

The Significance and Application of Creativity Skills for Special Educational Needs (SEN) Students with Learning Disabilities in the 21st Century Learning

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| Article Info | ABSTRACT |
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| <p>Article history: Received: 1 Jan 2023 Revised: 2 Jan 2023 Accepted: 26 March 2023 Published: 1 April 2023</p> <p>Keywords: 21st Century Learning Creativity Skills Special Educational Needs (SEN) Students with Learning Disabilities</p> <p>OPEN  ACCESS</p> | <p>21st Century Learning is a new turning point in the world of education as it is seen to meet the needs of today's education. The emergence of Industrial Revolution 4.0 is driving transformation in the education system in Malaysia. Thus, cultivating the element of creativity among SEN students with learning disabilities is a productive venture in line with the aim of National Education Philosophy. This review paper aims to explain the significance and application of creativity skills for SEN students with learning disabilities in 21st Century Learning. This paper also discusses the literature review on creativity, SEN students with learning disabilities, and 21st Century Learning. The methodology used in this study is a review of literature from previous studies. As a result, this study presents a conceptual framework for the application of creativity skills in learning and facilitation for SEN students with learning disabilities. In addition, the impact of this study provides a literature review on creativity and 21st Century Learning to future researchers. This is an effort to improve the quality of teaching in 21st Century Learning. The results found that teachers should strive to improve creativity in effective learning and facilitation. Therefore, being sensitive to all changes in education must be emphasized among teachers in the 21st century.</p> |

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INTRODUCTION

The emergence of Industrial Revolution 4.0 following the rapid development of technology is driving transformation in the education system in Malaysia. Changes in the national education system are in line with the focus on the concept of 21st Century Learning in order to strive and produce excellent human capital as aimed in the National Education Philosophy (Adibah & Hafizhah, 2021). 21st Century Learning has four main skills or known as the 4C framework including creativity, critical thinking, collaboration, and communication (Dora Henry & Zamri, 2021; Sabri et al., 2020; Norazlin & Rahaimah, 2019; Norfarahi et al., 2020; Adibah & Hafizhah, 2021). Cultivating 21st Century Learning skills among the current generation requires the role of all parties and at the school level, especially teachers are responsible for carrying out this task in realizing the goals of the Malaysian Education Development Plan (MEDP) 2013-2025 to achieve the best results (Norazlin & Rahaimah, 2019). Therefore, the process of change in the education sector requires its citizens, especially teachers and students, to face the implementation of 21st Century Learning, which is through teaching and learning or now better known as learning and facilitation.

Furthermore, the Ministry of Education (MOE) Malaysia emphasizes preparing students as the main source of the nation's human capital for 21st Century Learning with the aim of producing a creative and innovative workforce as embedded in MEDP (2013-2025). However, aspects such as learning styles, and ways of accepting learning of each SEN student with learning disabilities in the class are different and are influenced by the level of ability such as thinking styles and personality that include creativity, attitude, values, and social (Norfarahi et al., 2020). Therefore, the learning pedagogy used needs to be examined by teachers in addition to taking creative and innovative actions in line with the 21st Century Learning approach. Hence, teaching and learning for both normal students and SEN students with learning disabilities can be implemented in a planned, good, and more effective way (Azman et al., 2021). However, SEN students with learning disabilities need a special curriculum to develop their independent potential and improve the quality of being students at the same time special education teachers should plan lessons systematically and according to the needs of students (Rubiyani et al., 2020). Therefore, this review paper discusses the significance and application of creativity skills which is one of the main skills that must acquire by SEN students with learning disabilities in 21st Century Learning.

LITERATURE REVIEW

The literature review includes the definition of Creativity, SEN Students with Learning Disabilities, and 21st Century Learning.

CREATIVITY

Creativity is identified as an ability (Sugita et al., 2021). Creativity is the ability to use imagination to collect, digest and generate ideas or create something new or original through inspiration or a combination of ideas (Hazni et al., 2019). Creativity skills are the ability or capability to produce something new and useful (Shen et al., 2021). Moreover, creativity is producing a work that has 'novelty' or has new elements in the work as well as original ideas, not expected by others and appropriate (Zhou Kai, 2018). On the other hand, creativity skills can improve academic performance and develop children's talents as well as build innovative thinking processes (UNICEF, 2015). Nowadays, creativity skills are no longer optional skills whereas creativity skills become a necessity for the younger generation (Agnoli et al., 2018). Apart from that, creativity is an important skill to solve a problem creatively and innovatively in order to achieve the Sustainable Development Goals (SDGs) set by the United Nations (UNESCO, 2015). Therefore, creativity is an important element to cultivate among SEN students with learning disabilities to generate ideas and solve problems creatively in this 21st century.

In addition, Ida Puteri (2021) explained that creativity is an ability to think and act, not based on normal logic because logic is “evaluation” and requires creative and analytical thinking. Generally, the element of creativity is related to the ability to create something new, and in accordance, the country needs creative human capital to be able to contribute and generate quality ideas, thoughts, and work results to be competitive with foreign countries (Norfarahi et al., 2020). Therefore, the current education system focuses on the importance of creativity skills in the human capital development process for the current generation and the concept of these skills includes four characteristics of creativity, namely; 1) Strategy, 2) Creation process, 3) Imaginative ideas, and 4) Environment (Adibah & Hafizhah, 2021). The creativity skills in the context of this concept paper refer to creativity skills as defined by MOE Malaysia and this skill is one of the skills in 21st Century Learning that can increase the potential of students so that they can become creative human capital and ultimately be able to contribute to the development of the country.

SPECIAL EDUCATIONAL NEEDS (SEN) STUDENTS WITH LEARNING DISABILITIES

Learning disabilities refer to a number of disorders that may affect the organization, acquisition, retention, understanding, or use of verbal or nonverbal information (Learning Disabilities Association of Canada, 2017). According to Law on Individuals with Disabilities Education Act (IDEA, 2004), learning problems occur in one or more problems in basic psychological processes in writing or spoken language. These disorders affect learning in individuals with disabilities and otherwise display at least average abilities essential for thinking and reasoning. Besides, a learning disability is retardation, disorder, or delayed development in any one or more of the processes of speech, language, reading, spelling, writing, or arithmetic. Therefore, learning disabilities may cause impairments in one or more processes related to perceiving, thinking, remembering, or learning. These include, but are not limited to language processing, phonological processing, visual-spatial processing, processing speed, memory and attention, and executive functions. Hence, SEN students with learning disabilities have problems receiving information through their senses. Mostly, they confronted difficulties in processing the information accurately.

Pursuant to the Education Act 1996, Education (Special Education) Regulations Part 3, “Students with Special Needs” means a student certified by a medical practitioner, optician, audiologist, or psychologist as a student with (1) visual impairment, (2) hearing impairment, (3) speech impairment, (4) physical disabilities, (5) learning difficulties or a combination of any disabilities and problems faced by students with SEN. According to the Special Education Code of Practice (2014) published by the Special Education Division, Ministry of Education Malaysia, SEN students with learning disabilities are defined as students with brain intelligence that is not consistent with their biological age. Subsequently, the Department of people with disabilities and social welfare defines learning disabilities as brain intelligence that is inconsistent with its biological age (Azman et al., 2021). There are six categories of SEN students with learning disabilities namely; (1) Late Global Development, (2) Down Syndrome, (3) Intellectual Disability and conditions that affect individual learning ability such as (4) Autism, (5) Attention Deficit Hyperactivity Disorder (ADHD) and (6) Specific Learning Difficulties such as dyslexia, dyscalculia, and dysgraphia.

SEN students with learning disabilities require special education in order not to miss out on receiving the existing education system along with students in the mainstream as provided by the MOE Malaysia (Kama, 2019). These students face challenges in learning problems but they are unique and has different level of ability based on cognitive, physical, and behavioral aspects (Rubiyanı et al., 2020). Therefore, there is a necessity to design specific curricula or modules to teach them with various approaches or strategies.

21st CENTURY LEARNING

The need to provide equal education based on the needs of the next generation of students 21st century is often expressed by education experts. This is because progress in the field of technology and the dissemination of

information has changed the education policy in Malaysia. This point explains that the teaching and facilitation method practiced by teachers must be in line with the development of technology to be able to give the education needed by today's generation. 21st Century Learning was implemented nationwide in 2014 by the Ministry of Education Malaysia. Generally, the 21st Century Learning focuses on a student-centered approach. The education leaders and policymakers refer to the 21st Century Education Framework which is introduced by the Partnership for 21st Century Skills organization as a guideline to implement the 21st Century Learning. This organization designed a 21st Century Education Framework that covers 18 different skills to prepare students with 21st century skills. This framework highlight 4C elements namely: (1) Creativity, (2) Critical thinking, (3) Collaboration, and (4) Communication which is very important in the 21st century. To realize the aspirations of 21st Century Learning, teachers need to apply the 4C elements in teaching and learning to produce students' capability to compete on the global stage (Ministry of Education Malaysia, 2017).

(1) Creativity

Creativity in 21st Century Learning is about producing something unique and 'thinking outside of the box'. Creativity is often associated with new ideas and innovation. The notion of creativity can be expanded to include the exchange of ideas, learning how to inquire, and the collection of ideas for future use. Teachers can encourage students to argue about ideas and give views and ideas. The effectiveness of 21st Century Learning will be seen when it produces students who can criticize ideas and provide foresight.

(2) Critical thinking

Critical thinking skills are an individual's ability to analyze information and offer solutions to problems. Additionally, the British Council (2016) has defined critical thinking as self-directed thinking that produces new and innovative ideas that can solve problems. These critical thinking skills are very important skills to face challenges in the 21st century. Based on the opinion of the National Education Association (2010), students who think critically need to have several important characteristics. Students who think critically have the ability to use various forms of reasoning such as inductive and deductive that are appropriate to the situation. Students are also able to analyze and understand the interaction between components in a complex system. Next, students are also able to analyze and evaluate evidence, arguments, claims, and positions. Students are also able to analyze and evaluate from different points of view. Students are also able to synthesize and give meaning to information. In addition, students who think critically can interpret information and draw conclusions based on the results of the analysis. In addition, students are also able to make critical reflections on the learning experience and the processes involved.

(3) Collaboration

Collaborative elements in 21st Century Learning refer to the cooperation of teachers and students involved processing and exchange of ideas and knowledge between students. The class atmosphere collaborative allows the application of creativity and positive values of students and can strengthen relationships among them. Acceptance of the teacher with the existing condition of the student will reduce the interaction gap. Critical thinking is practical when the teacher frees students of this category to sprout ideas without restricting students' creative ideas. Students are trained for high-level thinking such as applying, analyzing, evaluating, and creating something. The teacher, on the other hand, acts as an encourager so that students can debate ideas without hesitation.

(4) Communication

The communication elements found in this learning have focused on the occurrence of teacher-student interaction and student-student interaction. However, without the good role of the teacher, the effectiveness of communication will not happen. As an example, the communication between student and teacher will result in a creative process and idea generation as the role of the teacher as a guide or facilitator.

In addition, 21st Century Learning focuses on the teaching and learning process that is student-centered and teachers act as mentors. Hence, the 21st Century Learning has been introduced and implemented in all schools since 2015. The application of 21st century skills constructs should be applied by teachers to emphasize 21st century skills in the teaching and learning process (Sabri et al., 2020).

METHODOLOGY

Reviews of relevant literature are the main methodology in this study. The literature review has been done through document analysis from previous studies. The initial step was to analyze related papers on creativity skills and Special Educational Needs (SEN) students with learning disabilities. Within this process, relevant articles were sought from search engines including Science Direct (<http://www.sciencedirect.com/>), and some of the journals were also assessed and downloaded at trusted sites such as ResearchGate (<https://www.researchgate.net/>) and Google Scholar (<https://scholar.google.com/>). Keywords such as 'creativity skills' and 'students with learning disabilities', 'Importance of creativity' and '21st Century Learning' and 'creativity' were used in the process of searching articles. These efforts resulted in the identification of 126 articles. Then, abstract screening and title screening was conducted. As a result, only 28 articles were selected after the second stage of the screening process. A total of 22% of the articles were related to 21st Century Learning, creativity, and students with learning disabilities while the remainder were linked to 21st Century Learning in general. Most of the selected articles focused the 21st Century Learning and creativity skills for students with learning disabilities in Malaysia, while the remaining articles provide supportive information on the importance of 21st Century Skills.

RESEARCH FINDINGS AND DISCUSSIONS

Creativity Skills in 21st Century Learning

Creativity skills are an important element for students in this 21st Century Learning. The teachers' creative teaching and practices can cultivate creativity skills effectively in the classroom. The teacher's ability to teach creatively using various teaching strategies and approaches enables them to nurture creative skills among students. In addition, the teachers' efforts in generating new ideas and techniques can bring out the greatest potential of students (Norazlin & Rahaimah, 2019). Therefore, the role of a teacher in the process of teaching and facilitation is crucial to implement creativity skills optimally in classroom activity.

A study by Adibah and Hafizah (2021) discusses the practice of creativity in 21st Century Learning which can be used as a guide for teachers to prepare materials and apply creativity skills to students through teaching and facilitation effectively, namely; i) Applying the i-Think map- the mind map helps to create a creative teaching and facilitation environment and even improves students' thinking skills; ii) The use of current technology- teachers are responsible for creating creativity skills and producing creative learning using current technology facilities; iii) Pedagogical skills- teachers have pedagogical skills on various strategies or well-established teaching methods, practicing creativity as well as implementing effective teaching so that they can develop creativity and critical thinking while undergoing teaching and facilitation; and iv) Curriculum transformation based on creativity - the teacher's awareness and understanding of this transformation and thinking creatively by involving creativity in the teaching and facilitation process. Therefore, teachers are responsible for bringing positive practices to life through the application of creativity skills in teaching and stimulating creative learning through teaching and facilitation to achieve the teaching objectives (Adibah & Hafizah, 2021).

The Application of Creativity Skills for SEN Students with Learning Disabilities

Creativity skills in 21st Century Learning are important for SEN students with learning disabilities because this skill can bring out the creative potential of students through the effective implementation of learning and facilitation by the teacher. Ida Puteri's study (2021) also proves that the aspect of art can be used as a medium of communication and self-expression and it can be applied especially for SEN students with learning disabilities to develop more creative, innovative, and productive human capital. However, each special student has different learning needs and the teacher needs to ensure that the specific approach or strategy is applied in learning and facilitation according to the student's ability level. The study of Azman et al. (2021) also found that the delivery techniques and teaching aids provided need to be appropriate according to the students' various levels of understanding and abilities. This is important so that the teaching aids provided by the teacher themselves need to follow the creativity and conditions of SEN students with learning disabilities so that they can easily and clearly understand these materials.

In addition, teachers need to identify the factors that encourage students' creativity so that the application of this element in learning and facilitation can be done more effectively. A study by Norfarahi et al. (2020) found that students' creativity is driven by the factors of knowledge, personality, motivation, and thinking style. Findings show that these four factors act as conditions for individuals to be creative, namely; 1) Knowledge will give students an advantage to identify original and new ideas in addition to nourishing this element of creativity in students, but a lot of knowledge can prevent creativity from working effectively, 2) The personality in creative students is aware of the existence of risk, brave, precise and open to criticism, rebuke, and slander, 3) Motivation (intrinsic) students have clear goals and have a deep interest in the task or work performed, while the extrinsic focus is given to the result such as prizes, appreciation, and rewards, and last factor 4) Thinking style that explains students think differently and flexibly with the environment and external input. Therefore, teachers need to develop the creativity factor for each student to facilitate the teacher's task to apply this element through learning and facilitation effectively.

Thus, this review paper proposes the concept of applying creativity skills in learning and facilitation for SEN students with learning disabilities through a conceptual framework as shown in Figure 1. The conceptual framework of applying creativity skills is adapted from experiential learning theory by David Kolb as presented in a study by Kama (2019). This theory emphasizes learning through individual experience for the process of understanding learning in a more effective direction, which involves the application of theory to actual training. This experiential learning theory explains that the learning process takes place in stages according to rounds (Concrete Experience - Reflective Observation - Abstract Conceptualization - Active Experimentation) until the target objective is achieved (Kama, 2019). In the context of this discussion, the implementation of learning and facilitation for a subject need to be implemented in stages according to rounds until the target objective is achieved. The first stage, which is concentration involves a process of deep concern for creative learning according to each student's ability level with emphasis placed on the student's creative experience to achieve a learning objective. In the second stage, students participate in creative learning and teaching reflection is carried out by the teacher through effective observation to ensure that students can creatively follow their abilities and master the learning. Next, the third stage involves the process of students' understanding of abstracts and concepts in a creative learning process followed by students. In the fourth stage, teachers should encourage students to be active in creative learning so that creative experience is gained and a learning objective can be mastered. The implementation of experiential learning theory in teaching and facilitation is seen to be able to help SEN students with learning disabilities to master creativity skills in addition to encouraging them to socialize with peers, teachers, and a creative learning environment.

Figure 1: Conceptual framework for the application of creativity skills in learning and facilitation for SEN students with learning disabilities

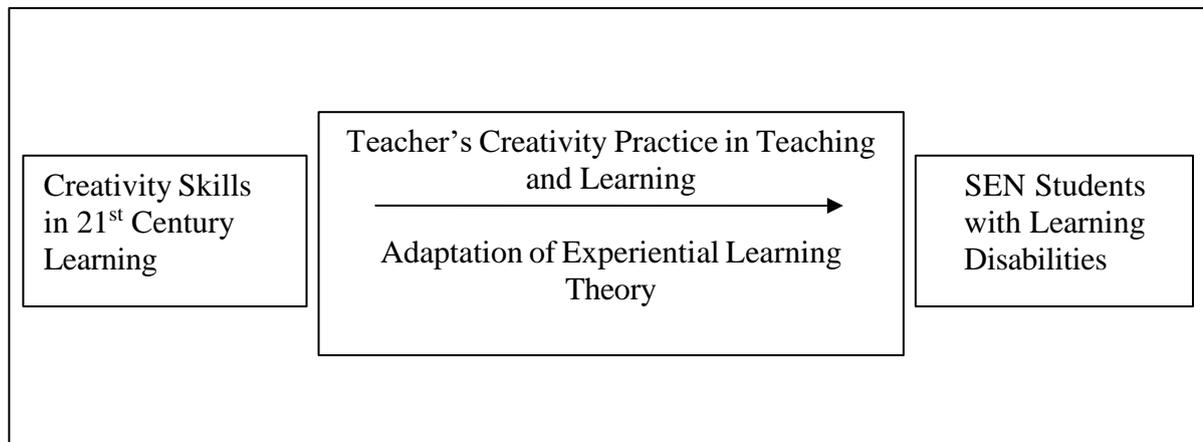


Figure 1 shows the conceptual framework for applying creativity skills in 21st Century Learning through teachers' creativity practices in learning and facilitation as discussed earlier by adapting experiential learning theory to SEN students with learning disabilities. Therefore, teachers need to play their role optimally to be able to unearth the potential creativity of SEN students with learning disabilities according to each student's ability level and further achieve the objective targeted in each lesson. Hence, relevant parties should emphasize guidelines, guidance, and training so that teachers are skilled in applying creativity skills to students through the learning and facilitation process at the same time the teachers themselves need to improve their skills and expand their knowledge related to creativity skills (Hazni et al., 2019). Furthermore, the use of various approaches or techniques and media in learning activities can stimulate creativity in addition to helping control the thinking process and student communication (Ida Puteri, 2021).

CONCLUSION AND RECOMMENDATION

Sustaining creativity skills among SEN students with learning disabilities is a productive venture in this 21st Century. Meanwhile, previous studies indicated that students who are immersed in creative activities show a higher level of innovativeness in their work and can produce ideas in a new way. Therefore, creativity skills are crucial for SEN students with learning disabilities to develop their 21st Century skills. Educational activities and programs for SEN students with learning disabilities should be tailored towards providing them with the needed skills since primary school. This will ensure that SEN students with learning disabilities grab various opportunities and contribute to the nation's economy. Nevertheless, this study aims to contribute to the fundamental knowledge of creativity skills emphasized by the Ministry of Education Malaysia through elements across the curriculum in the Malaysian National Curriculum for SEN students with learning disabilities.

In brief, this review paper focuses on creativity skills in 21st Century Learning which is an important skill to be mastered by SEN students with learning disabilities so that the potential of creativity according to the student's ability level can be unearthed. The presentation of the conceptual framework of the application of creativity skills through teaching and learning is adapted from experiential learning theory and is seen to be capable of providing a more effective process of understanding creative learning through students' experience. Therefore, teachers need to play an optimal role in applying the practice of creativity through teaching and learning to be able to achieve the teaching objectives in addition to being able to help the development and mastery of students' creativity, then students can contribute something to the progress of the country in the future. It is hoped that the context of this review paper can be given attention to relevant parties, especially the

Ministry of Education, the school, and teachers so that the conceptual framework expressed can be implemented to test the effectiveness of the experience-based learning process in teaching and learning for the SEN students with learning disabilities. Researchers are also encouraged to test this conceptual framework in future studies. Future researchers may research to explore more on the effectiveness of creativity skills among SEN students with learning disabilities.

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