



Exploring the Dual Role of Quizzes in Shaping Students' Learning Habits, Autonomy, and Assessment Dependency

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Abstract. *This study explores the role of quizzes in shaping students' learning behavior, with a particular focus on learning habits, autonomy, and assessment dependency in higher education. While quizzes are widely recognized as effective formative assessment tools, their influence on students' learning processes remains underexplored. This study contributes to the achievement of Sustainable Development Goal (SDG) 4, particularly SDG 4.4, SDG 4.7, and SDG 4.a, by promoting autonomous and supportive learning environments. It employed a qualitative research design using semi-structured interviews with 38 students at Universitas Negeri Makassar who experienced regular quiz implementation in their courses. The data were analyzed using thematic analysis to identify patterns in students' perceptions and behaviors. The findings reveal that quizzes shape students' learning behavior in four interconnected ways. First, quizzes promote structured learning habits by encouraging students to study in a time-bound and assessment-oriented manner. Second, quizzes foster assessment dependency, where students' engagement is strongly tied to the presence of evaluation. Third, a tension emerges between external control and learning autonomy, as students feel compelled to study due to quizzes rather than personal motivation. Finally, quizzes contribute to academic pressure and cognitive load, particularly when combined with other academic demands. Overall, this study highlights the dual role of quizzes as both supportive and controlling learning tools. While they can enhance engagement and discipline, over-reliance on quizzes may limit the development of autonomous and self-regulated learning. Therefore, assessment practices should adopt a more balanced and autonomy-supportive approach to promote sustainable learning in higher education.*

Keywords: Quizzes; Learning Habits; Assessment Dependency; Learning Autonomy; Student Learning Behavior

1. Introduction

In contemporary higher education, one of the main challenges is not only improving students' academic performance, but also building consistent learning habits and sustained engagement. Although technology and innovative teaching methods are increasingly used, many students still show irregular study patterns. They tend to study only when there are external demands, such as assignments or tests. This indicates that learning is often driven by assessment, rather than becoming a continuous and self-regulated process. Without regular reinforcement, students are likely to disengage, which can lead to inconsistent effort and shallow understanding (Agarwal et al., 2021). In the broader context of global education, fostering autonomous and self-regulated learners is closely aligned with the Sustainable Development Goals (SDGs), particularly SDG 4.4, which emphasizes the development of relevant skills for work and lifelong learning, as well as SDG 4.7 and SDG 4.a, which promote sustainable, inclusive, and supportive learning environments.

One strategy that is commonly used to address this issue is the implementation of quizzes which are held regularly. As a form of formative assessment, quizzes encourage students to recall previously learned material through retrieval practice. This process has been proven to improve retention and learning outcomes (Agarwal et al., 2021; van Wijk et al., 2024). In addition, regular quizzes can help maintain students' attention and encourage them to study more consistently, especially when they are integrated systematically into classroom activities (Ghosh et al., 2025).

However, it is important to look beyond learning outcomes and examine how quizzes influence students' learning behavior. Instructional strategies do not only affect what students learn, but also how they learn, including their study habits, motivation, and engagement over time (Bertilson et al., 2024). In addition, Wahyuni (2025) has also shown that regular quizzes can improve students' cognitive and affective outcomes. Nevertheless, these studies mainly focus on effectiveness, and do not fully explain how quizzes shape students' learning habits in the long term.

In practice, quizzes may have a dual role. On the one hand, they can help students become more disciplined and develop structured study routines. On the other hand, they may also lead to assessment-driven learning, where students study mainly because of external pressure rather than personal motivation. This situation can create a tension between external control and learning autonomy. However, this issue is still rarely explored, especially from students' perspectives in real classroom settings. Furthermore, the shift toward more flexible and technology-based learning environments has made it more challenging to maintain students' engagement. In such conditions, quizzes can act as learning triggers that encourage students to stay involved in the learning process.

Based on this gap, the present study aims to explore how quizzes shape students' learning behavior, focusing on learning habits, assessment dependency, learning autonomy, and the unintended consequences of assessment practices. This study used a qualitative approach to understand students' experiences and perceptions of quiz implementation in the classroom.

To better illustrate the focus of this study, Figure 1 presents the conceptual framework underlying the research. The framework highlights the dual role of quizzes in shaping students' learning behavior. On the one hand, quizzes may function as supportive learning mechanisms that encourage structured learning habits, engagement, and learning discipline. On the other hand, quizzes may also act as controlling mechanisms that foster assessment dependency, create tensions in learning autonomy, and contribute to academic pressure. This dual perspective reflects the complexity of quizzes as pedagogical tools that simultaneously support and regulate students' learning behavior in higher education contexts.

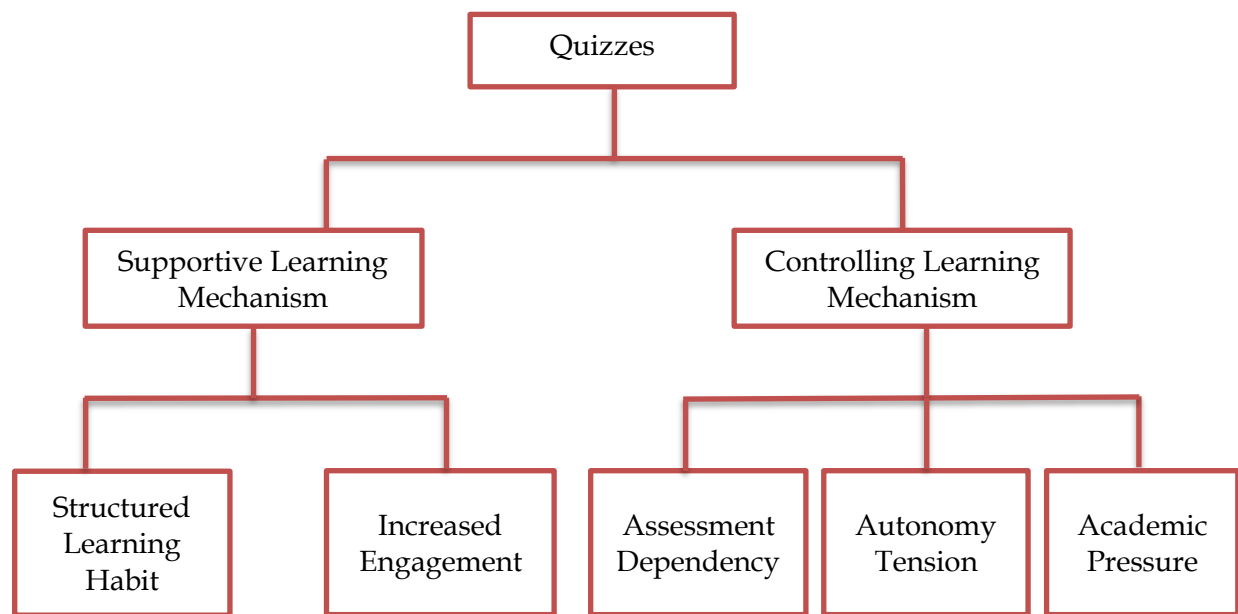


Figure 1. Conceptual Framework of the Dual Role of Quizzes in Shaping Students' Learning Behavior

The novelty of this study lies in its focus on the learning process rather than learning outcomes. Instead of examining whether quizzes are effective, this study investigates how quizzes influence students' learning behavior over time. While Wahyuni (2025) examined the effectiveness of quizzes on students' cognitive and affective outcomes, the present study extends this work by qualitatively exploring how quizzes reshape students' learning habits, autonomy, and assessment dependency over time, with a particular focus on the learning process rather than measurable outcomes. By doing so, this research is expected to provide a deeper understanding of the role of quizzes in supporting, or potentially limiting, students' learning autonomy in higher education.

2. Methods

This study employed a qualitative research design to explore how regular quizzes shape students' learning behavior, particularly in terms of learning habits, autonomy, and assessment dependency. A qualitative approach was chosen to capture students' experiences and perceptions in real classroom contexts. The participants were students at the English Education Study Program, Universitas Negeri Makassar who had experienced the implementation of regular quizzes in their classroom learning.

All participants were involved in the interview process. The participants were selected using purposive sampling based on several criteria: (1) they had experienced regular quiz implementation in their courses for at least one semester, (2) they actively participated in classroom learning activities, and (3) they were willing to share their learning experiences and perceptions regarding quiz practices. The selection of these participants enabled the researcher to obtain rich and relevant data concerning how quizzes influence students' learning behavior.

Data were collected through semi-structured interviews, enabling participants to express their perspectives while maintaining focus on the research objectives. The interview questions were designed to explore several key aspects, including:

2.1. Students' perceptions of the effectiveness of quizzes

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- 2.2. Their study habits before and during quiz implementation
 - 2.3. Their learning behavior in the absence of quizzes
 - 2.4. Their perceptions of quizzes as support or burden

The interviews were conducted in Indonesian to ensure clarity of expression and lasted approximately 20–30 minutes for each participant. All interviews were audio-recorded with participants' consent and transcribed verbatim to maintain the accuracy and authenticity of the data. Selected excerpts were later translated into English for reporting purposes. Data collection continued until thematic saturation was achieved, indicated by the repetition of similar responses and the absence of substantially new themes emerging from the interviews.

The data were analyzed using thematic analysis, involving processes of data familiarization, coding, categorization, and theme development. To ensure the trustworthiness of the findings, the analysis was supported by verbatim excerpts from participants, allowing for transparent and evidence-based interpretation of the data.

3. Results and Discussion

The results of this research revealed that regular quizzes shape students' learning behavior in four interconnected ways, ranging from the formation of structured learning habits to the emergence of dependency, tensions in autonomy, and the unintended consequences of increased academic pressure. These findings collectively indicate that quizzes function as a dual mechanism in learning, simultaneously acting as facilitators of engagement and regulators that may constrain learning autonomy and independence.

3.1 Structured Learning Habits

The findings reveal that quizzes play a crucial role in shaping students' learning habits by creating structured and time-bound study routines. Rather than engaging in continuous learning, students tend to organize their study activities around the schedule of quizzes, indicating that quizzes function as an external regulator of learning behavior. Several participants reported that they deliberately allocate time to review materials shortly before quizzes. For instance:

Excerpt 1: *Satu hari sebelum kuis biasanya saya belajar keras kemudian sebelum masuk kelas, saya mengulang-ulang lagi materi yang telah saya baca.* (One day before quizzes are held, I will study hard and recall the materials again before entering the class)

This pattern is also reflected in other participants' responses, as shown below:

Excerpt 2: *Pola belajar yang saya terapkan yaitu saya akan belajar pada malam hari sebelum hari dilaksanakannya kuis.* (My study habit was to study at night before quizzes were held)

Those excerpts above suggest that quizzes encourage episodic and deadline-driven learning habits, where engagement is intensified only in proximity to assessment. Similar patterns are also shown in van Wijk et al. (2024), indicating that students tend to adopt assessment-oriented study behaviors by concentrating their efforts around evaluative events rather than engaging in continuous learning.

Although this behavior reflects increased academic engagement, it also indicates that students' study routines are largely reactive rather than proactive, relying heavily on the presence of quizzes as a structuring mechanism. This supports the notion that external

assessment can function as a behavioral driver, but may not always foster fully self-regulated learning habits (Bertilsson et al., 2024).

Overall, these findings suggest that quizzes effectively structure students' learning habits, but primarily in a reactive and assessment-driven manner rather than fostering continuous and self-initiated learning. This indicates that while quizzes successfully initiate structured learning, they may also anchor students' engagement to external triggers rather than internal regulation.

3.2 Assessment Dependency

Another finding of this study is the emergence of learning dependency on quizzes as external drivers. Students explicitly acknowledged that their motivation to study is strongly tied to the existence of quizzes, particularly when these assessments contribute to their final grades. This is reflected in the following excerpt:

Excerpt 3: *Iya karena kuis itu mempengaruhi nilai jadi otomatis saya belajar.* (Yes, because the quizzes would influence the score so I would study for it)

This excerpt highlights how assessment acts as a primary trigger for learning engagement. It is in line with recent research showing that assessment can act as a strong external regulator that shapes students' engagement and study behavior (Ryan & Deci, 2020; Ghosh et al., 2025). More importantly, the absence of quizzes appears to significantly reduce students' learning engagement. As illustrated in the excerpts below:

Excerpts 4: *Saya jarang belajar ketika tidak diadakan kuis.* (I rarely study when quizzes were not conducted)

Excerpt 5: *Pola belajar saya setelah tidak ada kuis itu saya akan jarang mengulang materi yang sudah diberikan.* (My learning style after the quizzes were not conducted is I would recall the given materials rarely)

Excerpt 6: *Pola belajar saya setelah tidak adanya kuis saya malas membaca materi pembelajaran yang diberikan.* (My learning style after the quizzes were not conducted is I would be lazy to read the given materials)

These responses indicate that students' engagement tends to decline in the absence of assessment, reflecting what recent studies describe as externally regulated learning, where behavior is driven primarily by external demands rather than internal motivation (Ryan & Deci, 2020). Taken together, these findings suggest that quizzes do not merely support learning but may also foster a form of assessment dependency, where students' engagement becomes contingent upon external evaluation. In this sense, quizzes function as both enablers and controllers of learning behavior. Jansen et al., (2022) suggest that while frequent assessment can increase participation, it may simultaneously create reliance on structured evaluation if not accompanied by strategies that support learner autonomy. This reinforces the dual role of quizzes as both engagement enablers and sources of dependency.

3.3 Autonomy Tension

A further finding of this study reveals a tension between externally regulated learning and students' sense of autonomy. While quizzes are generally perceived as beneficial, some students view them as a form of control that limits their intrinsic motivation to learn. This is reflected in the following excerpt:

Excerpt 7: *Ya, karena kuis seperti memaksa saya untuk belajar. Saya menyadari kalau mengulang pelajaran itu penting tapi saya rasa lebih efektif jika saya belajar karena*

kemauan sendiri. (Yes, because quizzes force me to study. I realized that recalling the lesson is essential but I think it would be more effective if I study because of my own willingness)

This excerpt highlights the distinction between learning driven by external obligation and learning driven by personal intention. It indicates that although quizzes can encourage students to study, they may also reduce students' sense of autonomy. This finding is consistent with research grounded in Self-Determination Theory, which suggests that students' motivation is strongly influenced by whether learning activities are experienced as autonomous or controlled (Monacis et al., 2023).

Furthermore, when learning is perceived as externally controlled, students tend to shift toward controlled forms of motivation, which are generally less sustainable than autonomous motivation (Bureau et al., 2022). This suggests that the effectiveness of quizzes in promoting engagement may come with a trade-off, particularly in terms of students' internal motivation.

Taken together, these findings indicate that although quizzes can successfully enforce discipline and encourage participation, they may simultaneously constrain the development of autonomous learning behavior. In line with this, recent studies emphasize that autonomy-supportive learning environments are essential for sustaining long-term engagement, as students are more likely to persist when they feel a sense of choice and ownership over their learning (Reeve & Cheon, 2024). This tension further illustrates how quizzes simultaneously support learning engagement while potentially limiting students' autonomy.

Overall, these findings suggest that while quizzes can promote learning engagement, they may also create a tension between external control and student autonomy, potentially limiting the development of self-directed learning.

3.4 Academic Pressure and Cognitive Load

The final finding of this study relates to the emergence of academic pressure and cognitive load associated with quiz implementation. Although quizzes are generally perceived as beneficial, several students reported that they also create an additional burden, particularly when combined with other academic responsibilities. This is reflected in the following excerpts:

Excerpt 8: *Bisa dikatakan sebagai beban meskipun sebenarnya sangat baik untuk saya tapi bukan pelajaran ini saja yang harus dipelajari masih banyak tugas-tugas yang lain yang harus diselesaikan.* (I can say that it become a burden even though it is good for me but not only on this lecture I have to study, I also have many assignments to complete)

Excerpt 9: *Kadang-kadang kuis itu menjadi beban, ketika banyak tugas yang diberikan dari mata kuliah lain.* (Sometimes quizzes become a burden when there are many assignments from other courses)

These excerpts indicate that quizzes are not only perceived as learning tools but also as additional demands that require time, effort, and mental resources. This suggests that students often experience difficulty in balancing quizzes with other academic tasks, leading to increased pressure. This finding is supported by previous research showing that excessive academic workload can contribute to higher stress levels and negatively affect students' well-being and learning experience (Khoshaim et al., 2020; Pascoe et al., 2020). In this

context, quizzes may add to students' cognitive load, especially when they are implemented without considering the overall workload students must manage. Taken together, these findings suggest that while quizzes can enhance learning engagement, they may also introduce unintended consequences in the form of academic pressure and cognitive overload. This suggests that the same mechanism that promotes engagement may also contribute to increased pressure when not carefully balanced.

The findings of this study can also be further understood through the perspective of Self-Determination Theory (SDT), which emphasizes the importance of fulfilling three basic psychological needs, namely autonomy, competence, and relatedness, in fostering intrinsic motivation and sustainable learning behavior (Ryan & Deci, 2020). While the present findings primarily reveal tensions related to autonomy, the role of quizzes may also be interpreted in relation to students' sense of competence and relatedness.

In terms of competence, quizzes appear to support students' feelings of academic capability by providing opportunities for retrieval practice, immediate evaluation, and mastery reinforcement. Regular quizzes allow students to identify their level of understanding and recognize areas requiring improvement. This process may strengthen students' confidence in managing academic tasks and contribute to feelings of accomplishment when they successfully recall previously learned materials. Previous studies have similarly shown that formative assessment and retrieval-based activities can enhance students' perceived competence by providing continuous feedback and visible indicators of learning progress (Agarwal et al., 2021; Monacis et al., 2023). Therefore, although quizzes may function as external regulators, they can simultaneously support students' competence development when implemented constructively.

In addition, quizzes may also contribute to the need for relatedness when designed in more collaborative and interactive ways. Although the present study mainly explored individual experiences, several implications suggest that quizzes do not necessarily need to function as isolated assessment activities. Collaborative quiz formats, peer discussion before or after quizzes, and feedback-sharing activities may create opportunities for social interaction and mutual academic support among students. According to Self-Determination Theory, students are more likely to develop intrinsic motivation when they feel socially connected and supported within the learning environment (Ryan & Deci, 2020). In this regard, quizzes that encourage discussion, cooperation, and peer engagement may strengthen students' sense of belonging and reduce the perception of quizzes as purely controlling mechanisms.

However, the findings simultaneously indicate that quizzes may undermine autonomy when students perceive them primarily as external obligations or sources of pressure. The participants' responses demonstrate that learning engagement often emerges because students feel compelled to study in response to assessment demands rather than personal interest or internal willingness. This aligns with controlled forms of motivation, where behavior is regulated by external expectations rather than autonomous choice (Bureau et al., 2022). Consequently, while quizzes may successfully increase participation and discipline, excessive dependence on assessment-driven learning may weaken students' self-directed learning habits over time.

Taken together, these findings suggest that the effectiveness of quizzes depends not only on their frequency or evaluative function, but also on how they are designed to support students' psychological needs. To foster more intrinsic and sustainable motivation, quizzes

should be implemented using autonomy-supportive approaches, such as allowing flexible quiz formats, emphasizing formative feedback rather than purely grades, and encouraging reflection on learning progress. Furthermore, integrating collaborative elements and constructive feedback may help support students' needs for relatedness and competence alongside autonomy. In this sense, quizzes should not merely function as tools for external regulation, but as supportive learning experiences that encourage students' ownership, confidence, and meaningful engagement in the learning process.

The overall findings highlight the dual role of quizzes in shaping students' learning behavior. On the one hand, quizzes act as effective tools for structuring learning, promoting engagement, and encouraging participation. On the other hand, they may foster assessment dependency, reduce learning autonomy, and contribute to academic pressure. This duality suggests that quizzes function not only as pedagogical supports but also as regulatory mechanisms that shape how, when, and why students engage in learning. Therefore, the impact of quizzes should not be viewed solely in terms of effectiveness, but also in relation to their influence on students' long-term learning independence and sustainability.

Conclusions

This study demonstrates that regular quizzes play a significant yet complex role in shaping students' learning behavior. On the one hand, quizzes function as effective tools for structuring learning habits, encouraging students to develop more organized and consistent study routines. However, these habits tend to be reactive and largely driven by assessment demands rather than self-initiated learning.

On the other hand, the findings reveal that quizzes may foster assessment dependency, where students' engagement is closely tied to external evaluation. This condition creates a tension between external control and students' autonomy, as learning is often driven by obligation rather than personal intention. In addition, frequent quiz implementation may contribute to academic pressure and cognitive load, particularly when not aligned with students' overall workload.

Overall, the findings underscore the dual role of quizzes as both supportive and controlling learning tools. While quizzes can enhance engagement and discipline, over-reliance on them may limit the development of autonomous and self-regulated learning. Therefore, it is essential for educators to design quiz-based assessments in a more balanced and autonomy-supportive manner, ensuring that they not only promote participation but also foster sustainable, independent, and meaningful learning practices in higher education.

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Conflicts of Interest

The authors declare no conflict of interest.

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