

# Tailored Learning: Effectiveness of Graphic Organizers in Meeting the Needs of Slow Learners

Prabhjyot Kaur

Senior Research Fellow, Department of Education, Punjab University, Chandigarh, India

Corresponding author: prabhkaur87@hotmail.com

Received: 22-12-2025

Revised: 25-03-2026

Accepted: 14-04-2026

## ABSTRACT

Research from the past has demonstrated that students utilize graphic organizers to link concepts and ideas. Graphic organizers act as scaffolds to organize ideas. Utilizing graphic organizers promotes knowledge chunking and aids in learning. The present investigation sheds light on the effectiveness of graphic organizers in meeting the unique learning needs of slow learners in government schools of Chandigarh. Slow learners often struggle with understanding complex concepts and retaining information, which hampers their academic progress. Graphic organizers, as visual learning tools, help to simplify and organize information, making it easier for students to comprehend and remember key content. A purposive sampling technique was employed to select a sample of 40 slow learners from 8th grade in government schools of Chandigarh, with 20 students assigned to the experimental group and 20 to the control group. These learners were identified through checklist, academic performance records and teacher recommendations, focusing on students who consistently demonstrated difficulties in keeping up with the curriculum. Self-made questionnaires were designed to collect data. The responses gathered will be subjected to t-test to assess the impact of these tools on students' academic performance, engagement and comprehension ability in the learning process. The findings of this study demonstrate that graphic organizers create a tailored learning environment that significantly enhances the academic performance, comprehension and engagement of slow learners. This study seeks to provide meaningful insights for educators and policymakers, promoting the use of graphic organizers in classrooms to effectively support slow learners. Ultimately, it contributes to a more inclusive and adaptive teaching approach that accommodates diverse learning needs.

**Keywords:** Slow Learners, Graphic Organizers, Scaffolding, Tailored Learning, Academic Performance

*Never discourage anyone...who continually makes progress, no matter how slow.*

— (Plato, n.d.)

In the 21<sup>st</sup> century, where education is increasingly moving toward digital platforms, it is estimated that up to 15% of school-going students still struggle with basic comprehension and retention, putting them at risk of academic and social isolation (Subramania, 2012). Despite the significant advancements in e-learning, blended learning and other modern educational approaches, many students continue to face challenges in understanding, memorizing, and retrieving information from traditional expository textbooks (Holley & Dansereau, 2014). These difficulties often manifest as poor academic

performance, reduced self-confidence and disengagement from school, creating a pressing need for effective interventions tailored to their needs. To tackle these challenges, educationists have investigated various methods, with graphic organizers standing out as a highly effective tool.

**How to cite this article:** Kaur, P. (2026). Tailored Learning: Effectiveness of Graphic Organizers in Meeting the Needs of Slow Learners. *Educational Quest: An Int. J. Edu. Appl. Soc. Sci.*, 17(01): 133-139.

**Source of Support:** None; **Conflict of Interest:** None



Rooted in Vygotsky's concept of scaffolding, which emphasizes providing temporary support to help students achieve independence (Wood *et al.* 1976), graphic organizers offer structured visual representations that simplify complex information. By transforming linear text into spatial frameworks, they enable students to process, recall, and summarize essential information more effectively (Robinson *et al.* 1998). This structured approach minimizes cognitive overload while aligning with cognitive theories like schema theory, dual coding theory, and cognitive load theory, which highlight the significance of organized and dual-processed information in enhancing learning (Dexter & Hughes, 2011).

Numerous studies highlight the versatility of graphic organizers across subjects and learner demographics. For instance, Novak (2010) demonstrated the effectiveness of graphic organizers in enhancing critical thinking in science education. Samba *et al.* (2020) demonstrated that graphic organizers, when combined with experiential learning strategies, significantly enhanced critical thinking in science education. In mathematics, Hughes (2020) found that schematic diagrams, a form of graphic organizer, improved problem-solving skills by providing students with a clearer visual structure. Graphic organizers have been extensively studied for their effectiveness in enhancing writing skills among students with specific learning disabilities. Research indicates that computer-based graphic organizers led to significant improvements in the narrative writing abilities of elementary students with such disabilities, underscoring their potential as valuable instructional tools for this group (Gonzalez-Ledo, Barbeta, & Unzueta, 2015). Graphic organizers significantly strengthen academic language and content knowledge, specifically aiding ESL students in their grammatical understanding (Struble, 2007 as cited in Mercuri, 2010).

Graphic organizers further support constructivist principles by facilitating the integration of prior and new knowledge, enabling students to make meaningful connections. By activating prior knowledge and focusing attention on key concepts, these tools empower learners to grasp and retain information more effectively. Research has consistently highlighted their utility, demonstrating that readymade graphic organizers

outperform traditional linear texts by promoting deeper comprehension and strategies beyond rote memorization, leading to better academic outcomes (Shaw *et al.* 2012). Their effectiveness is evident across diverse age groups, from school-aged learners to college students (Kim *et al.* 2004; Boon *et al.* 2005; Stone, 2015). This is especially crucial for students facing learning challenges, as they often struggle with abstract thinking, language, numbers, and symbolic concepts (Chauhan, 2011). These difficulties not only hinder academic achievement but also lead to low self-esteem and disengagement.

Notably, an estimated 5% to 15% of school-going students encounter such challenges, increasing their risk of dropping out (Subramania, 2012). Unlike students with diagnosed learning disabilities, these struggling learners are frequently overlooked in general education settings. Their slower pace of learning and limited problem-solving abilities necessitates targeted interventions to prevent long-term academic and emotional repercussions. Graphic organizers address these unique challenges by reducing the cognitive demands of textual information processing. For instance, schematic designs help students identify and understand connections between ideas, fostering better comprehension and retention (Frase, 1977 as cited in Lehman, 1992).

Additionally, these tools promote active learning by engaging students in visually organizing and synthesizing information, which deepens their understanding of the material. Research confirms their significant benefits, particularly for students with limited literacy skills, as they simplify complex topics and make learning more accessible (Nesbit & Adesope, 2006). For teachers, graphic organizers are invaluable in inclusive classrooms, offering an efficient way to cater to the needs of struggling learners. By helping students approach content in a structured and organized manner, these tools not only enhance academic performance but also build confidence and independence. However, addressing academic performance alone is insufficient. Research indicates that struggling learners often lack effective strategies and fail to adapt when faced with challenges (Dembo & Eaton, 2000). Graphic organizer-based interventions provide a structured framework to help these students develop better learning habits, ultimately fostering both academic

and personal growth. Despite the growing evidence supporting the use of graphic organizers, there remains a gap in understanding their impact on engagement and comprehension among struggling learners. While many interventions primarily target academic outcomes, a broader approach is necessary to address the holistic needs of these students. This study specifically explores the question: How effective are graphic organizers in catering to the unique learning needs of slow learners? To answer this, an experimental approach is proposed to assess the impact of graphic organizers on academic performance, engagement, and comprehension among learners facing challenges. By bridging this research gap, the study aims to offer practical insights for fostering more inclusive and supportive educational practices, ensuring that every learner receives the support they need.

**Hypotheses of the study**

1. There is no significant impact of graphic organizers on the academic performance of slow learners.
2. There is no significant impact of graphic organizers on the engagement of slow learners.
3. There is no significant impact of graphic organizers on the comprehension of slow learners.

**Methodology**

This study utilized a pre-test post-test design with a purposive sample of 40 eighth-grade slow learners from government schools in Chandigarh, identified through a checklist, academic records, and teacher recommendations. The researcher developed assessment tools, including an achievement questionnaire, an engagement scale, and a reading comprehension test. Over 20 days, 20 lesson plans

incorporating graphic organizers—such as concept maps, spider maps, Venn diagrams, mind maps, and story maps—were implemented. A pre-test established baseline performance. It is followed by instruction using graphic organizers and then post-test evaluated changes in academic performance, engagement, and comprehension. Data analysis was conducted using a t-test to compare pre- and post-test results.

**RESULTS**

The collected data were analyzed using a t-test to assess significant changes in academic performance, engagement, and comprehension among slow learners by comparing pre-test and post-test results.

The table 1 compares pre-test and post-test academic performance scores between the experimental and control groups. In the experimental group, the mean score improved significantly from 9.95 to 20.55 ( $t = 8.42, p < 0.0001$ ), indicating a substantial positive effect of graphic organizers. Conversely, the control group showed a minor increase from 10.85 to 11.8 ( $t = 1.197, p = 0.2388$ ), which was not statistically significant. These findings reject the null hypothesis and confirm that graphic organizers significantly enhance academic performance in slow learners.

The table 2 presents pre-test and post-test engagement scores for both groups. In the experimental group, the mean score increased significantly from 10.05 to 22 ( $t = 9.43, p < 0.0001$ ), reflecting a strong positive impact of graphic organizers on engagement. In the control group, the mean score increased slightly from 13.45 to 14.4 ( $t = 1.406, p = 0.1678$ ), showing no significant improvement. These results reject the null hypothesis, demonstrating that graphic organizers substantially improve engagement among slow learners.

The table 3 compares pre-test and post-test comprehension scores of slow learners. The

**Table 1:** Comparison of Pre-test and Post-test Academic Performance Scores Between Experimental (taught using graphic Organizers) and Control Groups (taught using traditional method)

Group	Mean (Pre-test)	SD (Pre-test)	Mean (Post-test)	SD (Post-test)	t-value	p-value	Significance
Experimental Group	9.95	3.62	20.55	4.31	8.42	p<0.0001	Extremely Statistically Significant
Control Group	10.85	2.54	11.8	2.48	1.197	p= 0.2388	Not Statistically Significant

**Table 2:** Comparison of Pre-test and Post-test Engagement Scores Between Experimental (taught using graphic Organizers) and Control Groups (taught using traditional method)

Group	Mean (Pre-test)	SD (Pre-test)	Mean (Post-test)	SD (Post-test)	t-value	p-value	Significance
Experimental Group	10.05	3.91	22	4.10	9.43	p<0.0001	Extremely Statistically Significant
Control Group	13.45	2.21	14.4	2.06	1.406	p= 0.1678	Not Statistically Significant

**Table 3:** Comparison of Pre-test and Post-test Comprehension Scores Between Experimental (taught using graphic Organizers) and Control Groups (taught using traditional method)

Group	Mean (Pre-test)	SD (Pre-test)	Mean (Post-test)	SD (Post-test)	t-value	p-value	Significance
Experimental Group	15.25	2.88	33.6	2.95	19.9052	p<0.0001	Extremely Statistically Significant
Control Group	13.95	3.49	15.05	3.034	1.0638	p= 0.2941	Not Statistically Significant

experimental group’s mean score rose significantly from 15.25 to 33.6 ( $t = 19.9052, p < 0.0001$ ), indicating a notable improvement in comprehension due to graphic organizers. In contrast, the control group showed a slight increase from 13.95 to 15.05 ( $t = 1.0638, p = 0.2941$ ), which was not statistically significant. These findings reject the null hypothesis, confirming that graphic organizers effectively enhance comprehension in slow learners.

**DISCUSSION OF RESULTS**

The findings of this study highlight the significant positive impact of graphic organizers on the academic performance, engagement, and comprehension of slow learners. These results align with existing research on the effectiveness of graphic organizers as instructional tools. Notably, Gurgil (2020) also found that using graphic organizers enhanced academic performance by aiding students in structuring and retaining information more effectively. Similarly, the findings align with studies demonstrating that students show significant improvement in their academic performance when graphic organizers are incorporated into instruction, performing better than their initial assessments (Balasundram & Karpudewan, 2020; Bishop *et al.* 2015; Ilter, 2016; Lingaiah & Dhanapal, 2020). Similarly, research has also shown that graphic organizers have a positive impact on the academic outcomes of students with disabilities (Urton *et al.* 2025).

In the context of reading comprehension, research has shown that graphic organizers assist students with learning disabilities in understanding and recalling textual information (Kim *et al.* 2004). Similarly, studies have reported that graphic organizers help students segment ideas from a text, improving comprehension, vocabulary development, and the ability to identify text connections (Rahat & Rahman, 2020). This approach allowed students to grasp the main gist and central ideas, aligning with the objectives of the study. The findings conclude that graphic organizers substantially improved reading comprehension in the experimental group, proving their effectiveness in enhancing students’ comprehension skills. Graphic organizers help students express their thoughts clearly, simplify lessons and make the learning process faster (Aprianto and Syarifaturrahman, 2020). Graphic organizers also help students organize information more effectively and confidently identify key points in a reading text (Gonzalez, 2017). This underscores their role in enhancing the overall quality of students’ reading comprehension (Villafuerte, 2024). Research has shown that graphic organizers enhance engagement among struggling readers and promote deeper cognitive processing during discussions (Sargent, 2020; Kwon *et al.* 2018). Additionally, cognitive theory suggests that using graphic organizers can engage learners by minimizing extraneous processing and promoting meaningful processing, thereby facilitating more effective

cognitive engagement with learning content (Chandler & Sweller, 1991; Mayer & Moreno, 2003). Collectively, these findings indicate that integrating graphic organizers into instructional strategies can effectively support slow learners by improving their academic performance, engagement, and comprehension.

### Social implications

The findings of this study have important social implications, especially in tackling educational inequality and promoting inclusive learning environments:

- ❑ **Enhanced Educational Equity:** By showcasing the effectiveness of graphic organizers in addressing the needs of slow learners, this research presents a practical approach to narrowing the gap between high-performing and low-performing students, ensuring equal academic opportunities for all learners.
- ❑ **Empowerment of Slow Learners:** Implementing graphic organizers can enhance the confidence and self-esteem of slow learners by breaking down complex concepts, allowing them to engage more actively in the learning process and achieve better academic outcomes.
- ❑ **Policy Recommendations:** This study provides valuable insights for educators, school administrators and policymakers to integrate graphic organizers into mainstream teaching strategies, especially in government schools. This can lead to broader adoption of visual learning tools, promoting more effective and inclusive teaching practices.
- ❑ **Community Impact:** As slow learners achieve better academic results, their improved performance and engagement can positively influence their families and communities, fostering a culture of learning and progress.
- ❑ **Teacher Training:** This study underlines the need for training teachers in using graphic organizers effectively, promoting professional development and equipping educators with innovative tools to cater to diverse student needs.

### Educational Implications

The study provides several educational implications

that can improve teaching practices and learning outcomes, particularly for slow learners:

- ❑ **Improved Teaching Strategies:** This study emphasizes the effectiveness of graphic organizers as a teaching tool, encouraging educators to incorporate these visual aids to simplify complex topics and enhance engagement for slow learners.
- ❑ **Curriculum Development:** Findings from the study can inform curriculum developers to include graphic organizers as a standard part of instructional materials, particularly in schools with diverse learner populations.
- ❑ **Enhanced Student Engagement:** By simplifying information and promoting active learning, graphic organizers can help students better retain and comprehend key concepts, leading to increased academic engagement across various subjects.
- ❑ **Support for Inclusive Education:** This study highlights the importance of personalized instructional methods, supporting the advancement of inclusive education practices that cater to the diverse needs of all learners, including those with learning difficulties.
- ❑ **Professional Development for Teachers:** The results encourage teacher training programs to incorporate the use of graphic organizers, equipping educators with tools to effectively support slow learners and improve overall classroom dynamics.
- ❑ **Encouraging Self-Learning:** Graphic organizers can serve as a bridge to self-directed learning by helping students independently organize and review content, fostering lifelong learning habits.

### CONCLUSION

This study underscores the transformative potential of graphic organizers in meeting the unique learning needs of slow learners. By simplifying complex information and presenting it visually, graphic organizers effectively address key challenges faced by slow learners, including difficulties in comprehension and engagement. The results indicate that these tools significantly enhance academic performance, improve comprehension, and foster active engagement, making learning

more accessible and meaningful for slow learners. Graphic organizers not only provide a structured framework for understanding concepts but also empower slow learners by bridging gaps in their learning process, thus creating a tailored and inclusive educational experience. The study further demonstrates that graphic organizers serve as powerful tools to promote equity in education, enabling slow learners to overcome barriers and participate more actively in their academic journey. These findings offer valuable insights for educators and policymakers, emphasizing the importance of incorporating graphic organizers into mainstream teaching methodologies to support diverse learning needs. Ultimately, this research affirms that graphic organizers are highly effective in transforming learning experiences for slow learners, contributing to the broader aim of fostering an inclusive and equitable education system.

## REFERENCES

- Aprianto, D. and Syarifaturrahman, W.K. 2020. ESL learners' perception on the use of the graphic organizers (Gos) as class presentation strategies. *Expo. J. Pendidik. Bhs. Ingg.* **9**: 143-157.
- Balasundram, N. and Karpudewan, M. 2020. Embedding multiple modes of representations in open-ended tests on learning transition elements. *Science Education in the 21<sup>st</sup> Century: Re-searching Issues that Matter from Different Lenses*, pp. 113-136.
- Bishop, A.E., Sawyer, M., Alber-Morgan, S.R. and Boggs, M. 2015. Effects of a graphic organizer training package on the persuasive writing of middle school students with autism. *Education and Training in Autism and Developmental Disabilities*, **50**(3): 290-302.
- Boon, R.T., Paal, M., Hintz, A.M. and Cornelius-Freyre, M. (2015). A Review of Story Mapping Instruction for Secondary Students with LD. *Learning Disabilities: A Contemporary Journal*, **13**(2): 117-140.
- Bouffard, T., Boisvert, M. and Vezeau, C. 2003. The illusion of incompetence and its correlates among elementary school children and their parents. *Learning and Individual Differences*, **14**(1): 31-46.
- Chandler, P. and Sweller, J. 1991. Cognitive load theory and the format of instruction. *Cognition and instruction*, **8**(4): 293-332.
- Chang, K.E., Sung, Y.T. and Chen, I.D. 2002. The effect of concept mapping to enhance text comprehension and summarization. *The Journal of Experimental Education*, **71**(1): 5-23.
- Chauhan, S. 2011. *Slow Learners: Their Psychology and Educational Programmes*, **1**(8).
- Colliot, T. and Jamet, É. 2019. Asking students to be active learners: The effects of totally or partially self-generating a graphic organizer on students' learning performances. *Instructional Science*, **47**(4): 463-480.
- Colliot, T. and Jamet, É. 2020. Effects of self-generated graphic organizers on learning depend on in-task guidance. *Journal of Computer Assisted Learning*, **36**(5): 646-655.
- Dembo, M.H. and Eaton, M.J. 2000. Self-regulation of academic learning in middle-level schools. *The Elementary School Journal*, **100**(5): 473-490.
- Dexter, D.D. and Hughes, C.A. 2011. Graphic organizers and students with learning disabilities: A meta-analysis. *Learning Disability Quarterly*, **34**(1): 51-72.
- Fredricks, J.A. and Eccles, J.S. 2002. Children's competence and value beliefs from childhood through adolescence: Growth trajectories in two male-sex-typed domains. *Developmental Psychology*, **38**: 519 - 533.
- Ganeh Badrabad, L. and Ghanizadeh, A. 2019. The Impact of Visualization and Graphic Organizers on EFL Learners' Cognitive, Emotional, and Behavioral Engagement and Listening. *Journal of Language and Translation*, **9**(3): 1-15.
- Gonzalez-Ledo, M., Barbetta, P.M. and Unzueta, C.H. 2015. The effects of computer graphic organizers on the narrative writing of elementary school students with specific learning disabilities. *Journal of Special Education Technology*, **30**(1): 29-42.
- Gurgil, F. 2020. Effect of graphic organizer use in social studies on students' academic achievement. *International Journal of Eurasian Education and Culture*, **5**(8): 216-253.
- Gutierrez, G.G. 2017. *The effects of graphic organizers on efl students' reading comprehension* (Doctoral dissertation, Thesis. Colombia: ICESI University).
- Holley, C.D. and Dansereau, D.F. 2014. *Spatial learning strategies: Techniques, applications, and related issues*. Academic Press.
- Hughes, S. 2020. The effects of schema-based instruction on solving mathematics word problems. *Georgia Educational Researcher*, **17**(2): 2.
- Ilter, I. 2016. The power of graphic organizers: Effects on students' word-learning and achievement emotions in social studies. *Australian Journal of Teacher Education (Online)*, **41**(1): 42-64.
- Katayama, A.D. and Robinson, D.H. 2000. Getting students 'partially' involved in note-taking using graphic organizers. *The Journal of Experimental Education*, **68**(2): 119-133.
- Kim, A.H., Vaughn, S., Wanzek, J. and Wei, S. 2004. Graphic organizers and their effects on the reading comprehension of students with LD: A synthesis of research. *Journal of Learning Disabilities*, **37**(2): 105-118.
- Kwon, K., Shin, S. and Park, S.J. 2018. Effects of graphic organizers in online discussions: Comparison between instructor-provided and student-generated. *Educational Technology Research and Development*, **66**: 1479-1503.

- Lehman, H.G. 1992. Graphic organizers benefit slow learners. *The Clearing House*, **66**(1): 53-55.
- Lingaih, J. and Dhanapal, S. 2020. Use of Graphic Organiser and Instructional Scaffolding as a Teaching Strategy for TESL Undergraduates: An Overview of Students' Experiences. *Journal of Humanities and Social Sciences Research*, **2**(1): 87-102.
- Malik, S. 2009. Effect of intervention training on mental abilities of slow learners. *Int. J. Educ. Sci.*, **1**(1): 61-64.
- Mayer, R.E. and Moreno, R. 2003. Nine ways to reduce cognitive load in multimedia learning. *Educational Psychologist*, **38**(1): 43-52.
- Mercuri, S.P. 2010. Using graphic organizers as a tool for the development of scientific language. *Gist: Education and Learning Research Journal*, **4**(1): 30-49.
- Neisser, U.E. 1998. *The rising curve: long-term gains in IQ and related measures*. American Psychological Association.
- Nesbit, J.C. and Adesope, O.O. 2006. Learning with concept and knowledge maps: A meta-analysis. *Review of Educational Research*, **76**(3): 413-448.
- Novak, J.D. 2010. *Learning, creating, and using knowledge: Concept maps as facilitative tools in schools and corporations*. Routledge.
- Nussbaum, E.M. and Schraw, G. 2007. Promoting argument-counterargument integration in students' writing. *The Journal of Experimental Education*, **76**(1): 59-92.
- Rahat, L. and Rahman, G. 2020. Impact of Graphic Organizers on Reading Comprehension of English Learners at Intermediate Level. *SJESR.*, **3**(3): 128-134.
- Rahmat, N.H. 2018. Scaffolding Colour Codes and SAW Approach in ESL Academic Writing. *European Journal of English language Teaching*, **4**(1): 22-34.
- Reddy, G.L., Ramar, R. and Kusuma, A. 1997. *Slow Learners: Their Psychology and Instruction* (First Edit). New Delhi, India: Discovery Publishing House.
- Robinson, D.H. and Kiewra, K.A. 1995. Visual argument. *Journal of Educational Psychology*, **87**(3): 455-467.
- Robinson, D.H., Katayama, A.D., Dubois, N.F. and Devaney, T. 1998. Interactive effects of graphic organizers and delayed review on concept application. *The Journal of Experimental Education*, **67**(1): 17-31.
- Saadu, U.T., Omowumi, R.A. and Yusuf, G.A. 2022. Effect of Graphic Organiser Method on Academic Performance of Primary School pupils in Atiba Local Government Area, Oyo State, Nigeria. *International Journal of Academic and Applied Research*, pp. 2643-9603.
- Samba, R.M.O., Achor, E.E., Bash, A.E. and Iortim, S.O. 2020. Fostering students' critical thinking and achievement in basic science using graphic organizer and experiential learning strategies with feedback. *Science Education International*, **31**(2): 220-225.
- Sargent, K. 2020. *The Use of Graphic Organizers and Their Effects on Struggling Middle School Readers* (Doctoral dissertation, Vanderbilt University).
- Shaw, S. 2010. Rescuing Students from the Slow Learner Trap. *Principal Leadership*, pp. 12-16.
- Shaw, S., Nihalani, P., Mayrath, M. and Robinson, D.H. 2012. Graphic organizers or graphic overviews? Presentation order effects with computer-based text. *Educational Technology Research and Development*, **60**(5): 807-820.
- Stone, Carol L. 2015. "A Meta-analysis of Advance Organizer Studies." *The Journal of Experimental Education*, **51**(4): 194-199.
- Struble, J. 2007. Using graphic organizers as formative assessment. *Science Scope*, **30**: 69-71.
- Subramanian, S. 2012. Assessing the Effectiveness of Individualized Integrated Intervention Strategies to Turn Around Slow Learners: An Experimental Study. *Research Project Report Submitted to Department of Psychology Bharathier Univesity Coimbatore*.
- Urton, K., Moeyaert, M., Nobel, K., Barwasser, A., Boon, R. T. and Grünke, M. 2025. Effects of Graphic Organizers on Outcomes for Students with Disabilities: Three-Level Meta-Analysis of Single-Case Studies. *Exceptionality*, **33**(1): 17-39.
- Villafuerte, G.E. 2024. *Use of graphic organizers and development of reading comprehension skills in students of fourth grade of secondary level at Augusto B. Leguia School, Puente Piedra, Lima*.
- Weinstein, C.E., Husman, J. and Dierking, D.R. 2000. *Self-regulation interventions with a focus on learning strategies*. In M. Boekaerts, P. Pintrich and M. Seidner (Eds.), *Self-regulation: Theory, research, and applications* (727-747). Orlando, FL: Academic Press.
- Wood, D., Bruner, J.S. and Ross, G. 1976. The role of tutoring in problem solving. *Journal of Child. Psychology and Psychiatry, and Allied Disciplines*, **17**(2): 89-100.
- Zimmerman, B.J. 2000. *Attaining self-regulation: A social-cognitive perspective*. In M. Boekaerts, P. Pintrich and M. Seidner (Eds.), *Self-regulation: Theory, research, and applications* (13-39). Orlando, FL: Academic Press.

