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The upsides to working with a lap book as a study aid

Ventajas de trabajar con un lapbook como apoyo de estudio

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Abstract

This research assesses the utility of lap books as a didactic aid in teaching crowded classrooms with specific reference to the participation level and academic achievement. The study was carried out over three terms of high school English classes in a school in Quito, Ecuador; the assessment of results was done both through oral lessons and by end-term written tests. Results also reveal that lap books foster better performance in tests in terms of an increased number of high scores and reduced lower scores in subsequent years. Combining constructivist learning and differentiation as a teaching approach, lap books enhance student participation as well as foster individual learning styles that make the content more easily understandable and retained. The change that was observed across terms indicates improved overall performance, and the existence of lap books facilitated equality in terms of high grades. Consequently, based on such findings made in this study, it is recommended that the development and use of lap books can be adopted as a more conceptually appealing approach for enhancing students' learning in situations where a more direct form of one student/teacher ratio, interaction is due to large group sizes.

Keywords: study aid, lapbook, learning styles, creativity

Resumen

Esta investigación evalúa la utilidad de los libros de vuelta como ayuda didáctica en la enseñanza en aulas concurridas, con referencia específica al nivel de participación y rendimiento académico. El estudio se llevó a cabo durante tres semestres de clases de inglés de secundaria en un colegio de Quito, Ecuador; La evaluación de los resultados se realizó tanto mediante lecciones orales como mediante pruebas escritas de final de semestre. Los resultados también revelan que los libros de vueltas fomentan un mejor rendimiento en las pruebas en términos de un mayor número de puntuaciones altas y una reducción de las puntuaciones más bajas en los años siguientes. Al combinar el aprendizaje constructivista y la diferenciación como enfoque de enseñanza, los libros prácticos mejoran la participación de los estudiantes y fomentan estilos de aprendizaje individuales que hacen que el contenido sea más fácilmente comprensible y retenido. El cambio que se observó entre trimestres indica un mejor desempeño general, y la existencia de libros de vuelta facilitó la igualdad en términos de altas calificaciones. En consecuencia, sobre la base de los hallazgos de este estudio, se recomienda que el desarrollo y uso de libros portátiles se pueda adoptar como un enfoque conceptualmente más atractivo para mejorar el aprendizaje de los estudiantes en situaciones donde una forma más directa de una proporción estudiante/maestro, La interacción se debe al gran tamaño de los grupos.

Palabras clave: ayuda al estudio, lapbook, estilos de aprendizaje, creatividad

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INTRODUCTION

According to recent educational paradigms, learners are overwhelmed by anxiety to get passing marks on tests, and consequently, they end up forgetting the knowledge learned. These challenges are compounded by congestion in classrooms likely to have learners with learning needs. To tackle these challenges, teachers are in search of new methods to apply in the classroom to improve learning, interest, and valuable knowledge. In this regard, one of the useful tools that have desalinated potential usage includes the lap book (Luo, 2020).

This study examines the facilitation of learning of lap books as a fun instructional tool in educating the students. The lap books, due to their foldable construction, provide multiple connection possibilities, which is suitable for reinforcement of conceptual-spatial, visual, and haptic knowledge, inclusive of key concepts, structures, vocabulary, and forms across curricula (Voice & Stirton, 2020). This research will therefore seek to affirm the usefulness of lap book activities to students' understanding, retention of content, and general academic performance.

In order to assess the benefits derived from the use of lap books, this research was conducted in a senior English class in a school in Quito, Ecuador. To complement the concepts taught in English class, students were taught how to rigorously make and fold remarkable lap books. This is because the performance of the student was also measured by taking a final examination whereby a scoring sheet was utilized.

LITERATURE REVIEW

The use of a lap book in learning has therefore been found to be an effective teaching practice that encourages students' participation and learning accomplishment. This section briefly discusses previous work done on lap books to establish the voids that shall be used in developing the model for this paper to address. Constructivism places a premium on learning by doing or learning by interacting with objects in the environment. Studies by Manokore et al. (2023) show that lap books promote constructivism in learning by allowing children to engage in manipulative learning and seek knowledge on their own. When students make lap books, they are able to consolidate information while, in the process, enhancing their understanding and remembering of what they have learned. Gardner's Multiple Intelligences means that distinct abilities of the student can improve the learning process. According to research done by Ariza and Olatunde-Aiyedun (2023), it has been established that lap books can meet the needs of various learning styles since the kind of book is more of a visual and tactile type. This flexibility enables teachers to develop a better understanding of learner differences, which cannot be captured in a pre-designed curriculum.

Differentiated instruction is designed to fit teaching methods and materials as close to the needs of the students as possible (Manokore et al., 2023). In this type of instruction, it was found that lap books can be useful tools in accordance with learning profiles since changes and adjustments can easily be made to them. Studies by Bano et al. (2024) provide evidence to the proposition of lap books as a means of addressing differentiated learning needs as learners move through the content at their own ability and comprehending levels. Due to the availability of digital materials, teachers have considered the utilization of digital lap books. These electronic versions allow the students to create and develop hands-on projects by incorporating apps and websites for sharing and collaboration. Wei et al. (2021) in their study suggest that motivation and consequently learning can be motivated by the use of technology products; in this case, digital lap books would serve this purpose, especially with learners who are more in touch with technology (Sokolova et al., 2021). Nonetheless, there is still a lack of prior empirical evidence as to whether or not digital lap books are as effective as physical lap books in the facilitation of learning outcomes.

In addition to the lap books, the use of personal-owned wireless devices such as smart phones, tablets, and iPads is allowed under the BYOD program (Tinmaz & Lee, 2019). With BYOD, several subjects can be made to blend with lap books, wherein students can produce as well as retrieve digital material at any time and place. Still, it is acknowledged that the presented usage may bring about various advantages; there is a limited number of research concerning the ways lap books can be integrated into BYOD practice, and this indicates an essential theoretical void (Sokolova et al., 2021).

In language arts, lap books have been very helpful in teaching vocabulary and grammar, as well as reading comprehension and writing. Thus, the findings have shown that lap books help increase learning achievements not only for the purpose of remembering the meanings of the given terms but also for meaningful learning (Sakita et al., 2024).

Nevertheless, there is not enough literature that seeks to establish the thorough implication of lap books with regard to the improvement of writing skills of students to other genres of writing. In science education, it has been known that lap books are effective tools for concept development, experiments, and data collection. Previous studies show that the use of lap books enables students to understand a scientific concept better and sort the outcomes systematically (Sakita et al., 2024). Though prior scholarship demonstrates their utility in science, more research is required about intended content topics and the role of lap books in supporting scientific inquiry.

Other social studies subjects that are easy to teach using lap books are social studies, history, geography, and civics, English as a Foreign Language, whereby students have a space to creatively present the information they have gained (Sakita et al., 2024). Literature presents showed that implementing lap books in social studies enhances creativity and enables the pupils to understand real-life situations from history. However, the research seems to be lacking strong positive appraisals of how lap books can improve civic learning and participation among students.

Gaps in the Literature

However, despite an emergent body of studies proving lap books useful in a wide range of learning contexts, several questions remain unanswered. The literature has few papers that attempt to compare the extent to which students utilize digital or physical forms of lapbooks as students learn (Sakita et al., 2024). Since many previous studies focus on short-term outcomes, more long-term investigations exploring the long-term consequences of the usage of lap books on students' knowledge outcomes and skills enhancement are expected. Further research is also needed to better understand how lap books can be implemented in content-area learning, particularly in such areas as STEM.

Furthermore, the existing literature offers very scarce information with regard to proper suggestions of how to use lap books most efficiently in classrooms with various learning students; courses, particularly within the BYOD frameworks (Tinmaz & Lee, 2019). To fill these gaps, this article will explore lap books as an innovative teaching tool for chaotic classrooms. Due to overcrowded classrooms, this will afford a contribution to the existing literature on effective instructional practices.

METHODOLOGY

This research study took place in a state-funded high school in Quito, Ecuador, with thirty-six students using a naturalistic approach over one academic year, which is split into three terms. The main research question of this study was to assess the usefulness of lap books as an instructional instrumental point for improving learners' performance and interest based on the senior English class.

Research Methods

The research was conducted using a quantitative and qualitative point of view, which allowed to present the most accurate picture of student achievements and activity. Other forms of research employed are assessments made at the end of each term, which makes it easy to assess students' performance and, therefore, determine the effect of the lap book intervention on student learning (Tinmaz & Lee, 2019). During the first term, the assessment took the form of an oral presentation by the students on the subjects of the period in question. This oral assessment was scored with a rubric that is intended for the assessments of diverse criteria for oral communication, such as the clarity of language, the logic of the presentation, and the level of knowledge of the topic (Luo, 2020). Through assessment against the rubric marks, it was possible to have an appreciation of the students' understanding of the content.

On the second and third terms, the homework consisted of a written test in which the lap book was used to review the material beforehand. This was made easier since it enabled the students to use the knowledge they had put in their lap books when answering questions on tests (Tinmaz & Lee, 2019). These written tests were also assessed through criterion reference using aspects of knowledge, analysis, imagination, writing, and the general quality of the answers. Each criterion was assigned a five-point scale so that the students' performance and the usefulness of lap books can be assessed in detail.

Rationale for Methods

The use of a mixed-methods approach was deemed appropriate given the objective of establishing the effect of lap books on students' learning. Using both qualitative and quantitative data, the study sought to go beyond merely assessing the results of students and also their motivation level while using the lap books.

The pre-test allowed me to administer an initial check on students' understanding of the curriculum without the interference of the lap book intervention. It was very important when we wanted to assess increased performance displayed in the following terms while using lap books.

The use of lap books as study aids in the written tests helped in determining how relevantly the students were able to use this material in enhancing their learning. This is because the rubric criteria were detailed in such a way that a number of aspects of a student's performance would be adequately covered when the scores given for the different periods were being compared.

Therefore, the chosen approach of this study enables understanding of the diverse advantages of the use of lap books when there are too many students in a classroom and their impact on the students' learning processes.

FINDINGS

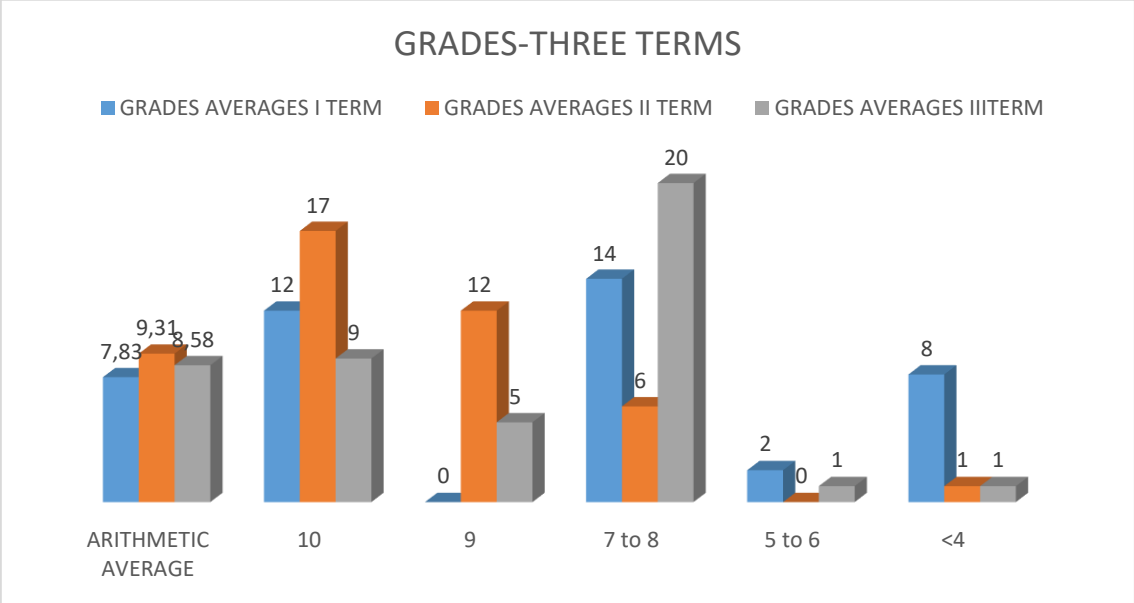
Table 1

Grades averages

GRADES AVERAGES			
	I TERM	**II TERM**	**III TERM**
No STUDENTS	36	36	36
ARITHMETIC AVERAGE	7,83	9,31	8,58
SCALES			
10	12	17	9
9	0	12	5
7 to 8	14	6	20
5 to 6	2	0	1
<4	8	1	1

Graphic 1

Grades averages



It is evidenced in the second term that the number of students that reached a 10 as a grade was higher than in the first term and second term. This indicates that the use of lap books as study aids might have had a positive effect on students'' performance, particularly in the second term. Also in the first term, more students were recorded to have obtained scores of between 0 and 4 than those of the second and third terms. This means that as the intervention of the lap books increased, the number of students scoring at the lower end reduced, and this could mean that the students' comprehension and retention improved. 5 and 6 grades were infrequent in the three terms of the year, although the first term had slightly more students of these grades than the following terms. This again strongly indicates that the lapbook approach might have assisted some students not to perform at this midrange but rather improve on it. In addition, the performance of students in grades 7 and 8 also improved, with the third term registering the highest number in these categories. Such a pattern points toward a kind of accumulation, as more frequent use of laptops led to more constant progress among students. In sum,

these analyses indicate the students' improvement in academic performance as they carried on using lap books, concurring with the notion that the use of this tool can be helpful in addressing the learning needs of multiple students in crowded classes.

DISCUSSION

From this study, it is clear that lap books can be used as an effective teaching aid in improving the performance of learners, particularly in crowded classes. This number rises significantly during the second term after employing the use of lap books, and the suggested intervention indicates that the lap books enhance the students' understanding and CU during their studies. This is in parallel with other studies done on the application of active learning techniques that postulate that when students are exposed to such tools, which are haptic and require a high level of interaction, it will enhance the retention of knowledge as the student will be exposed to his or her learning through multiple senses (Manokore et al., 2023). This paper shares constructivist learning theories, especially from Manokore et al. (2023), which highlight that students learn much better when they build knowledge that is within them rather than having it imposed on them. This is why lap books will complement this approach because, as students attempt to make a physical connection with information, so too are they allowed to construct an individualized, manipulatable model of what they are learning.

Also, the fact that the overall number of students who scored in the lowest grade ranges, <4 and 5-6, decreases across the terms suggests that lap books may assist the weaker students to move from failing to passing grades. This improvement supports the distinction for ability approach of the differentiated instruction, which postulates that on and off flexible materials can address high and low ability students, especially within overcrowded classes that allow minimal one-on-one interaction between teacher and student (Sokolova et al., 2021). Lap books are organized and offer the kids an opportunity to bias the lapbook, thus accommodating different learning abilities, which should be most important to students who at the start of the activity have low performance abilities. Gardner's multiple intelligences theory also supports this approach because lap books encourage students to use their visual-spatial, kinesthetic, and verbal-spatial connections, as well as their language skills, to comprehend and memorize data.

That high performance was realized and sustained to the third term of learning implies that with the use of lapbooks, the children have benefitted in their learning for the long term. Research evidence from the areas of testing effect and spacing effect demonstrates that learners who use past information often grasp more credit than students who cram (Luo, 2020). Through the cyclical construction as well as utilization of facilities, known as lap books, it is posited that retrieval practice plays a role in the strengthening of concepts across terms and consequently the improvement of memory, indicative of academic development.

However, there are several considerations of the study that need to be looked into with regard to the following: First of all, the research took place in one specifically selected school, which means that the results could only be partially extrapolated to other schools. Subsequent research across more than one school or with many students would be required to generalize the results found here (Voice & Stirton, 2020). Further, since data was collected in the form of summative assessments and rubric-based grading, there may always be scope for bias in the scores given. One more limitation of this study is that other factors affecting student outcomes have not been considered, including the shifts in the teaching-learning process, in the content of lessons, or in motivation during the school year.

The implications of this research can be interpreted by positing that lap books can be used in the regular curriculum as a low-cost, high-yield intervention strategy for helping students learn in resource-constrained, crowded classrooms. Schools could use lap books where necessary, depending on the teaching sessions, where some concepts may prove difficult and, therefore, may need constant

reinforcement. But future research should advance the use of technology to combine lap books with hands-on, as there may be other benefits, such as facilitating student engagement and accessibility.

CONCLUSION

This study aimed to assess the efficacy of lap books in teaching and learning situations where lessons are delivered in congested classrooms and also how it can boost students' yields, understanding, and interest. Engaging their senses in learning, lap books are consistent with constructivism and differentiated instruction where all student learning styles are accommodated while they construct their knowledge. In the three terms investigated, findings revealed that enhanced performance implies an increase in the number of students obtaining higher grades than before while a decrease in students' lower results. It simply implies that, through the development of lap books, the learning difficulties that arise from large group teachings could be contained because here, the students are provided with a form of learning that they can easily manage and customize, which makes it easy to reinforce your learning lessons.

The outcomes corroborate the scope of the presented thesis: lap books as pedagogical tools are viable, as are the multi-sensory learning solutions that might prove highly effective after teachers' attention is scarce. As such, lap books enhance learning delivery effectiveness and assist both high and low performers, and the achieved academic benefits meet the overall curriculum objectives.

Future suggestions are to test the findings with more participants and of a higher variety in order to confirm the possibilities of applying digital technologies to make lap books more engaging and teach more effectively. Lap books could be considered as a solution in schools where there are many students in a single classroom because the use of lap books in various subjects can aid in increasing the quality of students' learning. Finally, lap books symbolize a vital and efficient teaching aid for teachers who want their students to perform well in difficult classroom settings in particular.

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APPENDIXES

Table 1

Pre-test/Post-test comparative tables

	I TERM	II TERM	III TERM
student 1	5,55	5,28	7,58
student 2	10,00	10,00	10,00
student 3	10,00	7,58	8,00
student 4	10,00	5,28	10,00
student 5	0,00	0,00	7,58
student 7	5,55	1,00	0,00
student 8	0,00	10,00	10,00
student 9	0,00	5,28	5,28
student 10	10,00	10,00	5,28
student 11	7,77	10,00	10,00
student 12	4,44	5,58	0,00
student 13	10,00	10,00	1,00
student 14	0,00	0,00	0,48
student 15	2,22	5,28	0,00
student 16	7,77	10,00	10,00
student 17	10,00	5,58	0,00
student 18	0,00	5,58	5,28
student 19	2,22	10,00	0,48
student 20	4,44	0,00	7,00
student 21	10,00	10,00	10,00
student 22	0,00	10,00	0,48
student 23	0,00	10,00	7,48
student 24	5,55	10,00	10,00
student 25	10,00	5,28	0,48
student 26	0,00	10,00	7,00
student 27	10,00	10,00	10,00
student 28	10,00	5,28	0,00
student 29	0,00	5,58	0,48
student 30	4,44	5,28	0,00
student 31	4,44	5,58	5,58
student 32	0,00	0,00	0,48
student 33	10,00	0,00	0,00
student 34	0,00	10,00	5,58
student 35	0,00	10,00	0,00
student 36	5,55	10,00	5,58
student 37	10,00	10,00	10,00
	7,84	9,31	8,58

GRADES AVERAGES			
	I TERM	II TERM	IIITERM
No	36	36	36
ARITHMETIC	7,83	9,31	8,58
SCALES			
10	12	17	9
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Graphic 1

Pre-test/Post-test comparative tables

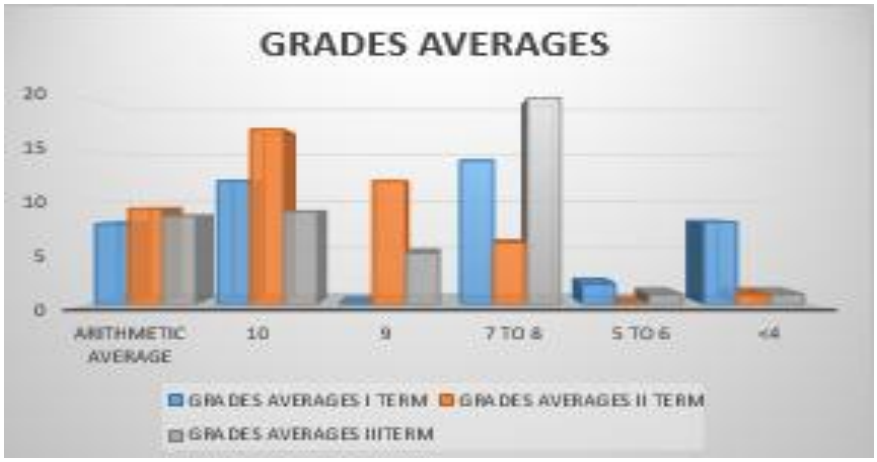

Figure 1

Evidences