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EMPOWERING HIGHER EDUCATION THROUGH SELF-DIRECTED LEARNING: FOSTERING 21ST-CENTURY SKILLS AND STUDENT ENGAGEMENT IN THE NEP 2020 FRAMEWORK

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RESEARCH ARTICLE

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Abstract

The National Education Policy 2020 envisages higher education as a means of developing 21st-century skills among students through learning autonomy. The self-directed learning (SDL) approach provides learning autonomy to the students, which plays a pivotal role in developing 21st-century skills. SDL is a student-centered approach where individuals take charge of their education by identifying knowledge gaps, setting goals, selecting resources, implementing strategies, and evaluating outcomes. Students' engagement, particularly in higher education, is critical for national development because it shapes a proficient human resource base. This theoretical study aims to elucidate the conceptual framework of SDL, highlighting the concept, dimensions, theories, and influence on student engagement. Additionally, the study seeks to delineate the advantages of SDL for higher education students. SDL skills enable learners to develop abilities in self-awareness, self-management, critical thinking, and life-long learning. By exploring these dimensions, the research contributes to understanding the dynamics between SDL and student engagement, as well as their implications for educational outcomes, national progress, and future research perspectives in this context.

Keywords: *Self-directed Learning; Learning Autonomy; Self-Regulated Learning; Student Engagement; Higher Education; NEP 2020*

Introduction

The National Education Policy 2020 (NEP 2020) defines the key objectives aimed at converting the education system to meet the demands of the 21st century. These objectives include aligning the system with contemporary educational goals, addressing existing gaps, and ensuring inclusive and equitable quality education. To achieve these goals, NEP 2020 introduces reforms across all education levels, emphasizing a holistic and multidisciplinary approach, integrating technology into learning, and recognizing the vital role of libraries in fostering knowledge-based societies (Nandi, 2020; Santra & Basu, 2023; Singh et al., 2023). The policy acknowledges the evolving nature of societal demands and the imperative for an adaptable education system (NEP 2020).

Kumar & Pandey (2022) point out that the aims of higher education have changed towards preparing students for the 21st-century world by transmitting digital literacy, critical thinking, problem-solving, communication, collaboration, and adaptability skills. Integrating these skills into the curriculum is significant for improving educational performance and employability (Khan et al., 2022). Recognizing this shift, NEP 2020 emphasizes the need to identify and prioritize the top skills required by 21st-century students (Imam et al., 2023). The role of higher education now extends beyond imparting knowledge to equipping students with essential skills for the digital workplace. SDL emerges as a key skill enabling individuals to adapt to this changing world.

The role of higher education is not only to impart knowledge among students, but also to develop the skills required for the digital workplace, and SDL has emerged as a key skill to adapt to this changing world. NEP 2020 emphasizes SDL as a skill or

empowerment for students to face the challenges of today's world. And this autonomous learning is part of SDL, which has emerged as an innovative learning method to prepare students to take responsibility for their learning. SDL involves students actively identifying knowledge gaps, setting goals, determining needed resources, selecting teaching methods, and critically evaluating outcomes. According to Alkan (2023), this teaching method places students at the center of learning and influences student ownership and autonomy in knowledge dissemination, as opposed to traditional teacher-cantered education. On the other hand, Khotimah 2022 notes that this education often integrates experiential learning by encouraging students to engage in activities that make their learning experiences more meaningful. Various digital platforms, such as YouTube videos, help students learn independently outside the classroom, which is very effective for self-directed student learning (Tyas, 2022). All around, SDL encourages autonomy, self-motivation, critical thinking, and independent learning ability, contributing positively to academic achievement in different backgrounds (Doo et al., 2023; Gao et al., 2023; Joa et al., 2023; Yang et al., 2022; Li et al., 2023).

This theoretical study aims to elucidate the conceptual framework of SDL, identify its dimensions, discuss related theories, and explore its significant impact on student engagement in higher education. Additionally, the study seeks to delineate the advantages of SDL for higher education students, especially for developing skills needed in the 21st century.

1. Conceptual Framework of SDL

1.1. Concept of SDL

SDL is a learning process where the learner himself manages all his learning processes and decides where, when, what, and how to learn. This approach actively empowers the learner, so that they become responsible for their learning goals and for managing the entire learning process. SDL has some basic principles, as Alkan (2023) mentions in his research: identifying problems in student learning; setting different goals based on that learning; deciding the learning method; implementing the method; determining the necessary materials; and finally evaluating the learning outcomes. In order to effectively develop this learning process, Gupta and Singh (2020) discuss several strategies that teachers use to increase flexibility and creativity in students' learning activities, such as problem-based learning, cooperative learning methods, and flipped classrooms.

Various studies have discussed the important characteristics and skills of SDL. Similarly, the presence of internal motivation in this type of student empowers them from goal setting to evaluation (Egorov & Zakharova, 2022). They are also known for their critical thinking abilities (Uus et al., 2022) and their ability to resist mental distractions and inhibit impulsive responses (Yarbrough & Hughes, 2022). Self-directed learners demonstrate a remarkable ability to manage their learning process and navigate different situations effectively (Shaala et al., 2018). Also, self-directed learners excel in managing their time efficiently, steering clear of procrastination (Morris, 2019), and exhibiting readiness for diverse learning environments (Li & Bonk, 2023). They capably handle stress and adapt to the demands of fast-paced, flexible learning modalities (Khiat, 2017). Intrinsic motivation, a keen sense of self-awareness, and a critical evaluation of available resources fuel their learning journey (Lemmetty & Collin, 2020). Overall, self-learners embody autonomy, purposefulness, and a growth-oriented mindset in their quest for knowledge and skill enhancement.

1.2. Dimensions of SDL

SDL includes several important dimensions. Primarily, it requires learners to undertake responsibility for their own learning journey, actively engaging in goal-setting and task selection (Kruszelnicki, 2020; Morris, 2020). Secondly, SDL asks for self-reflection and awareness of personal learning demands and progress (Lemmetty & Collin, 2020). According to Morris (2019), it promotes the development of critical thinking abilities, empowering learners to question and analyse information correctly. SDL emphasizes the significance of autonomy and independent decision-making (Zhu et al., 2022). And finally, SDL agrees closely with the concept of lifelong learning, encouraging learners to constantly seek advantages for individual and professional development. According to Garrison (1997), there are three dimensions of SDL: self-management, self-monitoring, and motivation.

A. Self-Management

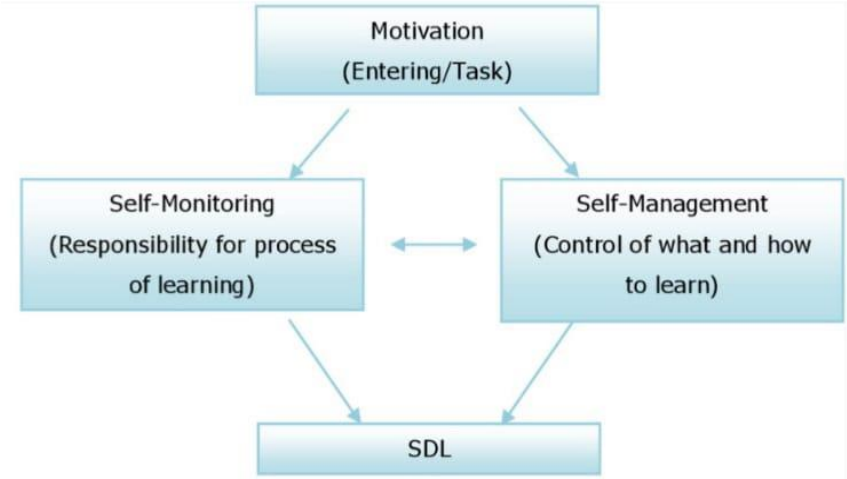
Task management issues include self-management, which focuses on the social and behavioral aspects of learning intentions, particularly the external activities associated with the learning process (Garrison, 1997). It refers to learners' ability to govern and control their own behaviors, emotions, and time efficiently. Self-management learners have several characteristics: they are motivated, manage their time perfectly, focus on activities, are goal-oriented, and make perfect decisions.

Self-management learning significantly influences personal and professional growth, fostering crucial skills for career development across diverse fields, including pedagogy (Dudnik, 2005). According to Arhipova & Kokina (2022), managers benefit from self-development, relying on effective planning, timing, and the seamless integration of learning, practice, and evaluation. Its frameworks empower leaders to guide their own learning, enhancing leadership capability and social capital within organizations (Gimson, 2022). For individuals with serious mental illnesses, personalized self-management learning is essential for a quality life and recovery support (Strong & Letts, 2021). In the domain of self-managing teams in software development, activities encompass adopting new roles, implementing technologies, assisting others' learning, and engaging in hobby projects (Hul, 2018).

B. Self-Monitoring

Self-monitoring included cognitive and metacognitive processes: monitoring the inventory of learning strategies as well as an awareness of an ability to think about our thinking (Garrison, 1997). Learners can plan and modify their thinking based on their learning objectives or activities. According to Magalhães et al. (2023), self-monitoring can assist learners in adjusting their thinking, cognition, feelings, and behavior, leading to better and faster achievement of learning goals, enhanced learning ability, and enhanced learning effectiveness. It offers advantages such as improved satisfaction, utilization of unlabeled data, efficient anomaly classification, and developing learning performance.

1. The figure shows the dimensions of SDL



[Garrison, D. R. (1997). Self-directed learning: Toward a comprehensive model. *Adult education quarterly*, *48*(1), 18-33]

B. Motivation

Motivation plays an important role in fulfilling efforts toward learning and achieving goals. To begin to understand the pervasive influence of motivational factors, we need to distinguish between the process of deciding to participate (entering motivation) and the effort required to stay on task and persist (task motivation). Entering motivation is the commitment to a specific goal and a specific task, and task motivation, on the other hand, is the tendency to focus on learning activities and goals and to stay in the same place (Garrison, 1997). Lectures, discussions, group work, and essays are effective learning methods that help motivate students to learn (Abrori, 2023). Active learning methods, collaborative work, and individual feedback also play a role in enhancing student engagement and learning effectiveness (Fraile-Jurado & Periáñez-Cuevas, 2023). Al-Ta'ani and Hamadneh (2023) suggest active learning strategies to increase student motivation for similar reasons. Agustin & Mu'is's (2023) study suggests leveraging the institution's resources for competition, rewards, and evaluation to enhance students' internal and external motivation while also creating a uniform environment that caters to their needs and interests.

1.3. Theories of SDL

The SDL strategy enables students to manage their own learning journey. Different theories follow SDL, and each of them provides a new perspective. One theory aligns SDL with adult learning principles and experiential learning, emphasizing the acquisition of skills for lifelong learning (Charokar & Dulloo, 2022). Another theory demonstrates connections between SDL, constructivism, learner-centered teaching or learning, and self-regulation (Charokar & Dulloo 2022). SDL is a comprehensive approach where learners independently conceptualize, design, execute, and evaluate their learning, employing strategies like motivation, awareness, planning, self-monitoring, and evaluation (Parkes, 2022). In essence, learners become autonomous in their educational pursuits. Furthermore, SDL encounters practical applications in diverse fields such as medical education, engineering, and computer science courses (Hsiao et al., 2021; Collier, 2023). In summary, SDL theories emphasize the importance of students taking responsibility for their learning and actively participating in SDL activities. The present study discusses two theories of SDL: self-regulated learning (SRL) and autonomous learning.

A. Self-regulated learning

Self-regulated learning (SRL) is the procedure wherein people handle cognitive, metacognitive, and motivational aspects of their learning journey. It involves goal setting, strategic planning, progress monitoring, and adaptive learning methods. The SRL theory empowers learners to control their learning by integrating psychological capacities with activity-related skills in

sociocultural contexts (Parveen et al., 2023). The process varies among individuals (Masaki, 2023) and includes defining tasks, making plans, employing and monitoring learning strategies, and reflecting on outcomes (Kuhlmann et al., 2023). Strategies like self-evaluation, goal setting, action planning, and outcome monitoring can enhance this ability or skill (Harahap, 2023). Many studies use a variety of methods, including self-reported questionnaires, think-aloud protocols, and microanalytic methods, to promote and assess SRL (Ye, 2023). SRL contributes to learners' development, improving learning effectiveness and efficiency (Ye, 2023). In higher education, SRL offers significant benefits, including encouraging active participation, goal setting, progress monitoring, and adaptability (Rahmawati et al., 2023). It positively influences academic development, enhancing behavior, engagement, and performance (Araújo & Nóbrega, 2023), while promoting independence and academic success (Huang et al., 2022). SRL strategies enhance learning efficiency, self-evaluation, self-regulation behavior, self-efficacy, learning gain, and satisfaction (Anthonysamy, 2022). However, challenges such as skill deficits upon university entry (Llacuna & Mason, 2022) and limited resources and guidance hinder SRL environments, necessitating university support for skill development and enhancement.

B. Autonomous learning

NEP 2020 highlights the concept of autonomous learning. This learning theory points out the significance of student autonomy, which includes self-reliance, information literacy, linguistic confidence, and learning strategy. It focuses on empowering learners to take control of their self-learning process and become SDLs. This theory offers the utilization of digital technologies, such as Google Form, Quizizz, Quizlet, Kahoot!, and Socrative, to develop learners' autonomy in the classroom (Pratiwi & Waluyo, 2023). Conversely, traditional learning theories frequently depend on teacher-centered methods, where students passively absorb information from teachers or textbooks. These approaches may not adequately promote learner autonomy and can hinder learning motivation. Autonomous learning theory aims to increase students' ability to actively engage, own ownership, and choose the learning procedure. According to Dries & Williams (2022), this learning process encourages students to apply knowledge in real-life situations and identify or develop their own preferences and actions. SRL and autonomous learning theory play an important role in practicing SDL in higher education. These theories provide valuable insight into how students can take ownership of their learning, navigate complex learning environments, and achieve better academic outcomes.

2. Concept of Student Engagement

Student engagement is about tying the active participation, involvement, and enthusiasm that students bring to their learning journey to mere attendance and on-time completion of work. It is not only limited to the presence of students on the educational premises or performing any educational work; it also includes the emotional, behavioral, and cognitive aspects of the students. A variety of elements in education support student engagement. Cinar et al. (2023) assert that individual-level factors like receptive vocabulary, attentional skills, motivation to learn, and externalizing behaviors, which are integral to student engagement, also link to SDL, thereby fostering positive engagement with educational institutions. Ahmed et al., 2022, found that self-efficacy, SDL, partners in learning, pedagogies, and transformative learning have a significant positive relationship with classroom engagement. Factors such as gender, education level, housing area, employment, language proficiency, cultural restrictions, class size, time constraints, course policies, instructor and student personalities, perception of peers, teaching style, student support, constructive feedback, and the application of theory to real-life situations influence student engagement in classroom activities, as Rohi & Muslim (2023) point out. Setting authentic and interactive tasks, incorporating social and emotional activities, and providing teacher support and encouragement can enhance student engagement in online learning (Samnidze et al., 2023). Various psychological components also affect student engagement in higher education. Li & Xue (2023) categorize these factors into promoting factors, which include positive emotion, positive learning behavior, positive teacher behavior, teacher-student relationship, partnership, learning and thinking ability, support of learning resources, individual and personality characteristics, and teaching factors. On the other hand, hindering factors include a lack of environmental support, negative student behavior, and negative teacher behavior (Roy et al., 2023). Additionally, studies have found that psychological hardiness positively influences student engagement, academic achievement, and prevents dropout (Slåtten et al., 2023). In summary, these psychological factors and SDL play an important role in planning student engagement within the higher education sector.

3. Exploring the relationship between SDL and student engagement

Each concept influences and supports the other, closely integrating SDL and student engagement. Students engaged are more likely to display the features of self-directed learners because they actively participate in their learning, look for chances for development, and manage their personal learning. SDL provides learners with the autonomy to explore their interests outside of the classroom, participate in significant educational opportunities, and control their personal academic progress, thereby increasing student engagement.

High levels of student engagement, on the other hand, enable learners to build SDL skills because they are more determined, highly concentrated, and creative in their ongoing search for knowledge. Scholars have established that SDL capabilities such as information literacy, self-management, interest in learning, and self-control positively impact student engagement (Li et al., 2023), (Arzeen et al., 2023), and (Sun et al., 2023). Aslam et al. (2023) and Kunjukunju et al. (2022) found that these skills

enhance students' learning engagement and readiness for e-learning environments. It is evident that SDL abilities significantly contribute to enhancing student engagement. Studies consistently indicate that fostering SDL skills can lead to improved student engagement in learning environments.

4. Advantages of SDL for Higher Education Students

SDL provides several advantages and benefits for higher education students, contributing to their overall academic success and personal development. The following are the key advantages that SDL offers in higher education:

Increased Motivation

SDL has several advantages in terms of increased motivation. Alkan (2023) suggests that SDL empowers students to maintain their learning and make decisions about what, how, where, and when to learn. This sense of autonomy and ability to manage their learning process can enhance motivation and engagement. Furthermore, the use of AI in SDL has the potential to benefit students by increasing motivation, providing meaningful experiences, and improving efficiency (Yildirim et al., 2023). Studies have demonstrated that incorporating SDL into entrepreneurship courses enhances students' entrepreneurial capabilities and motivation (Alizadeh & Cowie, 2022). All things considered, SDL allows learners to take ownership of their learning, which can lead to increased motivation and better learning outcomes.

Enhanced Autonomy

Implementing SDL positively impacts autonomy development in higher education students (Hutasuhut et al., 2023). It promotes self-directedness (Kinsella et al., 2023), and it helps students navigate academia and prepare them for professional life (Seherrie, 2023). Autonomy regulates thoughts and behaviors, fostering existential agency (Dutta et al., 2023). Student advisers are crucial in enhancing autonomy (El-Amin, 2023). SDL strategies enhance skills like independent learning and responsibility awareness, promoting autonomy development in higher education.

Critical Thinking Abilities

Through self-assessment, self-reflection, and peer assessment, students are able to critically identify their own behavior and identify their learning needs. Also, by applying such knowledge, students can evaluate a topic or piece of information, analyze concepts, and apply them to real life, enabling them to develop a holistic learning experience. SDL plays an important role in developing critical thinking skills, as it requires the self-directed, independent, and reflective learners that SDL provides. According to Chukwunemerem's (2023) study, SDL fulfills an essential task in growing critical thinking.

Flexible Learning

SDL allows people to grow their abilities at their own pace, permitting flexibility in learning style, approach, and program choices. This flexibility allows students to understand difficult matters and keep up their comprehension.

Lifelong Learning

SDL enables students to become lifelong learners by supporting their knowledge of a fast-changing world and adapting to various changing learning environments (Charokar & Dulloo, 2022). Hamlin (2020) stated that adult learning and experiential learning principles help students exhibit lifelong learning. When they acquire this skill, they can take responsibility for their own learning, encourage more independence, and also develop cognitive, emotional, and functional skills (Oishi, 2020). Mastery of SDL is key for continual knowledge acquisition (Salleh et al., 2019), with social networking sites mediating its impact (Geduld, 2019). Fostering SDL skills empowers students to overcome academic challenges and embrace lifelong learning.

Personalized Learning Experience

SDL significantly boosts the effectiveness of personalized learning experiences for students. Studies indicate that integrating personalized mobile learning resources (Fitzgerald et al., 2022) or employing personalized learning with self-regulated online learning (Ingkavara et al., 2022) enhances learning outcomes. Tailored to individual strengths and interests, personalized learning environments amplify self-determination, intrinsic motivation, and engagement (Pandey, 2021). Allowing students control over their learning paths and authentic assignments based on cognitive styles fosters autonomy and competence (Alamri, 2019). Moreover, SDL helps with self-evaluation, goal setting, and time management, which are significant for learning intention (Abedi et al., 2021). The integration of personalized learning and SDL empowers students to own their learning, leading to improved outcomes and motivation.

Responsibility and Accountability

SDL positively influences individual responsibility and accountability by encouraging initiative in determining learning needs and identifying necessary skills (Belkina et al., 2022). Promoting autonomy and flexibility, SDL allows individuals to set personalized learning goals and timelines (Briede & Popova, 2020). Self-assessment is crucial in SDL, with individuals taking

responsibility for evaluating their learning outcomes (Siminica & Dumitru, 2013). In summary, SDL cultivates accountability and ownership, empowering individuals to guide their learning journey for desired outcomes (Yarbrough & Hughes, 2022).

SDL at the higher education level enables students to become active participants in their learning, preparing them with the skills, mindset, and confidence needed to follow in an increasingly complicated and dynamic world.

Conclusion

NEP 2020 aims to modernize education by emphasizing 21st-century skills. SDL should support this vision by fostering autonomy and critical thinking. SDL is critical to students' engagement and promotes their personal growth, allowing them to manage their learning journey. It encourages self-management, self-motivation, and self-monitoring, all vital for academic success. SDL benefits from theories, including SRL, that support its use for different academic content. This perspective helps individuals actively participate in knowledge, increasing their flexibility and ownership in the acquisition of educational knowledge. Student engagement and SDL play an important role in advanced training, and many factors influence instructional fulfilment, including psychology and academic achievement.

Despite its benefits, SDL faces difficulties in traditional educational systems due to strict structures and outdated curricula. The favourable results of SDL depend on learner motivation, background, and resource accessibility. Appropriate teacher training and encouragement or assistance are also essential, but these require collaboration among educators, policymakers, and stakeholders. Overcoming the barriers necessitates significant investment in teacher development and institutional innovation to ensure long-term SDL realization.

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