# Incidental Learning, Reading Skills and Social Behavior of Non-Graded Learners with Intellectual Disability

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## ABSTRACT

Imagine a world where every encounter, every seemingly insignificant moment, holds the potential for profound learning. For individuals with intellectual disabilities, these incidental experiences can be pivotal in developing essential skills, particularly in reading. This study explored the extent of the implementation of incidental learning through the Individual Education Plan as an intervention to enhance the reading skills of learners with intellectual disability. To address this challenge, incidental learning has been proposed to enhance the reading skills of learners with intellectual disability. The study employed a descriptive research design and used a purposive sampling technique to determine its respondents, which included Special Education teachers and identified Grade 7 non-graded learners with intellectual disability in the General Santos City SPED Integrated School. The main instrument used was an adapted and modified questionnaire from the outlined indicators of the Individualized Educational Plan and an adopted Early Grade Reading Assessment. The study results showed that incidental learning was frequently implemented in the identified learners with intellectual disability. The application of incidental learning was highly recommendable as it gained positive feedback in helping learners develop their skills, not just in reading but development as a whole. The study's findings suggest that incidental learning can effectively enhance the reading skills of learners with intellectual disability. Hence, data were analyzed using mean, median, and Mann-Whitney U test analysis. The study showed that incidental learning is effective for teaching reading to learners with intellectual disabilities, but further research is needed.

## INTRODUCTION

**Background of the Study**

Imagine a classroom where learning occurs from planned sessions and the organic flow of daily encounters. It is the fundamental idea behind incidental learning, a potent but sometimes disregarded teaching strategy in which kids pick up skills and knowledge via random encounters in their daily lives. This kind of learning can be especially life-changing for learners. In contrast to conventional teaching techniques, incidental learning blends in with learners' daily lives, transforming reading from an academic assignment into a part of who they are. By utilizing the learner's natural interest and adaptability, this method makes every moment a chance for development. As learners delve into the intersection of incidental learning and reading development, they uncover strategies that can make a significant difference in the educational journeys of these learners, providing them with the tools they need to navigate and interpret the world around them.

On the other hand, reading is a basic skill with intense implications for personal, academic, and societal development, but it cannot be rushed. The brain is not prewired to translate symbols on paper into sophisticated meaning, as it has only existed for approximately 6,000 years. Unlike other complicated skills like walking, it does not develop "naturally"; it can be encouraged but not forced. It has a complex relationship with good communication. This essentially suggests that in order to cultivate a love of reading, teachers should put more emphasis on the elusive love of reading than on reading abilities. A few fundamental principles comprise the three-pronged approach they must adhere to foster such a passion for reading: a large number of books are easily available, enough time for reading, and faculty and staff who are passionate about reading. They put on plays

about those works, which is a fantastic link to oral tradition, and do not just read books (Villamin (2001).

Regardless of how far technology progresses or how flat the world can grow, reading can always be the key to a better life. This fundamental ability aids learners in mastering all other abilities. As the learners become older, they become distracted by various things. Furthermore, fewer readers perform worse academically. However, reading more frequently can help students become more proficient, self-assured, and passionate about reading, as with most learned abilities. Learners must be enthusiastic about reading and read every day for independent reading to increase, according to Villamin (2001). Cultivating a habit that needs to be practiced daily for a learner to improve as a reader is necessary. The ability rusts and may even disappear if not used.

From birth, children learn incidentally, developing language, manners, social skills, and life skills naturally. Parents can enhance this by modeling behaviors, promoting reading, and offering natural life lessons. Teachers can use adaptable, organic lessons encouraging problem-solving through trial and error and deductive reasoning. Praise and positive reinforcement at home and school help reinforce these behaviors (Saffran, 2016).

The respondents in this study are teachers, parents, and mostly non-graded learners with intellectual disabilities (ID). This study focused on applied incidental learning, reading skills, and social behavior of non-graded learners with intellectual disabilities and their social behavior. It emphasizes word-level reading rather than comprehension. The Early Grade Reading Assessment was the tool used to evaluate the reading abilities of students with intellectual disabilities (EGRA). It is a standardized instrument that the United States Agency for International Development (USAID) and the Department of Education have adopted. All kids' reading abilities are evaluated using this for both public and private schools.

Similarly, this identified the typical reading difficulties faced by learners with intellectual disabilities (ID). The Early Grade Reading Assessment (EGRA) has eight components such as Component 1: Orientation to Print; Component 2: Letter Name Knowledge; Component 3a: Letter Sound Knowledge; Component 3b: Initial Sound Identification; Component 4: Familiar Word Reading; and Component 5: Invented Word Decoding; Component 6a: Oral Passage Reading; Component 6b: Reading Comprehension; Component 7: Listening Comprehension; and Component 8: Dictation.

Improved reading comprehension is the key to learning. However, these reading abilities do not have to be limited to English. The capacity to read and write in any language or dialect matters. These are the critical components for developing personal competence and success that can eventually convert into a competitive workforce.

**Theoretical Framework**

Constructivism is a learning theory proposed by Lev Vygotsky in 1978. According to this theory, social interactions with individuals with greater expertise, such as teachers, parents, or peers, are essential for learning. Vygotsky referred to these individuals as 'More Knowledgeable Others' (MKOs). The Zone of Proximal Development (ZPD) is a key element of Vygotsky's theory. It encompasses tasks that a learner can accomplish with the assistance of an MKO but cannot yet perform independently. Through collaboration, learners can enhance their critical thinking skills with this support."

Additionally, Vygotsky (1978) emphasized the value of social interaction in learning. Collaborating in teams, exchanging ideas, and meeting diverse perspectives all aid in a learner's deeper comprehension and acquisition of new information. This idea helps explain how students with intellectual disabilities (IDs) can improve their reading comprehension. For them, incidental learning experiences from daily life can be a very useful tool. Learners with IDs can benefit from specialized support within their ZPD and a stimulating atmosphere to help them become more self-assured and independent readers.

According to psychologist Albert Bandura's (1977) Social Learning Theory, learning happens through seeing, copying, and imitating other people's actions, attitudes, and feelings. It emphasizes how crucial social interactions and their surroundings determine their behavior. Seeing and observing others can help one learn. This entails keeping an eye on the deeds and their results. Models are people they see around us. These role

models could be fictional figures they have seen in the media or actual people from their lives, including parents, teachers, or peers. Learners are more inclined to mimic a model's conduct if they believe the model and themselves to be comparable (Bandura, 1977). Even if they do not personally go through anything, they can still learn from the experiences of others.

Furthermore, social connection is quite important in determining their behavior. They get feedback on their acts and discover acceptable or desirable behaviors through social interaction. Although Bandura's (1977) Social Learning Theory strongly emphasizes imitation and observation, it also recognizes that their expectations, ideas, and thoughts impact their behavior. Before copying a behavior, they run their observations via their cognitive processes. They do not just copy everything they see. Understanding how they learn from the social environment around them is made easier with the help of social learning theory. Many actions, attitudes, and social skills are developed through observation, imitation, and interaction with others (Bandura, 1977).

The significance of offering learners temporary support (scaffolding) during the learning process is emphasized by Wood et al. (1975) in the Scaffolding Theory. Consider a child who is learning how to construct with blocks. They need assistance reaching higher, so you provide them with a stool or scaffold to help them get there. The scaffold supports students in the Zone of Proximal Development (ZPD), enabling them to learn to the best of their abilities. The process is active. As learners gain proficiency, the scaffolding should be incrementally withdrawn to allow them to perform tasks independently. This approach fosters confidence and self-reliance among students and encourages active participation rather than passive absorption of information. Moreover, scaffolding can be tailored to each individual's needs and learning styles. It also boosts motivation and confidence, as completing tasks with help provides students with a sense of accomplishment and motivates them to embrace new challenges (Wood et al., 1975)

**Conceptual Framework**

The following schematic diagram depicts the study's input, technique, and results. The first box contains the individualized education plan and incidental learning, which can be utilized as input for the framework. Furthermore, the process is detailed in the following sections: Reading Skills of Learners with Intellectual Disability (ID) Based on the Early Grade Reading Assessment (EGRA); Facilitating Incidental Learning Opportunities based on IEP; and Monitoring Progress (Pretest & Posttest).

Teaching any skill to a learner with an intellectual disability usually takes longer than training a learner without a disability. Reading is no different. Teaching individuals with intellectual disabilities to read, or even the subskills necessary for reading, should take much time. To improve their capacity to assimilate a series of steps or practices, learners with intellectual disabilities must adhere to a methodical sequence of activities. They might be able to apply what they learn in one practice to another within the same setting to some extent with a methodical lesson plan or intervention (Allor et al., 2009).
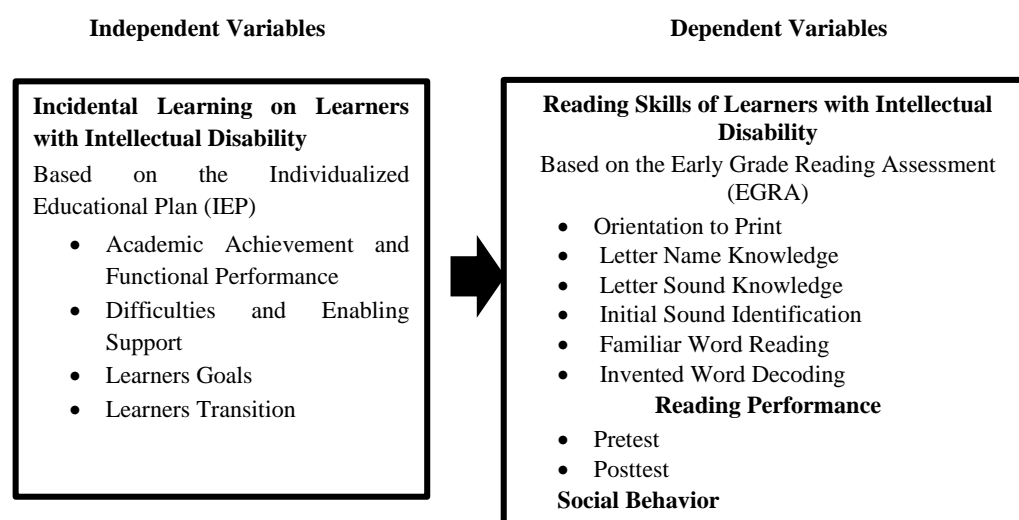
| Independent Variables | Dependent Variables |
|---|---|
| **Incidental Learning on Learners with Intellectual Disability**<br><br>Based on the Individualized Educational Plan (IEP)<br><br>• Academic Achievement and Functional Performance<br>• Difficulties and Enabling Support<br>• Learners Goals<br>• Learners Transition | **Reading Skills of Learners with Intellectual Disability**<br>Based on the Early Grade Reading Assessment (EGRA)<br><br>• Orientation to Print<br>• Letter Name Knowledge<br>• Letter Sound Knowledge<br>• Initial Sound Identification<br>• Familiar Word Reading<br>• Invented Word Decoding<br>**Reading Performance**<br>• Pretest<br>• Posttest<br>**Social Behavior** |

**Figure 1. The Conceptual Framework of the Study**

## Statement of the Problem

This study endeavored to enhance the reading skills of learners with intellectual disability through incidental learning. It answered to the following inquiries:

1. What is the level of incidental learning on learners with intellectual disability based on the Individualized Educational Plan (IEP) in terms of:

    1.1 academic achievement and functional performance;
    1.2 difficulties and enabling support;
    1.3 learners' goals and;
    1.4 learners' transition?

2. What is the level of reading skills of learners with intellectual disability based on Early Grade Reading Assessment (EGRA) about:

    2.1 orientation to print;
    2.2 letter name knowledge;
    2.3 letter sound knowledge;
    2.4 initial sound identification;
    2.5 familiar with word reading and;
    2.6 invented word decoding?

3. Did the EGRA scores of learners with Intellectual Disability in the experimental group change significantly from the pretest to the posttest?

4. Is there a significant difference between reading skills in the pretest to posttest of learners with intellectual disability?

5. How do non-graded learners with intellectual disabilities interact or behave socially?

## Hypotheses

1. There is a significant difference in the level of incidental learning for learners with an intellectual disability based on the Individualized Educational Plan.
2. There is a significant difference in reading skills in the pretest to posttest of learners with intellectual disability.

## Significance of the Study

The result of the study on enhancing the reading skills of learners with intellectual disability through incidental learning hopefully provides valuable information to the following:

**Department of Education (DepEd).** The data and findings of this study can serve as valuable inputs for shaping policy directions, implementing significant improvement initiatives, and devising strategic plans to enhance the reading skills of students with intellectual disabilities (ID).

**School Administrators**. The study's findings can offer them pertinent information and the concepts and foundation for creating updated materials, comprehensive professional development, and continuous support for special education teachers (SPET) to implement research-based instruction with high fidelity.

**Special Education Teachers (SPETs').** The findings of this study may inspire them to reflect on the quality of education they provide in the classroom. In doing so, they may realize the importance of incorporating key instructional features that have been demonstrated to be effective with struggling beginning readers and strategies proven to be successful for learners with intellectual disabilities (ID).

**Teachers.** The study aims to equip teachers with effective strategies and resources to enhance their teaching methods. The study's findings can empower teachers to create inclusive learning environments and improve their instructional practices.

**Parents/Family.** The purpose of this study is to get you more involved in planning and decision-making because you are the one who knows your child the best. Families and parents play a critical role in making sure students receive the support they need and that the accommodations they require are made so they may participate fully in the classroom.

**Researcher**. This research would enable her to conduct rigorous research on reading interventions and create an empirically validated program to enhance the reading training program for learners with intellectual disability.

## Scope and Delimitation

Conversely, this study has three parts: Part I concentrated on the level of incidental learning applied to learners with an intellectual disability based on an Individualized Education Plan wherein the respondents were Special Education Teachers. Part II focused on word-level reading rather than comprehension because the respondents were non-graded learners with intellectual disability (ID) struggling to read at the beginning stages. The reading skills in both English and Filipino were assessed through the Early Grade Reading Assessment (EGRA). The Early Grade Reading Assessment (EGRA) is a standardized tool adopted by the Department of Education through the United States Agency for International Development (USAID) used to assess the reading skills of all students in public schools (DO 57, s. 2015). The Early Grade Reading Assessment (EGRA) has eight (8) components such as Component 1: Orientation to Print; Component 2: Letter Name Knowledge; Component 3a: Letter Sound Knowledge; Component 3b: Initial Sound Identification; Component 4: Familiar Word Reading: and Component 5: Invented Word Decoding. It can also determine the common problems encountered by learners with intellectual disability in reading. Furthermore, out of eight components, only five (5) mentioned above can be used to assess and test the reading skills and the common problems encountered by learners with intellectual disability in reading.

Part III discussed the social behavior of non-graded learners with an intellectual disability through interviews with teachers and parents.

The respondents of the study were thirty (30) Special Education Teachers and sixty (60) identified Grade 7 non-graded learners with intellectual disability (ID) with ages from 12 to 19 years old who undergone pretest and posttest reading assessment using EGRA. The Special Education teachers are teaching at General Santos City SPED Integrated School. The identified learners with intellectual disability are enrolled at General Santos City Special Education Integrated School- Junior High School Department S.Y. 2023-2024. The primary goal of this study is to design an effective intervention to enhance their reading ability, create a reading training program, and foster in them the love for reading.

## Definition of Terms

For further understanding, the following terms are conceptually and operationally defined as used in the study.

**Difficulties and Barriers and Enabling Support** refer to many different shapes. These barriers can be corporal, technological, systematic, monetary, or behavioral or stem from an education provider's tardiness in making necessary adjustments.

**Early Grade Reading Assessment (EGRA)** refers to a one-on-one spoken evaluation that measures the basic reading abilities of young children in the early years of school. The Department of Education (DepEd) implemented this assessment following international benchmarks and guidelines.

**Familiar Word Reading** refers to a term often used in education and psychology to describe the ability to read words that are commonly encountered and already known to the reader. It means the capacity to effortlessly recognize and understand familiar and frequently used words in everyday language without pausing or thinking

about their meaning. It reflects the fluency and ease with which someone can navigate written text, drawing on their knowledge of words.

**General Santos City Division** refers to the administrative division or unit overseeing the educational system within General Santos City, Philippines. The local governing body manages and supervises schools, educational programs, and initiatives within the city's jurisdiction.

**Incidental Learning** refers to the practice of accidentally or indirectly picking up knowledge or abilities, known as incidental learning. This frequently happens due to ordinary encounters, social interactions, or casual observation. In contrast to controlled and intentional learning during formal instruction, incidental learning happens naturally as people interact with their surroundings. This kind of learning can occur in various contexts, including the community, the classroom, and homes. It is frequently unplanned. For people with disabilities, incidental learning is crucial in education since it lets them pick up skills and knowledge independently, independent of conventional teaching techniques.

**Individualized Educational Plan (IEP)** refers to a learner's special education needs and the support they will receive in grade school or high school. It considers their academic progress, challenges, and goals and helps them prepare for future learning environments.

**Initial Sound Identification** is a term commonly used in early literacy education to describe recognizing and matching the starting sound with its corresponding letter or sound symbol. In a more humanized sense, it refers to the ability to listen to a word and identify the sound at the beginning of that word. It is like being able to pick out the first note of a familiar song or recognize a friend's voice in a crowd—it is about tuning into that initial sound to understand and connect with the word being spoken or read.

**Inquartile Range** refers to an important tool for determining the variation in the central part of the data set; the interquartile range (IQR) gives a more nuanced picture than just the range. It is a statistical measure used to understand the data spread focused on the middle half of the values.

**Invented Word Decoding** refers to a term often used in literacy instruction, particularly in the context of phonics, to describe the process of sounding out and deciphering unfamiliar or "made-up" words by applying knowledge of letter-sound relationships and phonetic patterns. It is about experimenting with different combinations of sounds and letters until you can make sense of the word and understand its meaning based on the rules and patterns you have learned in reading.

**Learners' Goals** refer to constructing a baseline and considering the learner's present knowledge and academic performance. These goals are intended to address a learner's particular obstacles and assist them in developing the skills required for academic and social success.

**Letter Name Knowledge** refers to knowing the names of individual alphabet letters. Think of it as recognizing and identifying each letter by name. This skill is crucial for laying the foundation for reading and writing because it allows children to start making connections between the sounds of spoken language and the symbols (letters) that represent those sounds. It is the first step in engaging with and understanding written language.

**Letter Sound Knowledge** refers to the ability to link letters to their sounds. In simpler terms, it means knowing the sounds that letters make. This skill is crucial for early literacy development because it helps children decode and understand written language.

**Learners Transition** refers to the Individualized Education Program (IEP) component that describes the learner's transition goals and assistance. A transition plan is developed based on each high school student's needs, abilities, interests, and capabilities. Transition planning helps students achieve their post-high school goals by assisting them in defining and creating goals that must be fulfilled during the current academic year.

**Learners with Special Needs** refers to the learners who require additional support and accommodation due to disabilities or exceptionalities that affect their educational progress. These needs may include physical,

cognitive, sensory, emotional, or developmental impairments. Special needs learners encompass diverse abilities and may require individualized educational plans and services.

**Likert Scale** refers to a rating scale frequently used in questionnaires and surveys to gauge respondents' attitudes, views, and perceptions regarding a certain subject. Respondents are asked to select the choice that most accurately expresses how much they agree or disagree with a sequence of assertions.

**Mean** is the average of a group of numbers, referred to as the mean. It can also be used to create a target or expected level of performance. To calculate it, add all the numbers in the set, then divide the total by the number of numbers. It creates a standard by which to measure each student's performance about the group average.

**Median** refers to a "middle" value in a set of data when the data is arranged in order from least to greatest (ascending order) or greatest to least (descending order). It essentially divides the data set into two halves: one with values lower than the median and the other with values higher than the median.

**Non-Graded Learner** refers to the unemployment of the conventional grade, learning without rating grades, etc. Rather, these learners advance based on their mastery of particular courses or talents. They can now study at their own pace thanks to this. Rather than following a predetermined curriculum for a specific grade, the emphasis is on each student's unique needs and abilities. This type of learning environment aims to be more adaptable and individualized.

**Orientation to Print** refers to the foundational understanding and skills needed to interact with written language on a page. It involves knowing how to hold a book, recognizing that text is read from left to right (or right to left in some languages), understanding the concept of sentences and paragraphs, and grasping the basic structure of written material. It is about knowing how to physically and conceptually engage with printed text.

**Present Levels of Academic Achievement and Functional Performances**

refers to an essential component of a learner's Individualized Education Program (IEP). The goal is to determine the types and amount of special education assistance a learner may require. It explains how a learner's impairment affects or would affect his participation in the general education curriculum. It should include the learner's strengths and weaknesses, what aids or hinders a learner's learning, objective data from current evaluations of a learner, and how a disability affects his or her ability to participate and progress in the general education curriculum.

**Pretest** refers to a pilot test for a new strategy or a placement exam to gauge learners' readiness for a new course.

**Posttest** refers to a final assessment for learners following an instructional unit. It is frequently paired with a pretest to evaluate learning gains and program efficacy.

**Reading Skills** refer to a basis for comprehending written language. They include decoding letters and sounds (phonics), putting them together into words, and finally, understanding the meaning of sentences and texts. This comprises fluency (smooth reading), comprehension (getting the topic), and vocabulary (knowing what words imply).

**Social Behavior** refers to how people act and interact with each other in a group or society. Social rules, cultural habits, and relationships with others influence these actions. It includes talking, body language, working together, competing, fighting, helping others, and other interactions that help people live and work together. At its core, it is about how people affect and are affected by those around them. It is important for creating social structures, forming relationships, and keeping society organized. Understanding social behavior helps us see how people connect, how social rules and values are created and maintained, and how group actions and behaviors develop.

**Review Of Related Literature And Studies**

This chapter reviews relevant literature and studies that inform the current research. The researcher drew some

insights from these literature and studies.

## Concept of intellectual disability

The American Association on Intellectual and Developmental Disabilities (AAIDD, 2010) defines intellectual disability as significantly below-average general intellectual functioning that coexists with a deficit in adaptive behavior, manifests during the developmental period, and has a negative impact on a child's academic performance. Many people have complex communication needs; some do not rely on speech at all, while others do not have consistent speech.

According to Rizopoulos and Wolpert (2004), students with cognitive disabilities may have poor short-term memory, low-level meta-cognition skills, poor use of logic and organization, and some students with mental retardation may also have motor difficulties that affect their handwriting or ability to understand spoken language (Duffy, 2014). Individuals with intellectual disabilities have much lower learning and memory capacity than their non-disabled peers.

Learners with intellectual disabilities struggle to apply information to new situations and create learning sets more slowly than their peers without disabilities (Beirne Smith et al., 2006). Children must devote sufficient time to the learning activity and control distractions to absorb information. Children with intellectual disabilities may fail to detect and focus on relevant topics in social and educational settings (Saunders, 2001). According to Holloway et al. (2010), little research has been conducted on the most effective methods for teaching reading to learners with intellectual disabilities.

In contrast, Joseph et al. (2004) feel that many educators and academics have undervalued people with intellectual impairments' ability to comprehend and generalize reading skills. Learners who face intellectual problems usually struggle in the classroom. However, the instructional strategies used by Zambian teachers to teach reading to pupils with intellectual disabilities remain unclear. As a result, the researcher seeks to develop techniques for teaching reading to pupils who face intellectual obstacles. As a result, task conditions that force participants to focus on anything other than the researcher's focus are required for researchers researching incidental learning. It does not rule out form manipulation during exposure, but this processing and manipulation cannot be the job's purpose for the learners if learning is to be defined as occurring by chance (Joseph, 2004).

Schunk (1991) discusses the learning processes and memory retention in learners with learning disabilities, highlighting how these learners acquire knowledge but often struggle with retention due to their disabilities, which is in line with the Cognitive Load Theory of Sweller (1988) that explains that learners with intellectual disabilities may struggle with memory retention due to limited working memory capacity, which can be easily overloaded.

## Historical Approaches to Reading Instructions for Students with Intellectual Disabilities

Studies on teaching reading to learners with intellectual disabilities often focus on individual reading skills, like recognizing sight words. However, good reading requires mastering multiple skills together (Allor et al., 2010). Traditionally, educators prioritized teaching basic, practical words like "danger" or "stop" that might be helpful in daily life (Erickson et al., 2009). It may have been done if learners struggled to learn more complex reading skills.

Over the years, reading specialists have promoted several strategies they consider the most effective in teaching young readers. In the 1930s and 1940s, reading for meaning applying the "look and say" strategy was emphasized. The focus shifted to skill development in the 1960s and 1970s, entailing instruments like phonetics and other word decoding abilities (Kemba, 2005). The whole language approach, which developed over the word technique by fusing the four aspects of language with literature, like reading, writing, speaking, and listening, was first presented in the early 1980s and concentrated on reading for meaning. These days, teaching reading includes incorporating the four language skills, reading, speaking, writing, and listening, into other disciplines of study.

Emergent Literacy Theory, proposed by Teale and Sulzby (1986), suggests that literacy development begins early in life and is influenced by children's experiences with books and print in their environment. As aligned to Jeanne Chall's (1983) Stage Theory of Reading Development outlines the stages children go through as they learn to read. The initial stages focus heavily on recognizing the alphabetic principle and developing phonemic awareness, which is more directly teachable in a structured learning environment.

## Sight Word/Vocabulary Instruction

As stated by Browder et al. (2006) reviewed 128 trials of reading therapies involving one or more learners with moderate to severe cognitive difficulties and discovered that most of the interventions concentrated on sight words, with roughly 33% utilizing picture identification tasks. Less than one-third of all comprehension skills are included. It highlighted the rarity of therapies that taught phonemic awareness, phonics, or fluency.

Different sight word education techniques have been employed, such as visual fading, picture integration, and time delay. It was discovered that time delay, which involves waiting a certain amount of time before prompting the learner to say the word, works better than picture integration and fading. According to Bradford et al. (2006), sight word instruction should be limited to direct instruction on each word presented as a reading approach. It has not been found to aid in the decoding of new words.

Barudin and Hourcade (1990) compared three approaches to teaching sight words: solely sight word cards, fading pictures, and kinesthetic letter tracing. It revealed no distinctions between the three approaches but concluded that anyway was preferable to receiving no teaching. Additionally, they noted that extended word recall was achieved using picture fading and letter-tracing approaches, which demonstrated increased delayed

word response. According to Singh and Singh (1985, 1988), some learners struggle to sound out sight words. As a result, phonics has been incorporated into their instruction, improving students' short- and long-term word memory.

According to Engelmann (1995), some children require extremely high levels of over-learning and practice to obtain automaticity in word recognition. Share (1995) introduced the "self-teaching hypothesis," which posits that successful word recognition (especially for familiar words) can facilitate the development of decoding skills through repeated exposure and practice. Hulme and Snowling (2013) noted that repeated exposure to high-frequency words (familiar words) helps children, especially those with learning disabilities, to develop automaticity in word recognition, leading to better reading fluency and comprehension.

## Phonemic Awareness and Phonics Instruction

According to a recent large-scale survey, 67% of the sample reported reading as a secondary issue, making reading difficulties the most common secondary condition of intellectual disability (ID) (Koritsas & Lacono, 2011). For learners with intellectual disabilities (ID), reading difficulties should be largely avoided if suitable training programs are implemented and adequate knowledge about reading skills is gained. Even though they can learn, learners with intellectual disabilities nevertheless have difficulty.

Researchers need to look into how people pick up reading skills. Developing successful treatments and reading instruction programs for students with intellectual disabilities requires taking this crucial step. To start, patterns of strength and weakness in the development of reading skills must be identified. Because of the preceding, the researcher investigated how incidental learning can help learners with intellectual disabilities improve their reading abilities.

The inability to break down words into their component sounds, known as phonemic awareness, often causes reading difficulties. For example, they say/cat/ instead of /c/ /a/ /t/. Blends like /br/ and /bl/ are harder to pronounce than similar-sounding consonants like /mu/ and /nu/. Strong linguistic processing is required for this skill. Research-based programs on language processing and reading use small steps to help young readers distinguish sounds within words, which is essential for decoding.

The best way for learners with intellectual disabilities (ID) to learn reading is through phonologically based education that includes decoding and related skills. One of the main causes of reading difficulties for people with intellectual disabilities is a lack of phonological decoding ability. According to Wise (2010), learners with multiple etiologies are known to have trouble learning to read. After adjusting for language and age, they discovered that phonological awareness abilities predicted both word and non-word recognition. Comparable outcomes were found by Saunders and DeFulio (2007) for adults with non-specific etiologies of intellectual disability. After adjusting for verbal IQ, they discovered statistically significant partial relationships between phonological awareness and word and non-word reading assessments.

According to research, teachers were aware of sight word instruction's limits for average learners as to Erickson (2009). Educators tried phonics instruction with learners with intellectual disabilities, focusing on the sounds in words and how they connect to letters. Ideally, phonics training should include both phonemic awareness and phonics. While various studies have looked into the effects of phonics training, they have primarily focused on one style (explicit and systematic) that improves some reading skills but may not help with unknown words.

Furthermore, it was mentioned, image cues that depict the shape and sound of the letter have been demonstrated to have some success in helping learners identify letters with sounds. Thus, an alligator shaped like the letter a might not be useful, but a snake shaped like the letter s would be. Not many studies have explored teaching learners to read new words by breaking them down into larger chunks instead of individual letters. The results of these studies have not been consistent. This approach is similar to how students sort words by category.

According to Joseph and McCachran (2003), eight special education learners who were classified as mentally retarded (MR) and had a mean IQ of 69.50 were able to sort words into categories, but only a small portion of them were able to apply this skill to recognize and spell unfamiliar words. However, studies on learners with

major intellectual limitations revealed that word identification was given more weight (Erickson et al., 2009).

A study by McDonnell and Mithaug (2017) found that teachers could better plan and customize instruction by carefully improving their record of student development. Wehmeyer and Ayres (2003) found that teachers who identified specific needs had greater success putting those targeted interventions into action to improve learners' responses.

The Phonological Deficit Hypothesis suggests by Stanovich (1988) that difficulties in processing phonological information, which is crucial for decoding written language, are at the core of reading difficulties experienced by learners with intellectual disabilities. This theory posits that these learners struggle with phonological awareness, which includes recognizing and manipulating the sounds of spoken language. This deficit impacts their ability to associate letters with their corresponding sounds, a skill essential for reading development.

Developed by Sweller (1988), it focuses on the limitations of working memory and how it affects learning processes. According to this theory, learners with intellectual disabilities have a reduced capacity to hold and manipulate information in their working memory. This limitation can make learning to identify letter sounds particularly strenuous, requiring simultaneous processing of visual (letters) and auditory (sounds) information. It emphasized that when the cognitive load exceeds the learner's capacity, it hinders learning. For learners with intellectual disabilities, the effort required to decode letters into sounds can overwhelm their working memory, preventing them from effectively processing and retaining this information. This theory highlights the importance of instructional design that minimizes unnecessary cognitive load and supports the learner's capacity to integrate new information.

**Reading Comprehension Instruction**

The way we view reading is changing. Instead of seeing it as a set of separate skills, it is now understood as a process of actively interacting with written text to make sense of it (Snow, 2002). It is especially helpful for learners with intellectual disabilities who might struggle to remember spoken information. Reading allows them to revisit the written content whenever needed (Randi et al., 2010).

Furthermore, according to Bruner (1985), reading and comprehending stories that frequently deal with real-life scenarios that learners may encounter in their own lives might help them cope with life's occurrences. However, it identified no research examining the efficacy of teaching certain comprehension skills advised for readers who are not challenged, and there are few studies in the literature that examine teaching comprehension to learners with intellectual disabilities.

According to Erickson (2009), learners with Down syndrome have been the subject of most studies on reading comprehension in learners with intellectual disabilities. It was discovered that there was no correlation between their reading comprehension, spelling, or sight word decoding abilities and their capacity to comprehend oral language. While word attacks and letter naming hindered learners' vocal comprehension of stories, using context clues and prior knowledge seemed to aid. This population's comprehension improved when stories were audibly and graphically presented. It was demonstrated by their capacity to recount stories.

**Importance of Reading for Learners with Intellectual Disability**

An online essay by MacKay (2007) highlights the importance of reading in daily life, addressing students who might question its relevance. The essay lists essential tasks that require reading, like driving, obtaining licenses, navigating travel, ordering food, making purchases, finding employment, and understanding medical instructions. In short, illiteracy significantly hinders an adult's ability to live independently. Statistics from the National Center for Education Statistics (2013) reveal a concerning reality: 14% of adults in the US lack basic literacy skills, limiting their ability to handle everyday reading tasks.

Calkins and Tolan (2010) said that all learners must acquire higher literacy skills than before due to the demands of modern technologies, without particularly mentioning learners with intellectual disabilities. As stated by Bradford et al. (2006), not reading improves one's quality of life. Studies show that only a small percentage, roughly 20% of students with intellectual disabilities, reach even basic reading skills, according to Katims (2001). This difficulty in reading goes beyond just one subject. Struggling readers often experience delays in language development, building general knowledge, vocabulary growth, and even social acceptance.

Despite the possibility of assistive technology becoming more commonplace in society, reading will always remain a vital component of education, the workplace, and communal life. There are several reasons why teachers of learners with intellectual disabilities should incorporate literacy education into their lessons, as explained by Houston et al. (2004). Furthermore, the ability to read and be literate is essential for making decisions, being independent, and having access to knowledge. Reading should be included in the curriculum for learners with intellectual disabilities since it is required.

Furthermore, the No Child Left Behind Act (NCLB) of 2001 (PL 107-110) requires all learners, including those with disabilities, to demonstrate adequate yearly progress (AYP) towards grade-level standards. Pollaway et al. (2013) stated that functional literacy is required for learners with intellectual impairments to achieve independence, and reading is a crucial skill for success in most academic disciplines.

According to Hatch (2009), there is a controversy as to whether the curriculum that most people would consider functional for learners with intellectual disabilities genuinely aids in their comprehension or understanding when reading. Less than half of the instructors surveyed believed that literacy instruction, including reading, should be provided to all students despite most of them being curious to learn more about the subject. The teachers taught learners with intellectual disabilities (ID) and visual impairments. According to Mims et al. (2009), even if learners do not become literate, they should still have the chance to learn through literacy or reading.

**Teaching Learners with Intellectual Disabilities to Read**

In recent years, a green growing movement has recognized literacy as a fundamental right for all children. The national discourse emphasizes that every child deserves science-based reading instruction, and no one should graduate without strong literacy skills (as reflected in the No Child Left Behind Act of 2002). However, discussions about "all children" often overlook or vaguely mention learners with intellectual disabilities. It argues that "all" seems to have an unspoken qualifier; it applies only to children believed capable of learning to read.

This limitation contradicts what we know about education.

Traditionally, reading is seen as breaking down words to understand the author's message. However, many educators mistakenly believe that learners with intellectual disabilities cannot learn to read due to their classification (Katims, 2000). The common assumption has been that these learners, especially those with moderate ID, can only memorize a limited set of words by sight. This low expectation contributes to the reality that only 20% of learners with mild to moderate ID develop basic reading skills. Teaching them to read and write fluently is often disregarded.

Edyburn (2004) has proposed that reading difficulties are a major factor in transferring learners to a special school. More precisely, these impacted students struggle to fulfill the reading and viewing learning outcome requirements. It is difficult for learners with ID to commit reading material to memory and practice it. To help children learn, they find it difficult to organize or expand text (Alfassi et al., 2009). According to Elder-Hinshaw et al. (2006), learners who struggle with reading frequently struggle with word recognition, phonemic awareness and analysis, reading fluency, and text comprehension.

Contrary to assumptions, mental age does not limit what a learner with intellectual disabilities can learn but rather how they learn best (Lacono et al., 2004). Regardless of the classroom setting (general or special education), Apps et al. (2006) found that the key to achievement for struggling learners is maximizing active learning time with teacher support. Effective programs for these learners should be built on good teaching principles, not just designed around their diagnosed needs (compensatory education).

## Approaches to the Prevention and Remediation of Phonologically Based Reading Disabilities

More heated discussions and arguments than any other topic in education have surrounded the best strategies for helping children learn to read. Even though this topic has been studied extensively in the past (Adams, 1990;

Clark, 1988), scholars and educators continue to dispute greatly on it. Of course, one part of the problem is that no single answer can properly address the vast topic of teaching children to read. The skills and motivations that children bring to school, the knowledge, abilities, and motivations of their instructors, and the resources that parents and the community have available to support children are just a few of the many factors that will likely determine the answers to this question.

Unsurprisingly, there is currently no consensus regarding the most effective teaching tactics for children who struggle with learning to read, given that these and other factors establish contextual limitations on the effectiveness of various teaching strategies.

## Preparing an Effective Individual Education Plan (IEP)

Learners with disabilities receive appropriate education through Individualized Education Plans (IEPs). These legal documents detail the specific support and services a child needs to succeed in a regular classroom setting. Parents and school staff work together to create these IEPs, as mandated by the Individuals with Disabilities Education Act (IDEA), due to their critical role in a child's education (Yell, 2012). The IEP is a collaborative effort involving the school, parents, the learners (when possible), and other relevant individuals or organizations. It outlines modifications to the curriculum while prioritizing the learner's most pressing needs.

Additionally, the plan may include different accommodations and supervision to address other requirements the student may have. Support for learners with special needs should be targeted to their specific challenges, identified through assessments. The amount of customization and support will vary based on each learner's learning needs. Individualized Education Plans (IEPs) offer five key benefits: They are based on the student's current knowledge and tailored to their interests and strengths. They set clear goals and timelines. They consider the school's available resources and involve Parents in the planning process (Jachova, 2002). Significant adjustments to the curriculum might be necessary for students with more complex needs.

Research by Lemmons et al. (2014) suggests that intensive, personalized reading programs can significantly

improve reading skills in children with intellectual disabilities. An Individualized Education Plan (IEP) outlines a learner's needs and goals. It typically includes Current performance levels that describe the learner's current academic abilities; Learning goals and objectives are specific, measurable targets for the student to achieve during the school year; Support services detail the additional resources and assistance the student needs to succeed; Instructional adjustments outlines any modifications to teaching strategies, materials, or assessment tools to cater to the learner's learning style; Setting: This specifies where the student will receive their education; Personnel involved: This identifies the teachers, specialists, and other professionals who will support the learner; Review process: This outlines the schedule for reviewing the IEP and making adjustments based on progress and; Transition plans detail how the student will be supported when moving to a new educational setting.

This aligns with McDonnell and Mithaug's study (2017), which found that teachers who meticulously track learners' progress are better equipped to plan and personalize instruction.

The Education of All Handicapped Children's Act (EHA) 1975 laid the foundation for Individualized Education Plans (IEPs). This law guaranteed that public schools would provide "free appropriate public education" to learners with disabilities in the least restrictive setting possible. Since then, the EHA has undergone several changes. 1990 it was renamed the Individuals with Disabilities Education Act (IDEA). This revision included parents' rights to participate in IEP development and expanded services to include children aged 3 to 5. The Individuals with Disabilities Education Improvement Act (IDEIA) of 2004 further built upon this legislation, establishing new guidelines for identifying learners with specific learning disabilities.

A crucial part of a child's Individualized Education Program (IEP) is the Present Levels of Academic Achievement and Functional Performance. This section helps teachers, like Smith and Tyler (2010) suggest, pinpoint effective communication methods and document relevant behavior observations. These strategies are valuable because they allow educators to tailor lessons to the specific needs of students with intellectual disabilities. Ultimately, the goal is to determine what kind and level of special education support the child requires.

The IEP outlines various aspects: a) Present Levels, which details how the child's disability impacts their participation in the general curriculum, including their strengths, weaknesses, learning aids, and recent assessment data; b) Difficulties and Barriers, these can be physical, technological, financial, or even attitudinal. They might also stem from a lack of timely accommodations provided by the school; c) Learners' Goals, these are set based on the student's current knowledge and academic performance and; d) Learners' Transition, this section focuses on the learner's goals and support for transitioning beyond high school. It considers their unique needs, strengths, talents, and interests. Transition planning helps identify and achieve goals within the current school year to prepare learners for their post-high school aspirations.

Wehmeyer and Ayres' findings (2003), teachers who identify specific needs are more successful in implementing targeted interventions that improve learners' responses. It is consistent with Wehmeyer (2000), who found that incorporating learner empowerment into IEP goals can increase motivation and engagement. In other words, teachers reported a tendency to focus on what the student likes and is good at when creating IEPs. She suggests that educators identify effective communication strategies and record behavior observations, key components of effective IEP implementation. These interventions are critical in tailoring the learning process to the needs of the individual psychology student (Smith & Tyler, 2010). However, the assessment of learners' ability to independently perform tasks of daily living suggests a potential for improvement. Maintaining independence in activities of daily living is critical to the overall development and future success of psychology learners (Heward, 2013).

**Research on Early Reading Interventions**

Many studies conducted in the last 30 years have concentrated on preventing and treating reading difficulties in students who struggle to learn to read but do not have an intellectual handicap. One of the main conclusions drawn from this study is that, when given to small groups of elementary school learners, intervention can be very successful in preventing reading difficulties for the majority of learners and significantly lowering the severity of reading difficulties for those who still struggle (Mathes et al., 2005). Similarly, the important skills that

learners need to develop to become proficient readers should be revealed. Various reading process components, such as concepts of print, oral language, phonological and phonemic awareness (PA), letter knowledge, word recognition, fluency, and comprehension, are all targeted by effective early reading interventions in an integrated and comprehensive manner (Foorman et al., 2001).

Numerous experimental research shows that teaching PA improves learners' spelling and reading comprehension (Ehri et al., 2001). A significant predictor of reading achievement is letter knowledge, which includes letter naming and letter-sound recognition (Adams, 1990). These abilities also impact other critical early literacy skills like phonemic decoding and Phonics Awareness (Blaiklock, 2004). Perfetti et al. (2005) state that many kids who struggle to read also have trouble honing their oral language skills. Interactive storybook reading is effective for learners experiencing language difficulties (Arnold & Whiteburst, 1994). Effective early reading interventions also require explicit instruction in fundamental comprehension techniques (Mathes et al., 2005). Moreover, Gersten et al. (2005) emphasize the importance of equivalent pretest scores in experimental and control groups to accurately assess instructional interventions' impact.

In addition, Coyne et al. (2010) found that explicit and systematic reading instruction can lead to meaningful gains in literacy, especially in areas such as word recognition and decoding. It is crucial that, while tackling the challenge of intervening with learners who have intellectual disabilities, instructions offered should not only cover the essential reading material but also synthesize the best practices for instructing learners with ID. In a behaviorist paradigm, the teacher explicitly explains the material and demonstrates the skills, giving students consistent practice opportunities and reinforcement for mastery (Joseph et al., 2004). Furthermore, Heller et al. (1991) emphasize that baseline comparisons are more important for causing observed changes in the intervention.

**Research in Reading and Intellectual Disabilities**

Despite progress in educating learners with intellectual disabilities, research on reading instruction for this population remains limited. Most studies focus on learners with mild ID as stated by Browder (2006) and often target isolated reading skills rather than a comprehensive approach that addresses all essential components. Notably, there is a lack of research exploring whether learners with ID can develop full reading comprehension skills, which involve processing the written text and its meaning.

While research on reading instruction for learners with intellectual disabilities is scarce, the available evidence is promising. Studies show these learners can learn various reading skills, focusing on sight word recognition. The research also suggests that with proper instruction, even learners with moderate to severe ID can learn to recognize a significant number of words automatically. However, a major hurdle remains. These learners often struggle to apply their learning beyond the specific words they were taught, limiting their overall literacy development.

There is also some encouraging research on phonics instruction for learners with intellectual disabilities, though most studies focus on those with mild ID. Conners (1992) and Joseph and Seery (2004) found 14 studies that explored phonics for ID learners, suggesting its potential effectiveness. However, these studies were brief (a few months) and focused on isolated phonics skills, not a comprehensive approach to strong decoding. Phonemic awareness (PA), a crucial foundation, was not a main focus. O'Connor et al. (1996) studied the development of some ID learners in a PA intervention, and 3 out of 9 showed significant improvement after six months.

Another study found that learners with ID outperformed a control group in sounding out words after ten weeks of instruction. Research on vocabulary and comprehension for ID learners is even scarcer, with examples focusing on basic skills like matching pictures to words or using sight words in practical tasks by Browder (2006).

Our understanding of effectively teaching reading to learners with intellectual disabilities is limited due to the scarcity of research in this area. No studies examine how successful it is to provide a thorough reading intervention over time. We cannot decide whether learners with intellectual impairments should be included in the definition of "all" in "No Child will be Left Behind" without this kind of research. To put it briefly, we have

no idea what is achievable for learners with an intellectual impairment. The research presented here aims to make significant progress in answering this query. In particular, we want to know how well learners with intellectual disabilities can be taught to read. Another is McDougal (2019), who found that positive reinforcement effectively improves student behavior and learning outcomes and emphasizes that setting goals with timelines and milestones helps mentally challenged learners stay focused and motivated.

## Incidental Learning

There are different ways to define learning that happens unintentionally, also called incidental learning (Shintani, 2010). Researchers in psychology and studies of second language acquisition (SLA) often compare accidental learning with purposeful learning, particularly regarding vocabulary (Hulstijn, 2003). Imagine a research participant is asked to rate how pleasant different words sound (the task). They are not told there will be a test later. However, they are surprised with a test asking them to recall the words they just rated. This is an example of incidental learning (Craik & Lockhart, 1972). In contrast, purposeful learning involves knowing there will be a test later.

Once more, incidental learning is defined in terms of purposeful learning, with the main distinction being whether or not memory retention is a conscious effort on the part of the learner (incidental). Rather, incidental learning, the concept utilized, has been used alone to describe knowledge acquisition while directing attention toward something else (Shintani et al., 2010). As previously stated, incidental learning does not concentrate on the learner's material processing. Instead, it concerns the task's objectives and the individual's comprehension of them (i.e., the instructions).

Teaching languages will directly benefit from knowing whether and how accidental learning occurs. Krashen (1982) distinguished between acquisition, the unintentional taking up of form during communication and learning, and the deliberate teaching and learning of form. Since acquisition matches the knowledge required for effective communication, he thought it was preferable to learning. Moreover, he proposed that the two could not have an interconnection. While Krashen's ideas focused more on the difference between unconscious language acquisition and conscious learning, they have significantly impacted educational approaches based on incidental learning (Knell et al., 2007). This influence can be seen in programs like immersion programs (French and English programs in Canada) and content-based instruction (Lyster, 2009), as well as intensive language programs (Netten & Germain, 2005).

Most second language acquisition (SLA) theories acknowledge that learners acquire grammar unintentionally, alongside intentional learning (VanPatten & Williams, 2007). Incidental learning is widely seen as important for language acquisition. However, there is limited research on how it works for specific grammar features, how effective it is, or how to promote it in learners (Sintani et al., 2010).

A key study by Browder et al. (2008) reviewed 128 studies on teaching reading to students with severe intellectual disabilities. Their analysis revealed several trends: Focus on sight words, where most studies emphasized memorizing sight words, a basic vocabulary component; Limited attention to fluency, where only 28% of the studies addressed fluency, which is the ability to read smoothly and accurately; Picture identification focus, where just about a third of the studies focused on identifying pictures, a foundational skill but not core reading comprehension; Rare assessment of reading comprehension.

Difficulties with decoding and the ability to sound out words can significantly hinder incidental learning from reading materials. Access to appropriate reading materials with clear visuals and simple language is crucial. Attention and motivation also play a role, influencing how effectively learners with ID engage with these incidental learning opportunities (Allor et. al. 2010). However, it indicated that while intense training can help individuals with major developmental challenges acquire early literacy skills, additional research is needed to evaluate whether or not the skills taught will result in the ability to read.

Given the complexities and problems of teaching reading to learners with intellectual disabilities, many special education specialists argue for a more holistic approach to reading training. Allor et al. (2010) investigated the impact of prolonged reading instruction on the performance of learners with intellectual disabilities on reading-

related standardized tests. The 59 participants, whose IQs ranged from 40 to 69, were randomly allocated to the treatment or control group. Every day for 40 to 50 minutes per session, the treatment group received rigorous reading instruction in small groups of one to four pupils.

The researchers used several tests to assess the children's abilities, including phonological processing, vocabulary, picture vocabulary, and word reading efficiency. They then analyzed the data using a statistical method (factorial ANOVA) to compare the performance of different groups (likely intervention vs. control) before and after the intervention. The analysis showed significant differences between the groups, suggesting the intervention had an impact. This implies that for children with intellectual disabilities to learn the basics of reading, they need consistent, comprehensive, and in-depth reading instruction over time.

Ruwe et al. (2011) investigated the efficacy of flashcards and direct instruction to improve sight word skills in learners with intellectual disabilities. Three middle school children with special needs participated in the study, which was conducted in a separate classroom. The researchers assessed the learners' sight word knowledge throughout the study. Their findings revealed that direct flashcards effectively increased learners' sight word recognition. The study indicated this strategy could improve critical academic skills for adolescents with various learning difficulties.

Incidental learning opportunities through reading can be particularly beneficial for learners with ID. Exposure to written materials in daily life, such as signs, menus, labels, and simple instructions, can enhance vocabulary development, reading comprehension, and overall literacy skills. Studies have shown that ID learners can benefit from these incidental learning opportunities (Allor et al., 2010). However, it is important to acknowledge that challenges exist. However, Skinner (1974) argued that there is no one-size-fits-all approach to teaching. Recognizing this, researchers are looking to scientific methods to explore the potential of incidental learning to improve reading skills in learners with intellectual disabilities.

Conners et al. (2006) investigated the effectiveness of teaching phonics to learners with intellectual disabilities. They studied 40 children aged 7-12 with IQ scores below 70 and significant limitations in multiple areas. The researchers carefully matched students by age, IQ, and reading skills. Then, they randomly assigned each pair to either an instruction group that received phonics training or a control group that did not. Before and after the instruction period, all learners were tested on their reading skills. Trained researchers then evaluated each learner individually. The results showed that the learners who received phonics training (instruction group) significantly improved their ability to sound out words compared to the control group. They also showed a slight improvement in sight word reading and a significant improvement in predicting how to sound out new words after instruction. Additionally, Conners et al. found that learners who participated in 20-minute sessions performed better than those who did not, suggesting the importance of consistent practice.

Researchers appear to have long underrated the literacy potential of learners with intellectual disability. Until recently, learning to decode was deemed difficult for those with moderate to severe intellectual limitations (IQs of less than 50-55). According to systematic evaluations, sight-word training was frequently the only reading instruction approach employed in studies including these learners (Browder et al., 2006). Word recognition was taught to pupils visually, with no emphasis on the letter-sound correspondences that comprise it (Roberts et al., 2013).

Nonetheless, Hill's (2016) systematic review points out that research has increased over the last 20 years examining the outcomes of interventions designed to teach phonics and phonological awareness skills to learners with intellectual disabilities. A recent meta-analysis found that teaching learners with intellectual disabilities to decode using systematic phonics training and direct instruction is an evidence-based technique (Sermier et al., 2019). More importantly, several recent studies show that learners with moderate to severe intellectual disabilities can improve their knowledge of letter sounds and phonological awareness and decode if they receive intensive, methodical reading instruction using research-based strategies (Lemons et al., 2015).

Although research on teaching reading comprehension to learners with intellectual disabilities is limited, it is clear that offering explicit training in comprehension strategies, such as inference or reciprocal teaching, is a

beneficial intervention for these learners (Alfassi et al., 2009). Furthermore, collaborative story reading can assist students with intellectual disabilities who cannot read and comprehend texts literally and inferentially (Browder et al., 2014). In shared story reading, learners interact with the material as it is read aloud. Questions are provided to improve learners' literal and inferential comprehension of the text as they read, such as by encouraging conversation about the narrative's events and terminology (Hudson & Test, 2011).

Observational studies are important in special education because they produce data that can be used to guide practice and policy (Brantlinger et al., 2005). Collecting extensive descriptive data can help us establish how much specialists in naturalistic situations genuinely follow broad standards or use evidence-based practices. Several studies have examined the type and content of reading instruction for children with learning disabilities (Walker & Stevens, 2017). On the other hand, few observational studies include a big enough sample size of learners receiving reading instruction for intellectual disability (Ahlgrim et al., 2015). Moreover, they were all completed in the United States of America. To properly organize in-service training for professionals who work with learners with intellectual impairments and develop reading intervention programs, it is critical to understand the nature and quality of reading instruction provided to these learners in other national contexts.

Given that many learners with intellectual disabilities have extremely low reading proficiency, this is particularly crucial (Lemons et al., 2013). Strong reading skills are a cornerstone for independence and social participation for learners with intellectual disability (ID). While explicit reading instruction is essential, research suggests that incidental learning also plays a significant role in their development (Allor et al., 2010).

## Social Behavior

Social behavior encompasses interactions among members of the same species, including communication, competition, collaboration, and conflict. Understanding social behavior is crucial as it helps sociologists and psychologists comprehend how societies function and evolve, enabling them to predict future interactions and resolve disputes. It also addresses social issues like bias, inequality, and hostility, providing a basis for interventions that promote cooperation and social well-being. Insights into social behavior have practical applications in education, workplaces, and marketing, where they enhance learners' interactions, improve employee satisfaction and productivity, and lead to more effective advertising campaigns.

Several psychological theories describe how people pick up and maintain social habits. According to Albert Bandura's (1977) Social Learning Theory, people acquire social conduct mostly by imitating and observing others in social situations. Bandura contends that without first having firsthand experience, people might pick up new habits by seeing the acts of others and the results that ensue. Meanwhile, Festinger (1954) proposed the cognitive dissonance theory, which describes how people try to be internally consistent. People experience cognitive dissonance or discomfort when they see acts or attitudes contradicting their own. This discomfort prompts people to modify their views or behaviors to lessen them, affecting their social relationships and personal beliefs.

Social behavior is influenced by social learning, social influence and conformity, group dynamics, reciprocity, and social exchange. Social learning involves acquiring behaviors through observing others, while social influence and conformity describe changes in behavior due to the presence or actions of others, often to gain approval. Group dynamics, including roles, norms, and leadership, affect individual behaviors, with social comparison playing a key role. Reciprocity fosters mutual care through responding in kind, and social exchange theory explains relationships based on cost-benefit analyses. Understanding these mechanisms helps predict social behaviors and design effective interventions for social issues (Homans, 1961).

According to Blumer (1969), social behavior includes cooperative, competitive, and altruistic interactions with distinct motivations and outcomes. Cooperative behavior involves working together towards mutual benefits, enhancing productivity and satisfaction in various contexts. Competitive behavior, driven by the pursuit of limited resources and social comparison, can spur innovation and performance but may also lead to conflict. Altruistic behavior involves selfless acts that benefit others without immediate personal gain, often influenced by empathy, moral principles, and cultural norms and explained by kin selection theory. Understanding these behaviors aids in designing interventions, educational programs, and policies to create more productive and

harmonious social environments (Hamilton et al., 1964).

Comprehending social behavior is essential in educational settings to establish atmospheres that foster positive student interactions and successful learning. Teachers can create collaboration-boosting and bullying-reduction tactics by utilizing their understanding of group dynamics and peer influence (Festinger, 1954). For instance, cooperative learning models that focus on small group interactions can enhance students' academic progress and interpersonal relationships by encouraging a sense of community and shared responsibility. Furthermore, by comprehending the social behaviors linked to classroom engagement, educators can create interventions with a higher chance of inspiring pupils.

Moreover, Hodges and Gotham (1998) and Matson and McBride (2008) showed that people with intellectual disabilities frequently have difficulty interpreting social cues, communicating, and adopting perspective, which makes it difficult for them to make friends and function in social settings. Additionally, Langdon et al. (2009) discovered that disruptive behaviors can result from dissatisfaction, trouble expressing needs, and a lack of coping methods. Thus, in light of this, McConnell et al. (2008) and Turnbull et al. (2001) stress the significance of parents and teachers working together and communicating openly to guarantee consistency and meet each student's needs for effective support.

## Social Skills of Children with Intellectual Disability

The collection of abilities needed to engage and communicate with one another is known as social skills. These abilities include commonplace social skills like sharing, splitting up conversations, and letting others speak without interjecting. Kratchowill and French (1984) defined social skills as acquired verbal and nonverbal behaviors used in a particular social setting. It takes social skills to establish and maintain relationships with other people. These abilities can be developed gradually through learning, and the culture's diverse social agents significantly impact them. When these skills are applied correctly, they are called social competency. This process of learning and acquiring in society is known as socialization. Adaptive behavior and social skills are components of social competence. Due to the influence of their families, neighborhoods, and schools, all significant societal units, children vary widely in their social attributes Kratchowill and French (1984). Children learn best in schools and classrooms because they are social settings where learning occurs in an interactive setting. Still, children with mental retardation are a diverse population with a range of demands. When compared to other kids their age, they learn things more slowly. They exhibit developmental delays, such as being slow to sit, walk, grin, move, and show interest in objects.

They are deficient in one or more areas, such as using community services, self-care, living at home, and social and communication skills. They struggle with both intellectual functioning and carrying out daily tasks that someone their age should be able to complete (Strain, 1984). Social and emotional development issues are frequently a concern for children who suffer from mental impairment. These kids do not have the linguistic or social abilities to start and keep relationships. It has been discovered that children with mental retardation have smaller social repertoires than children without the condition.

When compared to typical children, children with mental retardation initiate fewer social connections and show fewer reactions to peers, according to early research by Guralnick and Weinhouse (1984). Many kids with developmental difficulties struggle to make friends as early as preschool. They spend more time alone or in idle pursuits and connect with peers less frequently. It can be challenging for kids with impairments to start activities and establish peer groups (Guralnick & Groom, 1987; Wilson, 1999). Because of the unique requirements put on them, families of children with mental impairment frequently encounter difficulties. Families usually put much effort into setting up the home and contacting people to find services to help their child. Children with mental retardation can benefit from a variety of training techniques, including cooperative learning, peer-mediated intervention, teacher prompting, social skills training, sensitivity training for peers, and imitation of peers.

Kids play in groups, whether at school, at home, or in the community, and engage with one another. Mead, Freud, Bowlby, Erikson, Sullivan, Piaget, and Kohlberg's theories, among others, all stress how important it is for children's social interactions to be of a certain type and caliber for their development. Similar results were

observed by Rubin et al. (1998), who stated that the capacity to engage with people well and form wholesome connections is a necessary component of competent social development in early childhood. Events such as athletic competitions and cultural presentations take place in schools.

Many changes, such as sharing, cooperating in social circumstances, and communicating with one another, are presented by participating in these programs. According to Howes (1987) and Saarani (1990), engaging in social contact necessitates the capacity to play with others, coordinate one's activities effectively during the exchange, and exhibit favorable behaviors toward peers.

### Synthesis

For learners with intellectual disabilities, incidental learning and Individualized Education Plans (IEPs) are essential for developing reading skills and guiding their academic journey. Incidental learning utilizes everyday experiences and environmental print, such as labels and signs, to enhance comprehension and sight word identification, promoting literacy in a natural and personalized way. An IEP provides a tailored roadmap detailing personalized instruction, adjustments, and support services based on each learner's strengths and needs. This approach ensures specialized help, fosters independence, and empowers learners to actively participate in and take control of their education.

Reading is the cornerstone of knowledge acquisition and lifelong learning and directly correlates to academic performance. Comprehending comprehension is essential for everyday functioning outside the classroom, from deciphering financial paperwork and road signs to comprehending pharmaceutical labels and public transportation timetables. A broad range of opportunities arise from literacy, including the confidence to follow passions, accomplish goals, and contribute to society. A culture of lifelong learning is fostered by emphasizing literacy education, which helps people realize their full potential.

Social interaction is crucial for the social, emotional, and cognitive development of learners with intellectual disabilities. Social contacts develop relationships, improve communication skills, and increase a person's self-worth and belonging. These encounters foster social competency and adaptive behaviors through observation and imitation. Good social ties also boost academic achievement, motivation, and participation in learning activities. Teachers can support learners with intellectual impairments' full potential and more fulfilled lives by fostering inclusive learning settings and social networks.

## METHODOLOGY

This chapter dealt with the research design, respondents, date-gathering procedures, and statistical treatment used in the study.

### Research Design

This study utilized the descriptive research design to test the effect of incidental learning in enhancing the reading skills and the social behavior of General Santos City Special Education Integrated School-Junior High School Department, Grade 7 non-graded learners with intellectual disability with ages from 12-19 years old who were enrolled for the school year 2023-2024. In addition to this, it also reflected a little of qualitative about the social behavior of the non-graded learners with intellectual disability.

It utilized an adapted and modified survey questionnaire and the standardized tool adopted by the Department of Education through the United States Agency for International Development (USAID), the Early Grade Reading Assessment (EGRA). EGRA is used to assess the reading skills of all students in public and private schools. It is based on the Deped Order 57 s. 2015. The Early Grade Reading Assessment (EGRA) has eight components such as component 1: orientation to print; component 2: letter name knowledge; component 3a: letter sound knowledge; component 3b: initial sound identification; component 4: familiar word reading; and component 5: invented word decoding. However, out of eight (8) components, only five (5) were used to assess and test the reading skills and the common problems encountered by Grade 7 non-graded learners with intellectual disability in reading.

## Locale of the Study

The study was conducted in General Santos City SPED Integrated School. It was the Division of General Santos' Special Education Resource Center, according to DECS Order No. 11. 2000. It was founded in 1997 as a special public school to meet the educational needs of gifted learners. Due to constant demands from parents, particularly those of handicapped children, it was converted into an integrated school, and its curriculum increased to the secondary level. The school's thrust and mission have directed its services to provide diverse educational programs and curricula to meet the educational needs of eight types of exceptional children: gifted/talented/fast learners, mentally challenged, behavioral problems, specific learning disabilities, visually impaired, hearing impaired, orthopedically handicapped, multiple handicapped, and autistic children. The researchers chose the school for implementation because it gave the researchers the needed information for learners with intellectual disability and from the Special Education Teachers. The study was conducted in the academic year 2023-2024.

## Respondents of the Study

The respondents for Part I of the study were thirty Special Education Teachers teaching learners with intellectual disability in General Santos City SPED Integrated School. Furthermore, respondents for Part II of the study included sixty (60) identified Grade 7 non-graded learners with intellectual disability (ID) ranging in age from 12 to 19 years old and struggling to read at the starting stage. It included thirty (30) learners with intellectual disabilities in the control group and thirty (30) learners with intellectual disabilities in the experimental group from General Santos City Special Education Integrated School-Junior High School Department School Year 2023-2024. The Part III was participated by teachers and parents of the Grade 7 non-graded learners with intellectual disability.

## Research Instrument

The instrument that tested the level of incidental learning applied in learners with an intellectual disability based on the Individualized Educational Plan was an adapted and modified survey questionnaire. Meanwhile, the instrument that tested the reading skills of learners with intellectual disability was the Early Grade Reading Assessment (EGRA). It is a standardized tool adopted by the Department of Education, based on the Deped Order 57 s. 2015, through the United States Agency for International Development (USAID). A focused group discussion to teachers and parents.

Part I of the study focused on Incidental Learning based on the Individual Educational Plan. Part II highlighted the reading skills of learners with intellectual disability using the Early Grade Reading Assessment (EGRA). Part III on the focused group discussion about the social behavior of non- graded learners with intellectual disability.

To measure the level of incidental learning applied in learners with an intellectual disability based on the Individualized Educational Plan, the following Likert scales were used.

Legend: Academic Achievement and Functional Performances

| Scale | Verbal | Description |
|---|---|---|
| 5 | Constantly | Creates incidental learning opportunities in academic subjects and facilitates functional skills. |
| 4 | Frequently | Creates incidental learning opportunities in academic subjects and facilitates functional skills. |
| 3 | Occasionally | Creates incidental learning opportunities in academic subjects and facilitates functional skills. |
| 2 | Rarely | Creates incidental learning opportunities in academic subjects and facilitates functional skills. |
| 1 | Never | Creates incidental learning opportunities in academic subjects and facilitates functional skills. |

Legend:  Difficulties, Barriers, and Enabling Support

| Scale | Verbal | Description |
|---|---|---|
| 5 | Constantly | Employs incidental learning to address difficulty, manage barriers, and provide enabling support. |
| 4 | Frequently | Employs incidental learning to address difficulty, manage barriers, and provide enabling support. |
| 3 | Occasionally | Employs incidental learning to address difficulty, manage barriers, and provide enabling support. |
| 2 | Rarely | Employs incidental learning to address difficulty, manage barriers, and provide enabling support. |
| 1 | Never | Employs incidental learning to address difficulty, manage barriers, and provide enabling support. |

Legend:  Learners' Goals

| Scale | Verbal | Description |
|---|---|---|
| 5 | Constantly | Incorporates incidental learning, allowing students to acquire skills and knowledge pertinent to their goals. |
| 4 | Frequently | Incorporates incidental learning, allowing students to acquire skills and knowledge pertinent to their goals. |
| 3 | Occasionally | Incorporates incidental learning, allowing students to acquire skills and knowledge pertinent to their goals. |
| 2 | Rarely | Incorporates incidental learning, allowing students to acquire skills and knowledge pertinent to their goals. |
| 1 | Never | Incorporates incidental learning, allowing students to acquire skills and knowledge pertinent to their goals. |

Legend:  Learners' Transition

| Scale | Verbal | Description |
|---|---|---|
| 5 | Constantly | Aligns incidental learning opportunities through natural learning experiences to acquire transition. |
| 4 | Frequently | Aligns incidental learning opportunities through natural learning experiences to acquire transition |
| 3 | Occasionally | Aligns incidental learning opportunities through natural learning experiences to acquire transition. |
| 2 | Rarely | Aligns incidental learning opportunities through natural learning experiences to acquire transition. |
| 1 | Never | Aligns incidental learning opportunities through natural learning experiences to acquire transition. |

To measure the reading skills of learners with intellectual disability using the Early Grade Reading Assessment, the following Likert scales were utilized.

Legend:  Orientation to Print

| Scale | Verbal | Description |
|---|---|---|
| 3 | Mastery | Consistently follows print from left to right and top to bottom, even in unfamiliar contexts. |

| 2 | Developing | Generally, follows print from left to right and top to bottom. |
| 1 | Needs Improvement | Rarely or inconsistently follows print from left to right and top to bottom. |

Legend: Letter Name Knowledge

| Scale | Scores | Description |
|---|---|---|
| 1 | 1–10 letters | Very Low Level of Identification |
| 2 | 11–20 letters | Low Level of Identification |
| 3 | 21–30 letters | Low-Moderate Level of Identification |
| 4 | 31–40 letters | Moderate Level of Identification |
| 5 | 41–50 letters | Moderate-High Level of Identification |
| 6 | 51–60 letters | High Level of Identification |
| 7 | 61–70 letters | Very High Level of Identification |
| 8 | 71–80 letters | Excellent Level of Identification |
| 9 | 81–90 letters | Superior Level of Identification |
| 10 | 91–100 letters | Perfect Level of Identification |

Legend: Letter Sound Knowledge

| Scale | Scores | Description |
|---|---|---|
| 3 | 21-30 letters sound | Low-Moderate Level of Identification |
| 4 | 31-40 letters sound | Moderate Level of Identification |
| 5 | 41-50 letters sound | Moderate-High Level of Identification |
| 6 | 51-60 letters sound | High Level of Identification |
| 7 | 61-70 letters sound | Very High Level of Identification |
| 8 | 71-80 letters sound | Excellent Level of Identification |
| 9 | 81-90 letters sound | Superior Level of Identification |
| 10 | 91-100 letters sound | Perfect Level of Identification |

Legend: Initial Sound Identification

| Scale | Scores | Description |
|---|---|---|
| 5 | (9-10) | Consistent Identification |
| 4 | (7-8) | Developing Identification |
| 3 | (5-6) | Emerging Identification |
| 2 | (3-4) | Limited Identification |
| 1 | (1-2) | No Identification |

Legend: Familiar Word Reading

| Scale | Scores | Description |
|---|---|---|
| 5 | (41-50) | Very proficient |
| 4 | (31-40) | Proficient |
| 3 | (21-30) | Moderate proficient |
| 2 | (11-20) | Less proficient |
| 1 | (1-10) | Beginner |

Legend:  Invented Word Decoding

| Scale | Scores | Description |
|---|---|---|
| 5 | (41-50) | Very proficient |
| 4 | (31-40) | Proficient |
| 3 | (21-30) | Moderate proficient |
| 2 | (11-20) | Less proficient |
| 1 | (1-10) | Beginner |

**Data Gathering Procedure**

The researcher has gone through with the study proposal, and the panel approved it. Then, the adoption of the reading assessment tool, the Early Grade Reading Assessment (EGRA). The researcher asked for the approval of the Dean of the Graduate School and permission from the Division Schools Superintendent for the Conduct of the Study. Similar request letters were addressed to the school principal, special education coordinator, and the respondents' parents to gather data for the study. After the approval was granted, the necessary arrangement for the study was made. A schedule was set to conduct the study. The administration of Early Grade Reading Assessment (EGRA) was administered personally by the researcher with the guidance of the special education teacher, as well as the tabulation and collating of data for analysis and interpretation. After which, data were tabulated and collated ready for analysis and interpretation using Statistical Package for Social Sciences (SPSS). SPSS is one of the most popular statistical packages that can perform highly complex data manipulation and analysis with simple instructions (Chandler, 2016).

The gathered data in this study were analyzed and interpreted through the responses of the teachers, parents and Grade 7 non-graded learners with intellectual disability (ID). For the researcher to determine the impact of incidental learning on the reading skills of learners with intellectual disability, the Early Grade Reading Assessment (EGRA) was utilized. Figure 2 shows the flow process of actual data-gathering activities during the study.
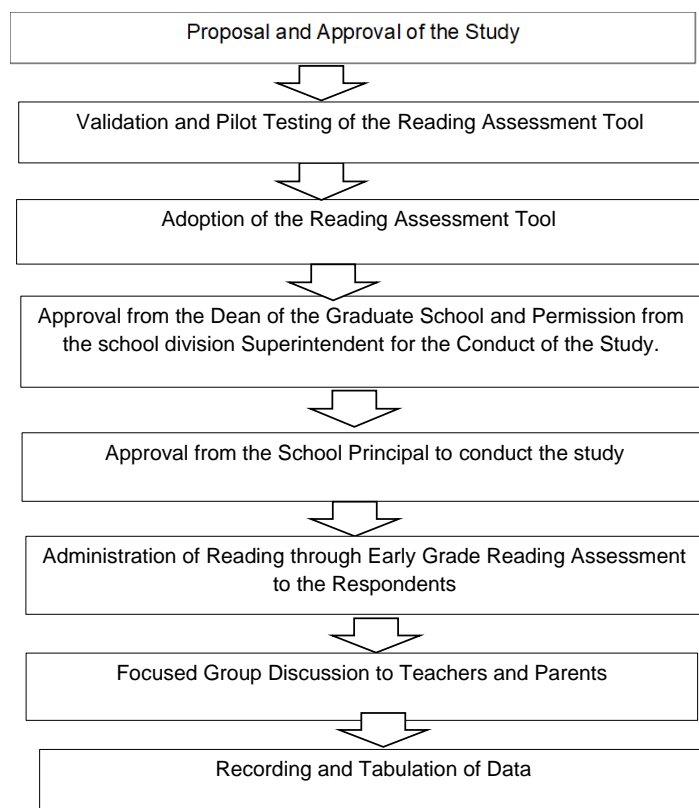


**Figure 2. Process Flow of the Data Gathering Procedure**

**Statistical Treatment**

To determine the level of incidental learning in non-graded learners with intellectual disability based on the Individualized Educational Plan, the researcher utilized descriptive statistics, such as mean scores for each component of learners scoring zero.

To determine the influence of incidental learning as an intervention on the reading capabilities of non-graded learners with intellectual disabilities, the researcher used the Mann-Whitney U test analysis to effectively analyze data where medians and p values were highlighted. The Mann-Whitney U test, often called the Wilcoxon Rank-Sum test for independent samples, is a nonparametric statistical test that compares two independent groups on a continuous or ordinal scale. It is a typical substitute for the independent samples t-test when the data is not normally distributed. The median is a statistical measure indicating a data set's "middle" value. It describes the data's center and is frequently used as an alternative to the mean (average) when the data is skewed or contains outliers The p-value denotes the likelihood of observing a U statistic as severe or more extreme than the calculated one, assuming no difference between groups. A low p-value (usually less than 0.05) implies a statistically significant difference in the two groups medians. The hypothesis tested at a 0.05 level of significance

## PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

This chapter presents the results and the discussion of the study conducted. The data is sequentially presented according to the statement of the problem.

The following covered the discussion: Part I: The level of incidental learning applied to learners with an intellectual disability based on the individualized educational plan in terms of academic achievement and functional performance; difficulties and enabling support; learners' goals and learners' transition; The next will be Part II which elaborate the level of reading skills of non-graded learners with intellectual disabilities based on Early Grade Reading Assessment (EGRA) about orientation to print, letter name knowledge, letter-sound knowledge, initial sound identification, familiar word reading and invented word decoding; The EGRA scores of learners with intellectual disability in the experimental group from pretest to posttest; and the significant difference between reading skills in the pretest to posttest of learners with intellectual disability. Lastly, Part III presented the responses of teachers and parents during the focused group discussion regarding the social behavior of non-graded learners with an intellectual disability.

**The level of incidental learning for learners with intellectual disability based on the Individualized Educational Plan**

An Individualized Educational Plan ensures that a child with a disability receives specific and related services for a child attending elementary or middle school (Kamens, 2004). It usually has indicators such as a) Academic Achievement and Functional Performance, (b) Difficulties and Enabling Support, (c) Learners' Goals, and d) Learners' Transition. It is shown in the following figures.

| Statement | M | SD | Description |
|---|---|---|---|
| 1.Establish a clear starting point by documenting the student's current level of performance in all relevant academic areas. | 4.57 | 0.68 | Frequently |
| 2.Document all relevant behavioral observations, including strengths and areas where support is needed. | 4.73 | 0.58 | Frequently |
| 3. Assess the learner's ability to interact with peers and adults, including any social skills that need development. | 4.47 | 0.9 | Frequently |
| 4. Assess the learner's ability to perform daily living tasks independently. | 4.27 | 1.14 | Frequently |
| 5. Identify strategies that have successfully engaged the learner in learning. | 4.77 | 0.57 | Frequently |
| **Overall Mean** | **4.56** | **0.46** | Frequently |

**Table 1 Academic Achievement and Functional Performance**

The information shown in Table 1 includes five statements about the application of incidental learning based on the Individualized Education Plan of learners with intellectual disability. These statements are under the Academic Achievement and Functional Performance indicator, evaluated on a Likert scale from 1 to 5, where 5 represents "Constantly," and 1 represents "Never." Each sentence's mean (M) and standard deviation (SD) are also given.

The analysis shows that teachers frequently engage in specific practices to support the learning of learners with intellectual disability. The highest-rated practice, with a mean score of 4.77 and a standard deviation of 0.57, is "Identify strategies that have been successful in engaging the learner in learning." Close behind, with a mean of 4.73 and a standard deviation of 0.58, is "Document all relevant behavioral observations, including strengths and areas where support is needed." Third is "Establish a clear starting point by documenting the student's current level of performance in all relevant academic areas," with a mean of 4.57 and a standard deviation of 0.68.

The statement "Assess the learner's ability to interact with peers and adults, including any social skills that need development" follows, with a mean of 4.47 and a standard deviation of 0.90. The lowest-rated, but still frequently practiced, is "Assess the learner's ability to perform daily living tasks independently," with a mean of 4.27 and a standard deviation of 1.14. Overall, the practices are often performed, with a mean score of 4.56 and a standard deviation of 0.46, indicating that teachers can identify effective communication strategies and document relevant behavioral observations.

These strategies are useful because they allow educators to customize their lesson plans to meet the specific demands of students with intellectual disabilities (Smith & Tyler, 2010). The moderate scores in these areas indicate that these interventions are acceptable, frequently applied, and reliable. However, the low mean of the subjective assessment of daily living does indicate where there is room for improvement. For learners with intellectual disabilities to become independent, this component is essential (Heward, 2013).

**Table 2 Difficulties and Enabling Support**

| Statement | M | SD | Descriptive Interpretation |
|---|---|---|---|
| 1.Establish a system for regularly collecting learner's records. | 4.33 | 0.99 | Frequently |
| 2.Identify and document the subjects or specific skills where the student struggles. | 4.53 | 0.90 | Frequently |
| 3.Record how often and how severe occurrences of problematic behavior are. | 4.37 | 0.85 | Frequently |
| 4.Schedule regular IEP review meetings and conferences. | 4.30 | 1.18 | Frequently |
| 5.Review and maintain detailed records of all observations, assessments, and interventions. | 4.57 | 0.77 | Frequently |
| **Overall Mean** | **4.42** | **0.35** | Frequently |

The information shown in Table 2 includes five statements about the application of incidental learning based on the Individualized Education Plan of learners with intellectual disability. These are under the indicator Difficulties and Enabling Support and are evaluated on a Likert scale from 1 to 5, where 5 represents "Constantly," and 1 represents "Never." Each sentence's mean (M) and standard deviation (SD) are shown.

This highlights those frequently used by educators to support learners with intellectual disabilities based on their Individualized Education Plans (IEPs). The highest-rated, with a mean score of 4.57 and a standard deviation of 0.77, is "Review and maintain detailed records of all observations, assessments, and interventions." The second most common practice is "Identify and document specific subjects or skills in which the student struggles," with a mean score of 4.53 and a standard deviation of 0.90. Third is "Establish a system for regularly collecting the

learner's record," which scored a mean of 4.33 and a standard deviation of 0.99. "Record how often and how severe occurrences of problematic behavior" follows closely, with a mean of 4.37 and a standard deviation of 0.85. The lowest, but still frequently practiced, is "Schedule regular IEP review meetings and conferences," with a mean of 4.30 and a standard deviation of 1.18. These strategies are often implemented, with an average mean score of 4.42 and a standard deviation of 0.35. This suggests that these practices are crucial for fostering meaningful learning for children with intellectual disabilities

They found that teachers focused most of their attention on keeping records safe and accurate and pinpointing areas where learners struggle. These findings are consistent with a McDonnell and Mithaug (2017) study, which found that teachers could better plan and customize instruction by carefully improving their record learner development. Wehmeyer and Ayres (2003) found that teachers who identified specific needs had greater success putting those targeted interventions into action to improve student responses.

**Table 3 Learners' Goals**

| Statement | M | SD | Description |
|---|---|---|---|
| 1.  Use positive reinforcement to encourage desired behaviors | 4.83 | 0.38 | Frequently |
| 2.  Identify and incorporate the student's strengths and interests into goal-setting. | 4.57 | 0.68 | Frequently |
| 3.  Set realistic and attainable goals considering the learner's current abilities and potential for growth. | 4.40 | 0.81 | Frequently |
| 4.  Establish a timeline for achieving the goals, with specific deadlines and intermediate milestones. | 4.40 | 0.89 | Frequently |
| 5.  Regularly re-evaluate and adjust goals. | 4.30 | 1.06 | Frequently |
| **Overall Mean** | **4.50** | **0.31** | **Frequently** |

The table presents the mean (M) and standard deviation (SD) of responses to statements regarding the use of incidental learning in achieving Learner Goals as per the Individualized Educational Plan (IEP) for learners with intellectual disabilities. The statements are rated on a Likert scale from 1 (Never) to 5 (Constantly).

"Use positive reinforcement to encourage desired behavior" achieved a mean score of 4.83 and a standard deviation of 0.38, which was identified as the most frequently practiced by teachers. The result was followed by "Identify and incorporate the learner's strengths and interests into goal-setting," which received a mean of 4.57 with a mean of 0.68, indicating that it was frequently performed. It was also reported to have occurred more regularly as ranked third with a mean score of 4.40 and a standard deviation of 0.81, directly referring to the statement, "Set realistic and attainable goals considering the learner's current abilities and potential for growth." The mean score of 4.40 alongside the standard deviation of 0.89 also indicates that it is frequently performed; the statement "Establish a timeline for achieving the goals, with specific deadlines and intermediate milestones," shifts to the fourth. Finally, with a minimum score of 4.30 and a standard deviation of 1.06, which still applied frequently, was the phrase "Regularly re-evaluate and adjust goals." The total score was 4.50, with a standard deviation of 0.31, indicating that teachers reported frequent practice in their IEPs for learners with intellectual disabilities.

The result is consistent with research by McDougal (2019), who found that positive reinforcement effectively improves student behavior and learning outcomes. She also emphasizes that setting goals with timelines and milestones helps mentally challenged students stay focused and motivated. These findings are also consistent with Wehmeyer (2000) who found that incorporating learner strengths into IEP goals could increase motivation and engagement. Regularly reviewing IEP goals ensures they remain relevant to the student's needs. Those with intellectual disabilities frequently used all five strategies listed in the IEPs. The result indicates that educators understand the importance of providing their students with evidence-based strategies.

**Table 4 Learners Transition**

| Statement | M | SD | Descriptive Interpretation |
|---|---|---|---|
| 1. Begin transition planning as early as possible. | 4.40 | 1.10 | Frequently |
| 2. Establish long-term goals that reflect the learner's aspirations, interests, and potential career paths. | 4.47 | 0.94 | Frequently |
| 3. Focus on the learner's preferences, strengths, and interests. | 4.57 | 0.86 | Frequently |
| 4. Emphasize the practical application of academic skills in real-world contexts. | 4.33 | 0.96 | Frequently |
| 5. Provide necessary accommodations and modifications. | 4.47 | 0.86 | Frequently |
| **Overall mean** | **4.45** | **0.35** | **Frequently** |

The table presents the mean (M) and standard deviation (SD) of responses to statements concerning the application of incidental learning in achieving Learners' Transition as stated by each Individualized Education Plan for learners with intellectual disabilities. Statements are rated on a Likert scale from 1 (Never) to 5 (Constantly).

To begin with, this was the phrase "Focus on the learner's preferences, strengths, and interests," which obtained the highest mean scores of 4.57 and 0.86, expected to occur often in the IEP. The second part, "Establish long-term goals that reflect the learner's aspirations, interests, and potential career paths," received a mean of 4.47 with a mean of 0.94, indicating that it happens often. The phrase "Begin transition planning as early as possible" got a mean of 4.40 and a median of 1.10, as observed to be frequently applied. In addition, the phrase " Provide necessary accommodations and modifications " was also marked as often practiced with a mean score of 4.47 and a standard deviation of 0.86 falling on the fourth was the phrase "Provide necessary accommodations and modifications." The lowest score, 4.33 and 0.96 represented the phrase "Emphasize the practical application of academic skills in real-world contexts," which was said to be frequently applied. The mean total score is 4.56 plus the standard deviation of 0.46, indicating that incidental learning interventions are commonly used to help learners with intellectual disabilities.

The result is consistent with Wehmeyer (2000), who found that incorporating learner empowerment into IEP goals can increase motivation and engagement. In other words, teachers reported a tendency to focus on what the learner likes and is good at when creating IEPs. It suggests that educators identify effective communication strategies and record behavior observations, key components of effective IEP implementation. These interventions are critical in tailoring the learning process to the needs of learners with intellectual disabilities Smith and Tyler (2010). However, the assessment of learners' ability to independently perform tasks of daily living suggests a potential for improvement. Maintaining independence in activities of daily living is critical to the overall development and future success of learners with intellectual disabilities (Heward, 2013).

**Table 5 Summary of Level of Incidental Learning of Learners with Intellectual Disability Based on Individualized Education Plan**

| Indicators of Individualized Education Plan | M | SD | Description |
|---|---|---|---|
| 1. Academic Achievement and Functional Performance | 4.56 | 0.46 | Frequently |
| 2. Difficulties and Enabling Support; | 4.42 | 0.35 | Frequently |
| 3. Learners Goals | 4.50 | 0.31 | Frequently |
| 4. Learners Transition | 4.45 | 0.35 | Frequently |
| **Overall Mean** | **4.48** | **0.15** | **Frequently** |

The table shows how much random learning learners with intellectual disabilities are taking based on the indicators in the IEP. The statements are rated on a Likert scale from 1 (Never) to 5 (Constantly), providing the mean (M) and standard deviation (SD) for each indicator.

The analysis focused on how much spontaneous incidental earning was applied based on learners' Individualized Education Plan (IEP) indicators. Results indicated that incidental learning is frequently performed in segments: Academic achievement and functional achievement with a mean of 4.56 and a standard deviation of 0.46; Difficulties and enabling support gained a mean of 4.42 accompanied by a standard deviation of 0.35; Learners Goals achieved a mean of 4.50 with a standard deviation of 0.31 and; the Learners Transition had a mean score of 4.45 with a standard deviation of 0. 35. This score highlights the frequency with which incidental learning was applied in the learning environment, wherein the overall mean was 4.48 together with the standard deviation of 0.15 indicating a clear view that incidental learning plays an important role in teaching learners with intellectual disability in this teaching environment.

As stated by Westling et al. (2004), incidental learning that occurs in natural settings and daily activities is important for learners with intellectual disabilities because it provides practical skills further that retention is greater reach. The result supports the frequency of incidental learning observed in the study. Moreover, Snell and Brown (2011) highlight the importance of using natural learning strategies, including incidental learning, to promote functional and meaningful connections for learners with intellectual disabilities. The frequency of application noted in the present study is consistent with findings on the effectiveness of such incidental learning intervention.

**Reading Assessment Components Reading Skills of Learners with Intellectual Disability based on Early Grade**

The Early Grade Reading Assessment (EGRA) is an individualized oral assessment to assess children's reading skills in the early grades. It was developed by the Department of Education (DepEd) following international standards and guidelines (DO. 57, s. 2015). Areas for intellectually disabled learners are Orientation to Print refers to learners' knowledge of books and letters; Letter Name Knowledge relates to learners' ability to name the letters of the alphabet; and Letter Sound Knowledge relates to learners' recognition of individual sounds. Recognition of the first sound refers to learners' ability to sound each word, Word Reading Awareness relates to learners' ability to recognize frequent words, and Creative Word Decoding refers to learners in the ability to decode expressions or make- up words. The results are presented in the following tables.

**Orientation to Print**

Understanding written language, including concepts such as writing orientation (e.g., left to right, top to bottom), word boundaries, and the relationship between spoken and written language, is called exegesis for writing. Developing a writing routine is the prerequisite for learning to read and write. It lays the foundation for understanding the orthography of language, which is crucial for academic development.

**Table 6 Orientation to Print Assessment for Learners with Intellectual Disability**

| Test | Group | n | Md | IR | Description |
|------|-------|---|-----|-----|-------------|
| Pre | Control | 30 | 1.00 | 2.00 | Needs Improvement |
| | Experimental | 30 | 1.00 | 2.00 | Needs Improvement |
| Post | Control | 30 | 1.00 | 1.00 | Needs Improvement |
| | Experimental | 30 | 1.00 | 2.00 | Needs Improvement |

In the Pretest, the Control and Experimental groups have a median score of 1.00, indicating that the students in both groups "need improvement" in their Orientation to Print skills. The interquartile range (IR) of 2.00 for both

groups indicates a considerable variation in results, showing that while the median score is 1.00, there are learners with values ranging from 1.00, which reflects needs improvement, to 3, which implies mastery. In addition, in the post-test, the Control Group gained a median score remains 1.00, and the IR narrowed to 1.00. where result suggests that scores are more concentrated around the median, with fewer learners showing higher proficiency levels. While in the Experimental Group, the median score remains at 1.00, but the IR stays at 2.00 which indicates that the variability in scores remains the same as in the Pretest, with some learners showing significant improvement while others still needing improvement. The findings show no significant difference in the orientation to print skills of students with intellectual disabilities between the control and experimental groups. This is because both groups had the same median score (1.00) on the orientation to print assessment before and after the intervention. A score of 1 indicates "needs improvement" in orientation to print skills. As a result, the findings suggest that both the control and experimental groups could benefit from development in this area. This similarity suggests that the intervention might not have boosted the overall orientation to print scores but did help make the learners' performance more consistent.

This result aligned with the findings of Smith and Jones (2018). They investigated the effectiveness of a reading intervention to improve early literacy skills. It was found that while the median scores of the participants did not show significant changes post-intervention, there was a notable reduction in score variability. The result means that the range of scores (how spread out the scores were) among learners became narrower, indicating more consistent performance levels across the group. The result is also supported by Brown and Green (2020) explored how different instructional interventions affect the variability in student achievement, where it was found that certain instructional interventions could reduce the variability in student performance without necessarily affecting the median scores. The result means that while the average performance level (median) remained the same, the spread or range of scores decreased, indicating more uniform performance among students.

## Letter Name Knowledge

Knowing the name of the letters in the alphabet, or the name of the letter, is important because it lays the foundation for learning the pronunciation that must be understood in reading. Understanding letter names helps children connect letters and their associated sounds, making it easier to decode words.

**Table 7 Letter Name Knowledge Assessment to Learners with Intellectual Disability**

| Test | Group | n | Md | IR | Description |
|------|-------|---|----|----|----|
| Pre | Control | 30 | 20 | 10 | Low Level of Identification |
| | Experimental | 30 | 20 | 10 | Low Level of Identification |
| Post | Control | 30 | 20 | 10 | Low Level of Identification |
| | Experimental | 30 | 20 | 12.5 | Low Level of Identification |

The Control Group's score during the Pretest was 20.00 on the median, with a 10.00 interquartile range. The result suggests that most students in the control group had a low level of identification based on the Likert scale. With an interquartile range of 10.00, the Experimental Group's score increased to a median of 20.00. The result implies that during the pretest phase, students in the experimental group likewise exhibited low identification. The result is relative to Adams and Henry's (2019) study to evaluate the impact of phonics instruction on children's letter name and sound knowledge, where the results showed that although the median scores did not significantly change post-intervention, there was an increase in score dispersion.

In the Posttest, the Control Group and Experimental Group maintained a median score of 20.00 in letter name knowledge, with interquartile ranges (IQR) of 10.00 and 12.50, respectively. This indicates no significant change in median scores for either group, with the Experimental Group showing slightly more variability. Despite this, the intervention did not significantly affect the overall median scores in either group. However, the increased IQR in the Experimental Group suggests varied individual responses to the intervention, potentially indicating

some improvement in letter name knowledge among certain members.

In conclusion, the median scores for the control and experimental groups remained low, indicating no significant increase in letter name knowledge from the Pretest to the Posttest. However, the experimental group's posttest scores showed an increased interquartile range (IR) of 12.50, suggesting greater variability in the results. This indicates that while there was a slight median score improvement, the intervention had diverse effects, with some students benefiting more than others. This outcome aligns with the findings of Miller and Smith (2021) and Adams and Henry (2019), who also observed that educational interventions can impact individual learners differently, leading to a broader spread of scores. Further research is needed to identify more effective methods to enhance letter recognition skills in learners with intellectual disabilities.

## Letter Sound Knowledge

Decoding words while reading requires phonological spelling skills or the ability to recognize words, letters, and combinations of letters. It is essential to improve academic performance, including the ability to read fluently, quickly, and fluently. Children can learn and understand better if they recognize letter sounds quickly and correctly.

**Table 8 Letter Sound Knowledge Assessment to Learners with Intellectual Disability**

| Test | Group | n | Md | IR | Description |
|------|-------|---|----|----|-------------|
| Pre | Control | 30 | 10 | 10 | Very Low Level of Identification |
| | Experimental | 30 | 10 | 10 | Very Low Level of Identification |
| Post | Control | 30 | 20 | 10 | Low Level of Identification |
| | Experimental | 30 | 20 | 10 | Low Level of Identification |

Letter sound knowledge scores are categorized using a 10-point Likert scale, ranging from 1 (identified 1-10 letter sounds) to 10 (identified 91-100 letter sounds).

During the Pretest, the Control Group's median score was 10.00, with an interquartile range of the same amount. The result suggests that most students in the Control Group identified letter sounds at a very low level. In contrast, the Experimental Group also obtained a score of 10.00, with a 10.00 interquartile range. The result implies that during the pretest phase, pupils in the experimental group exhibited very low levels of letter sound recognition. Meanwhile, the Control Group's posttest score increased to a median of 20.00 with an interquartile range of 10.00. The result suggests that there was progress from the Pretest in the control group's pupils' poor level of letter sound recognition.

In contrast, the Experimental Group had a rise in the median score to 20.00 with a 10.00 interquartile range. The result implies that although letter sound recognition in the experimental group was still low, it had improved from the Pretest. Aligned with Brown (2018) conducted a study showing that structured reading instruction leads to significant gains in the literacy skills of children with intellectual disabilities. Structured reading instruction involves a planned and sequential approach, typically including phonological awareness, phonology, fluency, vocabulary, and comprehension strategies.

In conclusion, both the control and experimental groups showed significant improvement in letter sound recognition from the Pretest to the Posttest, advancing from very low to low levels of identification. According to Stanovich's (1988) Phonological Deficit Hypothesis, individuals with intellectual disabilities often struggle with processing phonological information, which is critical for reading. This difficulty in phonological awareness hampers their ability to connect letters with their corresponding sounds, which is essential for reading development. Sweller's (1988) Cognitive Load Theory underscores that excessive cognitive demands can impede learning, particularly for learners with intellectual disabilities who may find decoding letters into sounds overwhelming. Effective instructional design should, therefore, aim to reduce cognitive load and support

integrating new information, accommodating the learners' cognitive capacities.

## Initial Sound Identification

Early exposure to phonics is essential to lay the foundation for reading, writing, and communicating literacy skills. It gives children the tools to become effective readers and writers by helping them understand the structure of spoken and written language.

**Table 9 Initial Sound Identification Assessment to Learners with Intellectual Disability**

| Test | Group | n | Md | IR | Description |
|------|-------|---|-----|------|-------------|
| Pre | Control | 30 | 0.50 | 6.00 | No Identification |
| | Experimental | 30 | 4.00 | 3.00 | Limited Identification |
| Post | Control | 30 | 2.50 | 7.25 | Limited Identification |
| | Experimental | 30 | 5.00 | 3.25 | Emerging Identification |

An analysis was conducted to determine the level of reading skills in learners with intellectual disabilities using the Early Grade Reading Assessment (EGRA) focusing on initial sound identification. The scores were collected both before and after the intervention. Initial sound identification scores are categorized using a Likert scale, ranging from 1-2 (no identification) to 9-10 (consistent identification).

In the Pretest, the median score of the control group was 0.50, with an interquartile range of 6.00. According to the Likert scale, this indicates that most students in the control group had no identification skills. On the other hand, the Experimental Group obtained a median score was 4.00, with an interquartile range of 3.00. The result suggests that students in the experimental group had limited identification skills at the pretest stage. Furthermore, the Control Group's score on the Posttest climbed to a median of 2.50 with an interquartile range of 7.25. Even with the improvements, most pupils still show poor identification abilities. With an interquartile range of 3.25, the Experimental Group's median score increased to 5.00. The result suggests that, compared to their pretest results, pupils in the experimental group exhibited emerging identification skills. In conclusion, the experimental group outperformed the control group regarding initial sound identification skill improvement, indicating that the targeted intervention benefited students with intellectual disabilities.

Studies have shown that planning and organizing interventions significantly improve early phonological recognition of students with intellectual disabilities. The experimental group showed greater performance improvement and strength than the control group. The result is consistent with the findings of Smith and Jones (2015) that targeted reading interventions focusing on phonological awareness and phonology significantly improved early literacy in children with intellectual disabilities.

The higher preintervention scores in the experimental group in the present study suggest that initial intervention in structured interventions may have offered some benefit it has already come. The more sustained and stable improvement in test group performance after the intervention is consistent with the findings of Smith and Jones and highlights the effectiveness of the structured intervention in encouraging consistent literacy gains emphasize the encouragement.

Moreover, Brown (2018) emphasized the importance of systematic phonics instruction in early literacy development. This hypothesis is supported by the results of the present study showing a significant improvement in early sound recognition for both groups but a more pronounced and stable gain in the experimental group. The program delivery likely contributed to the observed improvements by providing a clear sequence of programs for teaching phonological awareness, particularly useful for students with intellectual disabilities. These results prove that targeted literacy programs are effective in this group.

## Familiar Word Reading

The foundation for improving reading comprehension is understanding one's vocabulary. As children become more adept at recognizing and reading common words, they can focus more on making sense, predicting, and monitoring their knowledge when reading familiar words more easily than their reading abilities. They love to read a lot and look for opportunities to read independently as they can read familiar words, further enhancing their literacy skills.

**Table 10 Familiar Word Reading Assessment to Learners with Intellectual Disability**

| Test | Group | n | Md | IR | Description |
|------|-------|---|----|----|-------------|
| Pre | Control | 30 | 5.00 | 5.00 | Beginner |
|      | Experimental | 30 | 5.00 | 5.00 | Beginner |
| Post | Control | 30 | 5.00 | 5.00 | Beginner |
|      | Experimental | 30 | 10.00 | 10.00 | Beginner |

During the Posttest, the control group received a median score of 5.00, with an IR of 5.00. The result shows that, on average, the learners' familiar word reading abilities fall into the "Beginner" group, with scores falling within this range. Concurrently, the Experimental Group received an IR of 5.00 and a median score of 5.00. The result also implies that, on average, the learners' familiar word reading abilities are at the "Beginner" level, with a comparable distribution of scores as the Control group. In the Posttest, the Control Group's median score on the IR was 5.00, with a corresponding 5.00 median score. The fact that the learners' scores remain within the "Beginner" range and exhibit no variation suggests their familiar word reading skills have not changed.

Conversely, the Experimental Group's median score rises to 10.00 with an IR of 10.00. Although there has been progress toward the "Beginner" level, there is still significant heterogeneity in the ratings. The result implies that certain students have made tremendous progress while others have not. The control group's median score from 5.00 in Pre to Post did not significantly alter, suggesting that the group's familiar word reading abilities did not generally improve. The IR stays at 5.00, indicating that the variability of scores has not changed.

However, the experimental group's median score increased from 5.00 to 10.00, suggesting that their familiar word reading abilities had improved. The IR rises from 5.00 to 10.00, indicating that not all students saw the same level of improvement, with some making considerable strides and others not making as much. The intervention appears to have positively impacted the Experimental group's familiar word reading skills, as evidenced by the increase in median scores. The Control group, however, showed no change in performance. The Experimental group's increased variability indicates that the intervention had varying levels of effectiveness among the learners. In contrast to the lack of change in the control group, the improvement in experimental group reading scores confirms that the median, interquartile range increase in experimental group postintervention scores indicates improvement and variability in effectiveness, suggesting that although interventions were highly effective, individual responses varied.

In addition, Smith and Jones (2015) conducted a study examining the effects of structured reading interventions on children with intellectual disabilities. Such interventions were found to significantly improve reading ability. Structured interventions generally involve structured instruction tailored to the specific needs of students with intellectual disabilities. These interventions often include strategies such as phonics instruction, frequent reading, and targeted target vocabulary, all of which have been designed to address the unique learning challenges faced by this population.

## Invented Word Decoding

The introduction of spelling is very helpful in literacy development because it encourages the use of decoding

strategies, including blending, segmentation, and pattern recognition, all of which are important for reading comprehension and independently Help teachers assess their students' understanding of phonological concepts and control as they read. Vocabulary developed by students can be assessed to identify areas where additional support may be needed.

**Table 11 Invented Word Decoding Assessment for Learners with Intellectual Disability**

| Test | Group | n | Md | IR | Description |
|------|-------|----|-------|-------|-------------|
| Pre | Control | 30 | 5.00 | 5.00 | Beginner |
| | Experimental | 30 | 5.00 | 5.00 | Beginner |
| Post | Control | 30 | 10.00 | 10.00 | Beginner |
| | Experimental | 30 | 10.00 | 6.25 | Beginner |

Before the intervention, the control group had a median score of 5.00 and an IR of 5.00. The result suggests that the learners' decoding skills are generally at the "Beginner" level, with scores varying significantly within this category. While the Experimental Group received a median score of 5.00, with an IR of 5.00. Similarly, this shows that the learners' decoding skills are average at the "Beginner" level, with a score distribution similar to the Control group.

After the intervention, the Control Group's median score increased to 10.00, with a 10.00 IR. The result shows that the learners' decoding skills have progressed to a higher "Beginner" level while results remain highly variable. Furthermore, the median score of the experimental group rises to 10.00, but the IR decreases to 6.25. The result implies a progression to a higher "Beginner" level, similar to the Control group, but with less fluctuation in results, implying a more consistent improvement among the learners.

As evidenced by the increase in median scores, both groups showed improvement in their Invented Word Decoding skills but were still marked as "Beginners." However, The Experimental group demonstrated a more consistent improvement than the Control group, as indicated by the narrower interquartile range in the Posttest. The intervention appears to have contributed to improved decoding skills in the experimental group, as evidenced by a decrease in the interquartile range after the intervention, supporting structured literacy processing as good for improving decoding skills in students with intellectual disabilities. These findings are consistent with research by Smith and Jones (2015), which reported that targeted interventions can improve abstraction skills in children with intellectual disabilities is greatly increased. Similarly, Brown (2018) found that structured, systematic approaches to reading instruction resulted in significant gains in literacy skills in this group.

**EGRA Pretest and Posttest Results of Learners with Intellectual Disability in the Experimental Group**

**Table 12 Pretest and Posttest Results of Experimental Group**

| Variables | Test | N | Md | W statistic | p | interpretation |
|-----------|------|----|----|-------------|-------|----------------|
| Orientation to Print | Pre | 30 | 1 | 92 | 0.065 | not significant |
| | Post | | 1 | | | |
| Letter Name Knowledge | Pre | 30 | 20 | 78 | 0.002 | Significant |
| | Post | | 20 | | | |
| Letter Sound Knowledge | Pre | 30 | 30 | 55 | 0.002 | Significant |
| | Post | | 30 | | | |
| Initial Sound Identification | Pre | 30 | 30 | 198 | 0.004 | Significant |
| | Post | | 30 | | | |
| Familiar Word Reading | Pre | 30 | 5 | 66 | 0.002 | Significant |

| | Post | | 10 | | | |
|---|---|---|---|---|---|---|
| Invented Word Decoding | Pre | 30 | 5 | 91 | 0.001 | Significant |
| | Post | | 10 | | | |

The Wilcoxon signed rank test analysis demonstrated significant improvements across assessments for learners with intellectual disabilities post-intervention. Specifically, there was a trend towards significance in the orientation to print assessment (p = 0.065), although it did not reach conventional significance levels. However, the intervention showed significant impacts in other areas: spelling name knowledge had a p-value of 0.002, indicating a notable improvement. Letter phonics knowledge was also significantly enhanced with a p-value of 0.002, suggesting improved letter sound skills. Additionally, phoneme recognition showed a significant increase (p = 0.004), highlighting gains in phonological awareness.

Baseline vowel recognition significantly improved post-intervention as well. Familiar word reading skills exhibited significant enhancement with a p-value of 0.002, indicating improved ability in reading familiar words. Lastly, generated vocabulary through invented word decoding showed a substantial improvement (p = 0.001), underscoring advancements in expressive language skills. Overall, these findings emphasize the intervention's effectiveness in enhancing literacy and phonological skills among learners with intellectual disabilities.

The findings indicate that the intervention had a significant positive impact on the literacy skills of learners with intellectual disabilities, except for Orientation to Print. Teale and Sulzby (1986) emphasize that emergent literacy skills are developed through consistent and meaningful exposure to print in the environment. If the experimental group did not have significant exposure to print-rich environments outside of the intervention, it could explain why "Orientation to Print" did not substantially improve. Unlike skills that can be directly taught and practiced (such as letter-sound knowledge), print orientation is more about environmental exposure and implicit learning over time. The significant p-values in Letter Name Knowledge, Letter Sound Knowledge, Initial Sound Identification, Familiar Word Reading, and Invented Word Decoding suggest that the experimental group benefitted substantially from the intervention. These results are consistent with previous research indicating that structured literacy interventions can effectively enhance reading skills in children with intellectual disabilities. For instance, Allor et al. (2014) found that explicit and systematic instruction significantly improved the reading abilities of children with intellectual disabilities. Similarly, Browder et al. (2012) demonstrated that comprehensive literacy instruction, including phonics and phonemic awareness, significantly improved reading outcomes for students with severe disabilities.

**Significant Difference in Reading Skills of Learners with Intellectual Disability in the Pretest of Controlled and Experimental Group**

**Table 13 Reading skills in the Pretest of learners with intellectual    disability**

| Variables | Group | n | Md | IR | Mann Whitney U | p | Interpretation |
|---|---|---|---|---|---|---|---|
| Orientation to Print | Control | 30 | 1.00 | 2.00 | 328.50 | 0.846 | not significant |
| | Experimental | 30 | 1.00 | 2.00 | | | |
| Letter Name Knowledge | Control | 30 | 20.00 | 10.00 | 462.50 | 0.056 | not significant |
| | Experimental | 30 | 20.00 | 10.00 | | | |
| Letter Sound Knowledge | Control | 30 | 10.00 | 10.00 | 465.00 | 0.788 | not significant |
| | Experimental | 30 | 10.00 | 10.00 | | | |
| Initial Sound Identification | Control | 30 | 0.50 | 6.00 | 549.00 | 0.137 | not significant |
| | Experimental | 30 | 4.00 | 3.00 | | | |
| Familiar Word Reading | Control | 30 | 5.00 | 5.00 | 573.00 | 0.009 | Significant |
| | Experimental | 30 | 5.00 | 5.00 | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Invented Word Decoding | Control | 30 | 5.00 | 5.00 | 471.00 | 0.729 | not significant |
| | Experimental | 30 | 5.00 | 5.00 | | | |

The Mann-Whitney U tests revealed no statistically significant differences in orientation to print (U = 328.50, p = .846) or letter name knowledge (U = 462.50, p = 0.056) between the experimental and control groups. While the p-value for letter name knowledge was slightly above 0.05, it still provides insights into interventions targeting this area. Additionally, the groups had no significant differences in letter-sound knowledge (U = 465.00, p = 0.788) or initial sound identification (U = 549.00, p = 0.137), indicating similar performance regardless of intervention. However, there was a significant difference in familiar word reading scores (U = 573.00, p = 0.009), suggesting an effect of the intervention with a wider score distribution in the experimental group. Conversely, no significant difference was found in invented word decoding scores (U = 471.00, p = 0.729) between the groups. These results highlight the nuanced effects of interventions on specific reading skills in learners with intellectual disabilities.

The scores on the invented word decoding assessment were similar between the two groups, and the intervention did not have a statistically significant effect. Both the control and experimental groups having the same median and interquartile range further strengthen the conclusion that the intervention did not influence letter name knowledge acquisition. Overall, the pretest scores suggest that the two groups had similar reading skills before the experiment began. The exception is familiar word reading, where the control group scored slightly better. It is important to note that a statistically significant difference was only found for familiar word reading. Hulme and Snowling (2013) indicated that repeated exposure to high-frequency words (familiar words) helps children, especially those with learning disabilities, to develop automaticity in word recognition, leading to better reading fluency and comprehension. The result means that for all other categories besides familiar word reading, we cannot be sure whether the observed differences between the two groups are due to chance or a real effect of the intervention. The results indicate that no significant differences between the control and experimental reading groups showed significant differences in most reading skills before the intervention, except for familiar word reading well, which showed significant differences.

**Significant Difference in Reading Skills of Learners with Intellectual Disability in the Posttest of Controlled and Experimental Group**

**Table 14 Reading Skills in the Posttest of Learners with Intellectual Disability**

| Variables | Group | n | Md | IR | Mann Whitney U | p | Interpretation |
|---|---|---|---|---|---|---|---|
| Orientation to Print | Control | 30 | 1.00 | 1.00 | 565.00 | 0.074 | not significant |
| | Experimental | 30 | 1.00 | 2.00 | | | |
| Letter Name Knowledge | Control | 30 | 20.00 | 10.00 | 439.50 | 0.87 | not significant |
| | Experimental | 30 | 20.00 | 12.50 | | | |
| Letter Sound Knowledge | Control | 30 | 20.00 | 10.00 | 525.00 | 0.188 | not significant |
| | Experimental | 30 | 20.00 | 10.00 | | | |
| Initial Sound Identification | Control | 30 | 2.50 | 7.25 | 564.00 | 0.089 | not significant |
| | Experimental | 30 | 5.00 | 3.25 | | | |
| Familiar Word Reading | Control | 30 | 5.00 | 5.00 | 578.00 | 0.037 | Significant |
| | Experimental | 30 | 10.00 | 10.00 | | | |
| Invented Word Decoding | Control | 30 | 10.00 | 10.00 | 530.50 | 0.214 | not significant |
| | Experimental | 30 | 10.00 | 6.25 | | | |

The Mann-Whitney U tests revealed no statistically significant differences between the experimental and control groups in orientation to print (U = 565.00, p = 0.074), letter name knowledge (U = 870, p = 0.870), and letter sound knowledge (U = 188, p = 0.188), suggesting any observed differences may be due to chance rather than the intervention. Similarly, there was no significant difference in initial sound identification (U = 0.089, p = 0.089). However, an important difference was found in familiar word reading (U = 0.037, p = 0.037), indicating an effect of the experimental intervention. No significant difference was observed in invented word reading (U = 0.214, p = 0.214). Overall, the findings highlight mixed results in the impact of the intervention on various literacy assessments among learners with intellectual disabilities.

The results show that, after the intervention, there were no significant differences between the control and experimental groups in most reading skills, except word reading familiarity, which showed considerable improvement in the experimental group. Share (1995) introduced the "self-teaching hypothesis," which posits that successful word recognition (especially for familiar words) can facilitate the development of decoding skills through repeated exposure and practice. This may explain why the experimental group, possibly having more exposure to familiar words, performed better. In line with this, Hulme and Snowling (2013) noted that repeated exposure to high-frequency words (familiar words) helps children, especially those with learning disabilities, to develop automaticity in word recognition, leading to better reading fluency and comprehension. These findings are consistent with research demonstrating the effectiveness of targeted interventions to improve specific literacy skills in learners with intellectual disabilities. Lemmons et al. (2014) showed that intensive, individualized reading interventions could significantly improve the specific reading skills of children with intellectual disabilities.

Non-graded learners with intellectual disabilities also learn. They also acquire knowledge, but because they have intellectual disabilities, they quickly forget it, and they often face challenges in retaining this information. This is also relative to Schunk (1991) discusses the learning processes and memory retention in children with learning disabilities, highlighting how these children acquire knowledge but often struggle with retention due to their disabilities, which is in line with the Cognitive Load Theory of Sweller (1988) that explains that learners with intellectual disabilities may struggle with memory retention due to limited working memory capacity, which can be easily overloaded. However, Coyne et al. (2010) found that explicit and systematic reading instruction can lead to meaningful gains in literacy, especially in areas such as word recognition and decoding. In addition, Skinner (1974) asserts that "there is no single perfect approach to teaching."

**Social Behavior of Non-Graded Learners with Intellectual Disability**

This part draws upon the social behavior and presents the data that arose from the interview process during the focused group discussion.

These were the parents' responses to the social behavior of non-graded learners with intellectual disabilities.

Parent 1:

*"Does not speak, interact, and always keeps his head down."*

Parent 2:

*"He gets annoyed by loud noises, so he stomps around."*

Parent 3:

*"His behavior is unpredictable, but he mostly does not like talking to anyone."*

Parent 4:

*"Sometimes, he does not behave normally because his thoughts and emotions can be unpredictable."*

Parent 5:

*"He is sweet and funny and likes to dance and sing to entertain people around him."*

These were the teachers' responses to the social behavior of non-graded learners with intellectual disabilities.

Teacher 1:

*" Some have social and communication problems. They have difficulty in communicating with their classmates."*

Teacher 2:

*"Some really cannot communicate with their classmates, so they resort to having tantrums like throwing things they can grab, some bite, some spit, and others hurt themselves."*

Teacher 3

*"He was too shy to acquaint himself with other children or his classmates. He also lacked social skills, poor eye contact, and facial expressions."*

Teacher 4:

*"They are mostly friendly and easy to interact with; however, some struggle in verbal communication and reading even CVC words."*

Teacher 5:

*"They make friends and listen in class. They participate well, especially when they find the activity interesting."*

**Table 15 Thematic Analysis of Social Behavior of Non-Graded Learners with Intellectual Disability**

| Research Question | Core Ideas | Essential Themes |
|---|---|---|
| How do non-graded learners with intellectual disability interact or behave socially? | Withdrawn and non-communicative<br>Reacts to loud noises<br>Non-communicative<br>Inconsistency<br>Cheerful entertainer | Variability and unpredictability of behavior |
| | Difficulty in communication<br>Sensory sensitivity<br>Difficulty in communication<br>Struggling in verbal communication<br>Has social engagements | Sensory and communication challenges |

The table shows that most non-graded learners with intellectual disabilities have variability and unpredictability in behavior, as observed by their parents. Meanwhile, the teachers highlighted that more of their non-graded learners with intellectual disabilities face sensory and communication challenges. This was consistent with the findings of Hodges and Gotham (1998) and Matson and McBride (2008), who showed that people with intellectual disabilities frequently have difficulty interpreting social cues, communicating, and adopting perspective, which makes it difficult for them to make friends and function in social settings. Additionally, Langdon et al. (2009) discovered that disruptive behaviors can result from dissatisfaction, trouble expressing needs, and a lack of coping methods. Thus, in light of this, McConnell et al. (2008) and Turnbull et al. (2001)

stress the significance of parents and teachers working together and communicating openly to guarantee consistency and meet each student's needs for effective support.

# SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter deals with the summary, conclusions, and the corresponding recommendations of the study.

**Summary**

Imagine a world where every meeting and every small moment can teach us something important. For non-graded learners with intellectual disabilities, these unexpected learning experiences can be crucial for developing key skills, especially reading. This study looked at how much incidental learning was used through the Individual Education Plan (IEP) to help improve the reading skills of learners with intellectual disabilities. To tackle this challenge, incidental learning has been suggested as a way to boost the reading skills of these learners. The main objective was to find out the effect of incidental learning as an intervention in the reading skills of identified Grade 7 non-graded learners with intellectual disability of General Santos City Special Education Integrated School 2023-2024. The study utilized the descriptive research design.

The respondents for Part I of the study were thirty Special Education teachers from General Santos City Integrated School. In Part II, the respondents were sixty (60) identified Grade 7 non-graded learners with intellectual disability (ID) from ages 12-19 years old who are struggling to read at the beginning stage. It consisted of thirty (30) learners with intellectual disability (in the controlled group) and thirty (30) learners with intellectual disability (in the experimental group) of General Santos City Special Education Integrated School-Junior High School Department who are enrolled for the school year 2023-2024. For the focused group discussion, teachers and parents were involved in Grade 7 non-graded learners with intellectual disability.

The instrument that determined the level of incidental learning in learners with an intellectual disability based on the Individual Educational Plan was an adapted and modified survey questionnaire. Meanwhile, the instrument used to assess the effect of incidental learning as an intervention in the reading skills of learners with intellectual disability (ID) was the EGRA. It was a standardized tool adopted by the DepEd through the United States Agency for International Development (USAID) to assess the reading skills of all students in public schools (DO 57, s. 2015). In contrast, responses from the focused group discussion reflected the social behavior of the Grade 7 non-graded learners with intellectual disability.

The study used mean and standard deviation to describe the incidental learning level in learners with intellectual disability. Also, the study employed median and p values that highlighted the level of reading skills of learners with an intellectual disability based on the EGRA about orientation to print, letter name knowledge, letter-sound knowledge, initial sound identification, familiar word reading, and invented word decoding. Additionally, it utilized Mann-Whitney U test analysis to determine the significant difference between the scores gained by the group applied with incidental learning as an intervention in the reading skills of learners with intellectual disability and the controlled—furthermore, thematic analysis for the social behavior in the focused group discussion.

The following are the findings of the study:

Based on the collected and analyzed data, the following are the results of the study:

It was revealed that all statements connected to the indication of Academic Achievement and Functional Performance had a consistent frequency with an overall mean score of 4.56 and a standard deviation of 0.46.

On the other hand, the statements under the indicator Difficulties and Enabling Support provided an overall mean score of 4.42 with a standard deviation of 0.35, indicating the consistency and regularity of intervention used in IEPs for learners with intellectual disabilities.

Incorporating incidental learning into statements under the indicator Learners Goal in IEPs for learners with

intellectual disabilities resulted in an overall mean score of 4.50 with a standard deviation of 0.31.

Statements under the indicator Learners Transition had a mean score of 4.56 with a standard deviation of 0.46, indicating that incidental learning interventions were frequently used within IEPs to benefit learners with intellectual disabilities.

Meanwhile, the overall average across all segments was calculated at 4.48 with a narrow standard deviation of 0.15, indicating a consistent and prevalent use of incidental learning within this educational context, emphasizing the importance of incidental learning as a critical component in the instructional approach within the teaching environment.

After the intervention, there was no significant difference in performance between the two groups regarding Orientation to Print Assessment scores for learners with intellectual disabilities. The intervention did not appear to significantly influence either group's performance in terms of scores. However, the control group had a consistent pattern following the intervention, as seen in the lower quartile range. Both groups reflected the need for improvement in orientation to print.

Furthermore, there were no evident changes in letter name knowledge scores in the control or experimental groups after intervention because they gained a low level of identification, and prevalence rates (IR) increased in the control group after the intervention, indicating that a baseline attitude remained relatively stable. In addition, although they did not change considerably, the experimental group appeared to have a slightly better comprehension of letter names, indicating that the intervention may positively influence letter name naming skills. The intervention demonstrated distinct effects on different areas of letter naming knowledge, with potential improvements in understanding but significant effects on letter and name recognition scores.

As indicated by the increase in median scores from 10.00 to 20.00, the control and experimental groups increased their understanding of letter sounds following the intervention. From very low-level identification, both groups earned to low level of identification. The interquartile range (IQR) stayed steady at 10.00, suggesting that the variability of scores around the median did not alter, implying that the intervention effectively enhanced overall performance for both groups, with both groups experiencing identical improvements.

The findings imply that the incidental learning helped improve both the control and experimental groups' Initial Sound Identification scores as they increased. The control group improved from the level of identification to a limited level of identification, while the experimental group improved from a limited to an emerging level of identification.

The incidental learning intervention significantly improved the experimental group's ability to Read Familiar Words, as indicated by a median score rise from 5.00 to 10.00. However, the control group's scores showed no improvement. Both of the groups have the beginner level.

The experimental group's ability to interpret invented words improved dramatically following the intervention, as shown by the mean score and interquartile range increases. This signifies that the intervention or session improved the experimental group's performance over the control group. Both of the groups have the beginner level.

Except for Orientation to Print, the incidental learning intervention significantly improved the literacy skills of learners with intellectual disabilities. The significant p-values in Letter Name Knowledge, Letter Sound Knowledge, Initial Sound Identification, Familiar Word Reading, and Invented Word Decoding indicate that the experimental group benefited significantly from the intervention.

There were no significant variations in reading skills between the control and experimental groups during the pre-test. However, the two groups significantly differ in familiar word reading, with statistics of 573.00 and a p-value of 0.009. In familiar word reading, the control group outperformed the experimental group, with a median score of 5.00.

For the qualitative question, findings showed most non-graded learners with intellectual disabilities have

variability and unpredictability in behavior, as observed by their parents. While, the teachers highlighted that more of their non-graded learners with intellectual; disabilities face sensory and communication challenges.

## Conclusions

The following conclusions were drawn based on the findings of the study.

The study has found interesting patterns and results on the relationship between incidental learning and reading skill development in students with intellectual disabilities. It showed the extensive use of relevant learning strategies in Individualized Education Plans (IEPs), demonstrating teachers' commitment to providing individualized support and setting goals aligned with students' needs and desires. Personal goal setting and positive reinforcement emerged as particularly important strategies, highlighting the importance of identifying and utilizing learners' interests and skills in instructional design. There was an emphasis on using data to inform decisions when supporting children with intellectual disabilities in their learning experiences. The development of high-impact Instructional Plans (IEPs) that support student success can be achieved by educators through documentation of student needs and areas of success. There was a high variance that indicates a wide range of implementations of teachers.

However, it also revealed complex issues regarding how incidental learning interventions affect reading skill outcomes. There were differences between the control and experimental groups, although the incidental learning treatment significantly improved the reading abilities of students with intellectual disabilities, especially in reading familiar words.

It exposed a strong correlation that emerged between the incidental instructional strategies of learners with intellectual disabilities and reading skill achievement. In the future, continued curriculum and professional development programs will be needed to improve teachers' ability to use spontaneous learning to support learners with intellectual disability in academic success and skill development. By developing a deeper understanding of the underlying dynamics and modifying instructional strategies, educators can better prepare teachers with intellectual disabilities to navigate their educational journey with confidence and competence.

Though they have many obstacles to overcome, non-graded learners with intellectual disabilities also have special strengths and attributes that make them more valuable in their relationships and interactions. Teachers and caregivers can help these learners with their overall development and social integration by recognizing their individual needs and strengths and implementing supportive strategies.

## Recommendations

Based on the findings of the study, the following recommendations are derived:

1. The teacher may continuously use real-world cases and examples to support learning. Use differentiated instruction to account for different classroom learning styles and capacity levels. Adapt instruction, content, and assessment practices to meet the specific needs of each learner.
2. Examine the effectiveness of reading interventions for learners with intellectual disabilities, including changes in incidental learning that may be more community-oriented.
3. Utilize incidental learning, which is a type of learning that happens accidentally and typically results from routine encounters and activities.
4. Special education teachers will provide explicit instruction that directly teaches targeted reading skills to learners with intellectual disabilities, which may increase overall effectiveness. Ensure incidental learning experiences are engaging and allow repeated exposure to target skills.
5. The Department of Education plays a multifaceted role in helping learners with intellectual disabilities advance their reading ability through various projects, programs, and support services. Effective participation requires giving schools the money and tools to help learners with intellectual disabilities improve their reading ability. Give educators the chance to grow professionally and receive training to educate learners with intellectual disabilities more effectively.
6. Schools can implement tailored reading programs for learners with intellectual disabilities, offering

structured support. Training for instructors can encompass effective methodologies, evidence-based practices, and specialized reading materials. Providing parents with tools and resources fosters home-school cooperation in supporting the learner's reading development.

7. Positive reinforcement is one-way parents can help the learner become more involved in reading activities and work with teachers and staff. Learners need patience and perseverance to improve their reading skills.

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