Self-Management Intervention: What are the Implications for Students’ Academic and Non-Academic Learning? A Systematic Literature Review

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Abstract: This research analyzed the implementation of self-management (SM) strategies, an intervention to facilitate academic and non-academic students’ learning processes. This systematic literature review used an application named, the Publish or Perish 8 program, with a Scopus index. In this research, the applied inclusion criterion was - recent 5-year published articles from 2017-2022. The researchers used PRISMA 2020 concept model with some stages: 1) identifying the articles, 2) screening the articles, 3) checking the eligibility, and 4) using the articles. The researchers applied meta-synthesis data analysis. The results showed that SM strategy implementation could overcome academic problems, and influence learning continuity, balance, motivation, on-task behavior, and learning outcomes. SM strategy could also manage the students' non-academic problems, such as improving self-confidence, future-decision responsibility, and social involvement. The effectiveness of the SM strategy should also consider the student achievement levels, the experience of disability, and general and specific circumstances at schools. Thus, this strategy could deal with certain situations so SM strategy formulation must consider the student's needs.

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Self-Management; Intervention; Educational Psychology; Students.


Introduction
Each country encounters various problems due to SARS-CoV-2 virus transmission or Coronavirus 2019 (COVID-19). The virus spreads and mutates rapidly (Velavan & Meyer, 2020; Zhou et al., 2021). The first virus outbreak was observable in the Chinese community (Rothan & Byrareddy, 2020; Velavan & Meyer, 2020) and spread to the whole worldwide. The World Health Organization (WHO) acted immediately and appropriately to prevent the increased spread of the COVID-19 pandemic outbreak (Dyah, 2021; Nurchayati et al., 2021) and recommended the public wear masks while traveling, wash their hands, and keep their distance from others. These efforts were useful to minimize the spread of the COVID-19 virus (Dyah, 2021; Nurchayati et al., 2021).

The Indonesian government eventually applied Large-Scale Social Restrictions (LSSR) (Minister of Health, 2020). This applied rule was also a strategy to manage COVID-19 immediately. LSSR, instructed the people to keep their distance, avoid crowds, and promote daily activities from home, including working, schooling, worshiping, etc. The COVID-19 pandemic influenced various sectors, including the health sector (Andreozzi et al., 2020; Feroz et al., 2020; Knight, 2020; Nils et al., 2020; Otu et al., 2020), economy sector (Santosa, 2020; UNICEF et al., 2021), social society (Radhitya et al., 2020; UNICEF et al., 2021), and education (Guadix et al., 2020; Mastura & Santaria, 2020; UNICEF Indonesia, 2022). In Indonesia, the education sector provides a significant impact on teachers, parents,
and students; and hampered the learning process (Asmuni, 2020; Purwanto et al., 2020). It hampered the learning process.

One of the challenges was e-learning implementation. This implementation was the quick-respond policy of the government to deal with COVID-19 spread. Unfortunately, problems with implementing e-learning also occurred. The problems dealt with the content and materials availability (26.9%), restricted direct interaction with teaching staff (19.6%), unstable internet connection (16.8%), and unconducive home conditions (13.8%) (Dyrek et al., 2022). On the other hand, some parties might find the implementation of e-learning satisfactory. A percentage of 50% of students found e-learning implementation satisfying. A percentage of 36% of students found the implementation very satisfying while 17% of students found it dissatisfying (Abdull Mutalib et al., 2022). A percentage of 26% of students explained that online learning was more flexible. On the other hand, 19% of students admitted that e-learning implementation encountered internet problems and low-teacher-student interaction (Abdull Mutalib et al., 2022).

On the world scale, most governments forbid face-to-face activities at educational institutions, in 190 countries. They prevented the spread of Coronavirus and minimize the impacts the spread. The United Nations Educational, Scientific and Cultural Organization (UNESCO), by mid-May 2020, found more than 1.2 billion students at all levels of education worldwide had stopped taking face-to-face classes. More than 160 million students were from Latin America and the Caribbean (NU. CEPAL-UNESCO, 2020). This policy had some negative impacts, such as awareness, anxiety, network problems, students’ lack of necessary technology, and language barriers (Dhiman et al., 2023).

In Indonesia, similar problems were also observable in the online learning process. Some students’ behaviors hindered the learning process. The students also seemed to have less learning satisfaction (Septianingrum et al., 2022). The hindering behaviors toward the learning process included rarely studying at home, procrastinating in the learning process (Septianingrum et al., 2022), being late to submit assignments (Septianingrum et al., 2022; Zaen et al., 2020), skipping school assignments (Dianasari & Wijayanti, 2020), being late in the learning process (Dianasari & Wijayanti, 2020; Nuraini et al., 2020; Septianingrum et al., 2022), and spending more time to play than working on school assignments (Septianingrum et al., 2022; Zaen et al., 2020). These problems indicated a lack of excellent self-management in the learning process. Thus, the students could not control their thoughts, feelings, and behavior to learn (Amin, 2017; Ulfa & Suarningsih, 2018; Yates, 1986). Excellent self-management facilitates individuals to foster excellent behavior with excellent strategies (Cormier & Cormier, 2009) independently (Cormier & Cormier, 2009; Ulfa & Suarningsih, 2018). Thus, they could achieve their goals by optimizing their potential (Ulfa & Suarningsih, 2018). Bad or negative habits of the students should not be neglected because the bad habits harmed the students (Septianingrum et al., 2022). These bad habits eventually influenced student achievement in school (Dianasari & Wijayanti, 2020). For example, students achieved lower grades below the minimum standard mastery (Nuraini et al., 2020).

Education actors must overcome the problems, especially the student problems. One of them is by implementing adaptive-innovative learning strategies based on the teacher and student situation (Suciati et al., 2021). Schools have strategic roles to create innovative-supportive policies for better student learning, for example, self-management strategy. This strategy was considered effective to improve students’ learning abilities (Ambarsari et al., 2017), self-regulation in the learning process (Ambarsari et al., 2017; Habibi, 2019; Hidayati, 2018), self-directedness in the learning process (Agustin et al., 2017; Wahyaningrum et al., 2017), motivation in the learning process during a pandemic (Eka Suryanti et al., 2021),
student behavior in class, and learning outcomes (Smith et al., 2022). Self-management is an individual’s ability to improve better behavior (B. P. Pratama et al., 2020; H. A. Pratama et al., 2020). Self-management allows individual implementation for the students (B. P. Pratama et al., 2020). The behavioral perspective of learning scope perceives self-management as a strategy to control learning activities (Asim, 2016) by setting goals, observing the process, noting the previously promoted progress, performing the pre-determined behavioral targets, and managing the primary behavior for better behavior (Smith et al., 2022).

This research analyzed the implementation of a Self-Management (SM) strategy to facilitate both academic and non-academic learning processes of students. With the implementation of the SM strategy, students received facilitations to manage their daily learning problems and to optimize their potential for better satisfactory outcomes. This research was useful to provide meaningful information for educators about the positive impacts of implementing an SM strategy. Thus, educators in Indonesia could use the information as references for implementing interventions in the learning activities in schools.

Research Method

This research was the Systematic Literature Review (SLR) method using the PRISMA 2020 concept (Page et al., 2021), shown in Figure 1. The applied stages were, firstly, identifying the article. This stage included collecting the articles from an application, Publish or Perish 8, indexed by Scopus. The applied keywords were “self-management,” “Intervention,” “Strategies,” “in Learning,” and “Education.” The results of the keyword implementation were 264 articles. After identifying the obtained articles, the researchers excluded 173 articles. The researchers excluded these articles because the content did not match the keywords. Then, one of the articles was duplicated. The second stage was screening the obtained articles. In this process, the researchers found 90 articles with self-management topics. Of these articles, 63 articles, had self-management topics within clinical settings. Eventually, the researchers found 27 articles on the topic of self-management within the education setting. From this stage, the researchers could only use 26 articles for the further reviewing process because one of them did not have full-text access. The third process, the eligibility stage, dealt with the implementation of the inclusion criterion for 26 articles. The applied inclusion criterion was self-management in an educational setting. The researchers found 12 articles did not meet the criterion. The fourth stage was – analyzing the remaining articles, 14 articles. Based on the characteristics of the articles, namely self-management and their implications for educational settings.

Then, the researchers analyzed the data with meta-synthesis, critical review, and theme-based generated data descriptions from the research article findings (Evans & Pearson, 2001). The implementation of meta-synthetic analysis was to interpret and provide an understanding of the phenomenon (Evans & Pearson, 2001). This analysis involved six sage, starting from 1) determining the focus, 2) finding the study, 3) selecting the included studies for review purposes, 4) applying critical assessment, 5) extracting the data, and 6) synthesizing the data (Evans & Pearson, 2001).

Results and Discussion

Table 1 shows the 14 relevant articles on the topic, of self-management.
<table>
<thead>
<tr>
<th>No</th>
<th>Researchers</th>
<th>Variable</th>
<th>Research Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Ting Huang &amp; Long Yu, 2019)</td>
<td>Self-Management of Learning</td>
<td>SML positively influenced the learning community objective with Mobile language learning. Students with higher SML levels had a better intention to continue learning English using mobile devices. SML also positively influenced students’ perceptions of mobile English learning performance. Students could not support patient self-management. Thus, students required opportunities to improve competence in collaborative programs, the decision-making process, and follow-up care performance in a multidisciplinary context.</td>
</tr>
<tr>
<td>2</td>
<td>(Duprez et al., 2017)</td>
<td>Self-management support</td>
<td>Self-management strategy applied to the student learning process. However, SM might not be applicable for specific situations due to students’ abilities, disability status, and schools' infrastructure conditions.</td>
</tr>
<tr>
<td>3</td>
<td>(Briesch et al., 2019)</td>
<td>Student Behavior</td>
<td>Students could develop self-management skills from various Work-integrated learning (WIL) activities positively. This matter influenced the students’ learning motivation. Self-management skills also positively influenced students’ self-confidence. Scholar’s attributes, such as interpersonal skills and self-management, could increase students’ self-confidence and motivation to study through the WIL program.</td>
</tr>
<tr>
<td>4</td>
<td>(Ibrahim &amp; Jaafar, 2017)</td>
<td>Motivation to learn</td>
<td>Self-management strategy applied to the student learning process. However, SM might not be applicable for specific situations due to students’ abilities, disability status, and schools' infrastructure conditions.</td>
</tr>
<tr>
<td>5</td>
<td>(Mørch et al., 2017)</td>
<td>Sense of responsibility</td>
<td>Students could develop self-management skills from various Work-integrated learning (WIL) activities positively. This matter influenced the students’ learning motivation. Self-management skills also positively influenced students’ self-confidence. Scholar’s attributes, such as interpersonal skills and self-management, could increase students’ self-confidence and motivation to study through the WIL program.</td>
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Table 1. The Results of Article Analysis: The Effectiveness of Self-Management Interventions on Students
<table>
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<tr>
<th>No</th>
<th>Researchers</th>
<th>Variable</th>
<th>Research Findings</th>
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<tbody>
<tr>
<td>6</td>
<td>(Santoso et al., 2020)</td>
<td>-</td>
<td>Self-management</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>The Javanese ethnic employees who were studying could manage academic and non-academic problems. They could apply the most effective regulating method, self-management. They could manage their affection, behavior, and cognition. The researchers also found a significant impetus for Javanese employees to continue their studies, for example, the desire to improve their capabilities and their family life. This motivation is in line with the Javanese philosophy, “dadi uwong”.</td>
</tr>
<tr>
<td>7</td>
<td>(Darus et al., 2017)</td>
<td>Low academic scores</td>
<td>Mobile self-management system</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The research found that self-management facilitated students to improve their learning outcomes. The system also benefited students with poor academic performance.</td>
</tr>
<tr>
<td>8</td>
<td>(Zhu &amp; Doo, 2021)</td>
<td>MOOC learner</td>
<td>Motivation, self-monitoring, self-management, learning strategies</td>
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<tr>
<td></td>
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<td></td>
<td>The research found an indirect influence between motivation and self-management, moderated by self-monitoring; and a direct influence between motivation and self-management. In this case, the researcher did not expect students with self-monitoring or self-management skills would adopt effective learning strategies. Thus, the researcher recommended future researchers investigate the correlation among self-monitoring, self-management, and learning strategy.</td>
</tr>
<tr>
<td>9</td>
<td>(Hamutoğlu et al., 2021)</td>
<td>E-learning adaptation process</td>
<td>Readiness, attitude, control/self-management</td>
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<td></td>
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<td>The research found a significant difference in the levels of readiness, attitude, and self-control or self-management toward the applied e-learning process.</td>
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<tr>
<td>10</td>
<td>(Chen et al., 2021)</td>
<td>Student behavior</td>
<td>Self-management packed form CWFIT intervention</td>
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<td>Students with on-task behavior had some improvements as well as the teacher-student interaction. The intervention was valid and feasible to apply, with satisfactory procedures, results, and benefits.</td>
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<tr>
<td>11</td>
<td>(Bakhshae et al., 2017)</td>
<td>Positive youth development</td>
<td>Self-management of life</td>
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<td></td>
<td></td>
<td></td>
<td>Self-management strategy indirectly positively influenced the academic balance with positive youth development.</td>
</tr>
<tr>
<td>12</td>
<td>(Niu et al., 2022)</td>
<td>Kids’ Skill Method</td>
<td>Social-Emotional, Self-Management Skills</td>
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<td></td>
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<td></td>
<td>The KS method could support students in learning social-emotional and self-management skills to manage the encountered problems.</td>
</tr>
<tr>
<td>13</td>
<td>(Yan et al., 2022)</td>
<td>Online learning</td>
<td>Self-Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Self-management was positively correlated with online learning outcomes.</td>
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<tr>
<td>14</td>
<td>(Muluk et al., 2021)</td>
<td>-</td>
<td>Self-Management</td>
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<tr>
<td></td>
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<td>Self-management influenced students’ academic achievements, feats, and social involvements.</td>
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The research results indicated that self-management was useful in an educational setting (n = 4; 28.57%), for the student (n = 8; 57.14%), and the course (students, undergraduate students, and alums) (n = 1; 7.14%). Most studies used self-management as an

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independent variable, (n = 12, 85.71%). The studies also found that self-management influenced the other variables in the researchers, for example, student behavior, learning motivation, responsibility, academic grade, adaptive learning process, youth-positive development, young learner skill, and online learning. In this review, the researcher found two studies that used self-management as the dependent variable, (n = 2, 14.29%).

Most reviewed studies in this research applied quantitative method (n = 8; 57.14%), qualitative method (n = 3; 21.43%), experimental design (n = 1; 7.14%), mixed method design (n = 1; 7.14%), and literature review method (n = 1; 7.14%). The research showed that self-management strategy positively influenced the objectives of learning continuity (Ting Huang & Long Yu, 2019), academic balance (Bakhshaei et al., 2017), online learning outcomes (Yan et al., 2022), learning motivation, and self-confidence (Ibrahim & Jaafar, 2017). The implementation of SM facilitated students to have future choice responsibilities (Mørch et al., 2017), to overcome academic and non-academic problems (Muluk et al., 2021; Niu et al., 2022; Santos et al., 2020), to improve individual involvement in social scope (Niu et al., 2022), to improve learning outcomes (Dar'us et al., 2017), to improve on-task behavior and student-teacher interaction (Chen et al., 2021), and to improve academic and social-scope engagement. Although SM applies to many learning processes, SM implementation should consider some situations, such as the student's abilities and disabilities; and the school conditions (Briesch et al., 2019).

The Implications of Self-Management on the Student Learning Process

Self-Management (SM) facilitates individuals to manage their behavior by applying existing strategies and combining strategies (Cormier & Cormier, 2009). SM could improve the students to be better (Ulfa & Suarningsih, 2018). SM strategy allows students to keep alert while encountering various situations and prevents the students to achieve their goals. SM could also prevent undesirable situations (Amin, 2017). SM motivates individuals to move forward, optimize their abilities, realize excellent control, and to realize better individuals (Liang Gie, 2000). This process occurs as the result of controlling thoughts, emotions, and actions (Amin, 2017; Ulfa & Suarningsih, 2018; Yates, 1986). These controls are important to make qualified individuals (Ulfa & Suarningsih, 2018).

SM strategy implementation was also observable in clinical fields, such as treating patients with chronic diseases (Allegrante et al., 2019), and helping patients to be independent and to have a healthy life. Some patients with chronic and acute diseases also received SM strategies, such as patients with cancer (Boland et al., 2018; Kondylakis et al., 2017), chronic kidney disease (Lin et al., 2017), arthritis, asthma, cardiovascular disease (Allegrante et al., 2019), and diabetes (Adu et al., 2019; Allegrante et al., 2019; Beck et al., 2017).

The discussion of SM in the educational setting was limited although the implementation of SM influenced the learning process positively. SM strategy could influence individual behavior in the learning process, including academic achievement and assignment completion (Briesch DuBois et al., 2017). SM strategy could improve excellent study habits, such as diligence to learn or read books, self-directedness to learn, cooperation in group study, and readiness to prepare for examinations. SM could also make students less anxious (Ulfa & Suarningsih, 2018).

The review results showed that SM positively influenced learning continuity (Ting Huang & Long Yu, 2019), learning motivation and self-confidence (Ibrahim & Jaafar, 2017), academic balance (Bakhshaei et al., 2017), and online learning outcomes (Yan et al., 2022). The implementation of self-management influenced self-regulated learning, SRL (Ambarsari
et al., 2017; Habibi, 2019; Hidayati, 2018). SRL was closely related to student learning activities. Students with excellent SRL would likely have excellent learning outcomes.

Self-management and self-regulated learning influence learning abilities. Students with excellent management had an optimum learning process (Ambarsari et al., 2017). For example, students could determine their learning goals, studying time, and lessons to read at home and school. Students with excellent management could also submit the assignment punctually (Faruq et al., 2022).

SM strategy facilitated individuals to improve their future-choice responsibility, (Mørch et al., 2017), learning outcome (Darus et al., 2017), improve on-task behavior and student-teacher interaction (Chen et al., 2021), and academic and social engagement (Muluk et al., 2021). Students with excellent SM implementation could optimize their behavioral change process autonomously. They could also develop excellent responsibility and determine the correct and appropriate supportive activities for their learning process. Thus, they could improve their academic performance (Putri et al., 2021). SM strategy implementation also made students independent (Agustin et al., 2017; Wahyaningrum et al., 2017) and disciplined in the learning process (Anjani et al., 2020; Sugianto et al., 2021).

Based on the reviewed studies, SM could manage both academic and non-academic problems (Santoso et al., 2020). SM could also facilitate the students in the learning process. Thus, the students could avoid academic procrastination in the learning process (Putri et al., 2021). SM beneficially influenced the learning process and facilitated the students to optimize their achievements. With SM implementation, the students could manage their thoughts, feelings, and behaviors while learning. The students could develop relevant learning skills with the student's expectations. They could also maintain the occurring changes. With excellent SM implementation, the student's achievement would be better, especially in terms of academic achievement (Biomantara et al., 2019).

The researcher's findings also encouraged educators to apply the SM strategy to the students. However, SM implementation should consider some specific situations, starting from the cognitive level of the students, the disability status of the students, and school situations (Briesch et al., 2019). Many students focused on the students while implementing the SM strategy as the intervention. The results showed that the students could manage the encountered learning problems. SM also effectively improved students' self-regulated learning (Ambarsari et al., 2017; Habibi, 2019; Hidayati, 2018), students’ learning independence (Agustin et al., 2017; Wahyaningrum et al., 2017), discipline in the learning process (Anjani et al., 2020; Fatimah et al., 2019; Muratama, 2018; Sugianto et al., 2021), and academic achievement (Biomantara et al., 2019; Sumanggala et al., 2021). SM strategy could also lower academic procrastination (Putri et al., 2021).

Other research also provided additional information that self-management could improve student responsibility in the learning process (Asmara, 2021; Muratama, 2018). With the SM strategy, students would practice excellent attitudes every day at school and at home independently (Asmara, 2021). Thus, they could improve their learning motivation. This improvement was observable in the student's understanding of the meaning of learning for daily life implementation (Eka Suryanti et al., 2021). The improved learning motivation also relieved stress due to the online learning process during the pandemic (Purwanti & Fitriasari, 2022). Therefore, self-management positively influenced learning outcomes (Iskandar, 2017).

In this research, the most applied SM intervention was based on the concept of Yates. Biomantara et al. (2019) argued that Yates' strategy concept could significantly improve students' achievement than the implementation of Cormier & Cormier's strategy concept. The research involved extroverted and introverted students to reveal the differences in student
personality types. Thus, Yates' strategy provided a significant contribution to improving students' achievements. Based on Yates' model, the self-management intervention covered 5 stages, starting from 1) creating a comfortable atmosphere for participants and setting the goals, 2) promoting self-monitoring, 3) promoting self-analysis, 4) promoting self-change, and 5) promoting self-maintenance.

Conclusion
From the reviewed articles, the research concluded that self management (SM) strategy implementation had excellent implications for students’ learning processes. Thus, they could manage academic and non-academic problems, learning continuity, academic balance, learning motivation, on-task behavior, and learning outcomes. SM strategy could also overcome students’ non-academic problems by improving self-confidence, future decision responsibility, and social involvement. Although the implementation of SM was effective for the student learning process, SM implementation should consider student achievement, disability experience, and school circumstances. Thus, the implementation of SM strategy must consider some certain situations and the necessity of the students.

Recommendation
Based on the research results, the recommendations included 1) the establishment of school program activity development to improve student self-management, 2) the implementation of a self-management strategy to solve student problems by counseling teachers and school psychologists, and 3) self-management strategy implementation for daily life to facilitate student learning and social activity.

References


