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IMPLEMENTATION OF STUDENT-CENTRED LEARNING MODEL TO IMPROVE INDEPENDENCE AND 21ST CENTURY SKILLS

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Abstract

This study aims to examine in depth the implementation of student-centred learning as a strategy to improve learning independence and 21st century skills. The method used is a literature review with a qualitative descriptive approach, utilising various recent academic sources such as scientific journals, books, and relevant conference proceedings. The findings indicate that student-centred learning is effective in developing independence by granting students autonomy to set goals, choose strategies, and evaluate their own learning. Additionally, this model has proven to support the mastery of 21st-century skills, such as critical thinking, creativity, communication, collaboration, digital literacy, and problem-solving abilities. Factors contributing to the successful implementation include the role of teachers as facilitators, the use of educational technology, and a collaborative and contextual learning environment. However, challenges remain, particularly regarding teacher readiness, resources, and student readiness differences. Overall, the implementation of student-centred learning is considered relevant to the demands of modern education and capable of making a significant contribution to the development of competent and adaptive independent learners in the global era.

Keywords: student-centred learning, learning independence, 21st-century skills, digital literacy, collaboration.

Introduction

The 21st century is characterised by rapid changes in various aspects of life, including technology, economy, society, and culture. The development of digital technology, globalisation, and the complexity of world issues require education graduates to have skills that go beyond academic knowledge. Students are expected to possess critical thinking skills, creativity, the ability to collaborate effectively, and communicate well in various contexts (Ridwan et al., 2025) ; (Aslan & Azizan, 2025) . This indicates the need for educational transformation that not only focuses on the transfer

of knowledge from teachers to students, but also equips students with the ability to manage themselves, make independent decisions, and adapt to dynamic situations (Nasution & Aslan, 2025) ; (Sampe & Aslan, 2025) .

One approach considered effective in addressing these challenges is the student-centred learning model. This model contrasts with the old teacher-centred learning paradigm, which tends to place students in a passive role as recipients of material. Instead, student-centred learning places learners as active subjects who manage their own learning process, with teachers acting as facilitators, motivators, and guides (Sukirman, 2016) . Thus, students are encouraged to develop initiative, independence, and problem-solving skills, which form the foundation of 21st-century skills.

Self-directed learning is one of the main focuses in student-centred learning. This independence includes the ability to set learning goals, choose appropriate strategies, monitor learning progress, and evaluate results. According to several studies, students with high levels of self-directed learning are better equipped to adapt to academic and non-academic challenges in the future. Self-directed learning is also positively correlated with intrinsic motivation, personal responsibility, and self-confidence—key factors for meeting the demands of 21st-century competencies (Susilowati, 2015) . In addition to independence, 21st-century skills such as technological literacy, information literacy, higher-order thinking skills, collaboration, and communication have become prerequisites for competing in an increasingly complex workplace and social life. Various educational institutions and international organisations such as UNESCO and the Partnership for 21st Century Skills (P21) have emphasised the importance of integrating these skills into curricula and learning strategies. Student-centred learning models are considered one of the strategic pathways to ensure these skills develop optimally (Alghasab et al., 2019) .

The implementation of student-centred learning models requires a shift in the role of teachers from mere conveyors of information to facilitators who help students construct knowledge based on experience and interaction. This shift is not without challenges. Obstacles may arise from teacher readiness, student learning habits that still rely on direct instruction, limited resources, and a dense curriculum. However, a number of studies indicate that with the right implementation strategies, this model has been proven to increase student engagement, learning outcomes, and readiness for the workforce (Safitri & Saputra, 2024) .

Previous studies indicate that the implementation of student-centred learning models can facilitate the development of metacognitive skills, reflective thinking abilities, and mastery of context-based material. This occurs because students are actively involved in decision-making regarding their learning process, including selecting topics, methods, and relevant learning resources (Nursaya'bani et al., 2025) . This active participation fosters personal responsibility and collaboration with peers, which are two important aspects in the development of social and professional skills (Rahayu, 2023) .

From a pedagogical perspective, the implementation of student-centred learning aligns with constructivist theory, which states that knowledge is actively constructed by learners through direct experiences and interactions with their environment. This differs from the traditional approach, which views knowledge as something transferred from the teacher to the student in a relatively static form (Takarini & Wulandari, 2022) . In a constructivist context, teachers play a role in creating a learning environment that is rich in resources, challenges, and opportunities for collaboration, enabling students to build meaningful understanding.

In the Indonesian context (or similar Southeast Asian regions), this transformation is relevant given the demands of the Merdeka Curriculum, which emphasizes project-based learning, collaboration, and differentiation. This policy places students as the primary drivers of learning, aligning with the principles of student-centred learning (Abdullah & Munawwaroh, 2024) . Therefore, a literature review on the implementation of this model is not only academically relevant but also policy-relevant, as it can provide insights for improving national education practices.

Despite its many advantages, the student-centred learning model is not without implementation challenges, especially in schools or institutions that are not yet familiar with this approach. Some common obstacles include teacher resistance to changes in teaching methods, lack of professional training, and limited access to supporting technology. Additionally, differences in students' socio-economic backgrounds can influence their readiness for independent learning. Therefore, literature reviews that discuss implementation and supporting or hindering factors are crucial.

Research Method

This study employs a descriptive qualitative literature review method to analyse the concepts, characteristics, and implementation of student-centred learning models and their relationship with learning independence and 21st-century skills. Data sources were obtained from various academic literature such as books, national and international scientific journals, conference proceedings, and relevant research reports published in the last ten years to ensure the novelty of the information (Eliyah & Aslan, 2025). The data collection process was carried out through searches of academic databases such as Google Scholar, ERIC, and Scopus using keywords related to the research topic. The collected data were selected based on relevance and credibility, then analysed using content analysis techniques to identify main themes, similarities, differences, and important findings from each literature. The results of this analysis were synthesised to address the research questions and provide a comprehensive overview of the effectiveness of implementing student-centred learning models in enhancing independence and 21st-century skills.

Results and Discussion

Student-Centred Learning Model

Student-centred learning is an educational approach that positions students as the centre of the entire learning process. This approach gives them an active role in determining what is learned, how it is learned, and when the process takes place. ; (Rozikin et al., 2024) . Students act as managers of their own learning, while teachers function as facilitators, mentors, and motivators who help explore individual potential while guiding the process of knowledge construction based on students' experiences (Abdullah & Munawwaroh, 2024) .

Philosophically, this concept is rooted in constructivist theory, which emphasises that learning occurs when learners actively construct meaning and knowledge from new experiences that are connected to prior knowledge. In this model, learning is no longer merely a process of transferring information from teachers to students, but becomes a meaningful experience involving exploration, social interaction, and self-reflection (Ariyanto et al., 2020) .

Student-centred learning has distinctive characteristics, including active student participation, a flexible curriculum that can adapt to individual needs, collaboration among students, and personalised feedback. Students are given the freedom to choose learning paths that suit their learning styles, interests, and pace, making the learning process more contextual and relevant (Astutik & Hariyati, 2021) .

The roles of students and teachers undergo significant shifts. Students become decision-makers in their own learning process, while teachers play a role in designing a conducive learning environment, providing resources, facilitating discussions, and offering strategic guidance. Teachers also play a role in developing students' metacognitive skills so that they can reflect on their learning process (Martini & Arifin, 2025) .

The application of this model provides many benefits, including increasing student motivation and engagement, enabling more personalised learning, and honing critical thinking, problem-solving, collaboration, and communication skills that are essential in the 21st century. Knowledge retention also increases because the learning experience is built on the basis of students' interests and active participation (Sahabuddin & Saharuddin, 2023) .

This approach naturally encourages the growth of independent learning. Students learn to set goals, choose effective strategies, monitor progress, and evaluate results independently. This process produces lifelong learners who are able to adapt to various situations and new challenges (Mantau & Talango, 2023) .

Student-centred learning also enables the creation of personalised learning pathways. Materials, methods, and assessments can be tailored to each student's strengths, weaknesses, and interests, making the learning process more relevant and empowering. Collaboration is a key element in this approach. Through group work,

discussions, and collaborative projects, students develop social skills, shared responsibility, and a broader perspective. Interaction with peers helps them share perspectives and strengthen their understanding of concepts (Indrawati, 2023) .

In practice, this model often adopts an inquiry-based approach, where students are encouraged to ask questions, explore, and find answers on their own through direct experience. This type of experiential learning makes the material more meaningful and requires deeper cognitive engagement (Nurhadi & Fauzi, 2023) .

The curriculum in student-centred learning is adaptive to needs and contexts. Teachers and students can jointly determine the material to be studied, the methods used, and the most effective forms of evaluation. This flexibility makes the learning process more responsive to the times and the needs of learners (Sitopu et al., 2024) ; (Guna et al., 2024) .

However, its implementation is not without challenges. Teacher readiness, limited facilities, differences in students' learning abilities, and resistance to change can be obstacles. Student-centred learning requires adequate system support, including teacher training and supporting infrastructure.

Teacher professional development is a key factor in success. Teachers need to master facilitation strategies, constructive feedback techniques, and skills in managing dynamic classrooms with diverse learning styles. Without this readiness, the goals of student-centred learning are difficult to achieve optimally (Nurhadi & Fauzi, 2023).

Assessment in this approach views the process as equally important as the final outcome. Teachers use formative assessment and personalised feedback to help students understand their progress, reflect on their achievement of objectives, and identify necessary improvement steps (Syahputra & Hamdani, 2023) .

The relevance of student-centred learning models to 21st-century skills is clear. By providing space for innovation, critical thinking, effective communication, collaboration, and digital literacy, this model prepares students to become independent, creative individuals who are ready to face the complexities of the modern world. In the current educational context, student-centred learning is not merely a methodological choice but a strategic necessity to ensure that learners are able to compete in the global era.

The Relationship Between Student-Centred Learning Models and Increased Independence and 21st Century Skills

The relationship between student-centred learning models and the improvement of independence and 21st-century skills can be understood through various interrelated educational principles and learning outcomes. Student-centred learning places learners as active agents in their educational journey, fostering independence by encouraging them to set goals, choose strategies, and evaluate progress. This independence fosters self-regulation and intrinsic motivation, which are

the cornerstones of self-directed learning (Putra, 2022) . When students are actively involved in constructing knowledge, they develop critical thinking skills that are essential for analysing and solving complex problems, which are at the core of 21st-century competencies (Jannah, 2023) .

Student-centred learning approaches also emphasise a collaborative learning environment where students work together, share ideas, and communicate effectively. Through such social interactions, they hone their communication and teamwork skills, which are essential attributes in an interconnected global society (Iksal et al., 2024) ; (Fawait et al., 2024) . Participation in group projects and discussions also fosters creativity, as students are exposed to diverse perspectives and encouraged to innovate within a collaborative framework. This balance between independence and collaboration reflects the needs of modern education, which demands self-directed learners who are still capable of working effectively with others (Khawani et al., 2021) .

The development of digital literacy is also closely related to student-centred learning. When students use various digital tools and resources to research, create, and present knowledge, they acquire the technological skills needed in the digital age. Direct engagement with technology in a self-guided learning context strengthens their ability to critically evaluate information, use digital platforms skilfully, and adapt to rapid technological changes (Aisyah, 2022) . Thus, student-centred learning supports digital literacy not only as a technical skill but also as part of a broader process of independent learning.

Student-centred learning also fosters metacognitive skills by encouraging students to reflect on their thinking processes, learning strategies, and outcomes. This reflection is important for developing self-awareness and the ability to adjust learning techniques, which enhances the capacity for independent learning amid changing contexts. The ability to think about one's own learning process shapes students into lifelong learners—a skill that is essential in the 21st century, where continuous knowledge renewal is a necessity. This metacognitive dimension is closely related to independence and higher-order thinking skills (Prasetyo, 2022) .

The autonomy inherent in student-centred learning also often results in increased personal responsibility. When students are given the opportunity to make learning choices, they tend to develop a stronger sense of ownership and accountability for the learning process. This sense of responsibility motivates sustained engagement and perseverance in completing tasks. It also shapes them into proactive problem solvers and decision makers who are able to face complexities in academic, professional, and social domains (Suryani, 2021) .

The integration of real-world contexts in student-centred learning reinforces the relevance and application of 21st-century skills. By engaging in authentic tasks that mimic real-life challenges, students practise critical thinking, creativity, communication, and meaningful collaboration. This type of experience-based learning also increases

independence because it requires initiative and independent problem-solving skills. The meaningfulness of learning tasks increases motivation, deepens understanding, and better prepares students for future roles (Suhaimi & Permatasari, 2021) .

A student-centred learning environment is flexible and adaptive to individual needs, enabling personalisation in the pace, style, and content of learning. This personalised approach values and builds upon prior knowledge and experience, supporting different pathways to independence and skill attainment. As students engage in personalised learning journeys, they become increasingly proficient in self-assessment and reflection, which ultimately strengthens their independence and mastery of essential skills (Hardjo et al., 2019) .

Challenges remain in linking student-centred approaches with the development of independence and 21st-century skills, such as differences in individual learning readiness and teacher readiness. However, research indicates that when implemented effectively and supported by adequate resources, student-centred learning can create an environment where skills for autonomous learning and complex problem-solving develop gradually. Professional development for teachers is a key factor in guiding and providing appropriate scaffolding to optimise this process (Abe, 2020) .

Feedback practices and assessment in student-centred learning also support the strengthening of independence and skills. Formative assessment, self-evaluation, and peer feedback encourage students to reflect on their progress and adjust their learning strategies independently. This approach fosters a growth mindset and resilience, which strengthen the critical thinking and self-regulation skills needed for mastering 21st-century competencies (Wahyuni, 2020) .

Increased engagement and motivation resulting from the implementation of student-centred learning contribute directly to deepening the learning process and mastery of skills. When students find meaning and relevance in their learning experiences, they tend to be more persistent and able to apply 21st-century skills effectively. This motivational aspect forms the foundation for the successful development of independence and complex skills required in various modern contexts (Fitriana & Andika, 2022) .

The collaborative dimension of student-centred learning also develops broader interpersonal and cross-cultural skills, broadens students' perspectives, and enhances empathy. These social-emotional skills complement cognitive skills, enabling learners to navigate diverse environments and work effectively in cross-cultural teams—something that is increasingly important for 21st-century readiness (Alfaeni & Asbari, 2023) .

The integration of technology within a student-centred learning framework opens up extensive opportunities for innovation in learning experiences and expands independence beyond the classroom. Digital platforms facilitate personalised learning pathways, real-time feedback, remote collaboration, and access to diverse knowledge

sources. All of these develop digital fluency as well as independence and other essential skills (Syakhrani & Aslan, 2024) ; (Irwan et al., 2024) .

Thus, student-centred learning models promote a holistic development pathway where independence and 21st-century skills reinforce one another. Active engagement, autonomy, collaboration, reflection, and technology use converge to prepare students not only to acquire knowledge but also to apply it creatively, communicate effectively, and adapt continuously in a rapidly changing world. This relationship underscores the importance of implementing student-centred learning practices as a fundamental element of modern educational reform and lifelong learning.

Conclusion

Based on the results of the literature review, student-centred learning models have been proven to play a significant role in fostering learning independence while developing 21st-century skills, including critical thinking, creativity, collaboration, communication, and digital literacy. By placing students as active subjects in the learning process, this approach encourages them to take responsibility for their own learning goals, strategies, and evaluation. This process trains students to manage themselves, have intrinsic motivation, and be able to seek and process information independently, all of which are important foundations for lifelong learners.

Additionally, student-centred learning facilitates collaboration and contextual learning through project-based activities, inquiry, and real-life experiences. A collaborative learning environment not only strengthens social-emotional skills such as empathy and cross-cultural cooperation but also supports creative and innovative problem-solving. The integration of technology in this model further expands opportunities for independent learning, enables personalisation of materials, and enhances digital literacy, which is crucial in today's globalised world.

Overall, the implementation of a student-centred learning model is a strategy aligned with the demands of 21st-century education. Its success depends heavily on the readiness of teachers as facilitators, adequate learning environment support, and the availability of relevant resources. With consistent and adaptive implementation, this model can not only improve the quality of learning outcomes but also equip students with the skills and attitudes necessary to face future challenges independently, productively, and with high competitiveness.

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