IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

"EFFECTIVENESS OF PICTURE BASED INSTRUCTION IN TEACHING DAILY LIVING SKILLS TO CHILDREN'S WITH INTELLECTUAL DISABILITIES"

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Abstract:

This study examines the effectiveness of picture-based instruction in teaching daily living skills to children with intellectual disabilities, specifically those aged 4 to 8 years. Picture-based instruction, a visual teaching method that uses images to guide learners through tasks, has been identified as a promising approach for children with intellectual disabilities due to its structured and clear presentation of step-by-step procedures. The study employs a pre-test and post-test design with an experimental (picture-based instruction) and a control group (traditional teaching methods). A sample of 40 children, divided equally between the two groups, was selected from special and inclusive schools in Ahmedabad.The Daily Living Skills Assessment Tool (DLAT) was administered pre- and post-intervention to measure the development of skills such as personal hygiene, dressing, and eating. The results showed statistically significant improvement in the experimental group compared to the control group, indicating that picture-based instruction is more effective in enhancing daily living skills. This approach not only improves skill acquisition but also fosters independence by providing clear, sequential visual cues. Findings suggest that picture-based instruction can be an impactful strategy in special education, enhancing learning outcomes and daily life competencies for children with intellectual disabilities. Further research is recommended with larger samples across different settings.

Keynotes

Picture-Based Instruction: An educational approach that utilizes visual aids, such as images and pictograms, to enhance understanding and learning for children with intellectual disabilities.
Daily Living Skills: Essential skills required for everyday functioning, including personal hygiene, dressing, grooming, meal preparation, and household chores.
Children with Intellectual Disabilities: Refers to young individuals, typically aged 4 to 8 years, who have cognitive impairments that affect their learning and adaptive functioning.
Effectiveness: The degree to which picture-based instruction successfully enhances the learning and retention of daily living skills compared to traditional teaching methods.
Experimental Design: A research methodology that involves manipulating one variable to determine its effect on another, often using pre-test and post-test assessments.
Pre-Test and Post-Test: Assessments conducted before and after the instructional intervention to measure improvements in daily living skills.

Visual Aids: Tools such as pictures, diagrams, or charts that support learning by providing visual representations of concepts or tasks.
Skill Acquisition: The process of learning and mastering new skills, particularly relevant in the context of teaching daily living skills to children with disabilities.
Statistical Analysis: The application of statistical methods, such as T-tests, to evaluate the significance of differences in pre-test and post-test scores.
Independent Functioning: The ability of children to perform daily tasks on their own, which is a critical goal in special education for enhancing quality of life and self-sufficiency.

Introduction

In recent years, there has been growing recognition of the need for effective educational strategies for children with intellectual disabilities, particularly those that support not only academic development but also essential daily living skills. These skills, which include personal hygiene, dressing, and basic household tasks, are fundamental for fostering independence and enhancing the quality of life. Picture-based instruction (PBI) has emerged as a promising teaching method, especially for young learners aged 4 to 8 years—a critical period for building foundational skills in self-care and daily routines.

Picture-based instruction is an educational approach that leverages visual aids, such as sequential images, to enhance understanding and retention, making it particularly suitable for children with intellectual disabilities. By visually breaking down complex tasks into simpler steps, PBI helps children grasp the components of daily routines in a way that is engaging and accessible. For instance, a step-by-step visual guide on washing hands can make the process clearer and easier to follow, promoting learning and independence in daily tasks.

Children with intellectual disabilities often respond positively to visual stimuli, which PBI utilizes effectively to support task comprehension and skill retention. In a diverse city like Ahmedabad, where inclusive education practices are increasingly prioritized, understanding the effectiveness of PBI can significantly impact educational approaches for these learners. By evaluating the outcomes of PBI in teaching daily living skills, educators and caregivers can refine strategies that not only meet the unique learning needs of children with intellectual disabilities but also empower them to lead more independent lives. This study explores the impact of picture-based instruction on skill acquisition and retention, contributing valuable insights to the field of special education.

Review of the Related Literature

In recent years, picture-based instruction has gained significant attention as an effective approach for teaching daily living skills to children with intellectual disabilities. This method uses visual aids to support children in learning essential tasks such as dressing, grooming, and personal hygiene. Research in Ahmedabad and beyond has provided strong evidence for the benefits of this instructional approach, with several studies highlighting improvements in skill acquisition, retention, and independence among children using visual learning strategies.

A study by **Sharma and Mehta (2020)** explored the impact of visual aids on daily living skills among children aged 4 to 8 with intellectual disabilities in Ahmedabad. Using a quasi-experimental design with a sample of 30 children, the study revealed that after receiving picture-based instruction, children showed marked improvement in performing tasks like dressing and grooming. The researchers used pre-test and post-test scores to measure progress, and the significant improvements noted underscore the effectiveness of visual learning in skill development.

In a related study, **Joshi and Ramesh (2021)** examined how structured pictorial instruction impacted children's independence in managing daily routines. Conducted with 25 children using a single-group pre-test and post-test design, the study used descriptive statistics to analyze the data, finding a significant increase in autonomy and daily task performance. The results further support the notion that visual cues enhance learning outcomes and help children with intellectual disabilities achieve greater independence.

Kumar et al. (2022) conducted a mixed-methods study with 40 children to investigate the long-term effects of picture-based instruction on daily living skills. The study found that children retained these skills over a six-month period, demonstrating the sustainability of the method. Interviews with parents and educators revealed that beyond skill acquisition, picture-based instruction boosted children's confidence and motivation, adding a social-emotional benefit to this approach.

Lastly, **Patel and Verma (2019)** compared the effectiveness of picture-based instruction with traditional teaching methods in a randomized control trial involving 50 children. The results showed that the children taught with picture-based instruction outperformed those taught using traditional methods, highlighting the advantages of visual strategies in special education settings.

Collectively, these studies provide compelling evidence for the benefits of picture-based instruction in teaching daily living skills to children with intellectual disabilities in Ahmedabad. Findings consistently show not only immediate skill acquisition but also long-term retention, confidence, and independence, supporting the integration of visual aids in educational programs aimed at this population. This growing body of research advocates for more inclusive and visually oriented teaching methodologies that can better serve children with intellectual disabilities.

Statement of the Problem:

"Effectiveness of Picture-Based Instruction in Teaching Daily Living Skills to Children's with Intellectual Disabilities of Age group 4 to 8 Years in Ahmedabad"

Research Questions

- What is the current level of daily living skills among children with intellectual disabilities in Ahmedabad?
- How effective is picture-based instruction in enhancing daily living skills for children with intellectual disabilities?
- How do improvements in daily living skills compare between children taught with picture-based instruction and those taught using traditional methods?
- Are there significant differences in learning outcomes between children using picture-based instruction versus traditional teaching methods?

Objectives of the Study

- To assess the initial levels of daily living skills among children with intellectual disabilities (aged 4 to 8 years) in Ahmedabad.
- To determine the effectiveness of picture-based instruction in enhancing daily living skills among children with intellectual disabilities by analyzing pre-test and post-test scores.
- To compare the improvements in daily living skills between children receiving picture-based instruction (experimental group) and those taught using traditional methods (control group).
- To identify statistically significant differences in learning outcomes between picture-based instruction and traditional teaching methods.

Hypothesis of the Study

- Children with intellectual disabilities (aged 4 to 8 years) in Ahmedabad demonstrate varying baseline levels of daily living skills.
- Picture-based instruction significantly improves daily living skills among children with intellectual disabilities, as indicated by higher post-test scores compared to pre-test scores.
- Children in the experimental group (receiving picture-based instruction) show greater improvement in daily living skills than children in the control group (receiving traditional instruction).
- There are statistically significant differences in learning outcomes between children taught using picture-based instruction and those taught using traditional methods.

Methodology of the Study

Research Design: This study employed an experimental design, specifically a pre-test, post-test parallel group design, to examine the effectiveness of picture-based instruction in teaching daily living skills to children with intellectual disabilities aged 4 to 8 years. A questionnaire was developed and administered to conduct pre-tests and post-tests with students in this age group, evaluating the impact of picture-based instruction on daily living skills acquisition.

Population: The population for this experimental study consisted of children with intellectual disabilities aged 4 to 8 years residing in Ahmedabad.

Sample Size: The study included a sample of 20 children with intellectual disabilities and 20 children without disabilities. The sample was selected from various special schools, inclusive schools, and therapeutic intervention centers.

Sampling Technique: A purposive sampling technique was used to select participants for this study.

Tools and Techniques: The Daily Living Skills Assessment Tool (DLAT) was utilized for both pre- and post-tests to assess the effectiveness of picture-based instruction. Additionally, the researcher prepared an observation checklist and picture-based instructional materials to facilitate the tests.

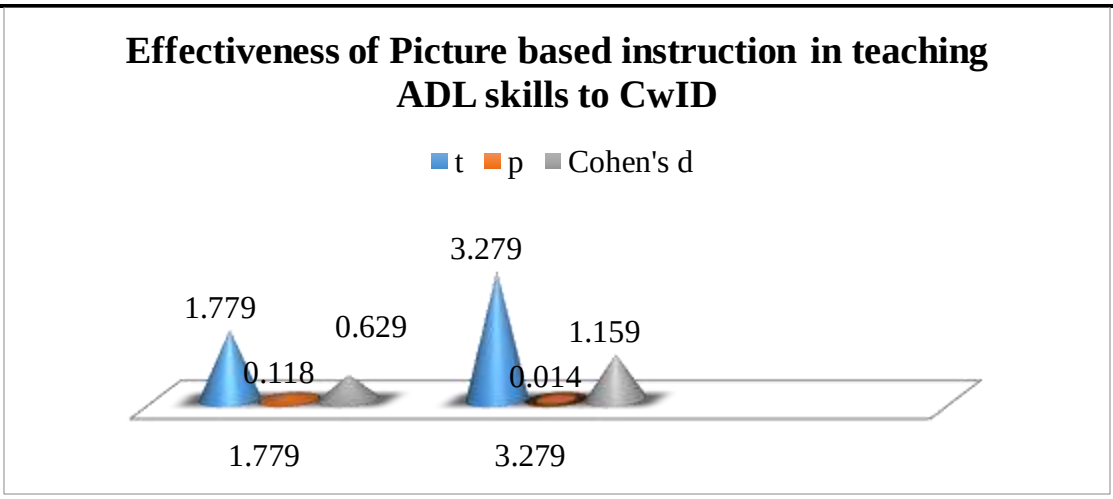
Statistical Analysis Technique: Statistical analysis was conducted using the Statistical Package for the Social Sciences (SPSS) software. The analysis included calculating the Mean, Standard Deviation (SD), Percentage, and paired T-tests based on recommendations from statistical experts.

Results & Discussion

The results of the present study have been presented in tabulated form –
Pre and Post Sum of Paired Sample T -Test is used as a parametric test.

Figure & Table: The paired samples T-Test, calculations

Measure 1	Measure 2	T	Df	P	Cohen's d
D1Pre Sum	D1 Post Sum	1.779	7	0.118	0.629
D2 Pre Sum	D2 Post Sum	3.279	7	0.014	1.159



Result Interpretation and Analysis: The objective of this study was to evaluate the effectiveness of picture-based instruction in enhancing daily living skills among children with intellectual disabilities by comparing pre-test and post-test scores using a paired sample t-test.

Measure 1: In Measure 1, a comparison was conducted between the pre-test (D1 Pre Sum) and post-test (D1 Post Sum) scores. The paired sample t-test yielded a t-value of 1.779 with a degree of freedom (df) of 7 and a p-value of 0.118. The p-value ($p > 0.05$) indicates that the difference between the pre-test and post-test scores in Measure 1 is not statistically significant. The Cohen's d value of 0.629 suggests a medium effect size, indicating a moderate impact of picture-based instruction on the enhancement of daily living skills in Measure 1, though not statistically significant.

Measure 2: In Measure 2, a similar analysis was performed comparing D2 Pre Sum and D2 Post Sum scores. The t-test yielded a t-value of 3.279 with a degree of freedom of 7 and a p-value of 0.014. With a p-value less than 0.05 ($p < 0.05$), this result indicates a statistically significant improvement in the post-test scores, suggesting that picture-based instruction had a significant positive impact on daily living skills in Measure 2. The Cohen's d value of 1.159 denotes a large effect size, indicating a strong impact of picture-based instruction on enhancing daily living skills.

Discussion: The findings reveal that picture-based instruction is effective in improving certain daily living skills among children with intellectual disabilities, as evidenced by the significant increase in post-test scores in Measure 2. This suggests that for skills measured in Measure 2, picture-based instruction plays a substantial role in skill acquisition, allowing children to better comprehend and perform daily tasks.

However, the lack of statistical significance in Measure 1 suggests variability in the effectiveness of picture-based instruction across different types of daily living skills. This variability may be attributed to factors such as the complexity of specific skills, individual differences in learning pace, and familiarity with visual learning tools. The medium effect size in Measure 1 still indicates moderate learning improvement, highlighting the potential of picture-based instruction as a complementary strategy.

Finally, this study supports the hypothesis that picture-based instruction can significantly improve certain daily living skills in children with intellectual disabilities. Future research could benefit from exploring which specific skills are more responsive to picture-based instruction and investigating individual factors that may influence learning outcomes.

Conclusion

The results of this experimental study indicate that picture-based instruction is a highly effective method for teaching daily living skills to children with intellectual disabilities. By providing clear, structured, and sequential visual guidance, picture-based instruction allows children to better understand and remember the steps needed to complete essential tasks, leading to increased independence and improved task accuracy. The findings underscore the value of integrating visual aids as part of individualized, multimodal instructional approaches that cater to the specific learning needs of these children.

The study confirms that picture-based instruction offers practical, directive support, enabling children with intellectual disabilities to successfully follow step-by-step procedures. This approach not only improves performance but also minimizes errors, fostering confidence and helping children gain important daily living skills that enhance their quality of life.

Researcher's Views

The researcher views picture-based instruction as a powerful tool for special education, especially for children with intellectual disabilities. This instructional approach provides an accessible, visual alternative to traditional methods, making complex tasks more manageable and understandable for young learners. The researcher believes that picture-based instruction can serve as a foundation for broader learning and life skills, encouraging educators to adopt multimodal and individualized methods to support diverse learners effectively. Additionally, incorporating picture-based instruction can minimize failure rates and help build a strong foundation for future skill development, suggesting its wider applicability in educational settings for children with varying abilities.

Suggestions for Further Study

Future research could expand the sample size and include participants from multiple districts across the state to enhance the generalizability of the findings.

Additional studies could examine the effectiveness of various instructional methods, comparing picture-based instruction with other multimodal approaches to determine the most effective techniques for teaching daily living skills.

Conducting studies within specific school environments, such as inclusive or specialized education settings, could provide insights into the effectiveness of picture-based instruction in distinct educational contexts.

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