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RESEARCH ARTICLE

A SYNTHESIS OF GESTALT AND PIAGET'S COGNITIVE DEVELOPMENT THEORY: AN IMPLICATION FOR PRIMARY SCHOOL TEACHING AND LEADERSHIP

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ABSTRACT

This article explores the Gestalt theory of learning and Piaget's theory of cognitive development, providing a synthesis aimed at enhancing educational practices in primary schools. Gestalt theory emphasizes holistic perception, insight learning, and the organization of information, while Piaget's theory focuses on stages of cognitive development and the interconnectivity between learners and their environments. By integrating these two frameworks, educators are encouraged to create student-centered, inclusive, and developmentally appropriate learning experiences. The article outlines key principles of each theory. The principles of the Gestalt theory include holistic perception, figure-ground relationships, and insight learning while Piaget's theory include stages of cognitive development - sensorimotor, preoperational, concrete operational, and formal operational. This synthesis emphasizes the importance of active, meaningful learning, holistic development, and culturally responsive teaching. It also highlights strategies for fostering critical thinking, intrinsic motivation, and engagement. Practical implications for educators and school leaders are discussed, including the design of multidisciplinary curricula, performance-based assessments, and collaborative learning environments. The article concludes that the integration of these theories provides a robust framework for addressing diverse learner needs, fostering intellectual and emotional growth, and preparing students for active participation in an evolving global community.

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INTRODUCTION

Learning theories play a critical role in shaping the teaching and learning process. It is through these theories that teaching pedagogy is refined and modified to enhance the teaching and learning process. Through these theories, it is realized that effective teaching is more than providing students with information for learning, but it involves proper leadership, direction, pedagogical innovations and psychosocial engagement. (Schunk 2024). For learning, these theories postulate that there must be careful application of psychological principles and cognitive abilities to guide instruction, assessment, and curriculum design (Ormrod, 2023). There are myriad learning theories that have evolved since the 19th century (Olson, & Hergenhahn 2016). For, the purpose of this paper, the Gestalt and cognitive development learning theories will be explored. Gestalt theory of psychology and Piaget's theory of cognitive development provide the framework on which valuable insights on how students can learn are postulated. However, while these theories were derived from different schools of thought, when combined they are complementary in shaping how learners make sense of the world. In integration of these two theories a more effective, student-centered teaching that fosters deeper, lasting learning and leadership within the primary school setting can be achieved (Foster & Mauzard 2025).

Overview of Gestalt theory of Learning: Gestalt learning theory focuses on the concept that learning centres on how learners perceive and process information as unified wholes, rather than disconnected parts. Wagemans, Feldman, Gepshtein, Kimchi, Pomerantz, van der Helm, & van Leeuwen, (2012) aligned with the Gestalt theory of learning in that they contended that learning takes place by re-organization and insights rather than association or repetition, and they emphasized understanding and perceiving whole patterns and configurations rather than focusing solely on individual parts. This holistic approach has several implications for the learning process, especially in the context of children's education (Eggen & Kauchak (2020). The key principles of this theory are:

- **Holistic Perception:** Children understand concepts better when they see the whole picture before delving into details.
- **Insight Learning:** Understanding relationships among various elements are precursors to learning. Through insight, children can solve problems by recognizing patterns rather than through trial and error.
- **Figure-Ground Relationship:** Refers to the way individuals visually and cognitively distinguish a main object (figure) from its surrounding background (ground). This principle helps learners focus on key information by

separating important content from less essential details. Applying this concept can enhance students learning by designing materials that distinguish main ideas from less essential details by using visual aids and bold headings.

- **Closure:** This principle suggests that the tendency of the mind is to perceive incomplete figures or information as complete. This cognitive process allows learners to fill in missing gaps based on prior knowledge. Encouraging learners to complete patterns, predict outcomes and or infer answers can promote deeper understanding.
- **Similarity:** This principle suggests that elements that look alike are perceived as belonging, children naturally group similar items together which help them to recognize patterns and make connections.
- **Proximity:** This principle recognizes relationships existing between things, as objects close together are seen as part of the same group.
- **Continuity:** This principle suggests that our brains are more inclined to follow a smooth path than being disjointed (Olson & Hergenhahn 2016).

Overview of Piaget's theory of Learning: Piaget's theory of learning emphasizes an interplay between children as active learners and their environment, illustrating that knowledge is co-constructed through interaction (Piaget 1964). Piaget (1973) identified the stages of cognitive development as sensorimotor, preoperational, concrete operational, and formal operational impacting children differently in the ways they think and understand the world.

- Sensorimotor falls within the ages of 0 to 2 years and suggests that knowledge develops through physical interaction with the environment.
- Preoperational falls within the ages 2 to 7 years, at this age children begin using language but lack the ability to perform mental operations logical.
- Concrete Operational, children at this age are within the 7 to 11 years. At this age learners begin to think logically about concrete events, grasping concepts like conservation and reversibility.
- Formal Operational, learners falling within the age 12 years and older, at this stage abstract thinking and hypothesis testing become possible.

Learning is driven by the processes of assimilation, integrating new information into existing frameworks and modifying frameworks to fit new information, impacting cognitive equilibration. For primary school learners, the concrete operational stage is most relevant as children benefit from hands-on learning, visual aids and real-life connections. This theory recognizes the importance of developmental readiness and teaching differences for individual approaches aligned with the learner's cognitive stages (Piaget, 2001).

Synthesis of Piaget's and Gestalt's Principles of Learning: In merging the principles of cognitive development and Gestalt theories (Foster & Mauzard 2025), primary school educators can benefit from learning experiences that consider interconnectedness of cognitive social, emotional development (Saavedra & Opfer 2012). Teachers can also gain useful insight from real world applications and understanding. These include the following:

Active and Meaningful Learning: Both theories promote active engagement, where students learn by doing and constructing meaning from their experiences. Piaget contended that children learn best through discovery and active manipulation of their environment (Piaget, 1973). Gestalt theory complements this by underscoring the importance of perceiving patterns and 'wholes' in the learning process (Köhler, 1947). In integrating these principles educators are encouraged to design experiential learning activities that allow students to make sense of information as a coherent whole rather than isolated facts (Talbert & Mor-Avi, 2019).

Holistic Development: This combined approach supports cognitive growth, emotional and social development. Activities such as dance, music and art enhance creativity and support emotional expression (Poplin, 2023). The Gestalt theory focuses on holistic perception, aligns with Piaget's view of development across multiple stages and domains, allowing students to develop their intellectual, emotional, and psychomotor abilities in tandem (Saavedra & Opfer, 2012).

Student-Centered Learning Environment: The importance of developmental readiness and individual pacing in learning was highlighted by Piaget's theory, while Gestalt theory focused on the learner's perception and personal insight (Rabindran &Madanagopal, 2020). By fusing these theories, educators can create inclusive classrooms that incorporate students' prior knowledge, respect cultural contexts, and students learning preferences. In doing this student's become active participants in their learning, making connections and contributing meaningfully (Sarbah, 2020).

Enhanced Critical Thinking and Problem-Solving: Gestalt psychology fosters insight-based learning, where learners grasp a problem's solution through the reorganization of their thoughts (Wertheimer, 1959). Piaget supports this through stages that promote logical reasoning and hypothesis testing. Collectively, these theories encourage educators to design learning experiences that are authentic and reflective of real-world contexts, thereby bridging the gap between classroom instruction and students lived experiences beyond the school environment (Kolb, 1984). For example, a classroom teacher engages the students in a project, to reduce plastic waste in their school and local community. By applying this real-world situation, students will be able to connect the academic content of science, mathematics, literacy, and social studies with real-world relevance. Students' analytical and critical thinking skills would then be developed as they research, collaborate and apply multiple skills in finding solutions in completing the project (Ryan & Deci, 2020).

Inclusivity and Cultural Relevance*:* The synthesis of Gestalt and Piaget's theories promote culturally responsive teaching. Where students in their classroom environment can incorporate their cultural backgrounds in the learning process. Educators can incorporate materials and experiences that reflect students' backgrounds, helping them to see the relevance of what they learn (Marchand, 2012). Learners can connect new information with what they already know deepening comprehension (Main, 2022).

Intrinsic Motivation and Engagement: Student motivation is emphasized. Piaget's theory suggested that learners are naturally curious and seek equilibrium through exploration (Piaget, 1973), while Gestalt theory highlighted satisfaction from achieving understanding. Educators can nurture intrinsic motivation by offering autonomy, choice, and opportunities for

creative expression (Gottfried, 2019). Project-based learning and real-life applications also enhance engagement and relevance (Mucedola, 2018).

Effective Assessment Practices: Gestalt theory informed assessments like concept mapping and hands-on tasks, focus on how well students perceive and organize information (Driscoll 2005). Assessments grounded in Piaget's theory consider the developmental stage of learners and prioritize their ability to construct knowledge through exploration (Rabindran & Madanagopal, 2020). Combining these theories provides holistic insights into students' understanding and supports differentiated instructions.

Teacher as Facilitator: Gestalt theory with its insight-oriented learning concept and Piaget's constructivist view both support the idea of teachers providing scaffolding and facilitating experiences that lead to deeper understanding (Code, 2020). Rather than transmitting knowledge, educators should act as facilitators for students' learning journeys. With teachers acting as facilitators rather than the source of all knowledge the students will gain independence, confidence, and will develop lifelong learning habits.

Implications for Primary School Teachers: Incorporating a unified approach to the Gestalt and Cognitive Development theories, primary school teachers can organize their classrooms with visuals and materials to represent thematic teaching patterns and relationships thus encouraging students to grasp holistic concepts while supporting hands-on concrete activities in keeping with students' developmental readiness. (Piaget 1973 &Wagemans, Feldman, Gepshtein, Kimchi, Pomerantz, van der Helm, & van Leeuwen, 2012). For example, plant life cycle could be explored through diagrams and actual demonstrations of planting or using full texts in reading. In doing these, teachers will be able to promote both conceptual understanding and insight (Tompkins, 2014).

In addition, assessment strategies could be modified to reflect students' cognitive development and ability to make meaningful connections. Performance-based assessments are among the most effective tools for evaluating students' understanding and skills. However, many modern-day teachers continue to rely on traditional tests as their preferred method of evaluation. As a result, the diverse spectrum of multiple intelligence is often overlooked, which not only limits but also significantly disadvantage students who do not excel in linguistic or logical areas. Performance-based assessments include portfolios, journals, and presentations. These assessments provide a more involved evaluation of students' understanding, pattern recognition, and application of knowledge. (Darling-Hammond & Adamson 2014). Additionally, applying these theories can provide environments of learning that grow students' insights and cognition which is meaningful and important for their academic and social growth.

Implications for School Principals: School administrators should recognize the value of learning theories and be willing to integrate them in ways that enhance student outcomes and strengthen teachers' instructional practices. Combining Gestalt theory with Piaget's theory of Cognitive Development offers an innovative approach to improving both teaching and learning. As instructional leaders, principals play a critical role in promoting teaching methods grounded in cognitive and perceptual learning. They can support this integration by:

- Designing curricula that are multidisciplinary and project-based, ensuring that learning is connected to real-world contexts through inquiry, collaboration, and problem-solving.
- Prioritizing a student-centered approach, where students' developmental needs are addressed and their voices are actively included in the learning process.
- Fostering a collaborative school culture that creates meaningful, engaging, and relevant educational experiences for both students and teachers (Darling-Hammond, Flock, Cook-Harvey, Barron & Osher 2020).
- Foster teacher development and growth by providing meaningful learning opportunities. Targeted training in child development and learning will assist educators design and develop lessons to meet the students' needs. Facilitating workshops on curriculum design will enhance teachers' understanding of creating interdisciplinary associations that emphasize creativity, analytical, evaluative and reflective thinking skills.
- Provide strategies for effective classroom learning and behaviour management. This can be done by offering tools and foster teaching practices to enhance engagement between teachers and students. (Marzano & Marzano & Pickering, 2003)

Principals can invest in learning environments that promote teacher and student development by:

- Enhancing instructional quality where classroomsare organized, flexible, and rich in resources.
- Encouraging learning centres that are student-centered, and collaborative, and
- Fostering a culture rooted in learning approaches, grounded in holistic and developmentally appropriate learning.

By championing these strategies, principals will shape a more dynamic and inclusive learning environment, where there will be greater productivity and more impact by teachers and greater student outcomes.

CONCLUSION

Children learn most effectively when instruction is aligned to students' developmental stages and supports their intrinsic motivation for understanding and meaning-making (Ryan & Deci, 2000). When lessons that are thoughtfully designed to be visually stimulating, hands-on, and developmentally appropriate, the classroom becomes a dynamic environment that fosters both intellectual and emotional growth. Integrating principles from Gestalt psychology and Piaget's theory of cognitive development empowers educators to transcend traditional, one-size-fits-all methodologies. This synthesis facilitates the creation of inclusive, student-centered learning environments that not only promote academic achievement but also prepare students for thoughtful and active participation in an increasingly complex society. In a rapidly evolving world, such an approach offers educators a robust framework for addressing diverse learner needs while cultivating a lifelong love of learning.

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