The Efficacy of the Direct Instruction Approach for Teaching English to Fourth-Grade Students with Ordinal Numbers

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Abstract. One of the most vital components is vocabulary. Their vocabulary significantly impacts the kids' ability to speak, listen, read, and write. This will make things easier for children because they will better comprehend what they read and hear. Ordinal numbers are learned as part of the English language's vocabulary. Direct instruction is the most suitable of the known learning models for teaching sequential numerical subjects. This study was conducted in one of Bekasi City, West Java, Indonesia's public elementary schools. Adapted action study on the topic of English ordinal numbers. Twenty students participated in this research. The pre-cycle action intervention design employs the cooperative learning model, whereas the first cycle employs the direct instruction approach. There was quantitative and qualitative data collection. Observations yielded qualitative data, while student test scores yielded quantitative information. The results demonstrated that the direct instruction model adopted in cycle 1 for the subject of serial numbers, which is part of the English vocabulary, is more effective at transferring knowledge to students and improving their learning outcomes than the cooperative learning model adopted in cycle 1.

Keywords: Direct Instruction · Learning Outcomes · Ordinal Numbers are keywords

1 Introduction

The literature has highlighted the significance of English. According to [1], learning English entails the development of contextually appropriate English language abilities following the context, conditions, and situations of students' daily life. In order to become proficient in the language they are learning, vocabulary development is one of the most essential abilities pupils must acquire. According to [2], acquiring explicit vocabulary focuses students' attention primarily on new terms and those associated with word meanings. According to [3], the mastery of synonyms, antonyms, and the meaning of terms served as markers of the increase in students' vocabulary knowledge.

According to [4], reading is a complicated activity involving multiple interrelated components, and research undertaken over the past century has repeatedly demonstrated that vocabulary is one of the most crucial components. Using word-learning strategies boosts teachers' awareness of vocabulary and reading comprehension-enhancing techniques [5]. [6] contend that vocabulary is a core component of dialect competence and crucial to how effectively kids talk, listen, read, and write. Students can perform tasks more quickly if they can comprehend what they read and hear.

Ordinal numbers are taught as part of the English language's vocabulary. Direct instruction is the most suited learning technique for teaching the topic of ordinal numbers compared to other available methods. Recent emphasis has been placed on the provision of direct instruction; for example, [7] argue that learning with direct instruction is more effective since the direct instruction model can transmit greater information to students and can increase student learning outcomes [8, 9].

Others commonly refer to direct instruction as display learning. Direct instruction is specifically designed to promote student learning of well-structured factual knowledge that can be taught in stages and to assist students in mastering the procedural knowledge required to execute simple and difficult abilities [10]. Direct instruction is designed specifically to facilitate student learning processes related to gradual or step-by-step declarative and procedural knowledge acquisition [11]. Direct instruction is utilized effectively in all learning situations because it is based on behavioral learning concepts, such as gaining students' attention, encouraging correct replies, providing corrective feedback to students, and exercising the acquired knowledge correctly. In addition, [10] identifies five processes in direct instruction, including goal-setting, explanations and/or demonstrations, practice guides, feedback, and practice expansion. In higher education, the direct instruction approach has been widely adopted.

Numerous studies indicate that direct instruction or demonstration models increase students' knowledge, such as the study by [12], which demonstrates that the use of demonstration models can significantly increase students' understanding of mathematics and their cognitive and emotional engagement. The demonstration approach facilitates knowledge transfer to children, particularly in elementary school mathematics, including multiplication and repeated addition. The findings of this study demonstrate that the direct teaching/direct instruction strategy improves mathematics learning outcomes for students (Hermawan et al., 2020). This is consistent with the premise of [13] research, which asserts that the deployment of demonstration models has been demonstrated to increase student learning results in science courses. This research also demonstrates that the direct learning methodology is proven to teach science abilities to children more effectively.

2   Method

This study employs action research methodology. According to [14], action research has an applied focus. Action research, like mixed methods research, collects data using either quantitative or qualitative methods. In contrast, action research focuses on a particular practical issue and seeks to find a solution. Based on [15] assertion that the purpose of this type of practical action research is to examine a specific school situation in order

to improve practice, this type of practical action research involves elementary school English teacher-led small-scale research projects that narrowly focus on problems or issues related to enhancing student understanding and learning outcomes.

This study was conducted at one of Bekasi City, West Java, Indonesia's public elementary schools. Adapted action research on the topic of English ordinal numbers. Ten male and ten female students participated in the research, for twenty.

Each research cycle comprises five to six phases accompanied by action research steps, including planning, action, observation, and reflection.

Quantitative and qualitative information was collected. Observations of student and teacher activities during the learning process and student worksheet portfolio documents were used to collect qualitative data. Observations are conducted directly to accurately capture and reflect on learning activities. In the meantime, quantitative data was obtained from test results, namely the value of student learning outcomes, which was analyzed by calculating the average value or percentage of learning success, among others, and the percentage of student activity, which was determined by analyzing student observation sheets.

3   Findings and Discussion

3.1   Pre-cycle

The initial condition for learning English in fourth grade at the pre-cycle stage was reported to be relatively low. It is known from the learning outcomes of 20 students who took the test, only 13 students, or 65% achieved the learning objectives, and seven students or 35% had not achieved the learning objectives. Based on the teacher's reflection, the low learning outcomes were due to the low level of student activity and the learning methods adopted by the teacher were not appropriate to the class conditions and students' abilities.

3.1.1   Planning

The teacher designs a lesson plan by adapting the cooperative learning model, examines teaching materials, sources, and learning media to be used, and checks the completeness and availability of data collection tools, such as observation sheets.

3.1.2   Acting

The pre-cycle action consists of six phases.

Phase 1. Clarify goals and establish set. The teacher sets ordinal numbers lesson objectives so students can know how to express a number and its use in constructing a sentence. The teacher explains ordinal numbers using live worksheets as comparison tables between cardinal numbers and ordinal numbers 1–10 to distinguish the functions of the two numbers.

Phase 2. Present information. The teacher presents information to students in a manner verbal about ordinal numbers. The teacher explains the definition of ordinal numbers with text, functions, and examples, procedures for using and writing them,

and mentions English pronunciation and its meaning in Indonesian. Students recite the first to tenth ordinal numbers and their meanings in Indonesian. Teachers use learning resources in English textbooks, YouTube videos, and live worksheets. Students watch an animated video explaining ordinal numbers, then students are asked to name the ordinal numbers listed on the live worksheets.

Phase 3. Organize students into learning teams. The teacher explains how to form study groups to study ordinal numbers material. The teacher uses the cooperative learning model by dividing students into 4 study groups, each comprising 5 students. Each group member is responsible for everything that is done in the group. Teachers help students to make efficient transitions. Each group remembers and memorizes ordinal numbers, then the teacher conducts questions and answers, the teacher asks about ordinal numbers in Indonesian and each group answers in English or vice versa. The teacher accompanies students in these activities.

Phase 4. Assist teamwork and study. The teacher assists study groups as they work on their assignments. The teacher gives the task of completing sentences using ordinal numbers. The teacher gives examples of questions as an illustration of students doing the task and translates the sentences in the questions into Indonesian so students can easily understand. Two groups worked on questions 1 to 5 and the other two worked on questions 6 to 10. The teacher-guided students who had difficulty learning ordinal numbers.

Phase 5. Test on the materials. The teacher tests students' knowledge of various ordinal numbers material. Students work on ordinal numbers through drag-and-drop exercises on live worksheets where each group works on three questions. The teacher guides study groups when presenting the results of their work.

Phase 6. Provide recognition. Teachers look for ways to acknowledge student effort in learning ordinal numbers. The teacher and students discuss assignments. The teacher checks assignments and assesses each student and group and provides follow-up. The teacher provides feedback and praise for student work and instructions or suggestions for students who encounter difficulties.

3.1.3   Observing

The observation results show that learning improvement activities using the cooperative model is not optimal. Less optimal learning activities are predicted to cause low student learning outcomes. From the results of daily tests, 13 students achieved the learning objectives, seven students had not.

3.1.4   Reflecting

Reflection concluded that student learning outcomes were still low because the cooperative learning model had not accommodated students' learning needs for the topic of ordinal numbers. Cooperative learning, takes a lot of time, effort, and resources. During group discussion activities, the topic of the problems discussed by students often expands, which spends more time, some students dominate the discussion and make other students only listen. The teacher seemed to have difficulty dividing assignments and guiding the classroom.
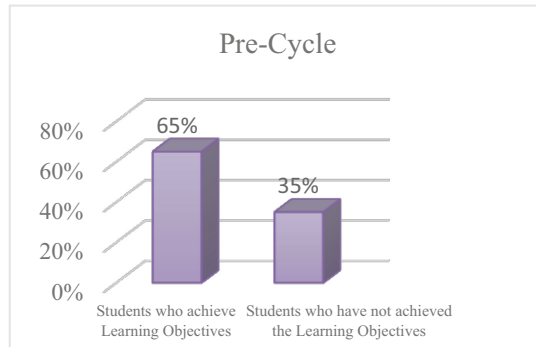
Fig. 1. Data on achievement of pre-cycle student learning objectives

Table 1. Data on student learning outcomes and the percentage of pre-cycle achievements

Student achievement	The number of students	Percentage
Students who have achieved learning objectives	13	65%
Students who have not achieved the learning objectives	7	35%

Therefore it is necessary to take action to improve learning cycle one. Efforts to be made are to replace the learning model with direct instruction which emphasizes mastery of concepts and/or changes in behavior by prioritizing a deductive approach. Figure 1 shows the results of the pre-cycle study.

Specifically, the achievement data for student learning objectives are shown in Table 1.

3.2 Cycle 1

3.2.1 Planning

Creating lesson plans by adapting the direct instruction model, analyzing the materials, sources, and learning media to be used, and confirming the availability and completeness of data collection instruments, such as observation sheets and test sheets.

3.2.2 Acting

The action of cycle 1 is comprised of five phases.

First, define objectives and establish objectives.

The instructor prepares students to learn by explicating the lesson's objectives using procedural texts from English textbooks. The teacher explains that the purpose of comprehending procedural text is for students to be able to articulate the steps required to complete a task or activity.

Phase 2: Exhibit knowledge and abilities. The instructor demonstrates the topic of ordinal numbers sequentially. The instructor reads and translates the text Playing

the Whispering Horse into Indonesian. The instructor instructs students to reread the assigned reading aloud, with students repeating after the instructor. Students record key vocabulary terms provided by the teacher, and the teacher and students recite the term and its meaning three times to ensure comprehension. Students view a YouTube video of the Whispering Horse game sketch to familiarize themselves with the game and understand its relationship to ordinal numbers. The instructor explains the meaning, steps, and rules of the Whispering Horse game and its noble values.

Step 3: Offer guided practice. The instructor structures the initial ordinal number practice. The instructor demonstrates how to read a procedural text titled How to Make Mango Juice using live worksheets and explains the contents of the reading as confirmation. The instructor guides students to mention ordinal numbers in the correct order. The instructor then directs students to list the steps for making mango juice sequentially.

Phase 4: Evaluate student comprehension and provide feedback. The instructor verifies that students have mastered the taught skills. The teacher asked the students to respond to the questions in the English textbook reading passage Playing the Whispering Horse and assisted them in completing the assignment. The instructor inquires about the students' responses and then discusses with them how to solve the problem. The instructor provides feedback, values, and evaluates student work.

Phase 5: Offer extended practice and transfer opportunities. The instructor establishes conditions for additional practice with an emphasis on skill transfer to more complex situations. The teacher provides additional instruction or practice for students to identify and record the sequential steps of other traditional games.

3.2.3 Observing

Observations in cycle 1 indicate that learning is still conducted in a traditional manner, leaving many students confused when completing assignments. In addition, the teacher explained the material quickly due to time constraints and an unstable internet connection, as well as a lack of optimizing student activities and teacher supervision, which is one of the factors contributing to low student performance. The teacher also does not provide conclusions at the end of learning, preventing teachers and students from understanding the relationship between the mastered experiences and the things just learned.

3.2.4 Reflecting

Reflection on the first cycle concluded that subpar learning activities were responsible for poor student learning outcomes. The implementation of cycle 1 learning improvement led to increased learning outcomes, with 17 of 20 students achieving the learning objectives. Based on these reflections, the teacher retaught and practiced with three students whose learning objectives had not been met. Figure 2 displays the findings of cycle 1 research on the learning outcomes of completed and uncompleted students.

Table 2 provides additional information about the attainment of learning objectives.
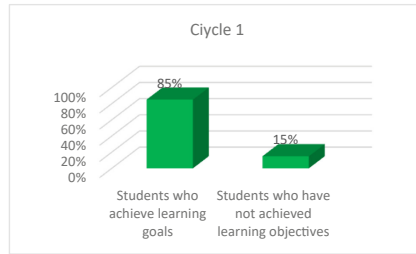
Fig. 2. The efficacy of the direct instrution

Table 2. Information on student learning outcomes and cycle 1 achievement percentage

Student achievement	The number of students	Percentage
Students who have attained learning objective	17	85%
Students who have not attained the learning objectives	3	15%

4 Conclusions

This is a summary of the conclusions: 1) The cooperative learning model is not necessarily suitable for all subjects and topics, nor can it be adapted in all classrooms; 2) The direct instruction model adapted in cycle 1, on the topic of serial numbers, which is part of the vocabulary learned in the subject English, has been shown to transfer knowledge to students more effectively and to improve student learning outcomes than the cooperative learning model adapted on pre-cycle.

This study found that generally, direct instruction can encourage students to acquire well-structured factual knowledge that can be taught in stages (in this case English vocabulary). Direct instruction is effective in all subjects and topics because it is based on the principle of transfer of behavior, such as the teacher demonstrating declarative knowledge, which is then followed by students, the teacher responding, the teacher providing corrections and feedback to students, and the students practicing the newly acquired knowledge.

References

1. I. K, Wijaya, Pembelajaran Bahasa Inggris di sekolah dasar. Bahtera: Jurnal Pendidikan Bahasa Dan Sastra, 14(2), 2015, pp. 120–128.
2. J. Sibanda, J. Baxen, J, Third-grade English second language teachers' vocabulary development practices. South African Journal of Childhood Education, 8(1), 2018, pp. 1–9.
3. Y. Elviza, Emidar, E. Noveria, Peningkatan penguasaan kosakata melalui teknik permainan teka-teki silang. Jurnal Pendidikan Bahasa Dan Sastra Indonesia, 1(2), 2013, 469–476.
4. J. F. Baumann, E. J. Kamé'enui, G. E, Research on vocabulary instruction: Voltaire Redux. In J. Flood, D. Lapp, J. R. Squire, & J. M. Jensen (Eds.), Handbook of research on teaching the english language arts, (2nd ed., pp. 752–785). Mahwah, NJ: Lawrence Erlbaum, 2003.

5. L. Li, K. Flynn, R. G. Tripathy, J. Wang, K. Austin-King, M. F. Graves, Word learning strategies: A program for upper elementary school students. Paper presented at the Annual Meeting of the American Educational Research Association (AERA), New York, NY, 2018, https://files.eric.ed.gov/fulltext/ED604593.pdf

6. J. Richards, W. Renandya, Methodology in language teaching, an anthology of current practice. Cambridge University Press, 2002.

7. A. Zendler, K. Klein, The effect of reciprocal teaching and programmed instruction on learning outcome in computer science education. Studies in Educational Evaluation, 58, 2018, pp. 132–144.

8. C. M. Hermawan, O. Rosfiani, Yulia, V. Lutfiana, The effectiveness of direct instruction model in mathematics subjects: A classroom action research in elementary school. International Journal of Scientific and Technology Research, 9(4), 2020, pp. 2506–2509. http://www.ijstr.org/final-print/apr2020/The-Effectiveness-Of-Direct-Instruction-Model-In-Mathematics-Subjects-A-Classroom-Action-Research-In-Elementary-School.pdf

9. H. Wenno, Direct instruction model to increase physical science competence of students as one form of classroom assesment. International Journal of Evaluation and Research in Education (IJERE), 3(3), 2014, pp. 1–6.

10. R. I. Arends, Learning to teach (9th ed). McGraw-Hill, 2012.

11. H. B. Uno, N. Mohamad, Belajar dengan pendekatan PAILKEM (Pembelajaran, aktif, inovatif, lingkungan, kreatif, efektif, menarik). Bumi Aksara, 2011.

12. O. Rosfiani., C. M. Hermawan, R. K. Sari, S. Hastuti, Improving student mathematics achievements of elementary school in 1st grade through demonstration models. *International Journal of Scientific and Technology Research*, 9(3), 2020, pp. 3669–3672. http://www.ijstr.org/final-print/mar2020/Improving-Student-Mathematics-Achievements-Of-Elementary-School-In-1st-Grade-Through-Demonstration-Models.pdf

13. A. Saepuloh, O. Rosfiani, C. M. Hermawan, Sutiawati, M. Apriyana, Teacher's efforts to enhance students' competence in madrasah ibtidaiyah in science skills and academic achievement. Journal of Physics: Conference Series, 1764(1), 2021. https://iopscience.iop.org/article/10.1088/1742-6596/1764/1/012095/pdf

14. J. W. Creswell, Educational Research : Planning, conducting, and evaluating quantitative and qualitative research (4th ed.). Pearson, 2012.

15. R. A. Schmuck, Practical action research for change. IL: IRI/SkyLight Training and Publishing, 1997.