



INTERNATIONAL JOURNAL OF
MODERN EDUCATION
(IJMOE)
www.ijmoe.com



EXPLORING THE ROLES OF EMOTIONAL INTELLIGENCE AND SELF-REGULATED LEARNING DURING ONLINE LEARNING

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Article Info:

Article history:

Received date: 22.09.2023

Revised date: 15.11.2023

Accepted date: 05.01.2024

Published date: 05.03.2024

To cite this document:

Su, S. I., & Fung, C. Y. (2024). Exploring the Roles of Emotional Intelligence and Self-regulated Learning during Online Learning. *International Journal of Modern Education*, 6 (20), 58-68.

DOI: 10.35631/IJMOE.620005

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Abstract:

Emotional intelligence (EI) and self-regulated learning (SRL) skills are two essential skills for student learning. Empirical students have shown that these two skills have impact on students achievement. However, their collective effects in online learning environment was not clear. This study, using a scoping review, to select literature on these areas to map out the keywords in order to understand how EI, SRL and online learning are related. The results show that EI and SRL are intertwined and could affect the academic achievement of online students. This finding is helpful to academic staff who need to deliver online courses as they need to know how to use EI to help online students better managed their emotion and self-regulate their learning. Policy-makers of institutions would also benefit from this study as they plan the training programme for the academic staffs.

Keywords:

Emotional Intelligence, Self-Regulated Learning, Online Learning

Introduction

The global survey conducted on youth and Covid-19 revealed that many students are not ready for online learning, with 65% of students (aged 18 to 24) reporting learning loss, 51% believed that their studies would be delayed, and 9% thought they would fail their tertiary education (ILO Global Report, 2020). Even though higher education institutions (HEIs) managed to ensure continuity in education by transitioning learning out of the classroom to online and remote delivery due to the Covid-19 global pandemic, the students surveyed had expressed various challenges faced with online learning. The global survey highlighted the challenges that hampered the effectiveness of online learning, including difficulty in staying focused and self-motivated to learn, internet connectivity issues for some students, finding a quiet and conducive learning environment, insufficient digital skills, and ineffective use of technology by teachers, depriving of social contact, and issues with mental health and well-being (Fung, et al., 2022). Compared to the traditional physical face-to-face approach, the pandemic has caused a lack of active interaction between teachers and students. Students need to be more self-motivated and self-regulated with online learning. Fogarty (2020) raised a concern that students' extra self-regulated study time and engagement on the subject outside class remains challenging. Hence, future post-pandemic education may need to consider developing new models of learning that are resilient, flexible, and with a student-centered approach that will further enhance online self-regulated learning for students. HEIs need to integrate diverse pedagogical strategies to offer a student-centered online learning environment and to bring personalisation to support the self-regulated learning process of today's modern students (Fung & Su, 2021; Gambo & Shakir, 2021; Singh & Miah, 2020). Smith (2016), however, asserted that students in higher education institutions bear greater academic responsibilities in their learning process. Students should be held accountable for their learning and develop strategies that will assist in their independent study. Students need to build on their emotional intelligence (EI) to help them regulate their actions (Okwuduba et al., 2021). Rathore (2018) claimed that students who are able to self-regulate their learning and emotions tend to have better academic performance. Goleman (1995) posited that EI is an essential element in life that enables one to cope with uncertain environments and pressures. This kind of ability is vital for self-regulated learning (SRL). Gambo and Shakir (2021) argued that most of the studies on self-regulated learning are quantitative and lack theory to provide a lens for interpretation and support the evaluation methods, thus affecting the confidence in generalising the findings.

Despite some literature investigating emotional intelligence and self-regulated learning, mainly in physical classroom settings, there is a dearth of literature around the roles of both students' emotional intelligence and self-regulated learning in online learning environments. This is in view that future education is shifting towards more blended and hybrid and even fully online classrooms post-pandemic. Online learning requires the students to be self-motivated and self-regulated. Students who are able to learn independently require higher emotional intelligence to be accountable for their learning process. So far, the results from past studies were not clear. Hence, this research attempts to provide an understanding of the roles of students' EI and SRL in online learning environments. The research questions are:

- (1) What is the role of students' EI in online learning?
- (2) What is the role of students' SRL in online learning?

Thus, this study is carried out as a platform for future research on integrating students' emotional intelligence and self-regulated learning to enhance online learning in higher learning institutions that offer online courses. Higher education institutions may consider supporting students' engagement in online learning through developing the necessary EI and SRL skills.

Literature Review

Online Learning

According to the global student survey conducted during the pandemic by a leading global education network, Quacquarelli Symonds (QS, 2020), there is an increasing trend in the proportion of students interested in pursuing online higher education in their home country. The QS survey also calls for future reform and innovation in education involving students actively in co-creating and co-developing curriculum as students are the recipients, and they understand the real needs. HEIs should focus on students' readiness, adaptability, and strategies to keep students motivated in online learning environments. It is also crucial for educators to be digital and technology-savvy to provide guidance and necessary support to students in an online and blended classroom setting in the new digital era of learning.

Emotional Intelligence (EI)

Goleman (1995; 1998) defined emotional Intelligence (EI) as one's abilities to manage and organise emotions, including "regulation of motivation, understanding others' emotions, and controlling and understanding one's own emotions". EI makes us aware of our own feelings and also of others and is a basic to success in life (Goleman, 1995). Schutte et al. (2001) described EI as "the ability or tendency to perceive, understand, regulate, and harness emotions adaptively in the self and in others". EI "includes the ability to engage in sophisticated information processing about one's own and others' emotions and the ability to use this information as a guide to thinking and behavior" (Mayer et al., 2008, p. 503). Sellars (2006) classified EI into intrapersonal and interpersonal EI where intrapersonal EI is related to an individual's driving ability to sustain self inner motivation, and interpersonal EI relates to self capabilities and willingness to seek help from others. This is also noted by Chan (2008), where interpersonal EI encourages support-seeking behaviour from others in managing the stress faced by the individual, whereas intrapersonal EI relates to an individual's coping ability when encountering stress. These two dimensions of EI enhance student self-efficacy to manage emotions to face challenges in online learning environments.

Self-Regulated Learning (SRL)

Self-regulated learning (SRL) is whereby an individual student is actively monitoring own behaviour, motivation, emotions, and affect (such as anxiety), cognition and is in control of self-actions to accomplish some academic goals (Pintrich, 1995). SRL involves the cognitive, metacognitive, behavioral, motivational, emotional, and affective aspects of learning (Panadero, 2017). Pintrich (1995) included resources management in SRL in which self-regulation of behaviour will involve students actively controlling their time and learning environment and seeking help and support from peers and teachers. Self-regulation involves the whole person's ability to manage one's thought processes, emotional state, attention span, and behavior. It required great self-awareness, emotional intelligence, personal responsibility, self-efficacy, and stress resilience. According to Zimmerman (2000), self-regulated students are proactive and actively involved in the learning process's forethought, performance, and self-reflection phases. The students will participate in learning by setting study goals,

determining practical learning strategies, and ensuring their goals are attained (Kizilcec, Perez-Sanagustin & Maldonado-Mahauad, 2017).

Past studies reveal limited information about the effect of students' emotional intelligence on their online self-regulated learning (SRL) during the pandemic to achieve optimal learning outcomes and academic achievements. The use of SRL requires self-regulation of the students, and could their EI be a factor that influences their use of SRL in online learning.

Methodology

In this study, a scoping review was carried out. The objective of a scoping review is to map out key concepts in the literature to answer the research questions. This five-step framework outlined by Arksey and O'Malley (2005) was used:

1. Identify the research question – This stage involved an extensive discussion with the study team to establish possible research questions surrounding EI and SRL in online learning environment;
2. Identify relevant studies – This stage involved sourcing electronic databases, in this study, Scopus, to find relevant peer-reviewed literature;
3. Study selection – This stage involved screening and filtering based on certain inclusion and exclusion criteria;
4. Charting the data – This stage involved extracting data, such as the document description, thematic area, and the major finding concerning the research area being investigated; and
5. Collating, summarising, and reporting the results – This stage involved summarising the results and report them according to the themes found.

Table 1 below outlines the details of these stages.

Table 1: Methodology Stages

Scoping Review stage	Consideration	Details
Identification	Search focus	Emotional Intelligence, self-regulated learning and online learning environment
	Search keywords	(“emotional intelligence” OR “emotional quotient” OR “emotion regulation”) AND (“self-regulated learning” OR “independent learning” OR “self-directed learning”)
	Search database	Scopus
	Search field	Article title, abstract, and keywords
	Search result	78 documents
Screening (selection criteria)	Search period	Up until August 2023
	Search areas	“social sciences”, “business, management and accounting”, “psychology”, “Economics, Econometrics and Finance”, “arts and humanities”
	Document type	“Article”
	Publication stage	“Final”
	Source type	“Journal”

Online learning implies that the students have greater autonomy to study when and where they prefer. The students must plan their work actively, set goals, monitor their understanding of the course, and manage their time spent on learning, especially for online education (Jansen et al., 2017). Rathore (2018) found that self-regulated secondary school students in India with high emotional intelligence (EI) create positive relationships with self and others. Self-regulated students would possess all the dimensions of EI, with self-actualization, problem-solving, happiness, optimism, and empathy being the dominant dimensions. These self-regulated students will take responsibility for their own learning and develop higher EI, thus are able to perform at high quality. Ben-Eliyahu (2019) found that students will manage their academic emotions in learning through self-regulated emotion (SRE) strategies and proposed that SRE be taught to students in schools. This view was echoed by Farhan and Rofi'ulmuiz (2021), who also proposed that it is essential for educators to foster students to have high EI, which affects their learning motivation and has an impact on their learning achievement. Their study proved that higher religiosity and emotional intelligence affect motivation to learn, affecting learning achievement. Students with high EI proved to be better at managing their own feelings and the feelings of others, thus able to handle relationships effectively and self-motivated to perform (Goleman,1995). Bar-On (2000) explained that EI involves non-cognitive capabilities, skills, and competencies that influence the ability of an individual to cope and respond proficiently to environmental demands and pressures. Okwuduba et al. (2021) investigated the impact of EI and self-directed learning on academic performance and concluded that students must develop strategies to ensure self-regulated learning. In order to do so, the students need to be equipped with self-regulated learning skills by first building on their EI.

HEIs are now required more than ever to utilise various virtual digital technologies and tools to ensure the continuing education of students remotely at any location and at any time (Berking and Gallagher, 2016). The Covid-19 pandemic has accelerated the increasing need to adopt digital technologies to reach students and meet the needs of modern 21st century students. Fullan (2005) emphasized the importance of innovative ideas and actions in the education system by integrating emerging technologies in higher education to enhance and impact learning experiences and outcomes. Malaysian Ministry of Higher Education (2013) has encouraged educators to rethink curricula and integrate innovative pedagogy to better prepare students for the future digital native workforce. It would be crucial to enhance the virtual learning experiences of students to mitigate the challenges of online and remote learning. Higher education institutions (HEIs) need to rethink and redesign curricula and digital online pedagogy tailored to the virtual audience of students to improve students' experience. Many HEIs have invested heavily in the IT infrastructure and digital technologies. However, there are also urgent needs for educators to reskill and upskill in delivering online and future blended learning post-pandemic. A study by Chang and Fang (2020) confirmed that some teachers were not well prepared for online instruction as they possessed low digital skills, and the replicated traditional methods of course instruction and teaching strategy are unsuitable for online education. With the online and remote learning environment, teachers must be more creative in designing instructional strategies leveraging digital technology and pedagogical innovation to facilitate relevant and meaningful 21st-century learning. Teachers must be able to integrate digital pedagogy in their teaching practices as the digital natives of students consider the quality of digital experience and digital capabilities of institutions when choosing a higher learning institution (Puckett et al., 2021).

A recent survey with responses from students at 14 college campuses in the United States conducted by the American College Health Association and the Healthy Minds Network found that 40% of these college students reported symptoms of depression, and 25% of the participants indicated anxiety and mental distress had disrupted their studies and thus affected their academic performance during and post-pandemic (Radwan, 2022). The survey results show the effect on students' emotions, which impact their self-regulated learning in the future of higher education that needs a more student-centered approach for survival. Therefore, educational institutions and teachers need to support students' self-regulation of emotions, using these self-regulated emotion strategies as part of their self-regulated learning (Ben-Eliyahu and Linnenbrink-Garcia, 2013). Albani et al. (2022) claimed that university students with high trait emotional Intelligence (TEI) may help them cope with stress and uncertainty to achieve a good level of SRL approach. Conversely, students with lower levels of TEI seem more vulnerable to stress and uncertain situations, which may hinder their ability to organize, elaborate, and assess their learning.

On the other hand, Okwuduba et al. (2021) discovered the importance of equipping students with emotional intelligence to help them regulate their actions. They asserted that intrapersonal and interpersonal emotional intelligence and self-directed learning significantly impact students' academic achievement besides gender and age. A study on nursing students by Kim (2022) supported this, where students with a high ability to self-regulate their emotions can maintain and strengthen their motivation to learn and thus able to control and utilize their emotions to improve their clinical performance. According to Zhoc et al. (2018), more emotionally intelligent students self-regulate their emotions and tend to be more self-directed in learning, which helps them achieve academic success and other areas of personal development like social, cognitive, and self-growth. It is interesting to note that emotional intelligence was favorably correlated with students' Grade Point Average in the business and social science subjects, not with all students. This could be due to a more solid grasp of one's own and other people's emotions and understanding of human behaviour in higher education courses such as business, psychology, sociology, and political science, which are more people-oriented, will help the students to perform better academically (Zhoc et al., 2018).

However, a multiple regression study by Mohd Rameli and Sinivashom (2020) found that self-regulated learning is a more significant predictor than emotional intelligence in influencing primary and secondary school students toward English examination stress. Due to environmental factors such as their maturity and different learning methods, secondary school students are more capable of acquiring SRL than primary school students. According to de la Fuente et al. (2020), teachers must be aware of the specific emotionality attached to different academic situations, such as study, class, and tests, which might affect students' stress and experience during the learning process. Higher educational institutions must thus consider student diversity and students who learn with a medium or low level of self-regulation. Qureshi et al. (2021), however, found that educators are less attracted to adapting and learning new technologies, and they are yet to optimise the use of digital technologies in their teaching practices which will affect the learning experiences of modern students. Chang and Fang (2020) indicated that many teachers in HEIs in China were not well-prepared and possessed low digital skills, and the pedagogy and teaching strategy might not be suitable for online instructions. Besides, many teachers still preferred the traditional methods of course instruction over online instruction. Nevertheless, teachers face challenges as they discover that students have not formed good online learning habits and are weak in their autonomous, self-regulated

learning ability. The success of self-regulated learning depends on the EI of students, as Rathore (2018) revealed that self-regulated students should have higher emotional intelligence and would be able to perform better in the future workplace. Self-regulated students with higher EI are self-motivated and can create positive relationships with own self and with others. They have higher EI levels of self-actualisation, problem-solving, happiness, optimism, and empathy (Rathore, 2018). Gopalan et al. (2020) argued that motivation is core to human aspiration and thus will affect the way students learn to work towards their goals. A highly motivated student will be more proactive and rigorously engage in learning activities.

Meanwhile, Sutarni et al. (2021) found out there are four observed variables in self-regulated learning: rationale for learning, responsibility for learning, learning capability, and social environment, which affect the optimisation of the digital learning environment, which include course content and management, teacher-learner interactions, and assessment; and academic achievements. It was noted that students with better self-regulated learning ability are more independent and can optimise their digital learning environment and thus will progress in academic achievement. On the other hand, Mahmoud (2021) found a significant positive role for online learning practices in enhancing self-regulated learning skills (Cognitive skills; Meta-cognitive skills; Resource management skills; and Motivation effort skills) to a more significant extent during the pandemic.

Conclusion

Students' emotional intelligence and their self-regulated learning are intertwined and have an effect on their online learning experience and learning outcome. Teachers and lecturers must learn how to exercise EI skills to help them better self-regulate both their emotion and learning strategies to obtain good academic achievement and learning outcome in online learning environment. This study helps to provide some relevant insights on the impact of students' emotional intelligence and self-regulated learning in online learning. The results would be helpful to the academic staff who need to deliver online courses. Policy-makers would find this study helpful when planning for training programme for the academic staff.

Acknowledgement

We thank the anonymous reviewers who have provided helpful comments and feedback to this article.

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