The Effect of Reciprocal Teaching Learning Model and Self-Concept on Reading Comprehension Ability

Tanto Aljauharie Tantowie[1]*, Dadang Sunendar[2], Rahman[3], and Tatat Hartati[4]

[1,3,4] Primary Education Department, Universitas Pendidikan Indonesia, Bandung, Indonesia
[2] Indonesian Language Education, Universitas Pendidikan Indonesia, Bandung, Indonesia

ARTICLE INFO

ABSTRAK

Kemampuan membaca siswa di lapangan masih sangat memprihatinkan. Hal ini diperkuat dengan rendahnya kemampuan siswa dalam memahami materi atau soal yang membutuhkan keterampilan berpikir tingkat tinggi. Rendahnya kemampuan membaca pemahaman dapat dilihat dari rendahnya kemampuan literasi siswa berdasarkan pemeringkatan PISA. Penelitian ini bertujuan untuk menganalisis keefektifan model reciprocal teaching terhadap keterampilan membaca pemahaman siswa ditinjau dari tingkat konsep diri siswa. Pendekatan yang digunakan dalam penelitian ini adalah kuantitatif dengan metode eksperimen semu. Partisipan penelitian ini adalah 100 siswa sekolah dasar yang dibagi menjadi dua kelompok yang masing-masing terdiri dari 50 siswa dalam kelompok eksperimen dan kontrol. Data dikumpulkan melalui tes pemahaman bacaan dan observasi. Analisis data dilakukan dengan ANOVA dua arah. Hasil penelitian menunjukkan bahwa model Reciprocal Teaching memberikan kontribusi yang lebih signifikan terhadap keterampilan membaca pemahaman siswa dibandingkan dengan metode konvensional, terutama bagi siswa yang memiliki konsep diri rendah. Berdasarkan temuan di atas, disimpulkan bahwa model pembelajaran Reciprocal Teaching berpengaruh terhadap keterampilan membaca pemahaman siswa. Baik model pembelajaran resiprokal maupun konvensional memiliki pengaruh yang sama terhadap siswa yang memiliki konsep diri tinggi. Implikasi dari penelitian ini adalah guru harus memilih model pembelajaran yang dapat mengakomodir semua siswa, tidak hanya siswa dengan kemampuan akademik tinggi, tetapi juga siswa dengan kemampuan akademik rendah.

ABSTRACT

The reading ability of students in the field is still very worrying. This is reinforced by the low ability of students to understand material or questions that require higher-order thinking skills. The low reading comprehension ability can be seen from the low literacy ability of students based on PISA rankings. This study aims to analyze the effectiveness of the reciprocal teaching model on students' reading comprehension skills in terms of students' self-concept levels. The approach used in this research is quantitative with a quasi-experimental method. The participants of this study were 100 elementary school students who were divided into two groups of 50 students each in the experimental and control groups. Data was collected through reading comprehension tests and observations. Data analysis was performed by two-way ANOVA. The results showed that the Reciprocal Teaching model gave a more significant contribution to students' reading comprehension skills compared to conventional methods, especially for students who had low self-concept. Based on the findings above, it is concluded that the Reciprocal Teaching learning model has an effect on students' reading comprehension skills. Both reciprocal and conventional learning models have the same effect on students who have high self-concept. The implication of this research is that teachers must choose a learning model that can accommodate all students, not only students with high academic abilities, but also students with low academic abilities.

*Corresponding author
E-mail addresses: tanto.aljauharie@upi.edu (Tanto Aljauharie Tantowie)

1. INTRODUCTION

One aspect of language skills that is the main foundation of students in accessing information is reading ability. The reading ability of our students in the field is still very worrying. This is reinforced by the low ability of students to understand material or questions that require higher-order thinking skills. The questions and texts contained in PISA require high reading comprehension skills (Lin et al., 2021; Yousuf et al., 2021). The difficulty in obtaining this implied information is seen when students take the midterm and school exams. This phenomenon proves that students' reading comprehension skills are still low. Based on this phenomenon, reading comprehension skills are very important to be improved through various teaching models. Through the ability to read, students can access other academic abilities. Reading has a very strategic value in self-development (Bezerra et al., 2022; Samiei & Ebadi, 2021). By reading, we can expand our knowledge of the world. It was further revealed that reading will broaden horizons, enrich perspectives, sharpen thoughts and feelings, and gain provisions to navigate real life. Reading comprehension skills are very important because through reading comprehension skills students are able to understand questions that are at a high level. In addition, through reading comprehension, students can access a variety of information that requires higher-order thinking skills (Gottardo et al., 2018; D. Hadianto et al., 2021b). The basic competence is finding the main idea in the reading text. This means that students must be able to understand various written discourses through reading activities. However, in reality this cannot be implemented optimally. Based on the importance of understanding reading content in learning, various efforts have been made by the government. Efforts made by the government so far are through curriculum improvements. Indonesia's reading interest is lowest in Southeast Asia (Froiland & Davison, 2020; Wagner et al., 2021). The lack of students' understanding of the contents of the reading has an impact on the failure to take the national exam for Indonesian subjects. Failure to take the national exam in the Indonesian language field can be caused by several other factors that are chain in nature. So that there are still many students who have difficulty in understanding a reading text, so this is a problem that needs to be solved. The low reading ability of these students is reinforced by the literacy rating of the State of Indonesia which is still below. The low PISA literacy rating in Indonesia is the low reading comprehension ability of students because the majority of students fail to understand the instructions or questions given through PISA questions (D. Hadianto et al., 2021a; Young et al., 2019). This indicates that the reading teaching model used by the school is not optimal. Therefore, an appropriate teaching model is needed so that students' reading comprehension skills are optimally encouraged.

One of the teaching models that can be used to improve students' reading comprehension skills is the reciprocal teaching model. The reciprocal teaching model is one of the teaching models that emphasize reading comprehension. The reciprocal teaching model refers to learning activities that occur in the form of dialogue between teachers and students regarding reading texts (Wulfemeyer, 2019; Zhao et al., 2022). This reciprocal teaching model also provides opportunities for students to convey information to other students related to the summary they have made. This dual role is useful because it allows students to gain understanding, both from their role as recipients of information and as people who convey information. There are four stages involved in the reciprocal teaching model, namely summarizing, asking, predicting, and clarifying. The stages in the reciprocal teaching model are expected to be able to improve students' ability to understand reading content. The reciprocal teaching model emphasizes students to work in groups that are formed in such a way that each member can communicate comfortably in expressing opinions or asking questions in order to exchange experiences of learning success with each other (Hiebert & Daniel, 2019; Soto et al., 2019).

The reciprocal teaching model not only helps to understand reading but also provides opportunities for students to monitor their own learning and thinking processes. The purpose of the reciprocal teaching model is to make it easier for students to communicate and help each other in their respective groups in understanding the text or reading given by the teacher. The structure of dialogue and interaction between groups in the learning process requires the participation of all students in fostering healthy competitive relationships so that they can help create a conducive learning atmosphere. Student participation in learning can include: (1) commenting on other students' summaries, (2) asking questions that have been made to other students, (3) providing comments on other students' answers, (4) asking for clarification of material that is not understood, 5) helps resolve misunderstandings. The reciprocal teaching model is a teaching procedure or approach designed to teach students about cognitive strategies and to help students understand reading well (Muijselaar et al., 2017; Ozturk, 2017; Taşçı & Turan, 2021). Academic self-concept is a factor that affects the learning process (learning model) and has an impact on student learning outcomes. Self-concept is the image that a person has of himself. Self-concept includes physical self-image and psychological self-image (Gubbels et al., 2020; Ha, 2021). A person's physical image is usually formed first and is related to physical appearance, attractiveness, suitability and incompatibility with gender. Psychological self-image is based on thoughts, feelings, and emotions. Self-

image consists of qualities and abilities that affect life adjustments. These traits include courage, honesty, independence, discipline, and trust (Ricchiardi & Emanuel, 2018; Shaari et al., 2019). Therefore, students' academic self-concept is considered to have an important role in learning reading comprehension. Starting from the description above, it is necessary to try the application of the reciprocal teaching learning model. This study is very important to determine the characteristics of the learning model that is able to accommodate low and high academic abilities. Basically, the learning model must not only be able to accommodate high academic abilities, but also must be able to accommodate low academic abilities.

Several previous studies that raised the ability to read comprehension include the role of metacognition in reading comprehension. This metacognition instruction is able to optimize students' understanding of the reading content because it is guided by questions that reveal the content of the text (Wulfemeyer, 2019). Another study that tested the cooperative script method to improve reading comprehension skills was proven to be effective in improving reading comprehension skills (Tarchi, 2017; Zhao et al., 2022). In addition, another study that used the PQRST (Preview, Question, Read, Summarize) method to improve reading comprehension skills was proven to have a significant contribution to students' reading skills. Improved reading skills through this method because students are given the opportunity to elaborate on the content of the text through the stages of preview, questioning, independent reading, and summarizing (Hayashi et al., 2018; Susantini et al., 2021). These various models have proven to be effective in improving reading comprehension skills. However, the previous research has not accommodated the characteristics of students who have diverse academic abilities.

The difference between this study and previous research is to test the effectiveness of the reciprocal teaching model in improving reading comprehension skills in terms of students' self-concept skills. So, the difference lies not only in the model used but also in the student's academic self-concept variable which will be very useful to see the role of the reciprocal teaching model in involving students with low and high academic self-concept abilities. The purpose of this study was to examine the reciprocal teaching model in terms of students' academic self-concepts. Through this research it is seen whether this model is able to accommodate students with low and high academic abilities or not. The purpose of this research is to study the effect of reciprocal teaching model and academic self-concept on students' reading comprehension skills.

2. METHOD

This study uses a quantitative approach with a quasi-experimental design. The sample of this study was students in grades 5-6 at the elementary school level, totaling 100 students with 50 experimental groups and 50 control groups respectively. Class samples were taken randomly. This study aims to determine the effect of the reciprocal teaching learning model on reading comprehension by manipulating the independent variables, namely the reciprocal teaching learning model and students' self-concept, while the dependent variable is students' reading comprehension ability. The quasi-experimental design used in this study was the Non-Equivalent Post Test Control Group Design. Hypothesis testing was carried out using a two-way ANOVA test.

The instruments used in this study were reading comprehension tests, and reciprocal teaching assessment observations to determine self-concept skills. The validity and reliability of the instrument used empirical tests and expert judgment. Based on the test results, the instrument meets the criteria for use. Students who have a high self-concept have signs, including: (1) he believes in his ability to solve problems, (2) he feels equal to others, (3) he realizes that everyone has feelings, desires, and behaviors that are different from others, and (4) he is able to improve himself and try to change it. The reading comprehension test is carried out through multiple choice questions using a cognitive level that is in the higher-order thinking area. Assessment of self-concept researchers used a Likert scale with points (1-5) and observation to see their own ability to measure their own abilities. The results of this self-concept observation will be used to confirm the results of their reading comprehension abilities whether they are in line or contradictory.

Students are instructed to understand the reading through cognitive strategies. Students are asked to read a discourse, during which they learn and practice four comprehension strategies, namely: summarizing, formulating questions, explaining difficult words or discourse content, predicting, and clarifying. Through summarizing students gain a learning experience to identify important information, themes, and ideas in reading texts and integrate them into concise statements. At the question stage, students learn to make questions based on the summary they made. Next, the third phase is prediction in which students combine previous knowledge with new knowledge they gain from reading texts to answer questions made and teacher questions. The last stage, students conduct discussions to clarify the material that has not been understood and present their work in front of the class. Data analysis was carried out by

confirming the results of the self-concept assessment with the results of the reading comprehension test. Students who have good self-concept are separated and compared with the reading ability test. Then, data analysis was carried out through a two-way ANOVA test to see the effect of the reciprocal teaching model on reading comprehension ability and how it relates to students' self-concept.

3. RESULT AND DISCUSSION

Result

Based on the results of the calculation of central tendency includes: mean, median, and calculation of dispersion, namely the standard deviation for the six data groups. It can be presented in Table 1.

Table 1. ANOVA Test Results for Reading Comprehension Levels, Self-Concept, and Learning Models

	Reciprocal Teaching	Conventional	High self-concept X Reciprocal Teaching	Low self-concept X Reciprocal Teaching	High self concept X Conventional	Low self concept X Conventional
Average	65.53	60.45	69.56	65.45	61.32	56.56
Median	67.35	61.23	73	63.53	60.22	56.45
Standard deviation	11.64	12.14	14.23	9.55	7.78	9.35
Variance	98.765	76.145	181.13	83.64	55.35	62.64
Maximum score	82.04	84.61	86.14	81.34	73.45	76.22
Minimum score	42.12	42.65	41.23	54.52	53.45	41.45

Base on Table 1, the results of the calculation of the two-way analysis of variance regarding the differences in students' reading comprehension who followed the reciprocal teaching learning model with the conventional learning model resulted in F = 6.465 (p <0.05). Thus, the null hypothesis is rejected. In other words, the alternative hypothesis which reads "there is a difference in reading comprehension between students who follow the reciprocal teaching learning model and students who follow the conventional learning model" is accepted at a significance level of 5%. When explored further, the reading comprehension of students who took reciprocal teaching (experimental class) was on average 65.53 with a standard deviation of 11.64 better than students who took conventional learning with an average of 60.45 with a standard deviation of 9 ,35. To find out the difference in reading comprehension of students who have high academic self-concepts who follow the reciprocal teaching learning model and students who have high self-concepts who follow conventional learning models, it is tested with the F-test. Fcount = 1.576, the significance is greater than 0.05. This means that for the group of students who have high self-concept, their reading comprehension is not significantly different either following the reciprocal teaching learning model or the conventional model at a significance level of 5%. However, when explored further based on the mean (mean) and standard deviation (SD), it turns out that the group of students who have high self-concept who follow the reciprocal teaching learning model averages 69.56 with a standard deviation of 12.14 which is better than the group of students who following the conventional learning model with an average of 61.32 with a standard deviation of 7.78.

The results of the F test resulted in Fcount = 4.643, in fact the significance was smaller than 0.05. This means that for groups of students who have low self-concept, their reading comprehension is significantly different between those who follow the reciprocal teaching learning model and those who follow the conventional model at a significance level of 5%. If further traced based on the average (mean) and standard deviation (SD), it turns out that the group of students who have low academic self-concepts who follow the reciprocal teaching learning model have an average of 65.45 with a standard deviation of 9.55, which is better than the group of students. It follows the conventional learning model with an average of 56.56 with a standard deviation of 9.35. From the results of the two-way ANOVA calculation, F = 0.132 (p>0.05) for a significance level of 0.05. Because the results of the analysis show that the significance is 0.865 > 0.05, it means that the null hypothesis is accepted. In other words, the alternative hypothesis which reads that there is an interaction between the learning model and the academic self-concept on reading comprehension is rejected. That is, the reciprocal teaching learning model is suitable for both high self-concept and low self-concept. Based on the results of data analysis, it has been proven that there are differences in reading comprehension of students who follow the reciprocal teaching learning model and those who follow the conventional learning model. This is indicated by the results of

ANOVA with an FA value of 6.476 (p<0.05), which was significant. From the application of the two models, different results were obtained at a significance level of 5%. The average reading comprehension score of students who follow the reciprocal teaching learning model is 65.53 with a standard deviation of 11.64, which is better than students who take conventional learning with an average reading comprehension score of 60.45 with 10.14 degrees of freedom. Through the application of the reciprocal teaching learning model, students are invited to understand reading through cognitive strategies. Students are asked to read a discourse, during that reading they learn and practice four comprehension strategies, namely: summarizing, formulating questions, explaining difficult words or discourse content, predicting, and clarifying. Through summarizing students gain learning experiences to identify important information, themes, and ideas in reading texts and integrate them into concise statements. In the question phase, students learn to make questions based on the summary they made. Next, the third phase is prediction in which students combine their prior knowledge with new knowledge they gain from the reading text to answer the questions made and the teacher's questions. The last phase, students conduct discussions to clarify the material that has not been understood and present their work in front of the class.

The results of the hypothesis test turned out to be Ho which reads "there is no difference in reading comprehension, students who have high academic self-concepts who follow the reciprocal teaching learning model and the conventional learning model" are accepted. This is indicated by the ANOVA results obtained by the value of F = 1.587 (p>0.05), which means it is not significant at the 5% significance level. Thus, it can be said that there is no difference in reading comprehension of students who have high academic self-concepts who follow the reciprocal teaching learning model and the conventional learning model. These results indicate that for the group of students who have high academic self-concept, students' reading comprehension is not significantly different at the 5% significance level for the two learning models. That is, for groups of students with high self-concept, both the reciprocal teaching learning model and the conventional learning model are both suitable to be applied.

The result of Ho's hypothesis test which reads "there is no difference in reading comprehension of students who have low academic self-concepts who follow the reciprocal teaching learning model and the conventional learning model" is rejected. These results are indicated by the ANOVA results obtained by the value of F = 5.464 (p <0.05) which means it is significant at the 5% significance level. Thus, it can be said that there are differences in reading comprehension of students who have low academic self-concepts who follow the reciprocal teaching learning model and the conventional learning model. These results indicate that for the group of students who have low academic self-concept, students' reading comprehension differs significantly at the 5% significance level for the two learning models. That is, for groups of students with low academic self-concept, the reciprocal teaching learning model is better than the conventional learning model. This can be seen from the average reading comprehension of students who study with the reciprocal teaching learning model of 65.45, which is greater than the group of students who study with the conventional learning model, which is 56.56.

Thus, if this model is applied to students who have low self-concept, of course over time they will be able to improve their self-concept. By increasing their self-concept, this will increase the suitability of the learning model with the students' self-concept so that their learning achievement including reading comprehension will be improved. From the hypothesis test 4 of this study, it turns out that there is no interaction between the learning model and students' self-concept on reading comprehension. This is evidenced by the results of ANOVA with an F value of 0.211 (p>0.05), which was not significant. The results also showed that the average reading comprehension of students for high self-concept was 69.56 who studied with the reciprocal teaching learning model (experimental class) was higher than students who studied with the conventional model (control class) which was 60.45. Likewise for the group of students with low self-concept, it turns out that the groups of students who study with the reciprocal teaching learning model have an average reading comprehension of 65.45 which is also higher than the average reading comprehension of students who study with the conventional learning model, which is 56.56.

Discussion

Based on the research results, it is clear that the reciprocal teaching learning model provides more opportunities for students to actively participate and practice their cognitive strategies in reading comprehension compared to the conventional model. This is in accordance with the opinion that the reciprocal teaching learning model is quite effective in helping students understand reading (Wulfemeyer, 2019; Zhao et al., 2022). The reciprocal teaching learning model has a dual role, namely as a recipient and a giver of information so as to enable students to get a better reading comprehension. Thus, it is natural that the results of this study indicate that the reading comprehension of students who take reciprocal

learning is better than students who take conventional learning. Through hypothesis testing there was no significant difference in students' reading comprehension taught by the reciprocal teaching learning model and the conventional learning model, judging from the average reading comprehension of students, it was found that the average reading comprehension of students taught by the reciprocal teaching learning model was higher compared to those who study with conventional learning models. This finding strengthens previous research that the reciprocal teaching model is able to improve the reading comprehension skills of low and high level students (Gubbels et al., 2020; Pacello, 2014; Silverman et al., 2015). This shows that the reciprocal teaching learning model is able to accommodate both students who have low and high academic self-concepts.

Students who have a low self-concept have characteristics including (1) he is very intolerant of the criticism he receives, he is easily angry. For this person correction is often seen as an attempt to bring him down, (2) he tends to avoid dialogue with various justifications or wrong logic, (3) he is very responsive to praise, for these people all complements that uphold his dignity always be the center of his attention, and (4) he will be pessimistic about competition and think he will be powerless to face competition. Students who have low self-concept tend to feel less confident in their abilities and pessimistic in doing a task, and students tend to be reluctant to express their ideas (Kane et al., 2014; LaRusso et al., 2016; Lyster et al., 2016). Although the group of students who have low academic self-concept has these characteristics, by applying the reciprocal teaching learning model it turns out that the reading comprehension results are better for the group of students with low academic self-concept compared to conventional learning models. This is in accordance with the theory that reading comprehension skills can be increased by a learning model that encourages active participation and encourages students' critical thinking skills (Meijer et al., 2013; Muijselaar et al., 2017; Ozturk, 2017).

Another finding in this study is that students who have low self-concept have relatively lower reading comprehension who study with the conventional model compared to the reciprocal teaching learning model (Froiland & Davison, 2020). From these findings, besides having advantages in improving students' reading comprehension skills, this model can help students develop self-confidence, so that students who have low self-concept will be able to improve their self-concept. This is because the reciprocal teaching learning model is a constructivism-based learning model. With this model, students learn to find their own knowledge and understanding, learn to construct knowledge and understanding, and learn to ask questions, express opinions with logical arguments, and be able to connect the understanding they have obtained with previous knowledge. In this learning model, learning is not only to know (learning to know), but also learning to find one's identity (learning to be). The findings of this study reinforce previous studies that a learning model that encourages students to be actively involved in the learning process will increase students' self-confidence (Gottardo et al., 2018; Justice et al., 2018). The findings on students who have high academic self-concept are students of this type can accept input and criticism which they consider logical and scientific. Based on the characteristics of these students, the learning model that is suitable for these students is a guided learning model that expects students' previous ideas, which are then linked to the experience gained in the learning process in accordance with the stages of reciprocal teaching, and later students are expected to find answers to questions through the same procedure clearly planned (Banks, 2012; Connor et al., 2018). Through the application of the reciprocal teaching learning model, students are required to be responsible for the learning process they undergo, and are directed not to always depend on the teacher. The reciprocal teaching learning model forms independent students who can continue the learning process in their life and career, so that there will be an increase in learning achievement, including an increase in reading comprehension. The characteristics of students who have a high self-concept as described previously are a necessary requirement in the application of the reciprocal teaching learning model, so that the demands in the application of the learning model are more easily carried out by students who have high self-esteem concepts, both reciprocal teaching learning models and conventional learning models.

Students with low academic self-concept abilities who study with the reciprocal teaching learning model are also superior in their reading comprehension compared to the group of students who study with the conventional model. Students who have low self-concept tend to feel less confident in their abilities and pessimistic in doing a task, and students tend to be reluctant to express their ideas. Based on the characteristics possessed by these students, the learning model that is more suitable for students who have low self-concept is the reciprocal teaching learning model because the reciprocal teaching learning model has more detailed stages, namely summarizing, asking questions, predicting, and clarifying (Daris Hadianto et al., 2022; Hiebert & Daniel, 2019; Soto et al., 2019). Compared to conventional learning, the stages are direct reading then followed by answering critical questions. Students who have low self-concept tend to follow what is given by the teacher without wanting to develop their ideas. Thus, it is natural that students' academic self-concept is low, reading comprehension is also lower for conventional

learning compared to reciprocal teaching. The results of this study are supported by research that most elementary school students have serious problems in reading (Foorman et al., 2020; Taşçı & Turan, 2021; Young et al., 2019). Furthermore, he said, after applying the reciprocal teaching model with small group work students can help students to develop students' metacognitive abilities, namely thinking about what students think such as reading and processing information.

The implications of this research provide an overview of the reciprocal teaching learning model that can be more effectively applied in improving students' reading comprehension, both for groups of students with high and low academic self-concept. From the presentation of the findings above, it can be concluded that the reciprocal teaching learning model is suitable for both groups, both students who have high self-concept and students who have low self-concept in improving students' reading comprehension. However, this research still has limitations. Therefore, it is hoped that future research will be able to further deepen and broaden the scope of research related to reciprocal teaching learning model and self-concept.

4. CONCLUSION

Based on the results of hypothesis testing as described above, it can be concluded that the learning model has an effect on reading comprehension. There are differences in reading comprehension between students who follow the reciprocal teaching learning model compared to those who follow the conventional learning model at elementary school level students. Reciprocal teaching learning can improve reading comprehension skills and help students develop comprehension monitoring skills. In this model, students and teachers exchange roles in working with reading texts, namely making questions, clarifying information, making predictions, and making conclusions.

5. REFERENCES

Banks, K. (2012). Are Inferential Reading Items More Susceptible to Cultural Bias Than Literal Reading Items? *Applied Measurement in Education*, *25*(3), 220–245. https://doi.org/10.1080/08957347.2012.687610.

Bezerra, R. L. M., Alves, R. J. R., & Azoni, C. A. S. (2022). Creativity and its relationship with intelligence and reading skills in children: an exploratory study. *Psicologia: Reflexão e Crítica*, *35*(1). https://doi.org/10.1186/s41155-022-00221-3.

Connor, C. M. D., Phillips, B. M., Kim, Y. G., Lonigan, C. J., Kaschak, M. P., Crowe, E., Dombek, J., & Al Otaiba, S. (2018). Examining the Efficacy of Targeted Component Interventions on Language and Literacy for Third and Fourth Graders Who are at Risk of Comprehension Difficulties. *Scientific Studies of Reading*, *22*(6), 462–484. https://doi.org/10.1080/10888438.2018.1481409.

Foorman, B. R., Wu, Y. C., Quinn, J. M., & Petscher, Y. (2020). How do latent decoding and language predict latent reading comprehension: across two years in grades 5, 7, and 9? *Reading and Writing*, *33*(9), 2281–2309. https://doi.org/10.1007/s11145-020-10043-3.

Froiland, J. M., & Davison, M. L. (2020). Emotional Intelligence, Listening Comprehension, and Reading Comprehension among Diverse Adolescents. *Journal of Child and Family Studies*, *29*(5), 1385–1390. https://doi.org/10.1007/s10826-019-01557-8.

Gottardo, A., Mirza, A., Koh, P. W., Ferreira, A., & Javier, C. (2018). Unpacking listening comprehension: the role of vocabulary, morphological awareness, and syntactic knowledge in reading comprehension. *Reading and Writing*, *31*(8), 1741–1764. https://doi.org/10.1007/s11145-017-9736-2.

Gubbels, J., Swart, N. M., & Groen, M. A. (2020). Everything in moderation: ICT and reading performance of Dutch 15-year-olds. *Large-Scale Assessments in Education*, *8*(1), 1–17. https://doi.org/10.1186/s40536-020-0079-0.

Ha, H. T. (2021). Exploring the relationships between various dimensions of receptive vocabulary knowledge and L2 listening and reading comprehension. *Language Testing in Asia*, *11*(1). https://doi.org/10.1186/s40468-021-00131-8.

Hadianto, D., Damaianti, V. S., Mulyati, Y., & Sastromiharjo, A. (2021a). Does reading comprehension competence determine level of solving mathematical word problems competence? *Journal of Physics: Conference Series*, *1806*(1). https://doi.org/10.1088/1742-6596/1806/1/012049.

Hadianto, D., Damaianti, V. S., Mulyati, Y., & Sastromiharjo, A. (2021b). Enhancing scientific argumentation skill through partnership comprehensive literacy. *Journal of Physics: Conference Series*, *2098*(1). https://doi.org/10.1088/1742-6596/2098/1/012015.

Hadianto, Daris, S. Damaianti, V., Mulyati, Y., & Sastromiharjo, A. (2022). Effectiveness of Literacy Teaching Design Integrating Local Culture Discourse and Activities to Enhance Reading Skills. *Cogent*

Education, *9*(1), 0–13. https://doi.org/10.1080/2331186X.2021.2016040.

Hayashi, Y., Seta, K., & Ikeda, M. (2018). Development of a support system for measurement and analysis of thinking processes based on a metacognitive interpretation framework: a case study of dissolution of belief conflict thinking processes. *Research and Practice in Technology Enhanced Learning*, *13*(1). https://doi.org/10.1186/s41039-018-0091-y.

Hiebert, E. H., & Daniel, M. (2019). Comprehension and rate during silent reading: Why do some students do poorly? *Reading and Writing*, *32*(7), 1795–1818. https://doi.org/10.1007/s11145-018-9917-7.

Justice, L. M., Lomax, R., O'Connell, A., Pentimonti, J., Petrill, S. A., Piasta, S. B., Gray, S., Restrepo, M. A., Cain, K., Catts, H., Bridges, M., Nielsen, D., Hogan, T., Bovaird, J., Nelson, J. R., Jiang, H., & Farquharson, K. (2018). Are working memory and behavioral attention equally important for both reading and listening comprehension? A developmental comparison. *Reading and Writing*, *31*(7), 1449–1477. https://doi.org/10.1007/s11145-018-9840-y.

Kane, S., Lear, M., & Dube, C. M. (2014). Reflections on the role of metacognition in student reading and learning at higher education level. *Africa Education Review*, *11*(4), 512–525. https://doi.org/10.1080/18146627.2014.935001.

LaRusso, M., Kim, H. Y., Selman, R., Uccelli, P., Dawson, T., Jones, S., Donovan, S., & Snow, C. (2016). Contributions of Academic Language, Perspective Taking, and Complex Reasoning to Deep Reading Comprehension. *Journal of Research on Educational Effectiveness*, *9*(2), 201–222. https://doi.org/10.1080/19345747.2015.1116035.

Lin, J., Li, Q., Sun, H., Huang, Z., & Zheng, G. (2021). Correction to: Chinese secondary school students' reading engagement profiles: associations with reading comprehension (Reading and Writing, (2021), 34, 9, (2257-2287), 10.1007/s11145-021-10139-4). *Reading and Writing*, *34*(9), 2289. https://doi.org/10.1007/s11145-021-10171-4.

Lyster, S. A. H., Lervåg, A. O., & Hulme, C. (2016). Erratum to: Preschool morphological training produces long-term improvements in reading comprehension (Reading and Writing, DOI: 10.1007/s11145-016-9636-x). *Reading and Writing*, *29*(6), 1289. https://doi.org/10.1007/s11145-016-9647-7.

Meijer, J., Sleegers, P., Elshout-Mohr, M., van Daalen-Kapteijns, M., Meeus, W., & Tempelaar, D. (2013). The development of a questionnaire on metacognition for students in higher education. *Educational Research*, *55*(1), 31–52. https://doi.org/10.1080/00131881.2013.767024.

Muijselaar, M. M. L., Swart, N. M., Steenbeek-Planting, E. G., Droop, M., Verhoeven, L., & de Jong, P. F. (2017). Developmental Relations Between Reading Comprehension and Reading Strategies. *Scientific Studies of Reading*, *21*(3), 194–209. https://doi.org/10.1080/10888438.2017.1278763

Ozturk, N. (2017). An analysis of teachers' self-reported competencies for teaching metacognition. *Educational Studies*, *43*(3), 247–264. https://doi.org/10.1080/03055698.2016.1273761.

Pacello, J. (2014). Integrating Metacognition into a Developmental Reading and Writing Course to Promote Skill Transfer: An Examination of Student Perceptions and Experiences. *Journal of College Reading and Learning*, *44*(2), 119–140. https://doi.org/10.1080/10790195.2014.906240.

Ricchiardi, P., & Emanuel, F. (2018). Soft skill assessment in higher education. *Journal of Educational, Cultural and Psychological Studies*. https://doi.org/10.7358/ecps-2018-018-ricc.

Samiei, F., & Ebadi, S. (2021). Exploring EFL learners' inferential reading comprehension skills through a flipped classroom. *Research and Practice in Technology Enhanced Learning*, *16*(1). https://doi.org/10.1186/s41039-021-00157-9.

Shaari, J. S., Hooi, L. B., & Siswantoyo. (2019). The effectiveness of psychological skills training program on netball shooting performance. *Cakrawala Pendidikan*, *38*(1), 174–187. https://doi.org/10.21831/cp.v38i1.23206.

Silverman, R. D., Proctor, C. P., Harring, J. R., Hartranft, A. M., Doyle, B., & Zelinke, S. B. (2015). Language skills and reading comprehension in English monolingual and Spanish–English bilingual children in grades 2–5. *Reading and Writing*, *28*(9), 1381–1405. https://doi.org/10.1007/s11145-015-9575-y.

Soto, C., Gutiérrez de Blume, A. P., Jacovina, M., McNamara, D., Benson, N., Riffo, B., & Kruk, R. (2019). Reading comprehension and metacognition: The importance of inferential skills. *Cogent Education*, *6*(1). https://doi.org/10.1080/2331186X.2019.1565067.

Susantini, E., Puspitawati, R. P., Raharjo, & Suaidah, H. L. (2021). E-book of metacognitive learning strategies: design and implementation to activate student's self-regulation. *Research and Practice in Technology Enhanced Learning*, *16*(1). https://doi.org/10.1186/s41039-021-00161-z.

Tarchi, C. (2017). Comprehending Expository Texts: The Role of Cognitive and Motivational Factors. *Reading Psychology*, *38*(2), 154–181. https://doi.org/10.1080/02702711.2016.1245229.

Taşçı, S., & Turan, Ü. D. (2021). The Contribution of Lexical Breadth, Lexical Depth, and Syntactic

Knowledge to L2 Reading Comprehension Across Different L2 Reading Proficiency Groups. *English Teaching and Learning*, *45*(2), 145–165. https://doi.org/10.1007/s42321-020-00065-z.

Wagner, R. K., Beal, B., Zirps, F. A., & Spencer, M. (2021). A model-based meta-analytic examination of specific reading comprehension deficit: how prevalent is it and does the simple view of reading account for it? *Annals of Dyslexia*, *71*(2), 260–281. https://doi.org/10.1007/s11881-021-00232-2.

Wulfemeyer, J. (2019). Modeling Metacognition and Providing Background Knowledge via Guided Reading Videos. *Journal of College Reading and Learning*, *49*(2), 75–88. https://doi.org/10.1080/10790195.2018.1514284.

Young, C., Durham, P., Miller, M., Rasinski, T. V., & Lane, F. (2019). Improving reading comprehension with readers theater. *Journal of Educational Research*, *112*(5), 615–626. https://doi.org/10.1080/00220671.2019.1649240.

Yousuf, M. S., Harvey, H. L., Parahoo, S. K., Ziadeh, B. S., Kilani, M., & Al-Kamil, E. (2021). The effects of pediatric primary prevention programs on screen-time and reading habits of children in Jordan. *International Journal of Child Care and Education Policy*, *15*(1). https://doi.org/10.1186/s40723-021-00092-8.

Zhao, A., Guo, Y., & Dinnesen, M. S. (2022). The direct and indirect effects of language and cognitive skills on Chinese reading comprehension. *Reading and Writing*, *35*(3), 539–564. https://doi.org/10.1007/s11145-021-10192-z.