the variables. According to Hernández, et al. (2014) the purpose of descriptive research is to explain the characteristics that can be seen of people, populations or any fact that we want to investigate, in which we can establish relationships between variables by measuring and collecting information in a complete manner.

**Design of the research**

Due to the characteristics of the research, it is framed at the Descriptive-Propositional research level. The research design to be used is as follows

**Figure 1**

Research design

Propositional research refers to a dialectical process that employs a range of tools and procedures to identify and address foundational issues, provide solutions to scientifically formulated inquiries, examine the interplay between variables and occurrences, or develop new knowledge.

This research is oriented to create a didactic proposal based on project-based learning to develop reading comprehension in English in the teacher trainees of “Nuestra Señora de Chota” Higher Pedagogical Institute.
Population and sample

Population

According to Hernandez et al. (2014) population is composed of individuals, objects, or events that share common characteristics. The purpose of defining population is to provide the researcher with a clear and defined framework for conducting their study.

For that reason, there is a population of 18 teacher trainees (5 men and 13 women) in the fourth year of languages specialty English of "Nuestra Señora de Chota" Higher Pedagogical Institute - Chota, (taken from the Enrollment card available on SIA – DIFOI)

Sample

Creswell (2014) emphasizes that the sample in research is a subset of the study population, which implies that not the entire population will be studied but only a representative part of it. Additionally, he highlights the importance of selecting the sample rigorously and carefully so that the results obtained are valid and representative of the population.

In that sense, it is composed of the same number of teacher trainees in the fourth year of languages specialty English of "Nuestra Señora de Chota" Higher Pedagogical Institute - Chota.

Sample inclusion criteria were

- All the teacher trainees in the fourth year of the career of languages, specialty: English of "Nuestra Señora de Chota" Higher Pedagogical Institute - Chota.
- Teacher Trainees enrolled during the 2022 academic year.
- Teacher Trainees with regular attendance to the course.
- Teacher Trainees who were studying to become English teachers.

Techniques and instruments of data collection

According to Tamayo (1998, cited in Castillo & Herrera, 2011) states: "technique is a set of mechanisms, means and systems to direct, collect, keep rework and transmit data. It is also a system of principles and norms that help to apply the methods but perform a different value"(p.148).

Cabinet techniques

It will allow the collection of bibliographic information in a systematic and organized way. Its instrument is the file to record information for background and the construction of the theoretical design.

Field techniques

They are used in the field, environment, or scenario, where the phenomenon occurs. This was used:

Pedagogical Test

According to Cerezal & Fiallo (2002) define the "pedagogical test is frequently used in pedagogical research with the aim of diagnosing the state of knowledge, habits, and abilities of the subjects at a given moment, in general. (p. 130)

It helps to know the effectiveness of teaching.

It serves to control the educational process.
It tries to assess the achievement of students in a given discipline.

**Instruments**

They are the conceptual or material tools that serve as research techniques, especially data collection techniques. The following was used:

**Objective test**

Cerezal & Fiallo (2002) state that objective test is a valid and highly reliable instrument in educational research. The primary attributes of this particular examination encompass the subsequent aspects:

- They allow a greater exploration of knowledge.
- Those evaluated can answer a more significant number of questions quickly.
- The luck factor is reduced to a minimum.
- The degree of subjectivity of the evaluator significantly decreases.

Its difficulty lies in the care and rigor in its preparation and the little depth in the content.

Some of the types of questions used in this type of test are the following:

- True–false tasks
- Fill in the gaps tasks
- Multiple choice tasks
- Match tasks
- Others.

The instrument used in this study to assess the dependent variable. (Reading comprehension) was the objective test and the type of questions were of multiple-choice tasks.

The objective test consisted of 19 questions, distributed in 2 dimensions based on the dependent variable, the literal level of 5 items, and the inferential level of 14 items.

**Instrument validity**

The instrument was validated using the Expert Judgment technique, where the collaboration of 3 experts on the subject were requested, resulting in the rating of "Very Good."

**RESULTS**

**Analysis and interpretation of results**

In order to measure the level of reading comprehension in English, an objective test was applied to a sample of 18 teacher trainees of the fourth year of the career of language specialty English of "Nuestra Señora de Chota" Higher Pedagogical Institute. The objective test contained a text with 6 paragraphs and 19 items, the items were based on the 2 dimensions of the dependent variable, 5 items of the literal level, and 14 items of inferential level.
Table 3  
*Dimensions, indicators and items of the objective test*

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Indicators</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literal</td>
<td>Find factual information</td>
<td>4, 15</td>
</tr>
<tr>
<td></td>
<td>Find negative factual information</td>
<td>1, 10, 13</td>
</tr>
<tr>
<td></td>
<td>Select summary information</td>
<td>19</td>
</tr>
<tr>
<td>Inferential</td>
<td>Understand vocabulary from context</td>
<td>7, 8, 18</td>
</tr>
<tr>
<td></td>
<td>Recognize references</td>
<td>3, 6, 9, 16, 17</td>
</tr>
<tr>
<td></td>
<td>Recognize paraphrases</td>
<td>11, 14</td>
</tr>
<tr>
<td></td>
<td>Make inferences from stated facts</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Infer rhetorical purpose questions</td>
<td>2, 12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>19 Items</td>
</tr>
</tbody>
</table>

*Note:* author’s own elaboration.

In addition, to process the results of the objective test was used the following rating scale:

Table 4  
*Determination of qualification for higher education system*

<table>
<thead>
<tr>
<th>Vigesimal scale</th>
<th>Performance Level Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>00-05</td>
<td>Before start</td>
</tr>
<tr>
<td>06-10</td>
<td>Start</td>
</tr>
<tr>
<td>11-14</td>
<td>In-progress</td>
</tr>
<tr>
<td>15-19</td>
<td>Accomplished</td>
</tr>
<tr>
<td>20</td>
<td>Outstanding</td>
</tr>
</tbody>
</table>

*Note:* Resolución Viceministerial N.° 123-2022-MINEDU.
Table 5

Level of reading comprehension in English at literal and inferential levels in the teacher trainees

<table>
<thead>
<tr>
<th>Teacher Trainees</th>
<th>Find factual information</th>
<th>Find negative factual information</th>
<th>Select summary information</th>
<th>Average (60 points)</th>
<th>Vigeimal scale</th>
<th>Performance Level</th>
<th>Dimensions</th>
<th>Inferential Level</th>
<th>General Average Vigeimal scale</th>
<th>General Performance Level Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>i4</td>
<td>i1</td>
<td>i5</td>
<td>i10</td>
<td>i19</td>
<td>00 33</td>
<td>11.00</td>
<td>In-progress</td>
<td>i7</td>
<td>00 00</td>
<td>00 00</td>
</tr>
<tr>
<td>i2</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>00 30</td>
<td>10.00</td>
<td>Start</td>
<td>i8</td>
<td>00 00</td>
<td>00 00</td>
</tr>
<tr>
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Note: Objective test applied to the teacher trainees of the fourth year of the career of language, specialty English of Nuestra Señora de Chota Higher Pedagogical Institute.
This table shows the results of the objective test to measure the level of reading comprehension in English, which was applied to the teacher trainees of fourth year of the career of languages, specialty of English of "Nuestra Señora de Chota" Higher Pedagogical Institute. It is observed that the average performance level of reading comprehension in English among the teacher trainees was at START and according to the vigesimal scale was 9.52 points.

**Graphic 1**

*Level of reading Comprehension in English at literal and inferential levels*

![Performance Level Scale](image)

**Note**: table 5.

This graphic shows that at the level of reading comprehension in English, the vast majority of teacher trainees (77.78%) were at the start level; however, a very low proportion (16.67%) were at in-progress level and a minimum proportion (5.56%) were at the accomplished level. For this reason, it is necessary to create a didactic proposal based on project-based learning to develop the reading comprehension in English, since there was a minimum proportion (5.56 %) that were at the accomplished level and there were no students at the outstanding level.
Note: table 5.

The figure shows the teacher trainees at the literal level dimension were at in-the process level with an average of 11.61 points; however, at the inferential level dimension they obtained a lower average, placing them at the start level with an average of 7.42 points. Therefore, it is necessary to create a didactic proposal based on project-based learning to develop reading comprehension in English.

Note: table 5.
In this figure shows that at the start performance level and at inferential level dimension there was a great proportion of teacher trainees (77.78%); as well as, at the literal level dimension there was a moderate proportion of teacher trainees (44.44%). At the literal dimension, 50% of teacher trainees were at the in-progress level; In this same performance level at the inferential dimension there was a very low proportion of teacher trainees (16.67%), at accomplished level, in both dimensions we found a minimum proportion of teacher trainees (5.56%). Therefore, it is necessary to create a didactic proposal based on project-based learning to develop reading comprehension in English.

**Graphic 4**

*Literal level dimension in the vigesimal scale*

![Literal level dimension in the vigesimal scale](image)

Note: table 5.

The figure shows that on the vigesimal scale in relation to the literal level dimension, of the three indicators evaluated in the objective test, the teacher trainees had a better vigesimal average in the indicator find factual information and select summary information (11.67) and in the criterion find negative factual information reached a lower vigesimal average (11.50), which they did not manage to exceed the level in-process. Therefore, it is necessary to create a didactic proposal base on project-based learning to develop reading comprehension in English.
Note: table 5.

The figure shows that on the vigesimal scale in relation to the inferential level dimension, of the five indicators evaluated in the objective test, the teacher trainees had a better vigesimal average in infer rhetorical purpose questions (9.44) and in the other indicators they were unable to pass a vigesimal average of 7.3, which indicates that all students evaluated in the inferential level dimension were at start level. Therefore, it is necessary to create a didactic proposal based on project-based learning to develop reading comprehension in English.

RESULTS AND DISCUSSION

Project-based learning to develop reading comprehension in English in teacher trainees of “Nuestra Señora de Chota” Higher Pedagogical Institute.

Regarding the specific objective measure through an objective test the level of reading comprehension in English in the teacher trainees, the results were decisive, showing that a large majority of teacher trainees (77.78%) are at the START level; However, a very low proportion (16.6%) are at the IN-PROGRESS level, a minimum proportion (5.56%) are at the ACCOMPLISHED level and no one of the teacher trainees (0%) was at the OUTSTANDING level concerning to reading comprehension in English in its literal and inferential levels dimensions, obtaining alarming diagnostic information since reading comprehension becomes a crucial skill in the learning of any language, including English as a foreign language. It refers to the ability to read, understand, and interpret written texts in the language being studied. Haerazi et al. (2019) suggest that reading comprehension involves more than grasping individual words within a text; it involves constructing and deriving meaning from these words in context.

The research explores the efficacy of project-based learning (PBL) as a pedagogical approach to develop reading comprehension skills at literal and inferential levels among teacher trainees of the professional career of languages, specialty English of “Nuestra Señora de Chota” Higher Pedagogical Institute. Drawing on the existing literature (backgrounds), the study is grounded in the premise that
PBL has demonstrated positive effects on various language skills, including critical thinking, oral communicative competence, writing skills, and overall language proficiency.

The literature review reveals a consistent trend across studies, emphasizing the positive impact of PBL on language skills. Notably, studies by Sari & Prasetyo (2021), Anggraini (2021), Sari et al. (2021), Puspitasari (2020), Bakar & Razali (2019), Andriansah et al. (2019), Sirisrimangkorn (2018) and Castro & Villacres (2021) and others, show how PBL contributes to the development of critical thinking, reading achievement, writing skills, and 21st-century skills. These results provide a solid theoretical foundation for this didactic proposal. According to the research objectives, both general and specifics, are well-defined and aligned with the existing literature. The research aims to measure the level of reading comprehension through an objective test, establish a theoretical basis for PBL, design a didactic proposal, and validate it through expert reports. The specific objectives are methodologically solids and provide a structured framework for the research design.

Taking account, the objective test results highlight the current state of reading comprehension among teacher trainees. The majority of the teacher trainees are at the “Start” level, indicating a need for improvement. The breakdown of performance at literal and inferential dimension provides valuable insights, analytical specific areas for intervention.

The results obtained in reading comprehension in English among teacher trainees align with the wider context presented in the literature. The positive outcomes of PBL interventions in other studies provide a promising context for the present didactic proposal. It is noteworthy that while the literature primarily focuses on oral and written skills, the current research seeks to bridge a gap by emphasizing on reading comprehension in English.

The research highlights the potential benefits of implementing PBL in the context of reading comprehension in English for teacher trainees. The didactic proposal rooted in PBL principles, holds promise for improving the reading comprehension in English of teacher trainees. The results of the objective test serve as a baseline, offering a measurable point of reference for assessing the effectiveness of the proposal.

Furthermore, the current proposal has been validated by three experts in the area with a rating of Very High and as a well-organized proposal based on the TBL strategies and techniques that allow teacher trainees to develop reading comprehension in English in its literal and inferential dimensions, thus overcoming the difficulties that teacher trainees would find when confront with real-world in reading comprehension in English in different kinds of texts.

In conclusion, the research on project-based learning and its impact on language skills, attached with the objective test results, provides a robust foundation for the didactic proposal. By addressing the identified gaps in reading comprehension among teacher trainees, the study contributes to the wider discourse on effective pedagogical strategies in language education. The research positions project-based learning as a valuable pedagogical method for developing reading comprehension in English, aligning with the global trend in innovative teaching methodologies.

CONCLUSIONS

The objective test was designed and applied as an instrument for collecting information, to measure the level of reading comprehension in English presented by the teacher trainees of the professional career of languages, specialty English of “Nuestra Señora de Chota” Higher Pedagogical Institute, taking into account the reading comprehension dimensions at the literal and inferential levels.
The level of reading comprehension in English presented by the teacher trainees was determined, after having applied the objective test, in which the result was that a vast majority of teacher trainees (77.78%) were at the START level.

The PBL theoretical basis to support the proposal were established according to following theories: Sociocultural Theory, Krashen's Input Hypothesis, Schema theory in reading, and collaborative Learning and Vygotsky’s Zone of Proximal Development.

The didactic proposal was designed, which was organized into 4 learning projects, programmed over 4 months, each project of 16 hours (a month), and that proposes the use of PBL strategies to develop reading comprehension in English in teacher trainees in the two dimensions of literal and inferential levels.

The didactic proposal was validated by three experts in the area with a rating of Very High and as a well-organized proposal based on the PBL, in which the strategies and techniques allow teacher trainees to develop reading comprehension in English in its literal and inferential dimensions, thus overcoming the difficulties that teacher trainees would find when confront with real-world in reading comprehension in English in different kinds of texts.
REFERENCES


