

Effectiveness of Transactional Strategies Instruction in Enhancing Reading Comprehension Among Learners with Special Educational Needs

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Abstract:

This study determined the applicability of Transactional Strategies Instruction (TSI) in enhancing reading comprehension among Learners with Special Educational Needs (LSEN). The study involved 20 Grade 7 learners of Achievers Heart of Knowledge Montessori Inc. who exhibited reading comprehension disabilities. Employing an experimental research design, the study utilized percentage, mean, standard deviation, and t-tests to analyze data. Findings revealed that the majority of participants were 14 years old, male, and performed at an instructional reading level prior to the intervention. After the implementation of TSI, participants achieved an independent reading level. The t-test results showed a significant difference between pre-test and post-test performances, confirming the efficacy of TSI in improving reading comprehension. Recommendations include integrating TSI into mainstream educational practices for LSEN and developing policies to support such instructional strategies.

Keywords: Transactional Strategies Instruction, reading comprehension, LSEN, experimental design, Philippines.

Introduction:

The journey toward cultivating proficient and confident readers has consistently been a pivotal concern in education, as literacy serves as the foundation for academic success and lifelong learning. However, reading comprehension remains a persistent challenge among learners across various educational settings, as identified by Applegate and Applegate (2019), who highlighted the disconnection between fluency and understanding in readers. To address this issue, the instructional approach known as Transactional Strategies Instruction (TSI) has emerged as a transformative pedagogical model.

It emphasizes interactive and strategic reading practices that enhance comprehension, critical thinking, and metacognition, as supported by Brown and Coy Ogan (2018) and Bergman and El-Dinary (2018). This approach aligns with Rosenblatt's (2017) transactional theory, which underscores the dynamic interaction between the reader, the text, and the context during the reading process.

Effective comprehension instruction involves multiple layers of cognitive engagement, as articulated by Baker (2020) and Sinatra, Brown, and Reynolds (2020). The deliberate use of questioning strategies (Beck & McKeown, 2020), direct explanations (Roehler & Duffy, 2017), and reciprocal teaching (Marks et al., 2018; Takala, 2020) are evidence-based practices that promote a deeper understanding of texts.

These methods not only improve reading comprehension but also foster self-regulation and autonomous learning, as explored by Brown et al. (2019) and Julapho (2018). Moreover, the adaptability of these strategies to diverse learners, including English language learners (Gersten et al., 2017; Roit, 2020) and students with special learning needs (Graham & Bellert, 2005), further demonstrates their universal applicability and efficacy.

Despite advancements in comprehension research, disparities in literacy achievement persist globally, particularly among English language learners and students in low-resource environments (Cummins, 2020; Jepsen & de Alth, 2020). The No Child Left Behind Act of 2001 and subsequent literacy initiatives underscore the urgency to bridge these gaps, as evidenced by the findings of the National Reading Panel (2000) and the Organisation for Economic Co-operation and Development (2010).

Integrating transactional strategies within mainstream classrooms has shown promise in addressing these inequities by promoting critical literacy skills, as noted by Casteel, Isom, and Jordan (2019) and Pennell (2021). This paper aims to explore the evolving role of TSI and other comprehension strategies in fostering reading achievement, with a particular focus on their implementation across diverse contexts.

Drawing from foundational works such as the *Handbook of Language and Literacy* (Apel et al., 2017) and recent empirical studies (e.g., Pilonieta & Medina, 2019; Saovapa, 2021), this study examines the intersection of cognitive, linguistic, and sociocultural dimensions in reading instruction. By synthesizing insights from extensive research (Pressley, 2020; Wilkinson & Son, 2021), the discussion highlights innovative practices that address contemporary

literacy challenges, including the integration of technology and multimodal resources (Julapho, 2018; Wichadee, 2021).

This paper underscores the imperative for educators and policymakers to adopt evidence-based, inclusive, and adaptive approaches to reading instruction. As highlighted by Wagner (2018), reimagining literacy education requires a concerted effort to redefine rigor and engage learners in meaningful, dialogic interactions with texts. Through the lens of TSI and related strategies, this study contributes to the ongoing discourse on equipping learners with the skills and confidence to navigate an increasingly complex and interconnected world.

Methods and Analysis:

This study employed an experimental design, which was deemed appropriate for addressing the objectives of the research. The experimental design facilitated the comparison of two groups: the control group and the experimental group. The experimental group was exposed to transactional strategies instruction (TSI), while the control group continued with the conventional method of teaching. This design allowed for the systematic examination of the effects of TSI on learners' reading comprehension.

To ensure the reliability of the findings, the experimental procedure involved a pre-test and post-test for both groups. The pre-test was administered to establish a baseline of the students' reading comprehension levels before the intervention. The experimental group then underwent a series of instructional sessions utilizing TSI, which focused on collaborative and dialogic interactions, encouraging active engagement with the text to construct meaning. In contrast, the control group received instruction using traditional teaching strategies. After the intervention period, both groups were given the same post-test to measure any improvements in their reading comprehension. The difference in the pre-test and post-test scores within each group, as well as between the two groups, was analyzed to determine the effectiveness of the TSI approach.

Key variables were carefully controlled throughout the study to ensure that any observed differences in performance could be attributed solely to the independent variable—the use of TSI. Variables such as the instructional environment, duration of the intervention, and teacher qualifications were kept consistent for both groups. This strict control minimized extraneous factors and enhanced the validity of the results.

The researcher constructed and validated a teacher-made test to assess the students' reading comprehension. A thorough literature review and consultation with educational resources guided the test development process. Despite extensive efforts to locate a standardized instrument, the researcher determined that constructing a custom assessment aligned with the specific instructional content was necessary. The test items were crafted based on the lesson objectives and designed to measure various aspects of reading comprehension, including decoding, vocabulary knowledge, and inferential thinking.

Validation of the test instrument was conducted in multiple stages. Initially, teachers from other schools with similar student demographics were invited to review the test items and provide feedback. Their comments, suggestions, and recommendations informed the first revision of the instrument. Subsequently, expert opinions were sought from the researcher's immediate superior and professors, who provided further insights for the second revision. These iterative revisions ensured that the test items were both valid and reliable for assessing the intended learning outcomes.

The study was conducted at Achievers Heart of Knowledge Montessori Inc., chosen for its observed need to support learners with special educational needs (LSEs) in improving their reading comprehension. The participants comprised 20 purposively selected LSEs, representing a total enumeration of the target population. The purposive sampling technique ensured that the study focused on students who would most benefit from the intervention.

Ethical considerations were rigorously observed throughout the research process. Permission to conduct the study was secured from relevant authorities, including school administrators and parents or guardians of the participants. The confidentiality of the students' data was strictly maintained, and their participation was entirely voluntary.

Statistical treatment of the data involved the use of t-tests at a 5% level of significance. This statistical approach enabled the researcher to determine whether the differences in the pre-test and post-test performances of the experimental and control groups were statistically significant. By comparing the mean scores of the two groups, the researcher assessed the impact of TSI on students' reading comprehension. The analysis provided empirical evidence to support or refute the hypothesis that TSI significantly enhances reading comprehension among LSEs.

The experimental design of this study provided a robust framework for investigating the effects of transactional strategies instruction on reading comprehension. Through meticulous planning, validation, and statistical analysis, the study aimed to contribute valuable insights into effective instructional strategies for supporting learners with special educational needs.

Results:

Demographic Profile: Table 1 presents the demographic profile of the participants. The majority (40%) were 14 years old, with a gender distribution of 65% male and 35% female. All participants were in Grade 7 and exhibited reading comprehension disabilities.

Profile	Frequency	Percentage	Profile	Frequency	Percentage	Profile	Frequency
Age 12	6	30%	Age 12	6	30%	Age 12	6
Age 13	6	30%	Age 13	6	30%	Age 13	6

Performance Before and After Intervention: Table 2 summarizes the reading performance of the participants. The mean pre-test score of 13.60 indicated an instructional reading level, while the mean post-test score of 24.15 demonstrated an independent reading level. These results suggest significant improvement in reading comprehension following the TSI intervention.

Test	N	Mean
Pre-Test	20	13.60
Post-Test	20	24.15
Test	N	Mean
Pre-Test	20	13.60

Significance of Difference: Table 3 shows the results of the t-test analysis. The significant difference between pre-test and post-test scores ($t = -8.81$, $p < .05$) confirms the effectiveness of TSI in enhancing reading comprehension among LSEN.

Test	N	Mean	SD	t-Test	p-Value	Remarks
Pre-Test	20	13.60	4.66	-8.81	1.03E-10	Significant
Post-Test	20	24.15	2.64			

Discussion:

The findings from the study on Learners with Special Educational Needs (LSEN) provide valuable insights into their demographic profile, performance before and after a reading intervention, and the significance of changes observed. This discussion interprets these results within the context of educational practices, the efficacy of targeted interventions, and the implications for future research.

Profile of the Learner-Participants

Table 1 reveals a clear demographic profile of the LSEN participants. The majority (40%) were 14 years old, with an equal distribution of 30% for those aged 12 and 13. This age range is significant as it corresponds to typical middle school age, where foundational reading skills are crucial for academic success. Middle school students are at a critical juncture in their education, transitioning from primary to secondary education, where literacy skills become the foundation for advanced learning across disciplines (Chall, 1983).

Notably, there was a predominant representation of males (65%) compared to females (35%). This gender disparity aligns with existing literature indicating a higher prevalence of reading disabilities among boys (Ritchey & Heise, 2006). Research suggests that boys may experience greater challenges with reading acquisition due to a variety of factors, including differences in language development, attention span, and motivation (Brown, 2020; Gaskins et al., 2018). These findings underscore the importance of developing gender-sensitive approaches to literacy instruction that address these unique challenges.

All participants were in Grade 7, highlighting the critical nature of this educational stage. By seventh grade, students are expected to transition from "learning to read" to "reading to learn" (Chall, 1983). Addressing reading disabilities at this juncture is vital for preventing further academic struggles and ensuring students can engage with more complex texts in various subjects. The uniformity of the disability type—specifically reading disabilities—among all participants emphasizes the need for specialized interventions. This focused group allows for a concentrated examination of the effectiveness of reading programs tailored to this specific challenge, highlighting the necessity of individualized approaches in special education (Carrasquillo & Rodriguez, 2020).

Performance Before and After the Intervention

Table 2 illustrates a significant improvement in the performance of the learner-participants before and after the intervention. The pre-test mean score of 13.60 indicated that participants were operating at the "instructional" level, suggesting they could read with guidance but struggled to comprehend independently. After the intervention, the post-test mean score rose to 24.15, categorizing their performance as "independent." This improvement signifies not only enhanced reading ability but also greater confidence in tackling reading tasks autonomously.

The intervention's effectiveness aligns with the literature emphasizing the importance of targeted reading interventions for students with disabilities. Programs incorporating explicit instruction in reading strategies, phonemic awareness, and comprehension techniques have consistently produced positive outcomes (Gersten et al., 2017). Furthermore, the results validate the role of transactional strategies instruction (TSI), as highlighted by Brown et al. (2019), which integrates cognitive and metacognitive strategies to foster active reading and comprehension. The observed gains suggest that the intervention employed in this study adhered to evidence-based practices in special education, which prioritize scaffolded instruction and consistent progress monitoring (Applegate & Applegate, 2019).

Significance of the Intervention

Table 3 demonstrates a statistically significant difference between pre-test and post-test scores, with a t-ratio of -8.81 and a p-value of 1.03E-10. This strong statistical significance indicates that the null hypothesis—there is no significant difference before and after the intervention—should be rejected. The results imply that the reading intervention was not only effective but also impactful enough to warrant attention in future educational strategies. The significant improvement in reading performance supports previous findings emphasizing the effectiveness of structured reading interventions. For instance, interventions employing systematic phonics instruction and comprehension strategies have been shown to produce significant gains in reading proficiency among students with reading disabilities (Ehri et al., 2001). Similarly, studies by Duke and Pearson (2020) highlight the importance of integrating direct instruction with opportunities for independent reading practice, a principle reflected in the design of this intervention.

The profile of the learner-participants and the significant improvements observed in reading ability post-intervention highlight several implications for practice in educational settings. Firstly, the findings suggest a pressing need for schools to implement targeted reading interventions for students with disabilities, particularly in middle school. Educators should focus on developing individualized education programs (IEPs) that incorporate specific reading strategies aligned with students' needs (Baker, 2020). Additionally, providing ongoing professional development for teachers on evidence-based reading strategies is crucial to sustaining and enhancing the effectiveness of such interventions.

The gender disparity noted in the participants raises questions about the need for gender-sensitive approaches in reading instruction. Future research could explore the reasons behind this discrepancy and investigate whether tailored strategies for boys and girls could further enhance reading outcomes. For example, studies have suggested that boys may benefit from interventions incorporating topics of high interest to them, which could increase engagement and motivation (Beck & McKeown, 2020; Ginting, 2019).

The effectiveness of the intervention also opens avenues for further studies. Future research should consider longitudinal studies to assess the durability of reading gains over time and explore the impact of interventions on other areas of academic achievement. Expanding the scope of the study to include a diverse range of disabilities beyond reading could provide a more comprehensive understanding of the generalizability of intervention strategies (Gersten et al., 2017). Moreover, exploring the integration of technology in reading interventions could provide insights into modern approaches that may engage students more effectively. Tools such as audiobooks, reading apps, and interactive platforms could complement traditional methods and cater to diverse learning styles (Julapho, 2018).

Conclusion:

The findings of this study provide compelling evidence for the effectiveness of Transactional Strategies Instruction (TSI) in enhancing reading comprehension among Learners with Special Educational Needs (LSEN). The significant improvement in reading performance, as indicated by the difference between pre-test and post-test scores, confirms the efficacy of TSI as a powerful tool for addressing reading comprehension challenges.

The participants, initially performing at an instructional level, achieved an independent reading level after the intervention, demonstrating the potential of TSI to foster greater comprehension skills and confidence in learners with reading disabilities. This study highlights the importance of implementing evidence-based instructional strategies tailored to the needs of LSEN, particularly at the critical middle school stage.

The observed gains in reading ability suggest that TSI's interactive and strategic approach, focusing on metacognitive and cognitive engagement with texts, can play a pivotal role in bridging reading gaps. Additionally, the findings underscore the need for educators to integrate such strategies into mainstream educational practices to better support students with diverse learning needs.

Integrating TSI into educational frameworks can lead to improved academic outcomes for LSEN, contributing to more inclusive and effective literacy instruction. Future research should explore the long-term impact of TSI, the role of gender-sensitive approaches in reading interventions, and the integration of technology to further enhance learning

experiences for LSEN. As we move forward, it is essential that policymakers and educators continue to prioritize innovative, inclusive strategies that empower all learners to succeed academically and beyond.

References:

- Apel, K., Ehren, B. J., Silliman, E. R., & Stone, C. A. (2017). *Handbook of language and literacy*. The Guilford Press.
- Applegate, M. D., & Applegate, A. J. (2019). "She's my best reader; she just can't comprehend": Studying the relationship between fluency and comprehension. *The Reading Teacher*, 62(6), 512-521.
- Armbruster, B. B., Lehr, F., & Osborn, J. (2020). *Put reading first: The research building blocks of reading instruction*. National Institute for Literacy.
- Baker, L. (2020). Metacognition in comprehension instruction. In C. C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 77-95). Guilford Press.
- Beck, I. L., & McKeown, M. G. (2020). *Improving comprehension with Questioning the Author: A fresh and expanded view of a powerful approach*. Scholastic.
- Bergman, J. L., & El-Dinary, P. B. (2018). A researcher-educator collaborative interview study of transactional comprehension strategies instruction. *Journal of Educational Psychology*, 84, 231-246.
- Brantmeier, C. (2020). Beyond linguistic knowledge: Individual differences in second language reading. *Foreign Language Annals*, 36(1), 33-43.
- Brown, A. I., Pressley, M., Van Meter, P., & Schuder, T. (2019). A quasi-experimental validation of transactional strategies instruction with low-achieving second-grade readers. *Journal of Educational Psychology*, 88(1), 18-37.
- Brown, D. (2020). *Teaching by principles: An interactive approach to language pedagogy* (2nd ed.). Addison Wesley.
- Brown, R., & Coy Ogan, L. (2018). The evolution of transactional strategies instruction (TSI) in one teacher's classroom. *The Elementary School Journal*, 221-233.
- Brown, R., & Pressley, M. (2018). Self-regulated reading and getting meaning from text: The transactional strategies instruction model and its ongoing evaluation. In D. Schunk & B. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 155-179). Erlbaum.
- Carrasquillo, A., & Rodriguez, V. (2020). *Language minority students in the mainstream classroom* (2nd ed.). Multilingual Matters.
- Casteel, C. P., Isom, B. A., & Jordan, K. F. (2019). Creating confident and competent readers: Transactional strategies instruction. *Intervention in School and Clinic*, 36(2), 67-74.
- Cummins, J. (2020). *Reading and the bilingual student: Fact and friction*. International Reading Association.
- Duffy, G. G., Roeler, L. R., Meloth, M. S., Polin, R., Rackliffe, G., & Tracy, A. (2017). Developing and evaluating measures associated with strategic reading. *Journal of Reading Behavior*, 19, 223-246.
- Duke, N. K., & Pearson, P. D. (2020). Effective practices for developing reading comprehension. In A. E. Farstrup & S. Samuels (Eds.), *What research has to say about reading instruction* (pp. 205-242). International Reading Association.
- El-Dinary, P. B., & Schuder, R. T. (2018). Seven teachers' acceptance of transactional strategies instruction during their first year using it. *Elementary School Journal*, 94, 207-219.
- Gaskins, I. W., Anderson, R. C., Pressley, M., Cunicelli, E. A., & Sadow, E. (2018). Six teachers' dialogue during cognitive process instruction. *Elementary School Journal*, 93, 277-304.
- Gersten, R., Baker, S. K., Shanahan, T., Linan-Thompson, S., Collins, P., & Scarcella, R. (2017). *Effective literacy and English language instruction for English learners in the elementary grades: A practice guide* (NCEE 2007-4011). National Center for Education Statistics, U.S. Department of Education. Retrieved from <http://ies.ed.gov/ncee>.
- Ginting, R. (2019). Improving Grade XI students' achievement in reading comprehension through transactional strategies instruction. (Unpublished thesis). Medan.
- Graham, L., & Bellert, A. (2005). Reading comprehension disabilities experienced by students with learning disabilities. *Australian Journal of Learning Disabilities*, 10(2), 71-78.
- Jepsen, C., & de Alth, S. (2020). *English learners in California schools*. Public Policy Institute of California.
- Julapho, P. (2018). Using transactional strategies instruction with online learning to promote English reading comprehension, summary writing ability, and autonomous learning of learners. (Master's Thesis). Chiangmai University, Thailand.
- Keshavarz, M. H., & Ashtarian, S. (2018). The relationship between Iranian EFL learners' gender and reading comprehension of three different types of texts. *Iranian Journal of Applied Linguistics*, 11(1), 97-114.
- Kim, S. S. (2021). The impact of transactional strategies instruction on the reading comprehension of a diverse group of second graders. (Doctoral dissertation). Available at <http://repository.usfca.edu/cgi/viewcontent.cgi?article=1079&context>.
- Lederer, J. (2019). Reciprocal teaching of social studies in inclusive elementary classrooms. *Journal of Reading Disabilities*, 33, 91-107.
- Marks, M. B., Pressley, M., Coley, J. D., Craig, S., Gardner, R., DePinto, T., & Rose, W. (2018). Three teachers' adaptations of transactional strategies instruction and reciprocal teaching in comparison to traditional reciprocal teaching. *Elementary School Journal*, 94, 267-283.
- McElvain, C. M. (2021). Transactional literature circles and the reading comprehension of English learners in the mainstream classroom. *Journal of Research in Reading*, 33(2), 178-205.

- Mehrpour, S., Razmjoo, S. A., & Kian, P. (2021). The relationship between depth and breadth of vocabulary knowledge and reading comprehension among Iranian EFL learners. *Journal of English Language Teaching and Learning*, 53(222), 97-127.
- National Assessment of Educational Progress. (2009). Retrieved from <http://nces.ed.gov/nationsreportcard/pdf/main2009/2010458.pdf>
- National Clearinghouse for English Language Acquisition. (2010). Retrieved from http://www.consumerserviceguide.org/articles/csg_national_clearinghouse_for_english_language_acquisition_ncl_a_ed
- No Child Left Behind Act of 2001, 20.
- National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. National Academy Press.
- Organisation for Economic Co-operation and Development. (2010). *PISA 2009 results: What students know and can do: Student performance in reading, mathematics and science* (Vol. 1). <https://doi.org/10.1787/9789264091450.en>
- Pennell, C. (2021). In the age of analytic reading: Understanding readers' engagement with text. *The Reading Teacher*, 68(4), 251-260.
- Pilonieta, P., & Medina, A. (2019). Reciprocal teaching for the primary grades: "We can do it, too!". *The Reading Teacher*, 63(2), 120-129.
- Pressley, M. (2018). Transactional instruction of reading comprehension strategies. *Perspectives in Reading Research Report 5*. National Reading Research Center.
- Pressley, M. (2020). Comprehension strategy instruction: A turn-of-the-century status report. In C. C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 11-27). Guilford Press.
- Pressley, M. (2020). *Reading instruction that works: The case for balanced teaching* (3rd ed.). Guilford Press.
- Pressley, M., & Afflerbach, P. (2018). *Verbal protocols of reading: The nature of constructively responsive reading*. Erlbaum.
- Pressley, M., El-Dinary, P. B., Gaskins, I., Schuder, T., Bergman, J., Almasi, J., & Brown, A. I. (2018). Beyond direct explanation: Transactional instruction of reading comprehension strategies. *Elementary School Journal*, 92, 511-554.
- Pressley, M., Gaskins, I. W., Cunicelli, E. A., Burdick, N. J., Schaub-Matt, M., Lee, D. S., & Powell, N. (2018). Strategy instruction at Benchmark School: A faculty interview study. *Learning Disability Quarterly*, 14, 19-48.
- Reutzel, D. R., Smith, J. A., & Fawson, P. C. (2020). An evaluation of two approaches for teaching reading comprehension strategies in the primary years using science information texts. *Early Childhood Research Quarterly*, 20, 276-305.
- Rodulfo, M. A. (2020). Reading in and out of school: Factors influencing the literacy achievement of American students in Grades 4, 8, and 12 in 2000 and 2002. National Centre for Education Statistics, Washington, DC.
- Roehler, L. R., & Duffy, G. G. (2017). Direct explanation of comprehension process. In G. G. Duffy, L. R. Roehler, & J. Mason (Eds.), *Comprehension instruction: Perspectives and suggestions* (pp. 265-285). Longman.
- Roit, M. L. (2020). Essential comprehension strategies for English learners. In T. A. Young & N. L. Hadaway (Eds.), *Building literacy: Supporting English learners in all classrooms*. International Reading Association.
- Rosenshine, B. (2020). *Principles of instruction: Research-based strategies that all teachers should know*. Education Week.
- Rosenblatt, L. (2017). *The reader, the text, and the poem: The transactional theory of the literature work*. Southern Illinois University Press.
- Saovapa, W. (2019). Improving Thai EFL learners' reading comprehension through the transactional strategies instruction (TSI) model. (Master's Thesis). Chiang Mai University.
- Savage, G. (2017). Transactional strategies instruction and how it helps struggling readers. *The Reading Teacher*, 70(3), 305-318.
- Slavin, R. E., Karweit, N. L., & Madden, N. A. (2018). *Effective programs for students at risk* (2nd ed.). Allyn and Bacon.
- Slavin, R. E., & Madden, N. A. (2021). The effectiveness of transactional strategies instruction in promoting reading comprehension. *Journal of Literacy Research*, 33(1), 17-38.
- Snow, C. E., & Biancarosa, G. (2018). *Academic literacy and the new accountability: A report on recent studies of the content and instruction*.
- Snow, C. E., & Uccelli, P. (2020). Teaching reading comprehension: The essential principles of high-quality instruction. *Annual Review of Applied Linguistics*, 35, 68-81.
- Sternberg, R. J. (2021). Cognitive psychology and reading comprehension. *Psychology Review*, 22(3), 45-58.
- Tharp, R. G., & Gallimore, R. (2020). *Rousing minds to life: Teaching, learning, and schooling in social context*. Cambridge University Press.