European Journal of Education Studies
ISSN: 2501 - 1111
ISSN-L: 2501 - 1111
Available online at: www.oapub.org/edu

DOI: 10.46827/ejes.v11i3.5241 Volume 11 | Issue 3 | 2024

UTILIZATION OF EXPLICIT INSTRUCTION IN KINDERGARTEN

Jobelyn L. Cadungog[1i],
Cornelio R. Rollo[2]
[1]Ramon Magsaysay Memorial Colleges
Graduate School,
General Santos City,
Philippines
[2]PhD, Ramon Magsaysay Memorial Colleges
General Santos City,
Philippines

Abstract:
This study aimed to determine the effectiveness of utilizing explicit instruction in kindergarten at P. Kindat Elementary School in the school year 2022-2023. The researcher utilized a non-equivalent group quasi-experimental design because the learners were grouped heterogeneously for which random selection and assignment were not possible. The study was conducted at P. Kindat Elementary School, Dadiangas West District, Division of General Santos City with 60 bona fide kindergarten learners as respondents of this study. The study found that the majority of the performance of the two groups of kindergarten learners before the utilization of explicit instruction was fair. It means that they did not meet the learning standards needed. Moreover, their performances after the utilization of explicit and without explicit instruction in the control group show that the majority of the kindergarten learners had fair performance, while the experimental group who are using explicit instruction met the minimum learning standards needed. Lastly, there was no significant difference in the control group, while there was a significant difference in the experimental group. This means that the utilization of explicit instruction was effective in teaching kindergarten learners.

Keywords: educational management, kindergarten learners, control group, experimental group, explicit instruction, Philippines

1. Introduction

Teachers everywhere have felt the intense pressure to cater to the needs of diverse learners inside the four corners of the classroom. The amount of material that students

[i] Correspondence: email giediolarodriguez@gmail.com

need to use has dramatically increased due to the recent growth in knowledge. Since ideas and content are vast and too much for them to absorb, it is necessary and a must for teachers to select and use a teaching method that will effectively improve pupils' learning performance along the process of learning. Placing pupils in education does not vouch for success (Acido *et al*., 2018; Annansingh, 2019; Coyle *et al*., 2021).

Explicit teaching in a tightly structured setting involves focusing students' attention on particular learning objectives. It is education designed to achieve specific learning objectives. Subjects and material are broken down into manageable chunks and taught one at a time. It involves practice, explanation, and demonstration. Children receive guidance and well-organized frameworks. The subjects are conducted under the teacher's direction and in a sensible order. Modeling behaviors, abilities, and thoughts are crucial to explicit instruction. The instructor must solve problems and walk pupils through procedures while thinking aloud. Pupils must pay close attention, and success depends on their ability to listen and observe (Anwar, 2018; Brevik, 2018; Hughes *et al*., 2018).

In the Philippines, children learn new skills through play during their preschool and kindergarten years (they must be five years old by June 1st of each calendar year). Play fosters growth in all critical domains, including social, emotional, physical, linguistic, and cognitive. Cognitive development is the process of knowing, reasoning, and thinking. Knowledge expansion depends on cognitive development. Children learn inquiry, spatial relationships, problem-solving, imitation, memory, numerical sense, classification, and symbolic play in preschool and kindergarten (Cervetti *et al*., 2020; Chodkiewicz, 2019; Sonjai *et al*., 2022).

Nonetheless, educators are aware of various issues that can arise during teaching-learning. Their goal was to perform their jobs effectively and efficiently. In addition to thoroughly understanding the material, they understood that they needed to employ the most effective teaching and learning techniques. By analyzing how the changes have affected administrative policy and classroom technique, as well as whether or not this methodology is well-known, accessible, and applied, this study may contribute to the body of knowledge (Coman *et al*., 2020; El Soufi & See, 2019).

The majority of the research that is currently available on the use of explicit instruction in kindergarten centers on how well it works to enhance early literacy and numeracy abilities. The more comprehensive socio-emotional and cognitive development of kindergarten pupils needs further research. While this approach has many benefits, they need more study to thoroughly comprehend how explicit teaching in skill learning may impact the growth of social skills, critical thinking, and general school readiness. To better promote young learners' holistic development, early childhood education practices, and policy can be informed by understanding the holistic effects of explicit instruction in kindergarten (Ashman, 2022; Hojholt & Kousholt, 2019; Kal *et al*., 2018).

Therefore, this study aimed to ascertain if kindergarten students at P. Kindat Elementary School. Explicit instruction improves learning. According to the study, a great teacher provides more than explicit instruction; they also fill in the knowledge and

skill gaps. Future research will examine the effectiveness of explicit education in kindergarten. Prospective educators can use the study's findings as a guide to help shape students' minds into lifelong learners.

2. Theoretical Framework

The central theoretical foundation for this work is Bandura's Social Cognitive Theory, which holds that learning happens in a social setting and through direct instruction or instrumental training. It occurs when parents or teachers use rewards or punishments to control the behavior and are clear about the lessons, they want the youngster to learn. Second, parental modeling imparts knowledge to the children. There are four component subfunctions needed for observational learning. Motivation, motor reproduction, attention, and retention are a few of these. For students to learn, they must focus on the critical information. Students must then retain the knowledge that they know. Students need to commit what they have learned to memory during this phase. Students mimic the behavior exhibited in the third sub-function of motor reproduction. Finally, the learner receives motivation from incentives that are direct, vicarious, or self-produced (Bandura, 2019; Beauchamp *et al.*, 2019; Eun, 2019).

In support of this notion, Vygotsky's concept of Sociocultural Learning emphasized the significance of communication for learning and growth. According to him, learning requires the development of both the social and cognitive domains. Playing with classmates allows the kids to share knowledge and give constructive criticism to one another. A child's learning progression depends on both parents and their teacher's interactions. One of the most crucial ideas within Vygotsky's theory is the Zone of Proximal Development (ZPD). As the discrepancy between students' actual and potential developmental stages, Vygotsky defined the ZPD. The ZPD is, to put it simply, the difference between the most challenging job a child can complete on their own and the most challenging task they can achieve with assistance (Erbil, 2020; Eun, 2019; Newman, 2021).

Second, in contrast to Piaget's theory, which was hesitant to push the kids beyond what their developmental stages allowed them to learn, Vygotsky thought that the kids could advance to the next developmental stage if given the right help. The teachers can design the curriculum to challenge the students' abilities. Like Bandura, Vygotsky postulates that kids can learn by watching and copying adults or their peers. As a result, it's critical to provide the kids time to cooperate and work together. Students are encouraged to talk and interact socially during this period (Babakr *et al.*, 2019; Meadows, 2019; Sanghvi, 2020).

3. Conceptual Framework

Figure 1 reveals the conceptual framework for the investigation. Its representations are the independent and dependent variables.

The first two boxes indicate the independent variables, the control and experimental groups. Explicit coaching was provided to the experimental group, while the other group received standard training. The use of explicit instruction, represented by the second box is the dependent variable. This teacher-centered approach known as "explicit instruction," focuses on making behavioral and cognitive goals and outcomes apparent to students (Ghaith & El-Sanyoura, 2019; Greeno, 2021; Sulu *et al*., 2021).

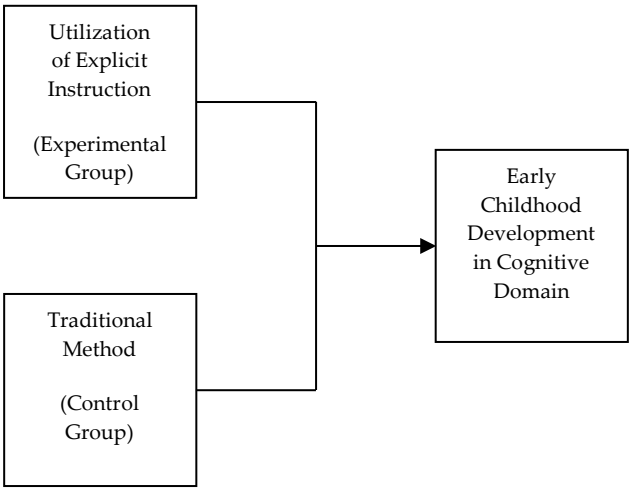

Figure 1: Conceptual Framework of the Study

4. Statement of the Problem

1) To determine the performance of the two groups of kindergarten learners before using explicit instruction.
2) To determine the performance of the two groups of kindergarten learners after using explicit instruction.
3) To determine the significant difference in the performance of the two groups before and after using explicit instruction.

5. Method

In this quantitative research, a quasi-experimental design was adopted. The design aims to establish the effectiveness of the utilization of explicit instruction to the cognitive development of kindergarten learners. Subjects are assigned to groups based on non-random criteria. In order to measure any changes, the researcher deliberately employed a nonequivalent group design with pretest and posttest. This structure allows for participant evaluations both before and after therapy. Nonrandomized intervention studies fall under the broad category of quasi-experimental studies. When conducting a randomized controlled experiment is not ethically or logistically viable, these designs are commonly employed instead. Internal validity risks may impact the design, despite its lower level of sophistication compared to certain other designs with lower error propagation (Krishnan, 2018).

The performance of kindergarten learners was evaluated based on explicit instruction. They completed both the pre-and post-tests. Assessment checklists were made for direct instruction at the design stage. Decisions made during the design phase led to the creation of explicit instructions throughout the development stage. Educators received training on using the materials during deployment. Pretest-posttest designs extend the pretest and posttest design with nonequivalent groups, one of the most fundamental methods for assessing the effectiveness of an intervention. This two-group design treats one group, with merged results at the conclusion. The same tests are administered simultaneously to the control group without therapy—afterward, and statistical analysis to determine whether the intervention had a significant effect. Statistical analysis is performed to assess the effectiveness of the intervention. In medicine, for example, this is commonly used to determine a drug's effectiveness by administering it to one group while keeping it out of the hands of the control group. While often utilizing two groups, this design approach can be more intricate. For example, if different therapy dosages are investigated, the design can be based on multiple groups (Little *et al.*, 2020).

There is an unequal distribution of boys and girls between the two sessions. By using clear guidance in teaching, the design enabled the researcher to compare the experimental group's findings to those of the control group. Using the Early Childhood Development Checklist as a guide, this approach uses pre- and post-assessments, as required by the K -12 Basic Education Program (Stratton, 2019).

The researcher set the inclusion criteria in the selection of the subjects: male or female, regardless of religion and ethnicity, ages 5-6 years old, who were currently enrolled as kindergarten learners in P. Kindat Elementary School, Dadiangas West District, Division of General Santos City for the school year 2022-2023. Nevertheless, the subjects have the right to withdraw from the study at any stage without providing a reason. Any respondent who chose to start was assured that his/her decision would not have any negative consequences or impact on his/her relationship with the school or program. Furthermore, if any respondent displayed discomfort, distress, or emotional unease during the study, appropriate measures were taken to support and ensure his/her well-being.

The research instrument used in the study was the Cognitive Domain for Early Childhood Development Checklist and the Lesson package. The Checklist underwent a series of quality assurance processes and was validated by the experts. The researcher constructed a teacher-made learning package based on the prescribed lesson guides in the Most Essential Learning Competencies (MELC's) under the K to 12 Basic Education Program. The checklist helped determine whether there is a significant effect on utilization of explicit instruction to the early childhood cognitive development of kindergarten in P. Kindat Elementary School, school year 2022-2023.

6. Validity and Reliability of the Questionnaire

Initially, the proponent made a 25-item assessment checklist based on the first grading lesson. After formulating and completing the draft of the device, the researcher piloted it homogeneously to answer the chosen 25 kindergarten learners coming from a neighboring school. After the learners answered the items in the checklist, it was immediately retrieved through the Internal-Consistency Method. Using this method, one could determine if the examinee passed or failed in an item A (1) was assigned for a pass or a failure.

The process of obtaining a reliability coefficient in this method was determined using Kuder-Richardson Formula 20. Hence,

$$\int xx = \left[\frac{N}{N-1}\right][\frac{SD^2 - \sum piqi}{SD^2}$$

Where:
N is the number of items,
SD^2 is the variance of scores on test defined as,

$$\frac{\sum(x-\bar{x})^2}{n-1}$$

and $piqi$ is the product of the proportion of passed and failed for item i. The symbol pi denotes the proportion of individuals giving item 1, and the proportion failing by qi, where $qi = 1 - pi$. The proponent strictly observed the steps in applying the Kuder-Richardson Formula 20:

$$\int xx = \left[\frac{N}{N-1}\right][\frac{SD^2 - \sum piqi}{SD^2}$$

First, the researcher computed the variance SD^2 of the test scores for the whole group. Second, the researcher determined the proportion passing each item (pi) and failing each item (qi). Third, the researcher multiplied the (pi) and (qi) from each item and sum for all the things. It gave the $\sum piqi$ value. Finally, the researcher substituted the calculated values in the formula.

After that, the researcher computed the values based on the computation that revealed if the 25-item test instrument piloted was reliable or not. Upon knowing the reliability of the tools, the proponent did an item analysis to see the index of difficulty and the index of discrimination of each item. To do this, the researcher strictly followed simple but effective procedures for item analysis:

In step 1, the researcher arranged the test scores from the highest to the lowest. Step 2, she got one-third of the papers from the highest and one-third from the lowest scores. The idle one-third was set aside. Step 3, she counted the number of students in the

upper and lower groups, respectively, who chose the options. In step 4, she then recorded the frequency from step 3. In step 5, the proponent estimated the index of difficulty. She used the following formula:

$$\text{Index of difficulty} = \frac{\sum x}{N} x\ 100$$

Where:
$\sum x$ is the sum of the correct answer of the upper and lower groups, and
N is the number of cases in both the upper and lower groups.

Difficulty refers to the percentage of getting the correct answer to each item. The smaller the percentage, the more complex the item is. The majority criterion (50% plus one) is the basis for interpreting the index of difficulty, whether the item is difficult or easy. When the item has a 50% difficulty index, it is neither easy nor difficult; the lower the percentage, the more complex the item is. Finally, in step 6, the researcher estimated the item discriminating power. In evaluating the item discriminatory power, the upper and lower groups were compared to the correct responses. The index of discrimination was computed using the formula below:

$$\text{Index of discrimination} = \frac{RU - RL}{NG}$$

To discuss the formula, RU presents the proper response of the upper group, RL is the appropriate response of the lower group, and NG is the number of learners in each group. According to Calmorin's formula, the discriminating power of an item is not more than 1.00. A maximum of positive discriminator power is revealed by an index of 1.00. It is obtained when all upper-group learners choose the correct answer and not the lower group. Negative discriminating power is obtained when more learners in the lower group get the correct answers than the upper group. Moreover, a zero-discriminating power (0.00) is attained when the equal frequency of the upper and lower groups received the right answer. The items having negative and zero discriminating power should be revised or improved.

Table 2: Index of Discrimination and Difficulty of Test Item

INDEX OF DISCRIMINATION	ITEM EVALUATION
0.40 or higher	Very Good Item
0.30 – 0.39	Good Item
0.20 – 0.29	Marginal Item
0.19 or below	Poor Item
INDEX OF DIFFICULTY	**ITEM EVALUATION**
0.70 or higher	Low Difficulty
0.31 – 0.69	Moderate Difficulty
0.30 or below	High Difficulty

The proponent retained the items that passed the difficulty and discrimination index in the item analysis. Other items that were marked revised or improved were carried out. The 25-item tests underwent face validation. It was validated by four (4) experts who are doctors of education.

The instrument was validated using the following criteria:

1) clarity of direction and indicators,
2) presentation and organization,
3) suitability of the items,
4) adequacy of indicators per category,
5) congruency to the purpose,
6) impartiality of the researcher, and
7) appropriateness of the options and evaluation rating system.

Through their expertise, revisions and improvements were made. The instrument obtained an overall mean of 4.77, which implied an excellent descriptive rating. Out of the 25-item Test that went through the validation and piloting process, the researcher came up with an official 15-item Test which was used in the pretest and post-test activities. The items were coming from the supplementary materials.

6.1 Validation of Instrument

The researcher submitted the instrument for validation with the help of the experts. Comments and suggestions were considered in the formulation of the said questionnaire. She computed the test of validity and reliability, including item analysis.

6.2 Mechanics of Learning Package

The researcher made a learning package, which was reviewed and validated by the experts to ensure the content quality and instructional quality. The content must be consistent with topics/skills found in the DepEd Learning Competencies intended for kindergarten. The concepts were developed for enrichment, reinforcement, and mastery of the identified learning objectives.

6.3 Mechanics of the Experimentation

The parents of the respondents were informed about the matter. It was also emphasized that their children's participation was not mandatory and that they could also inform their students about it and ask for their willingness to be part of the study. They were then assured of the confidentiality and the proper treatment of the information throughout the process.

The researcher personally administered the pre-assessment using the checklist in the experimental and control group. After the pre-assessment was given, the results were collected and kept for statistical treatment.

The next day, the researcher started the conduct of the study in the experimental and control group. The researcher taught the experimental group in the morning session using explicit instruction. The control group was the class in the afternoon session. The pupils taught the same topics as the experimental group but they were not exposed to

explicit instruction. After all the required topics were taught, the post-assessment was given to the groups of pupils. Finally, the researcher collected the post-assessment results of the two groups which were kept for statistical treatment.

6.4 Data Analysis and Statistical Tools

To analyze and interpret the gathered data, appropriate statistical tools were used. For sub-problem numbers one and two, frequency counts were used to treat the data gathered. For the sub-problem, the number three t-test was used to determine the significant difference between the pre-test and the post-test scores of the control and the experimental groups. A t-test is a type of statistical test that was used in comparing the means of two groups. It is one of the most widely used statistical hypothesis tests (Thukral *et al.*, 2023)

7. Results and Discussion

7.1 The Performance of the Two Groups of Kindergarten Learners Before the Utilization of Explicit Instruction

Table 6 presents the data on the performance of the control and experimental groups of kindergarten learners before the utilization of explicit instruction. Data revealed that in the control group and experimental group using explicit instruction, 1 or 3% obtained very satisfactory performance, 5 or 17% obtained satisfactory, 13 or 43% obtained fair, 10 or 34% obtained poor, and 1 or 3% obtained needs improvement.

The data shows that when comparing the 2 groups, the control, and the experimental group, the level of performance was the same. It implies that the selection of participants has the same level or category of performance.

A very satisfactory performance indicates that kindergarten learners obtained scores from 13 to 15. It means that kindergarten learners performed excellently and answered all or most of the items correctly. A satisfactory performance indicates that kindergarten learners obtained scores were 10 to 12 out of 15. It means that learners met the needed standards. A fair performance indicates that kindergarten learners obtained 7 to 9 correct scores out of 15 items. It means that learners did not meet the standards needed for their level of performance. A poor performance indicates that kindergarten learners obtained scores of 4 to 6 correct items out of 15. It means that learners' scores were very low and considered as failed. A needs improvement performance indicates that kindergarten learners obtained 1 to 3 correct scores out of 15. Learners belonging to this category were very poor and they needed more intervention to cope with the learning standards needed.

This assumption parallels the study of Smith *et al.* (2021), who stated that in children at an early age of education, academic success is achieved through organization, time management, prioritization, concentration, and motivation. When it comes down to it, organizing skills may be more important than reading, writing, and math in developing a well-rounded, independent person. Achievement is influenced by the performing arts and amateur athletics. They include self-assurance in one's abilities, the

ability to deal with stress effectively, and the ability to focus and filter out distractions. Critical thinking, decision-making, and conflict-resolution skills are required for success in any field. Academic success is critical for the social development of young people.

Table 6: Performance during the Pre-Test of Kindergarten Before the Utilization of Explicit Instruction

Performance Level	Control Group		Experiment Group	
	F	P	F	P
Very Satisfactory (13-15)	1	3	1	3
Satisfactory (10-12)	5	17	5	17
Fair (7-9)	13	43	13	43
Poor (4-6)	10	34	10	34
Needs Improvement (1-3)	1	3	1	3
Total	**30**	**100**	**30**	**100**

7.2 The Performance of the Two Groups of Kindergarten Learners after the Utilization of Explicit or Without Explicit Instruction

Table 7 presents the data on the performance of the control and experimental groups of kindergarten learners after the utilization of explicit instruction. Data revealed that in the control group after using explicit instruction, 2 or 7% obtained very high performance, 6 or 20% obtained satisfactory, 9 or 30% obtained fair, 8 or 27 obtained poor, and 5 or 16% obtained needs improvement.

In the experimental group, 10, or 23% obtained very satisfactory performance, 15, or 50% obtained satisfactory, 5, or 17% obtained fair, and none of the learners obtained poor and needed improvement.

Table 7: Performance during the Post-Test of Kindergarten using Explicit without Explicit Instruction

Performance Level	Control Group		Experiment Group	
	F	P	F	P
Very Satisfaction (13-15)	2	7	10	33
Satisfactory (10-12)	6	20	15	50
Fair (7-9)	9	30	5	17
Poor (4-6)	8	27	0	0
Needs Improvement (1-3)	5	16	0	0
Total	**30**	**100**	**30**	**100**

Kindergarten students obtained scores ranging from 13 to 15, indicating a very satisfactory performance. It means that kindergarten students performed admirably and correctly answered all or most of the questions. A satisfactory performance indicates that kindergarten students received scores ranging from 10 to 12 out of a possible 15 points. It means that the students met the required standards. Kindergarten students who performed well-received 7 to 9 correct answers out of 15 items. It indicates that students did not meet the standards required for their level of performance. A poor performance indicates that kindergarten students got 4 to 6 correct answers out of 15 possible answers.

It means that the learners' grades were extremely low and they were considered failed. A performance that requires improvement indicates that kindergarten students received 1 to 3 correct answers out of a possible 15. Learners in this category were very poor, and they require more intervention to meet the required learning standards.

On the other hand, performance during the post-test using explicit and without explicit instruction. It could be noticed that in the control group without explicit, 9 out of 30 or 30 percent of the kindergarten learners belong to a fair performance level or have scores of 7 to 9. It means that they did not meet the expected learning performance needed. However, under experimental groups using explicit instruction, 15 out of 30 or 50 percent of the kindergarten learners belong to a satisfactory level. It means that they met the learning standard needed.

This assumption parallels the study of Ashman (2017), who stated that explicit instruction is a set of instructional behaviors that increases the likelihood of student success. Learning becomes crystal clear with explicit instruction. It provides numerous opportunities for children to practice skills and receive feedback. It can be especially beneficial for children who learn and think in unconventional ways. Explicit teaching provides a powerful way to structure lessons while keeping the essential ingredients consistent. It essentially gives us feedback on our performance in real-time.

7.3 The Significant Difference in the Performance of the Two Groups Before and After the Utilization of Explicit or Without Explicit Instruction

Table 8 presents the data for this sub-problem. Data collection was done using T-test. It was found that the pretest and posttest scores of kindergarten learners in the control group were computed at the Alpha level of .05 with a df of 29. The calculated t-value, as displayed in the table, was 0.11. It was more significant than the tabular value of 1.699, which led to the acquisition of the null hypothesis. The pretest scores of the kindergarten learners do not significantly influence the post-test scores.

Table 5: The Significant Difference in the Performance of the Two Groups Before and After the Utilization of Explicit without Explicit Instruction

Control Group					Experimental Group				
Variable	**df N-1**	**t-value**		**Decision a=0.05**	**Variable**	**df N-1**	**t-value**		**Decision a=0.05**
		Computed	**Tabular**				**Computed**	**Tabular**	
Pre-Test vs. Post-Test	29	0.11	1.699	Accept Ho Not significant	Pre-Test Vs. Post-Test	29	10.90	1.699	Reject Ho Significant

The pre-test and post-test scores of kindergarten learners in the control group were tested at the Alpha level of .05 with a df of 29. The table shows that the computed Pearson's Product Moment Coefficient of Correlation value was 0.11. It was more significant than the tabular value of 1.699, which led to the acceptance of the null hypothesis. The pre-test scores of the kindergarten learners do not significantly influence the post-test scores. It was found out that the pre-test and post-test scores of kindergarten learners in the experimental group were tested at the Alpha level of .05 with a df of 29. The table shows

that the computed Pearson's Product Moment Coefficient of Correlation value was 10.90. It was more significant than the tabular value of 1.699. Which led to the rejection of the null hypothesis. The pre-test scores of the kindergarten learners significantly influenced the post-test scores.

Data revealed that comparing the two groups with or without using explicit instruction, the control group obtained a computed t-value of 0.11 and tabular t-value of 1.699 which led to the acceptance of the null hypothesis. This means that there is no significant difference between the pretest and posttest scores of 30 kindergarten learners. On the other hand, in the experimental group which utilized explicit instruction, the obtained computed t-values were 10.90, and the tabular t-value of 1.699 which led to the rejection of the null hypothesis. It means that there is a significant difference. The use of explicit instruction is effective in teaching kindergarten learners.

This assumption parallels the study of Boarman (2017), who stated that simply implementing explicit instruction in a clear lesson structure can have a significant impact on student outcomes and improve children's learning performance. An effective and efficient classroom dynamic that uses systematic, direct, engaging, and success-oriented instruction can result from effective delivery using explicit instruction. A carefully planned teaching sequence that progresses logically from simple to complex objectives, beginning with the students' current level of competence, benefits students.

8. Conclusions

The information acquired led to the establishment of the following conclusions: The majority of the performance of the two groups of kindergarten learners before the utilization of explicit instruction was fair. It means they did not meet the learning standards needed. Moreover, after the utilization of explicit and without explicit instruction in the control group, the majority of the kindergarten learners had fair performance, while the experimental group who used explicit instruction had a satisfactory performance or met the minimum learning standards needed. Lastly, there was no significant difference in the control group, while there was a significant difference in the experimental group. This means that the utilization of explicit instruction was effective in teaching kindergarten learners.

The effectiveness of explicit instruction stems from its ability to encourage teachers to examine the individual elements they intend to teach and constantly check for student understanding. This critical direct instruction component requires teachers to consider the step-by-step processes that students must follow to identify when students need help understanding or have misconceptions (Anwar, 2018; El Soufi & See, 2019; Hodgkins & Bullard, 2019).

9. Recommendations

To enhance the educational experience for kindergarten learners, educators and schools could integrate explicit instruction strategies into their teaching methods, as demonstrated by the significantly improved performance in the experimental group.

Additionally, a continuous assessment of kindergarten learners' performance should be maintained to promptly identify those who are facing challenges in meeting the learning standards and adapt the teaching methods accordingly. Recognizing the diversity of the learners' needs, educators should consider differentiated instruction techniques to accommodate varied learning styles. Professional development opportunities should be given to educators, particularly in early childhood education, including training in the effective implementation of explicit instruction.

Moreover, continuous monitoring and evaluation of instructional methods are essential to ensure alignment with the desired learning outcomes. Adequate resource allocation, such as instructional materials and technology should be prioritized to support effective teaching. Encouraging peer collaboration and the sharing of best practices can provide valuable insights into effective teaching methods, while further research on the specific elements of successful explicit instruction can lead to more targeted strategies.

Conflict of Interest Statement

The authors whose names are listed below certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; membership, employment, consultancies, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

About the Author(s)

Jobelyn L. Cadungog, Teacher I. Academic Education: Master of Arts in Education Major in Educational Management. Research interests: teaching and learning.
Cornelio R. Rollo, PhD. Public School Division Supervisor Academic Education: Doctor of Philosophy in Educational Management**.** Research interests: governance.

References

Acido, B., Muega, G., & Oyzon, L. (2018). Elements of a radio-based literacy program: Towards a community-responsive pre-service teacher education. *Asian Journal of Social Sciences and Humanities*, *2*(1), 196-201.

Altun, I., Cinar, N., & Bede, C. (2021). The contributing factors to poor sleep experiences according to the university students: A cross-sectional study. *Journal of Research in Medical Sciences*, 6, 557–561.

Annansingh, F. (2019). Mind the gap: Cognitive active learning in virtual learning environment perception of instructors and students. *Education and Information Technologies*, *24*(6), 3669-3688.

Anwar, K. (2018). The Implementation of Cooperative Integrated Reading and Composition (CIRC), Explicit instruction, and crossword puzzle models for increasing the Indonesian language student outcomes. In *1st International Conference on Creativity, Innovation and Technology in Education (IC-CITE 2018)* (pp. 296-300). Atlantis Press.

Ashman, G. (2020). The power of explicit teaching and direct instruction. *The Power of Explicit Teaching and Direct Instruction*, 1-152.

Ashman, G. (2022). *Should problem-solving precede explicit instruction when element interactivity is high?* (Doctoral dissertation, UNSW Sydney).

Babakr, Z., Mohamedamin, P., & Kakamad, K. (2019). Piaget's cognitive developmental theory: Critical review. *Education Quarterly Reviews*, *2*(3).

Bandura, A. (2019). Applying theory for human betterment. Perspectives on Psychological Science, 14(1), 12-15. https://doi.org/10.1177/1745691618815165

Beauchamp, M. R., Crawford, K. L., Jackson, B. (2019). Social cognitive theory and physical activity: Mechanisms of behavior change, critique, and legacy. *Psychology of Sport and Exercise*, Volume 42, p 110-117,

Boardman, A. G., Boelé, A. L., & Klingner, J. K. (2018). Strategy instruction shifts teacher and student interactions during text-based discussions. *Reading Research Quarterly*, *53*(2), 175-195.

Brevik, L. M. (2019). Explicit reading strategy instruction or daily use of strategies? Studying the teaching of reading comprehension through naturalistic classroom observation in English L2. *Reading and Writing*, *32*(9), 2281-2310.

Cervetti, G. N., Pearson, P. D., Palincsar, A. S., Afflerbach, P., Kendeou, P., Biancarosa, G., & Berman, A. I. (2020). How the reading for understanding initiative's research complicates the simple view of reading invoked in the science of reading. *Reading Research Quarterly*, *55*, S161-S172.

Chodkiewicz, H. (2019). Strategic reading: Towards a better understanding of its role in L2/FL learning and teaching contexts. *Lublin Studies in Modern Languages and Literature*, *43*(3), 61-72.

Coman, C., Țîru, L. G., Meseșan-Schmitz, L., Stanciu, C., & Bularca, M. C. (2020). Online teaching and learning in higher education during the coronavirus pandemic: Students' perspective. *Sustainability*, *12*(24), 10367.

Coyle, D., Bower, K., Foley, Y., & Hancock, J. (2021). Teachers as designers of learning in diverse, bilingual classrooms in England: An ADiBE case study. *International Journal of Bilingual Education and Bilingualism*, 1-19.

Dugnol-Menéndez, J., Jiménez-Arberas, E., Ruiz-Fernández, M. L., Fernández-Valera, D., Mok, A., & Merayo-Lloves, J. (2021). A collaborative escape room as a gamification strategy to increase learning motivation and develop curricular skills of occupational therapy students. *BMC Medical Education*, *21*(1), 1-13.

El Soufi, N., & See, B. H. (2019). Does explicit teaching of critical thinking improve critical thinking skills of English language learners in higher education? A critical review of causal evidence. *Studies in Educational Evaluation*, *60*, 140-162.

Erbil, D. G. (2020). A review of flipped classroom and cooperative learning method within the context of Vygotsky theory. *Frontiers in Psychology*, *11*, 1157.

Eun, B. (2019). Adopting a stance: Bandura and Vygotsky on professional development. Research in Education, 105(1), 74-88. https://doi.org/10.1177/0034523718793431

Ghaith, G., & El-Sanyoura, H. (2019). Reading comprehension: The mediating role of metacognitive strategies. *Reading in a Foreign Language* 3 (1), 19-43

Greeno, J. G. (2021). Some examples of cognitive task analysis with instructional implications. In *Aptitude, learning, and instruction* (pp. 1-22). Routledge.

Griffiths, C. (2019). Strategy Instruction. In *Qualitative Research Topics in Language Teacher Education* (pp. 210-215). Routledge.

Gül Peker, B., & Erdemir, N. (2021). Does compensation strategy instruction work? An action research study. *ELT Journal*, *75*(3), 351-361.

Gutierez, S. B. (2021). Collaborative lesson planning as a positive 'dissonance' to the teachers' individual planning practices: Characterizing the features through reflections-on-action. *Teacher Development*, *25*(1), 37-52.

Harwood, G., Knight, J., Thrower, N., & Berrow, R. (2019). Advancing the study of parental involvement to optimise the psychosocial development and experiences of young athletes. *Psychology of Sport and Exercise*, *42*, 66-73.

Harwood, N. (2021). Coda: An expanding research agenda for the use of instructional materials. *The Modern Language Journal*, *105*(S1), 175-184.

Hernández, T. A. (2021). Explicit instruction for the development of L2 Spanish pragmatic ability during study abroad. *System*, *96*, 102395.

Heydarnejad, T., Tagavipour, F., Patra, I., & Farid Khafaga, A. (2022). The impacts of performance-based assessment on reading comprehension achievement, academic motivation, foreign language anxiety, and students' self-efficacy. *Language Testing in Asia*, *12*(1), 1-21.

Hinton, V., Gibbs, A., & Franklin, T. (2020). The effects of CRA/CSA explicit instruction for students with and without disabilities taught in an inclusive setting. *Journal of the American Academy of Special Education Professionals*, *46*, 57.

Hodgkins, R., & Bullard, J. (2019). Who owns the curriculum? Co-production of an evolving research-informed module. In *Handbook for Teaching and Learning in Geography*. Edward Elgar Publishing.

Hojholt, C., & Kousholt, D. (2019). Developing knowledge through participation and collaboration: Research as mutual learning processes. *Annual Review of Critical Psychology*, *16*, 575-604.

Hughes, C. A., Riccomini, P. J., & Morris, J. R. (2018). Use explicit instruction. In *High Leverage Practices for Inclusive Classrooms* (pp. 215-236). Routledge.

Igwenagu, C. (2016). *Fundamentals of Research Methodology and Data Collection*. LAP Lambert Academic Publishing.

Kal, E., Prosée, R., Winters, M., & Van Der Kamp, J. (2018). Does implicit motor learning lead to greater automatization of motor skills compared to explicit motor learning? A systematic review. *PloS one*, *13*(9), e0203591.

Kang, H., & Furtak, E. M. (2021). Learning theory, classroom assessment, and equity. *Educational Measurement: Issues and Practice*, *40*(3), 73-82.

Kilday, J. E., & Ryan, A. M. (2022). The intersection of the peer ecology and teacher practices for student motivation in the classroom. *Educational Psychology Review*, 1-33.

Kolbeinsen, S. (2020). Teaching English reading strategies in the second language classroom. An intervention study of teacher-instructed use of reading strategies with L1 Norwegian L2 English Learners (Master's thesis, UiT Norges arktiske universitet).

Krishnan, P. (2018). A review of the nonequivalent control group post-test design. *Nurse Researcher 26(2), 37-40.* https://doi:10.7748/nr.2018.e1582

Laranjeiro, D. (2021). Development of game-based m-learning apps for preschoolers. *Education Sciences*, *11*(5), 229.

Little, T. P., Chang, R., Gorral, B.K, Waggenspack, L., Fukuda, E., Allen, P.J., Noam, G. G. (2020). The retrospective pretest-posttest design redux: On its validity as an alternative to traditional pretest-posttest measurement. *International Journal of Behavioral Developmen*t, 44(2), 175-183

Ma, R. (2022). Chinese parents' perspectives on parental involvement in children's education at the elementary level (6-12 years old) (Master's thesis, Itä-Suomen yliopisto).

Magnusson, C. G., Roe, A., & Blikstad-Balas, M. (2019). To what extent and how are reading comprehension strategies part of language arts instruction? A study of lower secondary classrooms. *Reading Research Quarterly*, *54*(2), 187-212.

Mahdy, A. (2020). The impact of COVID-19 pandemic on the academic performance of veterinary medical students. *Frontiers in Veterinary Science*, *7*, 732.

Meadows, M. L. (2019). Cognitive development implications of playful robotics investigations in kindergarten: Constructing microworlds. Webster University Proquest Dissertations Publishing.

Melhuish, K., Dawkins, P. C., Lew, K., & Strickland, S. K. (2022). Lessons learned about incorporating high-leverage teaching practices in the undergraduate-proof classroom to promote authentic and equitable participation. *International Journal of Research in Undergraduate Mathematics Education*, 1-34.

Moloo, K., Khedo, K., & Prabhakar, V. (2018). Critical evaluation of existing audio learning systems using a proposed TOL model. *Computers & Education*, *117*, 102-115.

Mumba, F., Banda, A., & Chabalengula, V. M. (2018). Junior high school pre-service science teachers' familiarity, conceptual understanding, and interest in electrochemistry. *African Journal of Research in Mathematics, Science and Technology Education*, *22*(2), 149-161.

Newman, S., & Latifi, A. (2021). Vygotsky, education, and teacher education. *Journal of Education for Teaching*, *47*(1), 4-17.

Ngoc, T. T. M., & Ngoc, T. B. (2021). Challenges faced by English majors when writing research papers. *American Journal of Humanities and Social Sciences Research (AJHSSR)*, *5*(12), 162-166.

Obis, J. D., & Valencia, J. S. (2019). Managing stress among elementary teachers in Sto. Tomas South District and its effect to their academic performance. *Ascendens Asia Journal of Multidisciplinary Research Abstracts*, *3*(2F).

Okkinga, M., van Steensel, R., van Gelderen, A. J., & Sleegers, P. J. (2018). Effects of reciprocal teaching on reading comprehension of low-achieving adolescents. The importance of specific teacher skills. *Journal of Research in Reading*, *41*(1), 20-41.

Raza, M. (2022). Interactive radio instruction–a legacy of COVID-19 for marginalized adolescent girls of Baluchistan. *Journal for Multicultural Education*. Retrieved from https://eric.ed.gov/?id=EJ1360537

Roman, T., Edwards, B., Dias, M., & Brantley-Dias, L. (2022). Building teacher communities through trauma-informed teaching practices: Teaching for social justice in STEM. In E. Baumgartner, R. Kaplan-Rakowski, R.E Ferdig, R. Hartsrone, & C. Mouza (Eds.). A retrospective of teaching, technology, and teacher education during the COVID-19 pandemic. (pp 261-268). *Association for the Advancement of Computing in Education (AACE).*

Salvatierra, L., & Cabello, M. (2022). Starting at home: What does the literature indicate about parental involvement in early childhood STEM education?. *Education Sciences*, *12*(3), 218.

Sanghvi, P. (2020). Piaget's theory of cognitive development: A review. *Indian Journal of Mental Health*, *7*(2), 90-96.

Sintema, J. (2020). Effect of COVID-19 on the performance of grade 12 students: Implications for STEM education. *Eurasia Journal of Mathematics, Science and Technology Education*, *16*(7),

Smith, E., Reinke, M., Herman, C., & Sebastian, J. (2021). Exploring the link between principal leadership and family engagement across elementary and middle school. *Journal of School Psychology*, *84*, 49-62.

Sonjai, W. (2022). Early childhood development according to Western theory and Trisikkha principle in Buddhism. *ASEAN Journal of Religious and Cultural Research*, *5*(3), 1-7.

Stratton, S. J. (2019). Quasi-experimental design (pre-test and post-test studies) in prehospital and disaster research. *Prehospital and Disaster Medicine*, *34*(6), 573-574.

Suartama, I. K., Setyosari, P., & Ulfa, S. (2019). Development of an instructional design model for mobile blended learning in higher education. *International Journal of Emerging Technologies in Learning*, *14*(16).

Sulu, M. D., Martella, R. C., Toper, O., Marchand-Martella, N. E., & Kiyak, U. E. (2021). Explicit and systematic scripted instructional programs for students with autism spectrum disorder: An updated and extended review. *Review Journal of Autism and Developmental Disorders*, 1-17.

Sweller, J. (2020). Cognitive load theory and educational technology. *Educational Technology Research and Development*, *68*(1), 1-16.

Thukral, S., Kovac, S., & Paturu, M. (2023). Chapter 29 - T-test. In: Eltorai AEM., Lui T, Chad R, Kalva SP (eds.) *Translational Interventional Radiology.* Handbook for Designing and Conducting Clinical, pp. 139-143. Academic Press.

Wambui, T. W. (2018). Influence of outsourcing adjunct faculty on students' satisfaction in public universities in Kenya (Doctoral dissertation, JKUAT-COHRED).

Zainuddin, Z. (2018). Students' learning performance and perceived motivation in gamified flipped-class instruction. *Computers & Education*, *126*, 75-88.

Zhang, J., Zhebel, E., Van den Boom, SJ, Liu, D, Aragon, AM (2022). Research article. An object-oriented geometric engine design for discontinuities in unfitted/immeresed/enriched finite methods, 123(21)