



## การส่งเสริมการเรียนรู้ด้วยตนเองด้วยกลวิธีการกำกับตนเอง การรู้คิด และสภาพแวดล้อมการเรียนรู้แบบร่วมมือ

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### Empowering Students' Autonomous Learning through Self-regulation, Metacognitive Strategies, and Collaborative Learning Environments

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#### บทคัดย่อ

บทความนี้ นำเสนอการส่งเสริมการเรียนรู้ด้วยตนเองของผู้เรียนโดยใช้กลวิธีการกำกับตนเอง การรู้คิด และสภาพแวดล้อมการเรียนรู้แบบร่วมมือเป็นส่วนสนับสนุนซึ่งส่งผลให้เกิดผลสัมฤทธิ์ทางการเรียนสูงขึ้น การส่งเสริมผู้เรียนให้เพิ่มพูนความรู้ด้านการกำกับตนเอง การพัฒนาทักษะการรู้คิดในสภาพแวดล้อมการเรียนรู้แบบร่วมมือมีความสำคัญในการเรียนรู้ของนักศึกษาในศตวรรษที่ 21 เพราะจะช่วยให้ผู้เรียนใช้เวลานอกสถานที่ศึกษาพัฒนาความรู้ ความเข้าใจและทักษะที่จำเป็นสำหรับการเรียนรู้ตลอดชีวิต การศึกษานี้ ชี้ให้เห็นว่าการส่งเสริมการเรียนรู้ด้วยตนเองของผู้เรียน ผู้สอนจำเป็นต้องพัฒนากลยุทธ์ใหม่ ๆ ในการสอน และส่งเสริมให้ผู้เรียนมีทักษะในการวางแผน ทักษะการทำงานร่วมกันระหว่างเพื่อน ทักษะการสะท้อนคิดและประเมินตนเอง ตลอดจนทักษะการบริหารเวลาด้วยการใช้เทคโนโลยีและการสื่อสารที่มีประสิทธิภาพ การตระหนักถึงคุณค่าของการเรียนรู้ด้วยตนเองเป็นสิ่งที่จำเป็นสำหรับนักศึกษา การเปลี่ยนจากการเป็นผู้รับความรู้จากผู้สอนไปสู่การเป็นผู้เรียนที่กระตือรือร้นแสวงหาความรู้ด้วยตนเองและเรียนรู้อย่างต่อเนื่อง ผู้เรียนต้องนำกลยุทธ์การเรียนรู้ใหม่ ๆ มาปรับใช้

**คำสำคัญ:** การเรียนรู้ด้วยตนเอง อภิปัญญา ความสามารถกำกับตนเอง

#### Abstract

This article presents the enhancement of autonomous learning among learners using self-regulation strategies, metacognition, and a cooperative learning environment. These elements contribute to higher academic achievement. Promoting learners to enhance their knowledge of self-regulation and developing metacognitive skills in a cooperative learning environment is important for student learning in the 21st century. It helps learners spend time outside of universities to develop their knowledge and understanding. These skills are necessary for lifelong learning. This study shows that to promote students' autonomy, teachers need to develop new teaching strategies and encourage students to have skills in planning, teamwork, self-reflection, and self-assessment, as well as time management with technology and effective communication. Recognizing the value of self- autonomous learning is essential for students.

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To transition from being passive recipients of information from lecturers to actively seeking knowledge and continuously learning independently, learners must embrace new learning strategies.

**Keywords:** autonomous learning, metacognition, self-regulation

## Introduction

Developing self-regulated and metacognitive skills during the learning process can encourage students to be eager and capable of reaching their learning outcomes. Evaluate results and make appropriate strategy changes. Promoting a cooperative and encouraging learning environment helps students become more engaged, communicative, and critical thinkers (Osterman, 2023) Establish a sense of acceptance. Encourage productive relationships and improve learners' overall well-being. These integrated techniques allow students to plan their learning better. They also develop higher-level thinking skills and promote an educational environment where teachers and students cooperate and assist one another (Kim, 2016; Marantika, 2021).

Self-regulation involves managing one's thoughts, feelings, and behaviors to achieve desired outcomes (Forgas, Baumeister, & Tice, 2009). It includes abilities like goal setting, organizing, tracking results, and changing tactics. Gaining self-regulation abilities helps students become mature, autonomous, self-regulated, and in charge of their own education. Assess outcomes and make necessary strategy adjustments. Encouraging a cooperative and encouraging learning atmosphere makes students more engaged, communicative, and critical thinkers (Osterman, 2023). It builds a sense of belonging. Encourage constructive relationships and assist students' overall well-being. Students can better plan their own learning with the aid of these blended approaches. Two strategies for helping students develop self-regulation are teaching goal-setting techniques and helping them divide their work into smaller portions (Tesprasit et al., 2023). In addition, encouraging metacognition and self-reflection can improve learning processes and deepen one's understanding of their strengths and weaknesses. Teachers play a critical role in helping students learn how to monitor and evaluate themselves. Students who are proficient in time management and organization are more likely to prioritize their tasks, conform to deadlines, maintain a disciplined.

Metacognition is the capacity to govern and manage one's own thought processes as well as the awareness and understanding of those processes (Flavell, 1979). It includes keeping track of one's progress, making plans, and assessing learning results. The components of metacognition relevant to four roots such as self-regulating, planning, evaluating, monitoring align together (Baker & Brown, 1996). If students have good metacognitive skills, they will become independent learners during the learning process (Yusnaeni & Corebima, 2017). Developing metacognitive skills helps students in forming the habit and become strategic thinker. So, they can reflect and adjust their learning approaches.

Collaborative learning environments enhances active engagement. Motivate students to consider how they are learning. Determine which tactics work best and be open to making changes as needed. This gives students the chance to create goals. Create a study schedule. Evaluating development and modeling metacognitive thinking can be done, for instance, by having participants solve problems or talk aloud while engaging in activities or ask for some practice reading aloud understanding. A participatory learning environment encourages learners to be more interested and interactive. In addition, the

exchange of ideas between learners by instilling a sense of belonging to society, respecting, and listening to the opinions of others, helping to promote a positive learning atmosphere. Creating activities that encourage peer participation in the classroom is one way to foster a supportive and cooperative learning environment. Students love and value the atmosphere in which they learn and notice the advantages of learning they can share with their friends. (Clifford & Montgomery, 2015). Students are urged to work together to solve problems and exchange knowledge, which sets clear expectations for cooperation and offers principles for productive teamwork. They are assigned roles within groups to ensure equal participation and accountability, facilitating group discussions and encourage respectful and inclusive communication. Moreover, it creates opportunities for peer feedback, collaboration, and reflection on the collaborative process.

### Objective

To review if effective teaching practices involving metacognition, self-regulation, and learning environments enhance students' autonomous learning.

Teachers' and learners' roles in educational growth have evolved greatly over time, notably in terms of planning, monitoring, reflecting, and assistance. The article underlines the need for both teachers and students to take on roles that differ from standard teaching approaches. Today's teacher plays the role of a facilitator, assisting students in setting goals and controlling their educational path. Teachers manage the planning process, track progress, and promote good practices while offering support tailored to each learner's particular requirements. Furthermore, it is critical that students take the initiative in this process. To enhance their learning outcomes, they are accountable for organizing their learning objectives, taking part in self-monitoring, thinking reflectively, and applying step-by-step guidance. The author provides insight into how these responsibilities change in a contemporary classroom, which eventually results in a more efficient and customized learning experience for every student.

### Roles of teachers and learners in teaching for planning, monitoring, reflecting and scaffolded support.

In a dynamic educational setting that is constantly changing, planning, analyzing, and reflecting must occur in an environment that promotes learning for both teachers and students. Successful learning greatly depends on the teacher's encouragement and support of independent learning. Teachers facilitate learning, implementing a planning-based learning method that complies with curriculum requirements and meets the needs of students. The teachers consistently evaluate the student's progress to adjust their teaching approaches to meet the changing needs of the students and provide timely feedback. The act of reflecting is necessary. Teachers evaluate the effectiveness of their educational procedures, whereas students consider their comprehension and learning techniques. This fosters a cooperative learning environment in which both students and teachers actively participate in each phase (Haesol & Kyungbin, 2021).

**Table 1** Role of teacher and learner



Aspect	Role of Teacher	Role of Learner
<b>Planning</b>	Design curriculum and lesson plans tailored to learner needs.	Share interests and areas for improvement to inform planning.
	Set clear objectives and outcomes for learning activities.	Engage in the planning process by expressing learning preferences. Participate in setting personal learning goals.
	Prepare resources and materials needed for effective learning.	Engage in the planning process by expressing learning preferences.
<b>Monitoring</b>	Track learner progress through assessments and observations.	Self-monitor progress and seek feedback.
	Provide timely feedback to guide learner improvement.	Reflect on feedback and identify areas for self-improvement.
	Adjust instructional strategies based on learner performance.	Inform the teacher about learning challenges and successes.
<b>Reflecting</b>	Analyze the effectiveness of teaching methods and learning outcomes.	Reflect on personal growth and learning experiences.
	Encourage learners to think critically about their learning journey.	Share reflections with the teacher to improve the learning experience.
	- Use reflection to inform future teaching practices	Use reflection to set future learning goals.
<b>Scaffolded Support</b>	Provide structured guidance and support tailored to learner's needs.	Engage with the support provided and ask for clarification when needed.
	Gradually reduce support as learners become more proficient	Work towards independence by applying learned strategies.
	Encourage problem-solving and critical thinking through guided practice	Take initiative in learning and seek out additional resources or help.

Planning is a basic process that includes deciding on activities, assigning resources, and establishing goals to accomplish goals. In the personal, professional, and educational circles, among other areas of life, it is fundamental. Topics for teaching planning include:

- **Goal setting:** Instruct students on how to make precise, quantifiable goals that complement their learning objectives. Assist them in breaking down more challenging goals into more manageable, smaller ones.

- **Time management:** Teach students how to prioritize their work, set deadlines, and create timetables to help them become proficient time management persons.
- **Task analysis:** Show students how to divide difficult assignments into manageable sections of work. This aids in their strategy design and locating resources. This helps them plan their approach and identify resources needed.
- **Organization:** Teach students how to use digital tools, planners, or folders to keep track of due dates, materials, and assignments to help them become more organized.

Monitoring is the practice of closely studying, assessing, and figuring out how well students are understanding and developing during the learning process. Active data and information collection is required to evaluate student performance, identify areas of strength and weakness, and make educated instructional decisions. Topics for teaching monitoring include:

- **Checkpoints and Progress Tracking:** Teach students to set checkpoints or milestones to assess their progress. Encourage them to regularly review their work and compare it against the planned timeline or criteria.
- **Self-Assessment:** Support students in becoming capable of evaluating their performance and progress. Teachers may provide self-assessment guidelines or benchmarks so that learners can reflect on their strengths and progress.
- **Reflection Questions:** It encourages learners to ask themselves questions such as “Which strategy is right for me?” and “What challenges am I facing?” during the learning process?”
- **Feedback Seeking:** Give students the direction to continually seek out criticism from teachers, other learners, or other reliable sources. They can see things from several angles and pinpoint possibilities for improvement what obstacles am I up against?

Reflecting is the process that aids students in honing their critical analysis skills. They consider their own educational experiences to identify their learning preferences, areas of strength, and areas in which they may still grow personally. Setting goals guides students to learn that administrators know themselves and their members can oversee goals and plans to improve learning outcomes. Autonomous or self-determined and extrinsic motivation reflects a conscious valuing of a behavioral goal or regulation (Deci & Ryan, 2000). Final Topics for teaching self-reflecting include:

- **Journaling:** Tell students to write in a learning journal so they can consider their encounters, realizations, and difficulties. Give them questions or clues to encourage reflection.
- **Metacognitive Prompts:** Introduce metacognitive skills to the students by asking them to consider questions such as "What did I gain from this activity?" or "What can I do differently when it's time I handle this task?"
- **Group Discussions:** Encourage learners to respect diverse perspectives by facilitating group discussion and providing an outlet for sharing learning experiences, strategies, and reflections. This method can promote collaborative learning and encourages learners to respect different perspectives.
- **Goal Evaluation:** It outlines the process used to ascertain students' learning preferences, areas of strength, and prospective areas for improvement.



Learners receive support in critically analyzing and evaluating their educational experiences. To increase learning outcomes, teachers can help students become self-aware, self-directed individuals who can assess their own learning, set goals, and make the required adjustments.

Scaffolded support refers to the process of giving students organized help and direction when they pick up new ideas, abilities, or responsibilities. It entails breaking down challenging learning goals into achievable stages and progressively decreasing the level of assistance as students become proficient and autonomous. Topics for teaching scaffolded support include:

- **Gradual Release of Responsibility:** Provide structured support initially, gradually giving students more independence for developing their planning, monitoring, and reflecting skills.
- **Modeling and Think-Aloud:** Model the process of planning, monitoring, and reflecting by thinking aloud and showing students how you approach these activities. This helps them internalize the strategies.
- **Guided Practice:** Allow students to try techniques under guidance and get honest feedback. To help scaffold their learning, divide the activity into manageable phases and provide them with checklists or prompts. Students have additional opportunities to practice and use these skills as a result. Teachers have an important role of playing in assisting students to grow as individuals. Students who are self-disciplined and capable of self-management might use these to monitor their progress in learning, accountable for their responsibilities and make wise choices that will advance their education.

### Guide for developing effective study habits and time management skills

Effective learning requires planning, monitoring, reflecting, and giving specific guidance roles for both teachers and students. Teachers facilitate learning. By designing lesson plans that are in line with curricular requirements and specific student requirements, they manage the learning process. Here are some strategies to guide students in developing these skills:

**Establish a Study Routine:** Help students create a consistent study routine by setting dedicated study times each day or week. Urge them to determine when they are most productive and set aside those hours for learning. Stress how crucial it is to follow the schedule to develop consistency and discipline.

**Prioritize and Set Goals:** Help students learn to order assignments according to priority and urgency. To keep students motivated and engaged during each study session, assist them in creating clear goals. Breaking up large tasks is advised. That section goes into further detail regarding defining and managing control over different components.

**Create a Productive Study Environment:** Encourage students to concentrate in a quiet environment. The space is well-lit, comfortable, and devoid of any sources of distraction. Assist them in maintaining a clean and organized workspace for studying materials. Demonstrate the use of productivity tools and instruct them on how to disable notifications to minimize digital distractions. The use of productivity apps is a good idea.

**Instruct Students on How to Take Effective Notes:** Teach students how to generate active notes by demonstrating the use of idea maps, visual aids, and topic summaries. To reinforce learning,

teach them to look over and edit their notes frequently. Urge them to elaborate on any notions that are unclear by posing questions.

**Teach Time Management Techniques:** Introduce techniques requiring students to work for a set length of time, perhaps just a short time, such as the technique known as the Pomodoro Technique (e.g., 25 minutes) and then take a short break (e.g., 5 minutes). Help students estimate the time required for different tasks and allocate appropriate time slots accordingly. Teach them to set realistic deadlines and consider potential distractions or interruptions (Macaskill & Denovan, 2013).

**Break Tasks into Manageable Chunks:** Help students divide more complex assignments or projects into manageable, smaller tasks. Give students assignments that they need to prioritize the tasks. Urge them to complete each assignment as soon as possible to avoid them feeling overwhelmed and ignoring their responsibilities.

**Encourage Regular Review and Practice:** Emphasize the need to do work that is consistent and frequently check over what you have learned. For enhanced recall, students should be advised to take notes to help in learning retention. Some individuals can review their textbooks or learning resources. Motivate them to share knowledge with their peers and adopt useful learning techniques like self-assess.

**Foster Self-Care and Breaks:** Emphasize students the need for self-care and the advantage of taking breaks from schoolwork if they are getting stressed. Advise them to take quick breaks-five to ten minutes very hour so they may relax and recharge and rebound. To support general well-being, encouraging healthy behaviors including regular exercise, sound sleep, and a balanced diet.

**Model and Provide Feedback:** As an educator, one should model effective study habits and time management skills. Feedback is a scaffolding process that facilitates student on continue learning (García-Jiménez, Gallego-Noche & Gómez-Ruiz, 2015). Teachers who provide timely feedback and guidance to students on their study habits and time management practices, also offer suggestions for improvement and help students reflect on their progress enhance autonomous learning. When teachers encourage students to participate in the feedback process, it has opened new areas to explore, such as self-assessment and peer assessment García-Jiménez et al., 2015).

**Monitor and Adjust:** Teachers should regularly check in with students to monitor their study habits and time management skills. Offer support and guidance as needed and encourage them to reflect on their own progress. Teachers can help students establish successful study habits and time management skills by aiding them in customizing the strategies based on their experiences and feedback and offering ongoing assistance.

. Teachers who provide help in developing key processes in learning, such as goal setting, time management, learning strategies, self-evaluation have supported students' self-regulation (Barry, 2002). These skills will not only enhance learners' academic performance but also equip them with valuable life skills that they can apply beyond the classroom.

### **Promote a positive teacher-student relationship and guidance in autonomous learning.**

Promoting a positive relationship between teachers and students and providing guidance in autonomous learning are considered crucial in modern education. This represents a shift from traditional teaching methods to newer approaches that involve more collaboration and a greater focus on the learners. The close relationship between teachers and students is beneficial and necessary for effective





learning. Additionally, teaching methods where teachers act as facilitators and guide autonomous learning enable students to take ownership of their learning experience. Various strategies and approaches, such as empathy, mutual respect, effective communication, and creating a conducive learning environment, not only promote academic success but also instill lifelong learning skills. This prepares students to cope with the constantly evolving world. Studies have found that positive teacher-student relationships and guiding students to engage in learning planning in a supportive environment help cultivate learners who are self-directed, responsible, motivated, and adaptable. Several strategies to promote those components include:

**Build rapport and trust:** Build a helpful and encouraging rapport with your students. Act empathetically, listen intently to their worries, and genuinely care about their well-being. This creates an environment in which students feel comfortable seeking guidance from their teachers.

**Set clear expectations:** Teachers need to be very explicit about what is expected of independent learners. Describe to the students the aims, objectives, and expected results. Give students information and guidelines so they know what is expected of them.

**Foster independence:** Students are allowed to make decisions for themselves, teachers can empower students to take charge of their education. Permit them to work on projects or subjects of their choosing within the parameters of the curriculum while they explore their interests.

**Provide guidance and support:** As appropriate, offer direction and assistance to encourage autonomy. Provide students with resources, advice, and ideas to ponder. Make yourself accessible to respond to inquiries and offer clarifications. When students face difficulties, teachers who are understanding of their personal and cultural traits, adaptable in their instruction, and foster a positive learning atmosphere can support them (Nguyen, 2012).

**Facilitate goal setting:** Assist students in establishing reasonable and attainable objectives for their own study. Help them break down their objectives into manageable steps and provide them feedback on how they are doing. Review and adjust goals frequently considering their changing needs and interests. A supportive learning environment can assist students in overcoming obstacles.

**Encourage self-reflection:** Emphasize to students the value of introspection in the learning process. Urge them to consider their advantages, disadvantages, and potential areas of improvement. Assist them in creating self-evaluation and self-correction plans.

**Provide constructive feedback:** Provide students with timely and helpful feedback regarding their independent learning endeavors. Recognize their successes and point up areas in which they may still do better. Give them targeted advice and materials to assist them improve their educational experience.

**Celebrate successes:** Recognize and value the accomplishments that students have made in their independent learning endeavors. Present their learning to the class through presentations, work displays, or sharing of accomplishments. This increases drive and promotes ongoing independent learning.

**Create a supportive learning environment:** Create a classroom or other learning environment that encourages independent study. Give learners access to a range of resources, such as materials, digital tools, and books. Encourage a collaborative environment where students can assist and learn from one another. When they create an environment that supports students' autonomy, teachers typically see significant improvements in their own lives. (Roth, Assor, Kanat-Maymon & Kaplan, 2007).



**Be a role model:** Teachers should demonstrate own enthusiasm for learning and model autonomy in their professional development. Share experiences of autonomous learning, and let students see how teachers take charge of their own learning journey.

As social changes, particularly the speed of the growth of knowledge, information technology, concise communication have created a need for lifelong learning (Macaskill & Denovan, 2013). Fostering a positive teacher-student relationship, offering helpful direction for autonomous learning, and encouraging students to participate in a collaborative and supportive learning environment are all important ways to promote independent learners. This helps students become self-sufficient, lifelong learners by inspiring them to pursue their interests and attain academic success.

## Conclusion and Discussions

Self-regulation, metacognition, and a supportive learning environment are essential to students' independent learning. Teachers must cultivate these skills and perspectives to help kids learn independently and for life. Students' metacognition, concept understanding, study habits, and time management can increase with autonomous learning (Dominggus & Kristin, 2019). Teachers can encourage metacognition by having students create and share learning goals (de Vries, Dimosthenous, Schildkamp, & Visscher, 2022). In an autonomous learning environment, teachers prepare to foster autonomy, assess progress, and reflect to enhance teaching. They create well-planned instruction (Higgs, 2012). Scaffolding helps students comfortably navigate self-directed learning. The strategies used positively correspond with teacher and self-assessed skill achievement (Fernández-Jiménez; Fernández-Cabezas, Polo Sánchez, Díaz Batanero, 2019). An outside expert can help teachers implement ways to boost student learning, according to Darling-Hammond et al. (2017). This comprehensive technique helps teachers develop lifelong learners who can self-direct and progress.

Successful teaching strategies require self-regulation, metacognition, and a supportive learning environment. Their influence on student autonomy is significant. Learning environment settings, metacognition, and self-regulation make effective teaching a transformational process rather than solely knowledge transfer. The ability of teachers to design effective, engaging, and student-centered lessons. A commitment to developing autonomous learners will shape learning for the future. Self-regulated learning using collaborative learning settings helps undergraduate students reach their goals, according to Nuankaew et al (2019) giving students the topic knowledge, skills, and attitude for lifelong independent learning will help students develop curiosity, self-confidence, self-control, and resilience to conquer complex knowledge.

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