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Conceptual Review: Cultivating Learner Autonomy Through Self-Directed Learning & Self-Regulated Learning: A Socio-Constructivist Exploration

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Abstract

This paper proposes a comprehensive framework for fostering learner autonomy (LA) in educational settings by integrating socio-constructivist principles with self-directed learning (SDL) and self-regulated learning (SRL). Emphasizing LA as both a learning process and a personal capacity, the framework draws on Vygotskian socio-cultural principles and Piagetian cognitive development. It underscores the importance of fostering LA in the contemporary "post-truth" classroom, where critical thinking and information literacy are paramount. Through analysis, three key insights emerge: socio-constructivism highlights the interplay between social interactions and individual cognitive development, SDL serves as the pathway to LA by empowering learners to control their learning, and SRL integrates metacognition for the metaliterate learner. Looking ahead, future research could explore effective pedagogical strategies, ensure learner agency and empowerment, and develop robust methods to assess LA and metaliteracy skills. By addressing these areas, educators can create environments conducive to cultivating self-directed, critical thinkers prepared for the challenges of the information age.

1. INTRODUCTION

When it comes to the process of inculcating learner autonomy (LA) into the folds of the classroom, the present paper aligns itself with the socio-constructivist stance that integrates Vygotskian socio-cultural principles (Gallimore & Tharp, 1990; Levykh, 2008; Vygotsky, 1978, 1986; Wertsch, 1985, 1998, 2007) with Piagian cognitive development thought (Devries, 1997; Kamii, 1993; Piaget, 1974). This position is more a theoretical inevitability than an intellectual choice. Rather than addressing the differences between constructivist and socio-cultural paradigms in a winner-take-all manner, the paper views these differences as indicative of the complexity of autonomous cognitive development and learning (O'Connor, 2020;

Mohammed, Kinyo, 2020). Accordingly, the available literature oscillates between conceptions of LA as a learning process and as a personal capacity. The present work argues for the need to integrate both conceptions into a theoretical framework that is envisioned to be able to empirically foster autonomy in the classroom environment on both metacognitive and socio-cognitive levels.

In doing so, it becomes essential to address the murkiness surrounding the conceptions of LA. This is done here by evoking self-directed learning (SDL) (Barnes, 1976, 2008; Benson, 2013; Dam, 2011; Holec, 1981, 1996; Knowles, 1975; Little, 1996, 2017) and self-regulated learning (SRL) (Boekaerts et al., 1999; Schunk & Zimmerman, 2011; Zimmerman & Risemberg, 1997). In the discourse on LA, there is a compelling argument for framing definitions within the context of SDL and SRL. This complementary framework provide a comprehensive lens to understand the multifaceted nature of LA. On one hand, SDL highlights the critical importance of learner agency, independence, and the ability to make informed decisions about one's educational path (Barnes, 1976, 2008; Candy, 1991; Dam, 2011; Grow, 1991; Holec, 1991; Knowles, 1975, Little, 2017; Loeng, 2020). It underscores the learner's capacity to set goals, manage resources, and actively direct their learning journey (Hiemstra & Brockett, 2012; Garrison, 1997; Toit-Brits et al., 2021). On the other hand, SRL provides theoretical grounds to situate the LA conception in contemporary conditions that shape "metaliterate learners" (Houtman, 2015) who can navigate both the ephemeral nature of knowledge today and their own biases through critical, metacognitive skills. This theoretical premise warrants investigation because despite the available literature distinguishing these concepts from each other, there is a scarcity of theoretical syntheses that involve LA, SDL, and SRL into an interconnected framework.

The purpose of this paper is to outline the emergent theories within the field of education in a well-informed analysis that not only distinguishes SDL and SRL from LA but devices all concepts in the establishment of a framework for fostering autonomy in learning. The paper first defines LA within the socio-constructivist paradigm. It props its main thesis by drawing on the epistemological underpinnings of each concept and elaborates it by revising these concepts through the LA socio-constructivist lens. It then presents its argument for the integration of SDL and LA into this definition by drawing on theoretical models pertaining to both concepts respectively (Candy, 1991; Dam, 2011; Grow, 1991; Hiemstra & Brockett, 2012; Garrison, 1997). The thesis is further elaborated by adding the metacognitive dimension to its LA conception by articulating the present-day conditions of information metaliteracy through the integration of SRL practices into the framework for fostering autonomy in the 2024 "post-truth" classroom (Jacobson et al, 2021). This revision is consolidated into a model that encompasses all concepts. This model is presented at the end of the paper as an inductive theoretical framework that stems from a learner-centred metacognitive conception and arrives at a multifaceted view of learning that engages the learner, teacher, and social context in a kaleidoscope for fostering autonomy in the classroom.

1.1 Research Questions

The research questions (RQ) guiding this theoretical investigation are as follows:

RQ1: How do socio-constructivist principles contribute to understanding learner autonomy in education?

RQ2: How does the integration of SDL practices contribute to the development of learner autonomy (LA) within educational settings, and what are the key mechanisms underlying this relationship?

RQ3: How does incorporating metacognitive skills within the framework of self-regulated learning contribute to information literacy and learner autonomy in the "post-truth" classroom?

2. Autonomy Between Constructivism and Socio-Cultural Theory

Although the term autonomy is ubiquitous in disciplines ranging from psychology to critical theory, and feminist theory, it is not grounded in a singular, all-encompassing definition. This is an issue that is more acutely tended to within the constructivist literature; namely in fields related to learning and cognitive development. Evidently, the most prominent works that arise from said literature are those of Jean Piaget and Lev Vygotsky. This exploration of the concept of LA synthesises Piaget's focus on individual exploration and adaptation with Vygotsky's emphasis on social interactions and scaffolding to provide a comprehensive framework for understanding autonomy in education. By integrating these theories, this section aims to reach a common ground between constructivist and socio-cultural theories through a socio-constructivist definition of LA. It is through this definition that this work introduces its thesis.

2.1 From Heteronomy to Autonomy: A Piagetian Perspective on Educational Goals

Constance Kamii (1984) argues in her article “Autonomy: The Aim of Education Envisioned by Piaget” that Piaget’s educational theory is often narrowly confined to discussions of child development stages, which overlook Piaget’s broader vision of education. She emphasizes the concepts of moral and intellectual autonomy, contrasting them with traditional education’s goal of transmitting knowledge and values across generations. Kamii (1993) further elaborates in “Autonomy: The Importance of A Scientific Theory In Education Reform,” defining autonomy as the ability to self-govern both morally and intellectually, making decisions independently of external rewards and punishments. This view necessitates understanding autonomy within constructivist theory, juxtaposing it with heteronomy. Kamii (1993) explains that moral autonomy is fostered through sanctions by reciprocity, which encouragess reflection, while intellectual autonomy involves critical thinking and questioning authority, as seen in historical scientific breakthroughs like Copernicus’s heliocentric theory. Traditional education, which centers the teacher as the sole source of knowledge, fosters heteronomous individuals unable to independently generate knowledge (Kamii, 1993).

This discussion is crucial for framing a constructivist definition of autonomy in the current research. Piaget (1974) asserts that:

> the goal in intellectual education is not to know how to repeat or retain ready-made truths (a truth that is parroted is only a half-truth). It is in learning to master the truth by oneself at the risk of losing a lot of time and of going through all the roundabout ways that are inherent in real activity (p. 106)

Autonomous learning, thus, involves internal knowledge construction rather than passive absorption from the environment. This stance, often criticized as individualistic, is clarified by DeVries (1997), who introduces the concept of co-operation derived from Piaget's work. DeVries (1997) argues that co-operation allows individuals to self-construct moral rules and intellectual truths, fostering independent and creative thinking while considering the interests of others. This collaborative process counters critiques of constructivist autonomy as egocentric, emphasizing the necessity of interaction among self-regulating individuals to gain diverse perspectives. In Piaget's view, knowledge is continuously constructed and reconstructed through the co-operation of autonomous individuals.

2.2 Vygotsky and the Dialectic of Autonomy: Examining the Interplay Between Mediation and Internalization

This thesis posits that despite differing perspectives, both Piaget and Vygotsky share a common goal of promoting learner autonomy. Piaget's constructivism and Vygotsky's sociocultural theory both emphasize the importance of developing autonomous learners. Vygotsky's theory, which highlights social interaction and cultural tools in learning, argues that children's development occurs through a dynamic, "dialogical" process with their environment, mediated by tools and language (Keenan et al., 2016). This interaction fosters the formation of new mental structures (Levykh, 2008), promoting autonomous learning through internalization (Gallimore & Tharp, 1990).

Vygotsky's socio-cultural theory views education as a bridge between the individual and their culture, driving the development of higher mental functions through inter-psychological and intra-psychological levels (Vygotsky, 1978). Inter-psychological mediation involves interaction with tools and social relationships, helping individuals develop more complex understandings (Wertsch, 1998). Explicit mediation, introduced by Wertsch (2007), involves intentional guidance using tools and prompts, facilitating the development of higher mental functions within the zone of proximal development (ZPD). The ZPD highlights the role of social interaction and teacher guidance in cognitive development, where teachers and learners co-construct knowledge through tools and language (Vygotsky, 1978). Scaffolding techniques, which provide targeted support, help accelerate learners' development and foster autonomy as control is gradually handed over to the learner (Little, 1996).

Within the ZPD, learning involves a dynamic interplay between self-regulation and social support (Gallimore & Tharp, 1990). Initially, learners receive "assisted performance" from a more knowledgeable other (MKO), which might include direct instruction or task modeling. As learners internalize skills through guided practice, they move towards "self-assisted performance" and eventually "independent performance" (Bruner, 1985). This cyclical process underscores the ongoing nature of learning. Effective support, or scaffolding, is tailored to the learner's progress and gradually withdrawn as competence increases, fostering self-regulation (Gonulal & Loewen, 2018). Vygotsky's (1986) notion of "inner speech" reinforces this by highlighting how internalized language becomes a tool for thought and self-regulation, enabling learners to tackle future challenges independently.

Ultimately, both Piaget and Vygotsky, despite their seemingly different approaches, agree that individual development requires interaction with tools, language, and social

influences. While Piaget emphasizes "self-regulation as an outcome of both social and individual processes," Vygotsky highlights the internalization of cultural tools and language through "mediated action" within the ZPD. This internalization transforms these external supports into individual cognitive functions. This intersectionality addresses the processes through which learners actively construct knowledge based on their cognitive capacities, while simultaneously considering the profound impact of social interactions, cultural tools, and collaborative learning environments on the development of autonomy. By examining the nuances of autonomy development within the social and cognitive realms, this work integrates the intricate layers that contribute to the formation of an autonomy framework. This complex conception drives this theoretical exploration to seeking a nuanced understanding of how pedagogical approaches can leverage both individual cognitive development and socio-cultural interactions to cultivate and nurture learner autonomy and subsequently contribute to the development of a theoretical framework of learning and autonomy.

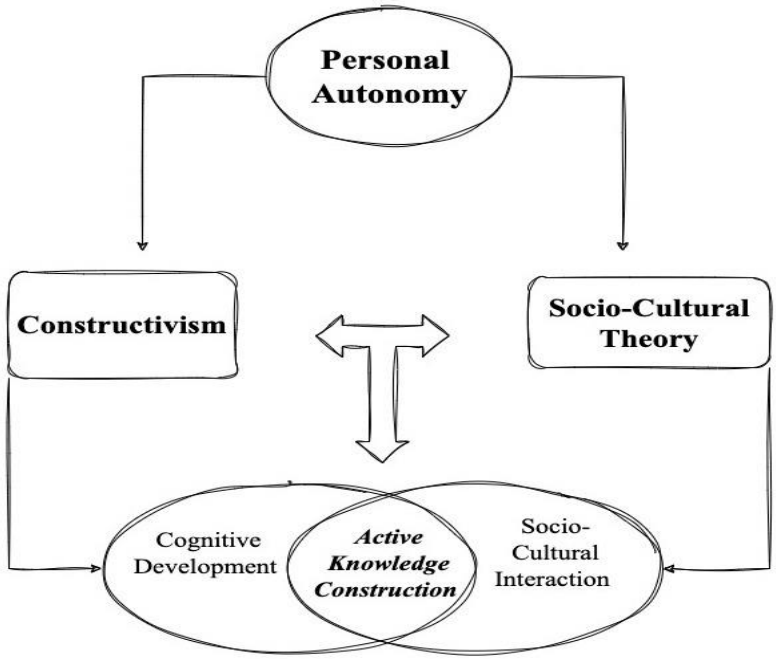

Figure 1: *A Conception of Constructivism and Socio-cultural Theory*

3. Beyond Textbooks: Humanism's Quest for a More Meaningful Learning Experience

The paper’s ongoing exploration now arrives at the humanistic movement that arose in the mid-20th century as a response to behaviorism's dominance in psychology. Piaget and Vygotsky's constructivist and socio-cultural theories challenged behaviorism's focus on observable behavior by emphasizing internal mental processes and social influences on learning. This shift resonated with Maslow’s (1964) critique of American education as lacking clear goals and focusing solely on skills acquisition. Rogers (1961) echoed this sentiment, advocating for "facilitating classroom climates" that empower students to engage with

meaningful problems. Maslow's (1943) hierarchy of needs further bolstered this shift, highlighting the importance of fulfilling intrinsic needs for self-actualization, which remains a key concept in understanding learner autonomy in today's educational landscape. Although the main thesis presented here is not aligned with the humanistic paradigm, it is essential to explore this later's influence in the education milieu as it highlights the preliminaries of the academic grappling with the amalgam of the growing availability of information (cheaper print materials, computer databases, the internet), the focus on quality of life and individuality, and the need for social responsibility to become producer of society

Learner autonomy stems from both the desire for personal growth and the inherent human drive for self-actualization. Rooted in Maslow's hierarchy of needs, it emphasizes intrinsic motivation as individuals move beyond basic needs and seek deeper fulfilment through the learning process itself. This shift rejects behaviorist theories of "coping behavior" and instead embraces intrinsic engagement and self-expression. This humanistic focus, championed by figures like Maslow and Rogers, laid the foundation for the learner autonomy approach, empowering individuals to become "all they are capable of becoming" (Maslow, 1954, p. 110).

Maintaining this humanistic viewpoint, Carl Rogers emphasizes the inherent drive for self-actualization within individuals. Change in both therapy and education, he argues, isn't driven by external forces but by an "inner tendency" towards autonomy and liberation from external control (Ford, 1991). This self-actualizing tendency manifests as genuine, intrinsic growth when therapy or learning is perceived as personally enriching. This core principle underpins Rogers' work in both client-centered therapy and student-centered learning. He emphasizes the connection between them in his article "Significant Learning: In Therapy and in Education" highlighting the shared potential for transformative learning driven by personal motivation. Such "significant learning" empowers individuals with self-understanding and growth by providing the necessary conditions for personal change. In education, Rogers emphasizes providing an environment where learners perceive learning as relevant to their own lives. This perception is argued here to be encapsulated by the concepts of the knowledge society and the learning society.

3.1 The Knowledge Society, The Learning Society and Learner Autonomy: A Symbiotic Dance

The rise of the "knowledge society" in the post-industrial era, as defined by thinkers like Bell (1976) and Lyotard (1984), fundamentally reshaped the role of education. Knowledge transformed from a static commodity to a dynamic force, constantly evolving with technological advancements and diverse perspectives, aligning with socio-constructivist principles where knowledge is actively constructed through individual interactions and interpretations. Universities faced the challenge of adapting their traditional role as dispensers of established knowledge, leading to the emergence of learner autonomy (LA) as a key response. Embracing a sociologically constructivist approach, universities began prioritizing reflexivity, critical thinking, and the ability to navigate diverse narratives. This shift, driven by the demands of the information economy and globalization, required a focus on individual adaptability and lifelong learning, positioning LA as an essential aspect of preparing individuals to thrive in an increasingly complex and interconnected world.

The late 20th century witnessed a paradigm shift with the rise of the "learning society," a response to the rapid and interconnected changes of the postmodern era. Barnett describes this complexity as "supercomplexity" (quoted in Y. Su, 2010, p. 14), highlighting the constant adaptation and learning demanded by this new reality. Human capital theory, championed by figures like Theodore Shultz (1961), recognized education and individual skills as crucial drivers of economic growth. However, viewing the learning society solely through an economic lens risks neglecting its social dimension. Social capital, as highlighted by Coleman (1988), emphasizes the role of social interactions and relationships in shaping individuals' learning experiences, fostering trust and collaboration essential for continuous learning and personal development. Discussions of both knowledge and learning societies often adopt a top-down approach, potentially overlooking individual autonomy. Ya Hui Su (2007, p. 196) cautions against subordinating individual learning to grand objectives, advocating for learner autonomy to ensure that intrinsic learning patterns and agency are preserved amidst broader educational goals.

The Faure Report (Faure et al., 1972) pioneered the concept of lifelong learning, envisioning it as an "existential continuum as long as life" (p. 233), shifting the perception of learning from a confined period to a lifelong process. This approach emphasizes flexibility and individualization, positioning individuals as the "legislators" of their own learning (Ya hi Su, 2007, p. 199), who tailor their learning activities based on their cultural context, personal realities, and historical understanding. Building on these ideas, The Delors Report (Delors et al., 1996) introduces four pillars of education: learning to know, do, be, and live together. These pillars aim to balance individual needs with the demands of a globalized, technology-driven world, promoting social cohesion while upholding the humanistic and utopian ideals of lifelong learning. Elfert (2015) notes that Delors et al. (1996) recognize the transformative power of technology in the information society, which empowers individuals to pursue learning activities previously deemed unattainable, thereby enhancing individualization within the learning landscape (p. 90).

4. Conceptual Synthesis: RQ1: How do socio-constructivist principles contribute to understanding learner autonomy in education?

At this juncture, it is essential to synthesise the amalgamation of the concepts dealt with thus far to further elaborate the conceptual underpinning from which, the present paper posits, stems the learner autonomy paradigm. The overview of the ongoing relationship between socio-economic conditions and education amid the 20th century transformations and the turn of the 21st century has served to restate the principles of socio-constructivism argued at the beginning of this paper as the bedrock for learner autonomy. Both universal and individual reactions to the supercomplexity of society can be interpreted in terms of extrinsic and intrinsic capacities for autonomous learning and relearning. This is depicted by the concepts of the knowledge society and the learning society that oscillate between conceptualising the learning process as an extrinsic, purely utilitarian affair whereby the individual seeks to adapt to the technocratic forces of society, or as an intrinsic process whereby the individual is able to adapt to her/his context not for socio-economic gains but rather to achieve the utopian state of perpetual self-actualisation in an ever-changing world.

The common ground for both conceptions is found in the lifelong learning paradigm that builds on the humanistic idea of learning to be to that of learning to be together which is theorised here concerning the socio-cultural principles of internalisation and mediation that afford the individual with the capacity for autonomy while acknowledging the cultural forces that impact the learning experience. Hence, this paper is able to arrive at a socio-constructivist conceptual framework that delineates the intellectual interactions that result in the advent of the learner autonomy paradigm. This framework allows the paper to clearly navigate the main theories that are involved in the empirical introduction of autonomous learning in the classroom so as to build the theoretical framework stemming from the thesis leading the argument.

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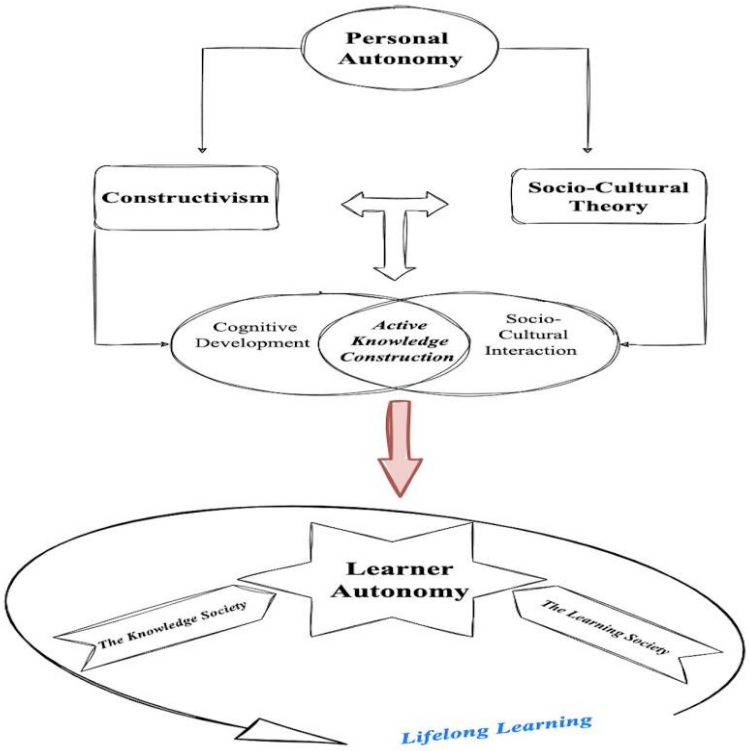

Figure 2: *A Conceptual Framework of Learner Autonomy*

5. A Continuum Towards Autonomy: Self-Directed Learning and Self-Regulated Learning as Stepping Stones in the Development of Autonomous Learners

On the one hand, LA and SDL emerged from the same fertile ground: the lifelong learning movement and adult education initiatives. Malcolm Knowles, a pioneer in this field, laid the groundwork with his theory of andragogy, emphasizing the self-directed nature of adult learning (Knowles, 1975). However, the present work critiques the rigid division between andragogy and traditional pedagogy, arguing for a continuum of learning approaches that acknowledges the dynamic interplay between teacher guidance and learner autonomy (Hartree, 1984). While SDL, as defined by Knowles, focuses on the "how" of learning through individual

initiative and decision-making (Knowles, 1975), LA embraces a broader vision. It extends beyond the learning process itself to consider the "what"; the knowledge and understanding ultimately acquired. LA draws from socio-constructivism, acknowledging that knowledge is not passively received but actively constructed within a social context (Holec, 1981). This highlights the significance of collaboration and interaction in the learning journey.

SRL developed separately from LA. While SDL and LA emerged within the progressive education movement, emphasizing learner-centered language learning, SRL's roots are in educational psychology, particularly through the work of Barry J. Zimmerman and Albert Bandura's social cognitive theory. This epistemological distinction allows the current paper to position SRL as a second theoretical ground for fostering learner autonomy as a personal capacity. Although links between SRL and LA have been explored in language learning over the past two decades (Fukuda, 2018a, 2018b; Seker, 2016; Zhou & Hiver, 2022), this paper grounds these links in different conceptual underpinnings. The argument is supported by discussions integrating the metaliteracy of 21st-century learners with metacognition in the context of contemporary information society 4.0. The paper posits that metacognition is a core concept in both SDL and SRL. As Flavell (1979) states, "cognitive strategies [SDL] are invoked to make cognitive progress, metacognitive strategies [SRL] to monitor it" (p. 909).

5.1 Cultivating Autonomous Learners: A Theoretical Framework for Fostering Learner Autonomy in Higher Education

At this point in the argument, it is pertinent to define learner autonomy (LA) to add further nuance. LA entered education through language learning. Benson (2011) argues that the rise of learner autonomy is closely tied to the breakdown of traditional language classrooms in the 1970s and 1980s and the emergence of new approaches that prioritize learner needs and involvement. The Council of Europe's Modern Languages Project (CRAPEL) at the University of Nancy, France, exemplifies this shift by promoting individual freedom through lifelong learning opportunities. In this self-directed learning approach, "the objectives, progress and evaluation of learning are determined by the learners themselves" (Benson, 2011, p. 10)**.**It is thus while leading CRAPEL in these academic endeavours that Holec (1981), proclaimed pioneer of autonomy in education, defined the concept as "the ability to take charge of one's learning" (1981, p.3), which means: [...] to have, and to hold, the responsibility for all the decisions concerning all aspects of this learning, i.e.:

- determining the objectives;
- defining the contents and progressions;
- selecting methods and techniques to be used;
- monitoring the procedure of acquisition properly speaking (rhythm, time, place, etc.);
- evaluating what has been acquired. (ibid.)

By affording the autonomous learner with the capacity to make decisions at every point of the learning process, Holec's (1981) definition of the concept echoes the philosophical stances dealt with thus far. It does so by challenging the traditional teacher-learner relationship and transferring the responsibilities at every stage of learning to the student. Nevertheless, the definitions explored throughout this work do not reflect attempts to cement a unified

conception of learner autonomy, but rather they (Benson, 1996, 2011; Holec, 1981; Little 1996) operate within the elasticity of the term resulting in a literature that oscillates between the theoretical development of LA and the pragmatic application of the LA capacity; both of which are dealt with hereafter.

In the discourse on autonomy in education, defining LA within the contexts SDL and SRL provides a comprehensive understanding. SDL emphasises learner agency, independence, and informed decision-making, focusing on goal setting and resource management. SRL, on the other hand, involves cognitive and metacognitive processes, highlighting strategies for monitoring, self-assessment, and emotional regulation. Therefore, integrating SDL and SRL into the LA framework acknowledges that learners possess both the freedom and the necessary skills to optimize their learning. This holistic approach enhances the understanding of how learner agency and effective learning management interact, offering a nuanced definition of LA. Addressing the overlapping yet distinct nature of LA, SDL, and SRL is crucial as this paper argues for clear distinctions between these constructs to outline emergent educational theories. While all three involve learner control, they differ in scope and emphasis. The following section elaborates on these distinctions, examining specific conditions for SDL and SRL development and investigating theoretical approaches to fostering autonomy in the classroom.

5.2 Building Blocks of Learner Autonomy: The Importance of Self-Directed Learning

Unveiling the intricate relationship between LA and SDL is crucial for effective education. While both concepts emphasize learner agency and responsibility, a subtle yet important distinction exists. LA, as envisioned by Holec (1981), represents the broader objective. It encompasses the goals and outcomes of learning, focusing on the "what" of the learning journey. Here, learners are empowered to take charge, construct knowledge within a social context, and ultimately achieve a deeper understanding that becomes integrated into their individual worldview. This socio-constructivist perspective stands in contrast to the andragogical view of SDL, often associated with Knowles (1975). The andragogical approach assumes inherent learner autonomy and emphasizes the "how" of learning, focusing on specific episodes of self-directed learning.

Leni Dam's (2011) research injects a valuable nuance into the conversation. She acknowledges the importance of SDL practices like goal setting, self-reflection, and self-assessment in cultivating LA. However, her work extends the concept of LA within the dynamic environment of a classroom setting. Here, the teacher plays a crucial role that goes beyond simply transmitting knowledge. Drawing on the work of Barnes (2008), Dam emphasizes the concept of "working on understanding" (p. 4). This approach shifts the teacher's focus from teaching to learning, actively engaging learners in the construction of knowledge. This aligns with the constructivist notion that knowledge is built upon existing understanding, and ultimately, learners must construct their own (Barnes, 1976). Furthermore, Dam highlights the significance of social interaction and language use in developing LA, particularly within the context of language learning. By incorporating collaboration and group work, drawing on Vygotskian concepts like the ZPD, Dam's approach fosters not just cognitive skills but also the language proficiency that is inseparable from LA in a language learning context (Little, 2017).

In essence, LA represents the overarching goal; the ability to take charge of one's learning and construct personal knowledge. SDL provides the toolkit, practices like goal setting and collaboration, that empowers learners to achieve this autonomy. Importantly, Dam's work demonstrates that fostering LA within a classroom setting requires a shift in the teacher's role. This shift moves the teacher away from simply imparting knowledge towards actively guiding and engaging learners in a social and language-rich environment. By embracing this nuanced understanding of LA and SDL, educators can cultivate learning experiences that empower learners to become not just skilled students, but truly autonomous individuals.

5.2.1. Garrison's Dimensions of SDL

Garrison's (1997) work sheds light on a crucial distinction within the vast body of research on self-directed learning (SDL). Prior literature has largely treated autonomy as the goal of SDL (Barnes, 1976, 2008; Candy, 1991; Dam, 2011; Grow, 1991; Holec, 1991; Knowles, 1975; Little, 2017). This perspective, however, can limit our understanding of the cognitive and metacognitive processes that drive learners towards self-direction. Garrison argues for a broader framework that acknowledges the complexities of this journey.

His three-dimensional model moves beyond the simple control-oriented view of autonomy. The first dimension, self-management, acknowledges the contextual conditions that influence learner control. It encompasses factors like learner proficiency, available resources, and the interdependence that exists within learning environments (Garrison, 1997). This moves the concept of control away from a purely independent and free state towards a balance between institutional norms, learner choice, and individual abilities.

The second dimension, self-monitoring, delves into the learner's responsibility for constructing meaning. This responsibility is multifaceted, encompassing both internal aspects like cognitive and metacognitive abilities, and external influences like the educational context and teacher feedback (Garrison, 1997). Importantly, this dimension emphasizes the role of self-observation, self-judgment, and self-reflection in gauging progress and adapting learning strategies. While acknowledging the importance of external feedback, Garrison highlights the learner's internal meaning-making process as a crucial aspect of self-directed learning. This focus on (meta)cognitive abilities provides a more robust foundation for understanding how learners can arrive at an autonomous perspective.

Finally, the motivation dimension adds another layer of complexity. Garrison (1997) views motivation as the driving force behind setting and pursuing learning goals. It encompasses both entering motivation, which refers to the initial intentions that propel learners to choose specific learning paths, and task motivation, which fuels focus and persistence during learning activities. This intertwined concept highlights the interplay between control and responsibility within the learning process.

The strength of Garrison's model lies in its ability to untangle the intricacies of the learner's role in self-directed learning. It avoids a simplistic view of control and emphasizes the dynamic interaction between internal cognitive processes, external influences, and motivation. This complexity underscores the need to delve deeper into the specific cognitive and metacognitive conditions that guide individual learners on their path towards self-direction.

5.2.2. The Person, Process, Context Model.

Twenty years after their initial contribution to the SDL field, Hiemstra and Brockett (2012) reconfigured their PRO model as "models […] are fluid because of subsequent research and enhanced understanding" (Hiemsta & Brockett, 2012, p. 155), and thus are able to evolve over time due to continued research. Having acknowledged the criticisms aimed at the PRO model, Hiemstra and Brockett (2012) state that their purpose is to clarify the terms comprising the model since they became ambiguous over the years. The main concept that warrants reconsideration, as was argued in this paper, is personal responsibility. It was previously contented that this latter is too strictly entrenched in humanistic principles to comprehensively connect the individual learner with the learning process. This, coupled with the lack of significant emphasis on the role of the social context in learning, resulted in what Hiemstra and Brockett (2012) call a political co-opting of the concept that blames the individual for their shortcomings in both professional and social life irrespective of the socio-economic contexts they live in. Evidently, this spurred the reintroduction of the SDL model using more focused language that maintains the essence of the PRO model while also adapting to academic transformations; hence the person, process, context (PPC) model.

The PPC model retains the person and process dimensions of the PRO model while reintroducing the social context as an equal dimension, emphasizing its significant impact on learning and readiness for self-direction. The model delineates three components: person, encompassing characteristics such as creativity, motivation, and self-concept; process, involving facilitation, learning skills, and planning abilities; and context, including factors like culture, power dynamics, and organizational policies. By emphasizing the context dimension, the PPC model acknowledges the influence of socio-constructivist perspectives on SDL knowledge, highlighting the imperative role of teachers in promoting self-direction within diverse learning contexts (Toit-Brits et al., 2021, p. 6). This socio-collaborative process, involving learners, teachers, and the learning environment, is described as "the optimal situation for self-directed learning" (Hiemstra & Brockett, 2012, p. 159), wherein learners are highly self-directed, teaching-learning processes encourage learner control, and the sociopolitical context supports self-directed learning (ibid).

This conception of the SDL process is argued here as a synthesis that allows the present paper to construct a comprehensive segment of its theoretical framework that outlines the progressive trajectory from learner self-direction to LA as envisioned at the beginning of the SDL and LA discussion. The PPC model offers conceptual and theoretical elasticity, accommodating a wide range of research questions at each intersection of its dimensions (Hiemstra & Brockett, 2012). The person/process intersection explores correlations between the personal characteristics of self-directed learners and instructional strategies, as evidenced by the staged self-directed learning (SSDL) model. The process/context intersection delves into the relationship between learner and teacher, considering how teachers facilitate progress toward self-direction within a socio-constructivist knowledge construction framework. This intersection acknowledges the socio-cultural context of knowledge construction in the SDL classroom, emphasizing freedom and autonomy (Hiemstra & Brockett, 2012). The person/context intersection is identified as the least explored area of SDL research (ibid), highlighting a gap in existing frameworks that warrants further investigation

6. Conceptual Synthesis: RQ2: How does the integration of SDL practices contribute to the development of learner autonomy (LA) within educational settings, and what are the key mechanisms underlying this relationship?

The postulation leading this proposed framework is propped by its conceptual foundation established at the beginning of this paper. Within its conceptual underpinnings, LA is posited as the result of the individual capacity for active knowledge construction which constitutes an amalgam of the individual capacity for cognitive development and the socio-cultural influences that propel this development. Implied in this conception are two theoretical routes that lead the fostering of learner autonomy in learning. The first route deals with fostering learner autonomy as a process while the second route deals with fostering learner autonomy as an individual capacity. The former argument is aligned with the interpretation of the link between LA and SDL advanced at the outset of the theoretical investigation. Evidently, the present exploration examined thus far leads to the postulation of SDL as the process underlying the fostering of LA in the HE classroom and informs the development of this branch of the theoretical framework leading the study at hand.

SDL serves as the cornerstone of the framework, representing the process through which learners progressively gain control over their learning journeys. This process demands negotiated control, achieved through the practice of self-management. Factors like individual proficiency, available resources, and institutional standards come together in a delicate balance, shaping this consensual approach to learning. At the intersection of process and context, self-management empowers learners to set goals, manage time, and utilize resources effectively, fostering a sense of responsibility and ownership over their learning endeavors.

Moving to the person/process intersection, the framework emphasizes the crucial role of responsibility in knowledge construction. This responsibility, however, transcends the traditional humanistic interpretation and is reimagined within a collaborative-constructivist paradigm. It stems from the learner's active engagement with information, fueled by self-monitoring practices. This introspective process involves internal feedback mechanisms, encompassing cognitive self-regulation (observing, judging, and reacting) and metacognitive reflection on the knowledge construction journey. Internal and external feedback intertwine through self-monitoring, fostering a dynamic relationship between personal capacities and the learning process.

Motivation adds another dimension to the framework, residing at the person/context intersection. Garrison's model of SDL provides a lens to understand motivation through two key concepts: entering motivation and task motivation. The former hinges on the perceived value and personal potential related to learning goals, prompting self-directed action. Task motivation, on the other hand, fuels sustained engagement throughout the process, influenced by control and self-management practices. This interplay between intrinsic and extrinsic factors ultimately leads to a deeper sense of responsibility, where learners invest their energies based on both personal meaning and contextual opportunities for shared control and collaboration.

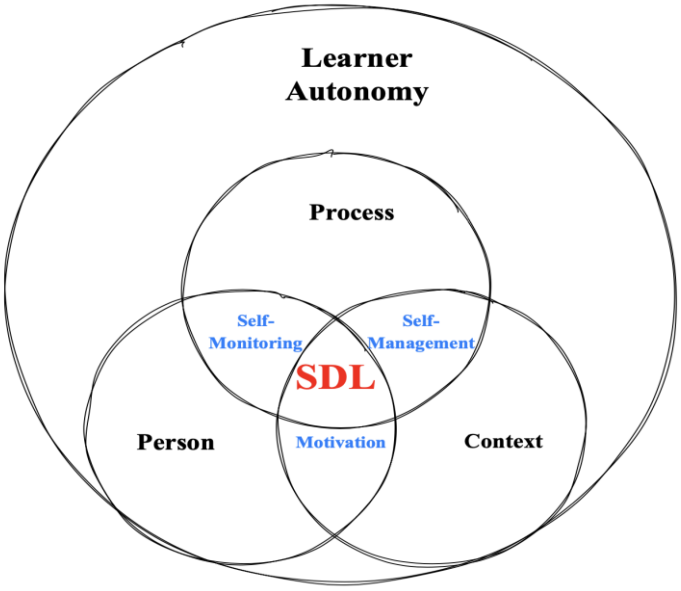

Figure 3: *A Model for Fostering Learner Autonomy through Self-Directed Learning Practices*

The interpretations made thus far notwithstanding, the present paper maintains that although SDL offers solid theoretical foundations for the conception the evident cognitive and metacognitive processes involved in the person/context intersection, it is pertinent to introduce the concept of SRL and its metacognitive underpinning. This expansion allows the present framework to delve deeper into the metacognitive dimensions of learning, shedding light on the intricate processes that underlie effective self-regulation in the quest for learner metaliteracy in addition to autonomy. By incorporating SRL theoretical foundations in the following section of the review, the present framework is enriched in a way that provides a more nuanced perspective on the multifaceted nature of learner autonomy.

7. Conceptual Synthesis: RQ3: How does incorporating metacognitive skills within the framework of self-regulated learning contribute to information literacy and learner autonomy in the "post-truth" classroom?

To integrate the principles of SRL into the theoretical framework for fostering autonomous learning, it's imperative to differentiate SRL from LA. Autonomy, with its multifaceted nature, permeates various scientific endeavors, adapting to diverse conceptual transformations. SRL research has notably influenced autonomy's conceptual evolution, positioning SRL at the core of learners' journey towards autonomy. To further dissect this claim, the conceptual link between SDL and SRL has to be evoked.This paper elucidates this link between within a socio-constructivist framework, emphasizing learner practices guided by taking responsibility and control over the learning process (Brockett & Hiemstra, 2012; Benson, 2011; Garrison, 1997; Holec, 1981; Little, 2017; Knowles, 1975). The incorporation of metacognitive aspects further strengthens this link, establishing a foundation for progressing towards LA. SDL, rooted in adult learning principles, extends beyond the classroom to encompass informal learning, reflecting a philosophy of lifelong learning. The argument posited here asserts that SDL necessitates SRL; self-regulation serves as a fundamental

prerequisite for individuals aspiring to become proficient self-directed learners (Cosnefroy & Carré, 2014). This claim is supported by the distinction between the self-directed and self-regulated learner, where the former manages the entire learning trajectory while the latter focuses on the learning activity (ibid). Such a holistic approach acknowledges the dynamic interplay between learner agency and the regulation of learning processes, facilitating the cultivation of LA in a nuanced and comprehensive manner

Having delimited the epistemological links in the amalgam of LA, SDL, and SRL, the paper now contextualizes its thesis in the current conditions of the post-truth world; this is done through the concepts of metacognition and metaliteracy. SRL "assumes a triadic reciprocality among motivation, environment and action […] which considers learner autonomy to be a contextually embedded phenomenon rather than a static learner trait" (Juklová et al. 2022, p. 100). In doing so, SRL challenges metacognitive theorists to elucidate why students learn and how they independently manage their behaviors (Zimmerman, 1997, p.105). Contextualizing this challenge in contemporary learning environments situates the learner as both a consumer and producer in dynamic information environments where diverse literacies converge (Robertson et al., 2022). This 21st century interpretation of the autonomous learner arrives at the concept of metaliteracy which is defined as a dynamic process wherein "individuals learn to continuously evaluate all forms of information through evolving media formats, whilst also understanding that they are empowered to produce and share knowledge in a multitude of collaborative and connected spaces" (Jacobson et al., 2021, p. 73). This definition places new emphasis on SRL through metacognitive elaborations of both knowledge and skills.

Metacognitive knowledge involves a learner's awareness of their own learning processes and how to engage most effectively with tasks, encompassing their understanding of cognitive processes that impact their outcomes (Muijs & Bokhove, 2020; Zhang & Zhang, 2019). Within the metaliteracy elaboration, this SRL intrapersonal dimension is argued as crucial in creating a self-awareness that fosters learner autonomy, empowering individuals to develop independent strategies for knowledge construction and evaluation. Ultimately, this occurs in a lifelong learning framework, where individuals continuously adapt and grow in response to the changing landscape of information and literacy (Jacobson et al., 2021). Concomitantly, metacognitive skills, or metacognitive regulation, distinct from metacognitive knowledge, involve applying that knowledge to control one's learning through strategies like planning, monitoring, and evaluating. This includes planning before problem-solving, monitoring progress during learning, and assessing outcomes to adjust the learning process for optimal results (Schraw, 1998). This practical manifestation of metacognition restates the main thesis of the paper that portrays the gradual progress toward autonomous learning.

By introducing the metaliteracy prerequisite to the autonomous learner concept, the framework is able to aptly theorize SRL, metacognition more specifically, as the nucleus of its LA continuum. By arguing for the triadic analysis (Zimmerman & Risemberg, 1997; Panadero, 2017) of SRL, the framework is grounding LA in the socio-constructivist stance that envisages LA attainment as the progression from the intermental to the intramental plane. A crucial consideration is recognizing that metacognitive knowledge may be inaccurate, and the skills the learner employ can be less than optimal in terms of efficacy and efficiency. Consequently, SRL can exhibit either adaptiveness or maladaptiveness. Evidently, metacognitive knowledge and skills, as posited here, operates on both intermental and intramenta planes (Vygotsky,

1978) as the learner is involved in a dynamic loop wherein the teacher plays a pivotal role, as both knowledge and skills can be enhanced through instruction and practice.

Further elaborating metaliteracy as the zeitgeist of all learning theory in the 21st century, the paper restates Little's (1991) definition of autonomy as a "*capacity* - for detachment, critical reflection, decision-making, and independent action" (p. 4) and posits its practical expression in SRL through metacognition. Essentially, this latter enhances the development of contextual relativism and self-authorship (Juklová et al., 2022). Within metaliteracy, contextual relativism involves adopting a personal stance and creating meaning by evaluating all information within its post- truth context, allowing learners to break free from authoritative sources and develop independent strategies for knowledge construction. By engaging in metacognitive practices, the metaliterate, autonomous learner can enhance their ability to critically assess evidence, coordinate and act upon their values and beliefs, and collaborate in joint meaning-making, thus enriching both the intrapersonal and interpersonal dimensions. Consequently, metacognition through SRL not only bolsters the cognitive and metacognitive dimensions of self-authorship but also reinforces the overall process of contextual relativism and learner autonomy, leading to a more robust and autonomous learning experience.

This learning experience does not occur in isolation as SRL theory is well established in the classroom environment. This aligns with the socio-constructivist view of the learning process that highlights the integral role of both teacher and environment in the cognitive and metacognitive development of the learner. However, the teacher/learner interaction is reimagined in the metaliteracy classroom. The metacognitive aspect of metaliteracy reflects this interaction through the shift of focus from teacher to learner by envisioning learners as both students and educators. Mackey (2019) explains that "imagining the learner as teacher recognizes the pedagogical role we [teachers] all play in social spaces by sharing this commitment in an equal way that promotes empowered learning and active participation with others". Thus, metaliteracy goes beyond description by showing how learners critically evaluate and understand their knowledge as part of social learning environments (Mackey and Jacobson, 2014). This metacognitive process equips learners to engage effectively by integrating critical thinking, information evaluation, adaptation to new technologies, teaching, learning, and the acquisition/production of new knowledge.

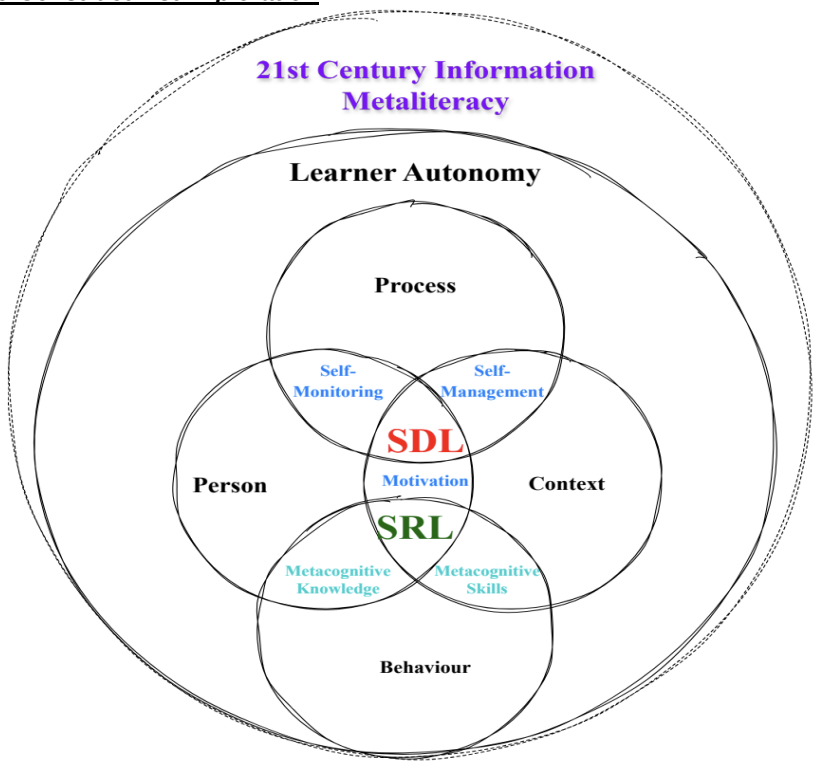

Figure 4: *A Model for Fostering Learner Autonomy through Self-Directed Learning and Self-Regulated Learning*

8. CONCLUSION

This paper has argued for a comprehensive framework to foster learner autonomy (LA) in the classroom by integrating socio-constructivist principles with the concepts of self-directed learning (SDL) and self-regulated learning (SRL). The framework emphasizes that LA should be understood both as a learning process and as a personal capacity, leveraging the theoretical foundations laid by Vygotskian socio-cultural principles and Piagetian cognitive development The emphasis here lies on fostering LA in the 21st century "post-truth" classroom, where information literacy and critical thinking skills are more important than ever.

The analysis revealed some key takeaways. First, understanding the interplay between social interactions and individual cognitive development, as emphasized by socio-constructivism, is crucial for fostering LA. Second, SDL serves as the process that leads to the desired outcome of LA. By empowering learners to take control of their learning journeys through SDL practices, we pave the way for them to develop LA. Finally, SRL integrates metacognition for the metaliterate learner. Metacognitive skills honed through SRL practices like planning, monitoring, and evaluating learning are essential for navigating the ever-changing information landscape and fostering LA in the "post-truth" era. Additionally, this framework positions metaliteracy as the defining characteristic of learning in the 21st century. Metaliterate learners, equipped with metacognitive skills, are empowered to critically evaluate information, adapt to new technologies, and actively participate in knowledge construction.

Looking towards the future, research could build on this framework by exploring several areas. One area of inquiry could focus on effective pedagogical strategies.

How can teachers best facilitate the development of metacognitive skills and foster learner autonomy in the metaliteracy classroom? Another area of exploration could investigate learner agency and empowerment. How can we ensure that learners have the necessary agency and resources to take control of their learning journeys? Finally, developing valid and reliable methods to assess learner autonomy and metaliteracy skills remains a challenge. By addressing these questions and areas of future research, educators can create learning environments that nurture self-directed, critical thinkers who can thrive in the information age.

REFERENCES

Barnes, D. (2008). *Exploratory Talk for Learning*. https://doi.org/10.4135/9781446279526.n1

Barnes, D. R. (1976). *From Communication to Curriculum*. Penguin Education.

Bell, D. (1976). *Coming Post-industral Soc*. Basic Books.

Benson, P. (1996). Concepts of autonomy in language learning. *R. Pemberton, E. Li, W. Or, & H. Pierson. Taking Control. Autonomy in Language Learning*, 27–34.

Benson, P. (2013). *Teaching and Researching: Autonomy in Language Learning* (2nd ed.). Routledge. https://doi.org/10.4324/9781315833767

Boekaerts, M., Zeidner, M., & Pintrich, P. R. (1999). *Handbook of Self-Regulation*. Elsevier.

Bruner, J. (1985). The Role of Interaction Formats in Language Acquisition. In J. P. Forgas (Ed.), *Language and Social Situations* (pp. 31–46).Springer. https://doi.org/10.1007/978-1-4612-5074-6_2

Candy, P. C. (1991). *Self-direction for lifelong learning: A comprehensive guide to theory and practice* (1st ed). Jossey-Bass.

Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology*, *94*, S95–S120.

Cosnefroy, L., & Carré, P. (2014). Self-regulated and Self-directed Learning: Why Don't Some Neighbors Communicate ? *International Journal of Self-Directed Learning*, *11–2*(1–12). https://hal.parisnanterre.fr/hal-01410802

Dam, L., & Legenhausen, L. (2011). Explicit reflection, evaluation, and assessment in the autonomy classroom. *Innovation in Language Learning and Teaching*, *5*(2), 177–189. https://doi.org/10.1080/17501229.2011.577533

Delors, J. (1996). *Learning, the treasure within: Report to UNESCO of the International Commission on Education for the Twenty-first Century*. Unesco Publishing.

DeVries, R. (1997). Piaget's Social Theory. *Educational Researcher*, *26*(2), 4–17. https://doi.org/10.3102/0013189X026002004

du Toit-Brits, C., Blignaut, H., Mzuza, M. K., Olivier, J., Dhakulkar, A., Jagals, D., Bergamin, P., Wirth, K. R., Nuhfer, E. B., Watson, R., Fleisher, S. C., Bailey, R., Sebotsa, T., de Beer, J., Kriek, J., Sebatana, M. J., Dudu, W. T., Mahlaba, S. C., & Chahine, I. C. (2021). *Self-Directed Learning: An imperative for education in a complex society* (E. Mentz,D. Laubscher, & J. Olivier, Eds.). AOSIS. https://doi.org/10.4102/aosis.2021.BK279

Elfert, M. (2015). UNESCO, the Faure Report, the Delors Report, and the Political Utopia of Lifelong Learning. *European Journal of Education*, *50*(1), 88–100. https://doi.org/10.1111/ejed.12104

Faure, E., & UNESCO. (1972). *Learning to be: The world of education today and tomorrow*. UNESCO.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive developmental inquiry. *American Psychologist*, *34*(10), 906–911 https://doi.org/10.1037/0003-066X.34.10.906

Ford, J. G. (1991). Rogerian Self-Actualization: A Clarification of Meaning. *Journal of Humanistic Psychology*, *31*(2), 101–111. https://doi.org/10.1177/0022167891312011

Fukuda A. (2018a). Examining the Relationship Between Self-Regulated Learning and EFL Learners' Proficiency. **異文化コミュニケーション論集**, *16*, 17–31.

Fukuda, A. (2018b). The Japanese EFL Learners' Self-Regulated Language Learning and Proficiency. *Journal of Pan-Pacific Association of Applied Linguistics*, *22*(1), 65–87.

Gallimore, R., & Tharp, R. (1990). Teaching mind in society: Teaching, schooling, and literate discourse. In *Vygotsky and Education: Instructional Implications and Applications of Sociohistorical Psychology* (pp. 175–205). Cambridge University Press. https://doi.org/10.1017/CBO9781139173674.009

Garrison, D. R. (1997). Self-Directed Learning: Toward a Comprehensive Model. *Adult Education Quarterly*, *48*(1), 18–33. https://doi.org/10.1177/074171369704800103

Gonulal, T., & Loewen, S. (2018). Scaffolding Technique. In *The TESOL Encyclopedia of English Language Teaching* (pp. 1–5). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781118784235.eelt0180

Grow, G. O. (1991). Teaching Learners To Be Self-Directed. *Adult Education Quarterly*, *41*(3), 125–149. https://doi.org/10.1177/0001848191041003001

Hiemstra, R., & Brockett, R. (2012). Reframing the Meaning of Self-Directed Learning: AnUpdated Modeltt. *Adult Education Research Conference*.https://newprairiepress.org/aerc/2012/papers/22

Holec, H. (1981). *Autonomy and foreign language learning*. Pergamon Press.

Holec, H. (1996). Self-directed learning: An alternative form of training. *Language Teaching*,*29*(2), 89–93. https://doi.org/10.1017/S0261444800008387

Houtman, E. (2015). 'Mind-Blowing'": Fostering Self-Regulated Learning in Information Literacy Instruction. *Communications in Information Literacy*, *9*(1).https://doi.org/10.15760/comminfolit.2015.9.1.178

Jacobson, T., Mackey, T., & Olivier, J. (2021). Aligning Metaliteracy with Self-directed Learning to Expand Assessment Opportunities. *University Libraries Faculty Scholarship*. https://scholarsarchive.library.albany.edu/ulib_fac_scholar/169

Juklová, K., Jaborník, M., & Šlosrová, R. (2022). Supporting Learner Autonomy in the Context of Epistemic Development. *European Proceedings of International Conference on Education and Educational Psychology, ICEEPSY 2022: Education and Educational Psychology*. https://doi.org/10.15405/epiceepsy.22123.9

Kamii, C. (1984). Autonomy: The Aim of Education Envisioned by Piaget. *The Phi Delta Kappan*, *65*(6), 410–415.

Kamii, C., & Clark, F. B. (1993). Autonomy: The importance of a scientific theory in education reform. *Learning and Individual Differences*, *5*(4), 327–340. https://doi.org/10.1016/1041-6080(93)90016-L

Keenan, T., Evans, S., & Crowley, K. (2016). *An introduction to child development* (Third edition). SAGE. https://app.kortext.com/borrow/170045

Knowles, M. S. (1975). *Self-Directed Learning: A Guide for Learners and Teachers*. Association Press, 291 Broadway, New York, New York 10007 ($4.

Levykh, M. G. (2008). The Affective Establishment and Maintenance of Vygotsky?s Zone of Proximal Development. *Educational Theory*, *58*(1), 83–101. https://doi.org/10.1111/edth.2008.58.issue-1

Little, D. (1996). Learner Autonomy: Some Steps in the Evolution of Theory and Practice. In *TEANGA: The Irish Yearbook of Applied Linguistics*.https://eric.ed.gov/?id=ED414746

Little, D., Dam, L., & Legenhausen, L. (2017). Language Learner Autonomy: Theory, Practice and Research. In *Language Learner Autonomy*. Multilingual Matters. https://doi.org/10.21832/9781783098606

Loeng, S. (2020). Self-Directed Learning: A Core Concept in Adult Education. *Education Research International*, *2020*, e3816132. https://doi.org/10.1155/2020/3816132

Lyotard, J.-F. (1984). *The Postmodern Condition: A Report on Knowledge*. University of Minnesota Press.

Mackey, T. P., & Jacobson, T. E. (2014). *Metaliteracy: Reinventing Information Literacy to Empower Learners*. American Library Association.

Mackey, T. P., & Jacobson, T. E. (2019). *Metaliterate Learning for the Post-Truth World*. American Library Association.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, *50*(4), 370–396. https://doi.org/10.1037/h0054346

Maslow, A. H. (1954). *Motivation and personality* (First edition). Harper & Row, Publishers.http://swbplus.bsz-bw.de/bsz000741604inh.htm

Maslow, A. H. (1964). *Religions, Values, and Peak-experiences*. Ohio State University Press.

Mohammed, S., & Kinyo, L. (2020). Constructivist Theory as a Foundation for the Utilization of Digital Technology in the Lifelong Learning Process. *Turkish Online Journal of Distance Education*, *21*(4), 90–109.

Muijs, D., & Bokhove, C. (2020). Metacognition and Self-Regulation: Evidence Review. In *Education Endowment Foundation*. Education Endowment Foundation. https://eric.ed.gov/?id=ED612286

O'Connor, K. (2022). Constructivism, curriculum and the knowledge question: Tensions and challenges for higher education. *Studies in Higher Education*, *47*(2), 412–422. https://doi.org/10.1080/03075079.2020.1750585

Panadero, E. (2017). A Review of Self-regulated Learning: Six Models and Four Directions for Research. *Frontiers in Psychology*, *8*. https://doi.org/10.3389/fpsyg.2017.00422

Piaget, J. (1974). *To Understand Is to Invent*. Penguin Publishing Group.

Robertson, S., Burke, M., Olson-Charles, K., & Mueller, R. (2022). Metacognitive awareness for IL learning and growth: The development and validation of the Information Literacy Reflection Tool (ILRT). *Communications in Information Literacy*, *16*(2). https://doi.org/10.15760/comminfolit.2022.16.2.1

Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy*. Houghton Mifflin Company.

Schraw, G. (1998). Promoting general metacognitive awareness. *Instructional Science*, *26*(1), 113–125. https://doi.org/10.1023/A:1003044231033

Schultz, T. W. (1961). Investment in Human Capital. *The American Economic Review*, *51*(1)1–17.

Schunk, D. H., & Zimmerman, B. (2011). *Handbook of Self-Regulation of Learning and Performance*. Taylor & Francis.

Seker, M. (2016). The use of self-regulation strategies by foreign language learners and its role in language achievement. *Language Teaching Research*, *20*(5), 600–618. https://doi.org/10.1177/1362168815578550

Su, Y. (2010). The Learning Society: Two Justifications. *Australian Journal of Adult Learning*, *50*(1), 10–25.

Su, Y.-H. (2007). The learning society as itself: Lifelong learning, individualization of learning, and beyond education. *Studies in Continuing Education*, *29*(2), 195–206.https://doi.org/10.1080/01580370701403514

Vygotskiĭ, L. S. (1986). *Thought and Language: Мышление И Речь, Психологические Исследования*. MIT Press.

Vygotsky, L. S. (1978). *Mind in Society: Development of Higher Psychological Processes*. Harvard University Press. https://doi.org/10.2307/j.ctvjf9vz4

Wertsch, J. V. (1985). *Vygotsky and the social formation of mind* (pp. xiv, 262). Harvard University Press.

Wertsch, J. V. (1998). *Mind as action* (pp. xii, 203). Oxford University Press.

Wertsch, J. V. (2007). Mediation. In *The Cambridge companion to Vygotsky* (pp. 178–192). Cambridge University Press. https://doi.org/10.1017/CCOL0521831040.008

Zhang, D., & Zhang, L. J. (2019). *Metacognition and Self-Regulated Learning (SRL) in Second/Foreign Language Teaching*. https://doi.org/10.1007/978-3-319-58542-0_47-1

Zhou, S. A., & Hiver, P. (2022). The effect of self-regulated writing strategies on students' L2 writing engagement and disengagement behaviors. *System*, *106*, 102768. https://doi.org/10.1016/j.system.2022.102768

Zimmerman, B. J., & Risemberg, R. (1997). Chapter 4—Self-Regulatory Dimensions of Academic Learning and Motivation. In G. D. Phye (Ed.), *Handbook of Academic Learning* (pp. 105–125). Academic Press. https://doi.org/10.1016/B978-012554255-5/50005-3

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