Intergenerational learning in Taiwanese preschools: Theoretical foundations and core principles for educational renewal

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Abstract: Intergenerational Learning (IGL) is an educational approach that facilitates structured interactions between individuals from different generations, fostering the reciprocal exchange of knowledge, values, and skills. This pedagogical framework not only strengthens intergenerational relationships but also contributes to the holistic well-being of both older adults and young children. Moreover, IGL programs function as a meaningful form of social participation, promoting active aging among older adults while enriching the developmental experiences of younger learners. The implementation of IGL initiatives is widely acknowledged as an effective strategy for cultivating collaborative and transformative learning experiences. Furthermore, the theoretical framework of this study draws upon the social constructivist perspective, Bandura's social learning theory, Piaget's cognitive development theory, and Mezirow's transformative learning theory. These perspectives collectively inform an understanding of how individuals construct meaning through social interaction, observation, cognitive development, and critical reflection. The core principles underpinning the study include reciprocity, social cohesion, cultural transmission, and sustainability. These interconnected concepts serve as foundational pillars for fostering inclusive, collaborative, and culturally responsive educational practices aimed at long-term societal well-being. In light of these considerations, this article aims to foster the theoretical foundations and core principles of intergenerational learning in Taiwanese preschools, with a focus on fostering educational renewal.

Keywords: Intergenerational learning, Older adults, Young children.

1. Introduction

Intergenerational Learning (IGL) is an educational model that promotes interaction across generations through carefully designed activities, enabling the exchange of knowledge, values, and skills. This approach not only enhances intergenerational understanding and strengthens relationships but also contributes to the physical and mental well-being of both older adults and young children. Moreover, intergenerational learning programs are widely acknowledged as a form of social engagement that supports active aging among older adults. The implementation of IGL programs is regarded as one of the most effective strategies for facilitating meaningful and impactful learning experiences. Furthermore, the society is grappling with the challenges posed by a declining fertility rate and an aging population in Taiwan, which have profound implications across various sectors, including politics, the economy, culture, and education. In this context, it is essential to examine effective strategies for promoting intergenerational education and addressing the barriers that exist between generations [1-3]. However, in order to develop effective strategies for enhancing intergenerational

education, it is critical to first establish a comprehensive understanding of the concept of intergenerational learning. In light of these considerations, this article aims to examine the theoretical foundations and core principles of intergenerational learning in Taiwanese preschools, with a focus on fostering educational renewal.

2. The Intergenerational Learning

2.1. The Theoretical Foundations of Intergenerational Learning

2.1.1. Social Constructivist Perspective

John Dewey's philosophy of education reflects a collaborative relationship between people and the environment. Dewey believed that children must be taught to understand social issues sensibly. He proposed a balanced and integrated relationship among different aspects of children's individual developments [4]. According to Vygotsky's theory, human development is primarily determined by the interplay ofinterpersonal (social), cultural-historical, and individual elements [5]. Vygotsky's theory differs significantly from other developmental theories, including social learning theory, in that it posits that all higher psychological functions originate from social interactions. Vygotsky's sociocultural theory underscores the pivotal role of social interactions in the learning process. Within this framework, older adults, through dialogue and engagement with young children, can facilitate their cognitive development by guiding them to higher levels of understanding. In Vygotsky's theory, adults occupy a central role, primarily tasked with transmitting knowledge and culture to children, while also providing support within the child's Zone of Proximal Development (ZPD). Learning, according to Vygotsky, occurs through interaction with others—especially adults—who offer essential guidance and assistance. Given their wealth of experience and knowledge, older adults are particularly equipped to support children in tasks they cannot yet accomplish independently. Vygotsky's theory, therefore, emphasizes the significance of intergenerational interactions, positioning adults as integral participants in the child's learning journey [6-8].

2.1.2. Bandura's Social Learning Theory

In analyzing the operation of human agency in this interactional causal structure, social cognitive theory accords a central role to cognitive, vicarious, self-reflective, and self-regulatory processes. The issues addressed concern the psychological mechanisms through which personal agency is exercised, the hierarchical structure of self-regulatory systems, eschewal of the dichotomous construal of self as agent and self as object, and the properties of a nondualistic but nonreductional conception of human agency. The relation of agent causality to the fundamental issues of freedom and determinism is also analyzed. Observational learning is an important area in the field of psychology and behavior science more generally. Bandura's social learning theory acknowledges the importance of interaction in learning (e.g., through observation and imitation). Bandura emphasizes the pivotal role of observational learning, arguing that humans learn by observing the behaviors of others and imitating them. Older individuals, acting as role models, demonstrate behaviors and problem-solving techniques that help younger individuals develop new skills and gain a deeper understanding of the world [6, 9, 10].

2.1.3. Piaget's Cognitive Development Theory

Piaget's influence on psychology has been profound, particularly in the development of constructivist theory. He posits that learning is an active process, occurring through exploration and interaction with one's environment. While his theory primarily emphasizes individual cognitive development, it can be adapted to the context of intergenerational learning, where older individuals play a significant role in providing a supportive learning environment. In such settings, older adults serve not merely as passive observers, but as active participants who guide children through their cognitive processes, offering appropriate stimuli and fostering intellectual growth. Piaget's emphasis on active exploration and environmental interaction can be effectively extended into intergenerational learning contexts. In these environments, older adults not only share their knowledge and life experiences but

also engage children in meaningful dialogue, thereby facilitating cognitive, social, and emotional development. By cultivating a rich learning atmosphere where children are encouraged to explore ideas, pose questions, and receive constructive feedback from older adults, both generations benefit. The wisdom and experience of older adults stimulate young children's curiosity and assist in constructing a more nuanced understanding of the world. Hence, young children have strong learning abilities because of their high neural plasticity and ability to imitate, and they are driven by curiosity. In addition, preschool teachers providing developmentally appropriate learning environments, equipment, and activities for young children can positively affect their language development. This dynamic process aligns with Piaget's view that cognitive development is rooted in active engagement with one's surroundings, and in the case of intergenerational learning, the reciprocal exchange between generations enhances developmental outcomes for both young children and older adults [11-18]

2.1.4. Mezirow's Transformative Learning Theory

Transformative learning involves learning to think critically by questioning assumptions and expectations that shape and influence what we think and do. Transformative learning is defined as the process by which we transform prob lematic frames of reference—sets of assumption and expectation – to make them more inclusive, discriminating, open, reflective and emotionally able to change. Such frames are better because they are more likely to generate beliefs and opinions that will prove more true or justified to guide action Mezirow [19]. Mezirow [19] are two of the most important contributors to understanding adult learning. Mezirow [20] frequently acknowledged the impact that Freire had on his thinking and one can wonder if there is a distance between the critical consciousness of Freire and the critical reflection of transformative learning. Mezirow [20] Transformative Learning Theory emphasizes that learning transcends the mere acquisition of knowledge, instead presenting a dynamic process wherein individuals critically examine and reflect upon their deeply ingrained assumptions and beliefs. Central to this theory is the concept of "perspective transformation," wherein learners engage in a process of reevaluating their worldview through critical reflection, which leads to fundamental cognitive and behavioral shifts. This process unfolds in several stages, including the experience of "disorienting dilemmas," followed by "critical reflection," and culminating in the internalization of new cognitive frameworks within one's personal life. Mezirow [20] argues that the core of transformative learning lies in the questioning of cognitive models shaped by societal norms, cultural influences, and prior personal experiences, thereby facilitating profound changes at both epistemological and ontological levels. The ultimate objective is not simply the accumulation of knowledge but the development of autonomous learners with critical awareness and open-mindedness, capable of ongoing adaptation and growth within their sociocultural contexts. In the domain of intergenerational learning, transformative learning theory exerts a profound and bidirectional influence on learners across different age groups, fostering meaningful interactions and perspective transformations. Older adults, through their engagement with younger children, are prompted to reconsider their established teaching methods and reflect on the learning styles, interests, and developmental needs of children. This reflection encourages the adaptation of educational strategies to better align with the cognitive and emotional characteristics of young children. Simultaneously, young children, through interactions with older adults, gain exposure to diverse generational life experiences and values, which challenges their preconceptions and encourages them to analyze and interpret issues from a broader, more inclusive perspective. This bidirectional learning process resonates with Mezirow [20] concept of "perspective transformation," further elucidating the practical value of transformative learning theory in educational contexts. Specifically, it offers significant theoretical and practical insights for promoting intergenerational understanding and the transmission of cultural knowledge [19-22].

2.2. The Core Principles of Intergenerational Learning

Intergenerational learning can be conceptualized as a reciprocal and interactive process through which individuals from different generations engage in shared activities to exchange knowledge, skills,

values, and experiences. This dynamic learning relationship, which predominantly involves children and older adults, fosters mutual understanding, social cohesion, and lifelong learning. Within the specific socio-demographic context of Taiwan—characterized by an aging population and declining birth rates—intergenerational education holds significant potential to strengthen intergenerational bonds and mitigate the social challenges arising from demographic shifts. To develop a robust framework for effective intergenerational education strategies, it is imperative to examine the core principles of intergenerational learning [2, 7, 23].

2.2.1. Reciprocity

The principle of reciprocity in learning is fundamentally embedded within intergenerational education theories, highlighting the mutual benefits that arise from shared experiences and fostering a more profound understanding between younger and older generations. Learning is best conceptualized as a bidirectional exchange in which both generational cohorts actively contribute to and derive meaningful value from their interactions. DeSouza [24] underscores the significance of social learning, dialogue, and reflection, asserting that structured intergenerational engagement—facilitated through guided activities and purposeful discourse—can yield transformative outcomes for all participants. The reciprocal exchange of experiences not only reshapes individual perspectives but also stimulates the emergence of novel ideas. These cognitive and perceptual transformations have the potential to drive attitudinal shifts, thereby strengthening intergenerational understanding and contributing to the well-being of both individuals and the broader community [7, 24, 25].

2.2.2. Social Cohesion

Viewed as the glue that binds societies, social cohesion is considered an essential ingredient to address common societal challenges. Definitions and associated conceptual frameworks usually summarise social cohesion as collective attributes and behaviours characterised by positivesocial relations, a sense of identification or belonging, and an orientation towards the common good [26]. "Social cohesion" refers to the degree of social integration and harmony within a community or society. It encompasses shared values, trust, and a sense of belonging among individuals and groups, fostering solidarity and cooperation. Strong social cohesion reduces social tensions, enhances collective well-being, and promotes inclusive participation in societal activities. Intergenerational learning can occur across diverse contexts, including family settings, formal education, workplaces, and broader societal interactions. Scholarly literature underscores its significance, highlighting its role in facilitating the transmission of knowledge and wisdom, fostering mutual understanding, and enhancing social cohesion. Intergenerational learning programs should cultivate inclusive environments that mitigate age-related stereotypes, fostering a sense of belonging and promoting social cohesion between older adults and young children. These programs are essential in bridging generational divides, enhancing mutual understanding, and strengthening intergenerational bonds [2, 7, 26].

2.2.3. Cultural Transmission

In the context of intergenerational learning, cultural heritage emerges as a particularly relevant theme, offering participants the opportunity to explore and celebrate their diverse backgrounds, traditions, and histories. Culture embodies the dynamic essence of social activities and the enduring significance of traditional values, serving as a bridge that connects generations and fosters mutual understanding. Older adults can impart cultural heritage, traditions, and accumulated wisdom, while young children bring contemporary knowledge and fresh perspectives, creating a dynamic exchange that enriches both generations. This reciprocal sharing fosters a deeper understanding of both the past and the present, promoting intergenerational dialogue and mutual learning [17, 18, 27]. In Taiwan, cultural transmission initiatives can be facilitated through activities such as Grandparents' Day events, which promote intergenerational exchange and contribute to the preservation and continuity of cultural heritage. The process of activities is presented in Figure 1.

Figure 1.
The Process of Activities for Grandparents' Day.

2.2.4. Sustainability

At the global level, substantial efforts have been undertaken to address societal challenges, enhance human well-being, and restore the planet's ecosystems through sustainability and resilience programs. However, these initiatives are predominantly led by governments, the private sector, and financial institutions, often lacking mechanisms to empower local communities in actively participating in the co-design and implementation processes. In the context of Taiwanese preschools, IGL should be designed to achieve long-term impact by embedding them within community life and educational systems, rather than implementing them as isolated, one-time initiatives. IGL can affect young children's understanding of aging and old age [28].

3. Reflections: Benefits of Intergenerational Learning between Young Children and Older Adults

Chang [29] stated.

In recent years, a growing trend of cross-generational integration, where young children engage with elderly residents in nursing homes, has emerged across various countries, including the United States, Germany, and Japan. Notably, an Australian television network recently produced a documentary that captured the interactions between older adults and young children in a nursing home. The results were surprising: the young children's simple words and playful behaviors inspired the elderly residents to rise from their seats and walk quickly with the assistance of walking aids, all in the spirit of play. Shirley, an 84-year-old retired woman, moved into the "RSL Life Care" nursing home in suburban Sydney after her retirement. In recent years, she had spent most of her time sitting idly, feeling like a forgotten, nameless figure. Shortly after being diagnosed with depression, she was reluctantly involved in the filming of the documentary *The Old People's Home For 4 Year Olds*. Astonishingly, this experience led to a spontaneous recovery from her depression. "Playing with these children brought me back to life," said Shirley, a nursing home resident diagnosed with depression.

The global population is currently aging at an accelerated rate. In 2015, it was estimated that 8.5% of the global population was aged 65 and older, with projections indicating that this figure will continue to rise. By 2050, older individuals are expected to comprise 16.7% of the world's population. While the increase in life expectancy is a remarkable advancement for humanity, the growing aging population presents significant health and economic challenges. Intergenerational collaborative learning serves to strengthen the bonds between older adults and young children, while also enriching their knowledge, skills, social interactions and promoting their health. Through the implementation of structured and meaningful programs, educators and community leaders can cultivate inclusive learning environments that bridge generational gaps and promote lifelong connections [2, 23, 30-33].

3.1. For Young Children

The growing interest in engaging older adults in early childhood education (ECE) programs reflects an emerging innovative practice that has the potential to reshape traditional approaches to ECE. Although relatively new, intergenerational engagement plays a critical role in enhancing young children's socio-emotional development. Specifically, interactions with older adults are essential for cultivating key attributes such as empathy, patience, and respect for diverse life experiences for young children. These exchanges offer young children valuable opportunities to practice active listening, articulate their thoughts clearly, and refine their conversational abilities. Furthermore, learning from older generations provides young children with direct access to cultural traditions, historical narratives, and lived experiences that are often underrepresented in conventional curricula. Participation in creative activities—such as storytelling, music-making, and arts and crafts—stimulates imaginative thinking, fosters collaborative problem-solving, and thereby contributes to both cognitive and social development for young children [17, 27, 30].

3.2. For Older Adults

Interrelationships between the predisposition toward approaching experiences in a mindful and creative way, participation in specific activities, and cognition among older adults. Participants were administered a battery measuring cognition (i.e., working memory, processing speed, divergent thinking, inductive reasoning, visuo-spatial processing), activity level, and the predisposition towards mental engagement. Engaging in learning activities with young children helps older adults maintain mental acuity, thereby mitigating cognitive decline. Building relationships with children also alleviates feelings of loneliness, enhancing a sense of purpose and fulfillment. Participation in hands-on activities, such as gardening, playing games, or dancing, promotes physical health and mobility. Additionally,

involvement in educational programs fosters stronger community connections, reducing social isolation and encouraging social integration for older adults [17, 27, 30].

In conclusion, in response to population aging observed globally, the active aging model has been proposed to preserve the well-being of more individuals in old age. Since raising awareness about a comprehensive life course perspective of aging, the importance of a sense of well-being in old age, and resources needed to age well early on carries great importance. IGL facilitates meaningful exchanges between individuals across different age groups, fostering mutual understanding, emotional connection, and the reciprocal transfer of knowledge and experiences. Within the context of Taiwanese preschools, the integration of IGL offers a distinctive opportunity to enrich educational practices by cultivating intergenerational relationships and supporting the holistic development of young children and older adults. This article examines the theoretical foundations of IGL, delineates its core principles, and evaluates its potential to drive educational renewal within Taiwan's early childhood education (ECE) system. Drawing on sociocultural and ecological theories, IGL underscores the significance of reciprocal learning, cultural continuity, and active community engagement. Through fostering holistic child development and advancing inclusivity, IGL not only strengthens the educational landscape but also nurtures future generations to value collaboration, cultural heritage, and social responsibility. The effective implementation of IGL in Taiwanese preschools necessitates intentional program design, ongoing reflective practice, and the establishment of sustainable partnerships. These elements are crucial to ensuring the long-term impact of IGL on the early childhood education system, contributing to a more inclusive and socially responsive educational environment [7, 17, 34-36].

Transparency:
The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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