Proceeding of ICSPHS 2026 Symposium: Critical Perspectives on Global Education and Psychological Development
DOI: 10.54254/2753-7048/2026.HT30707

Analysis of Instructional Behaviors and Learning Motivation

Xiaoqi Xu

Canada International School of Beijing, Beijing, China
xiaoqi.xu@cisbeijing.com

Abstract. This study primarily addresses the decline in student learning motivation following the pandemic and explores how different teaching approaches—autonomy support, video lecture support, and cooperative learning—can restore it. This study employed a quantitative cross-sectional approach. A sample of 515 middle and high school students was collected from three provinces in Cambodia. Participants ranged from 13 to 18 years old, comprising 42.72% males and 56.70% females. The questionnaire data were analyzed using structural equation modeling (SEM) to test hypotheses and compare outcomes against predictions. Teaching behaviors included student autonomy, video lecture support, and cooperative learning. These three approaches were examined for their effects on subjective task value (internal motivation) and external learning motivation. Extensive testing and data reveal positive correlations between all three teaching methods and student motivation. The article concludes that supporting students' autonomy in learning or their intrinsic learning motivation is highly necessary in the educational process.

Keywords: Instructional behavior, Learning motivation, intrinsic motivation, extrinsic motivation

1. Introduction

Learning motivation is undoubtedly crucial for students, as it relates not only to their interest but also to their academic performance. In many developing countries, the education system is extremely rigid, which only dampens students' enthusiasm for learning, leading them to view acquiring knowledge as merely completing tasks. This issue has become more prominent in the post-pandemic era, as students' learning motivation has further declined.

Through various experiments and hypotheses, we test the impact of these teaching practices on students' intrinsic and extrinsic motivation, as reflected in subjective task value. Autonomy support involves teachers granting students greater choice, such as selecting preferred assessment formats (posters, PowerPoints, articles) for assignments, thereby fostering a sense of freedom. Video lecture support entails teachers using video resources—like YouTube tutorial videos—to enhance students' comprehension of course content. Finally, a cooperative study examines how teacher-student or peer-to-peer assistance and discussion differ in their effects on student motivation. Motivation is categorized into two types: intrinsic motivation, driven by a passion for the subject or unit [1], and extrinsic motivation, driven by incentives like scholarships or grades [2].

DOI: 10.54254/2753-7048/2026.HT30707

Cooperative study shows strong association only with subjective task value, exerting no significant effect on intrinsic motivation—meaning it does not inherently spark students' interest in learning [3]. While autonomy support significantly influences subjective task value and intrinsic motivation, indicating that greater choice enhances students' motivation and perceived importance of tasks [4]. Conversely, lecture video support influences students' extrinsic learning motivation, suggesting this method may encourage greater effort for grades or rewards [3].

Therefore, adopting a flexible educational approach can break the current educational status quo, and this solution requires immediate implementation to restore students' motivation [5]. In the process of rebuilding educational approaches, motivation is an indispensable consideration. Equally important is subjective task value [6], which represents how students perceive the worth of a task and the effort they are willing to invest.

This article investigates students (515 participants) across three provinces in Cambodia, employing a structural equation modeling approach to analyze survey results. It examines the impact of three teaching behaviors on students' intrinsic and extrinsic learning motivation, as well as their perceptions of task value. The three behaviors examined are: autonomy support, video lecture support, and cooperative learning. The significance of this research lies in its provision of additional reference materials for teachers on how to enhance students' interest and motivation in learning. It also offers concrete guidance on specific actions teachers should take in practice. Through comprehensive and detailed recommendations and knowledge, it not only enables teachers to gain deeper insights but also helps parents understand the correct ways to drive students' learning motivation.

2. Research progress

The article from Scientific Reports, “Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions,” points out that an effective strategy for enhancing student motivation is Self-Determination Theory (SDT) by Deci and Ryan [7]. This theory, published in Contemporary Educational Psychology two decades ago, defines intrinsic and extrinsic motivation. SDT primarily addresses people's inherent inclination to learn and grow through intrinsic motivation, and the ways to support these tendencies. Research has revealed that the key factors underpinning autonomy are interest and values (internal motivation). Conversely, motivating students to learn through rewards or punishments yields negative effects—their learning motivation and academic performance both decline [7].

An article from Cornell University, “Increasing Student Motivation & Participation,” highlights factors that can influence student motivation: carefully designed courses by teachers, effective management or instructional strategies, and creating a positive learning environment. When students perceive the course content as valuable, feel confident in their abilities, and have a clear understanding of their tasks, they are highly likely to engage in the project. Furthermore, when course content aligns with students' interests or goals, and they receive teacher feedback or support, it also boosts engagement [8]. To sustain this effect, teachers should clarify learning objectives and help students perceive their relevance. Equally important is fostering a positive, inclusive classroom atmosphere where students understand that making mistakes is acceptable, while consistently connecting instruction to their interests [8]. This approach sustains high levels of student motivation, initiative, and classroom engagement. The article further recommends that teachers employ diverse methods to captivate students and maintain their involvement. Achievable goals and feedback foster a sense of accomplishment and build confidence in task completion. By delivering flexible,

DOI: 10.54254/2753-7048/2026.HT30707

supportive instruction with clear objectives, teachers can sustain student confidence and enthusiasm, thereby enhancing classroom participation and cooperation.

3. Three instructional behaviors

3.1. Autonomy support

Autonomy support requires teachers to cultivate students' autonomy by letting students choose the learning way that is best for them and promoting self-chosen approaches. Experimental results validate that this learning strategy not only affects students' beliefs in the value of activities but also directly predicts intrinsic motivation. It suggests that students who have control over the learning way or process show increased attentional focus on activities and view them as valuable. Such observations align with the previously investigated Self-Determination Theory (SDT) that suggests that students' needs should be satisfied—e.g., providing support, freedom, or feedback—to enhance students' self-directed learning and intrinsic motivation [9]. It further suggests that teachers should consider providing students with freedom and personal space in the learning environment to foster their learning.

According to the experiment of Ruos' experiment on 515 students [3], within the structural equation model, the path coefficient linking autonomy support and subjective task value stands at $\beta = 0.47$, $p < 0.001$. Concurrently, the coefficient connecting autonomy support to intrinsic motivation is also highly significant, measuring at $\beta = 0.32$, $p < 0.01$. These results suggest that when teachers provide students with greater choice and autonomy, students not only grasp the importance and value of the task but also engage in learning propelled by their own interests [3]. This illustrates the impact of autonomy support on both intrinsic motivation and task value. Moreover, this conclusion reinforces the psychological needs hypothesis inherent in Self-Determination Theory (SDT). When individuals' autonomy is fulfilled or expressed, they demonstrate enhanced motivation. As depicted in Figure 1, this effect is not merely indirect (through task value) but also possesses a direct influence. In other words, even when students' subjective sense of value is not entirely realized in specific circumstances, teachers can still ignite their intrinsic drive and motivation through autonomy support. Hence, the icons and data culminate in the conclusion that autonomy support serves as a direct pathway to nurturing students' interest in learning, representing an effective teaching practice.

DOI: 10.54254/2753-7048/2026.HT30707

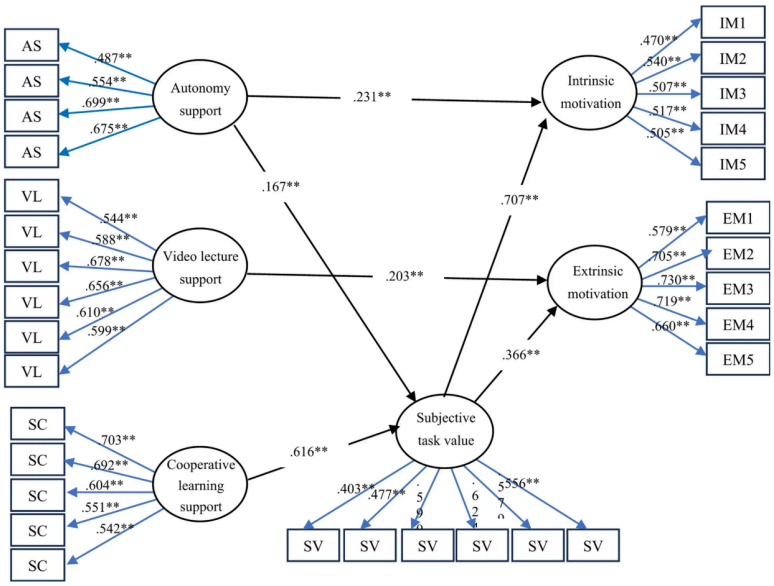

Figure 1. The impact of instructional behaviors on learning motivation via subjective task value in high school students in Cambodia [3]

3.2. Cooperative learning

This study found that cooperative learning helps students see the value in schoolwork. But it does not directly make them more interested in it. The data from the study shows a strong link between cooperative learning and task value [3]. However, the link from cooperative learning to inner motivation is not important. In that case, group work makes students understand why a task is useful. But it does not create a real interest in the work itself. The study also shows that cooperative learning affects motivation in an indirect way. It first increases how much students value a task. This higher task value then leads to more inner motivation and also more outer motivation. The effect on inner motivation is stronger, which means the main job of cooperative learning is to show students why a task matters. After they see the task's value, their motivation can grow.

Figure 1, "Path Diagram of Cooperative Learning," shows a clear process. The link from "Cooperative Learning" to "Task Value" is strong and important. This means when students work in groups, they start to see their schoolwork as more valuable [3]. However, the link from "Cooperative Learning" through "Intrinsic Motivation" is not significant. This means group work does not directly make students more personally interested in the work, and shows that the motivation process in cooperative learning is indirect. It does not happen on its own [3].

Cooperative learning creates a special social and learning environment. In this setting, students find meaning in working together. They feel good when their team succeeds, and they learn to rely on each other. This teamwork helps them understand the task's value for the group [10]. However, a sense of group duty or external pressure does not directly create inner motivation. A student may see a task as important for the team, but may not find the activity itself interesting or enjoyable. The motivation is for the group, not for the learning.

This explains how cooperative learning acts as a bridge. It helps students see the value in learning tasks, and they understand why the work matters for the group's goal. But by itself, this group value may not create a deep, self-sustaining interest. The student's personal connection to the material might still be missing. The learning is for the team, not for themselves. Therefore, to build students' inner motivation, teachers must make cooperative activities personally relevant. They need to

DOI: 10.54254/2753-7048/2026.HT30707

connect group work to the students' own lives and interests. This requires careful planning. Teachers can create group work that relates to everyday life. This makes the work feel more real and useful. Giving students personal choice within the group is also helpful. For example, letting them choose which part of a project to work on and allowing time for self-reflection after the group work is another good idea. This helps students think about what they learned.

3.3. Video lecture support

This study found that video lecture support was strongly linked to extrinsic motivation. But it did not show a significant direct link to intrinsic motivation or subjective task value, which means in Cambodian high schools, video lectures mainly work as external drivers for learning. For example, they help students finish homework, study for tests, or meet performance goals. Figure 1 illustrates this clearly, which, according to "Video Lecture Support → Extrinsic Motivation," is strong [3]. However, the path toward intrinsic motivation is weak and not significant. This shows that while videos can help learning, their effect is more about practical use than real interest. Students use video lectures as a tool to achieve external goals, rather than to connect deeply with the material.

The lack of a direct link to intrinsic motivation also comes from the low interactivity and engagement in the videos used. These were mostly one-way teaching resources. As the authors point out, the missing mediating effect through subjective task value further shows that video lectures do not automatically make students see tasks as more important or relevant to them. In other words, just providing videos is not enough to create self-driven motivation [3]. This is because students may watch them passively to meet outside demands, not to make learning goals their own. This matches earlier research, which says video lectures can support intrinsic motivation only if they include interactive parts like quizzes, reflection prompts, or problem-solving tasks.

The findings of this study indicate that teachers' autonomy support and cooperative learning strategies can effectively enhance students' sense of task value. In contrast, the supportive role of video lectures primarily manifests in strengthening students' external motivation. From a teaching practice perspective, video lectures offer significant advantages in resource-limited or blended learning environments. However, teachers should not employ video instruction in isolation. They need to organically integrate videos with active learning approaches. Specifically, teachers can design complementary classroom discussions, group assignments, or individual reflection sessions for video content. Such instructional designs help students connect external goals (e.g., achieving grades) with intrinsic learning interest. This approach not only improves task completion efficiency but also gradually cultivates students' intrinsic motivation. Ultimately, students achieve a deeper understanding of knowledge. Thus, video resources integrated with interactive elements become more powerful tools for simultaneously advancing academic achievement and sustaining long-term learning motivation.

3.4. Discussion

This research explored how different teaching methods influence learning motivation among secondary school students in Cambodia. It focused on autonomy support, video lecture support, and cooperative learning. The results show that autonomy support improves both how much students value a task and their inner motivation. Cooperative learning does not directly raise inner motivation, but it helps students value the task more. Video lecture support, on the other hand, increases outer motivation. The study also found that task value plays an important middle role, showing that students’ sense of a task’s worth helps explain how teaching methods affect motivation.

DOI: 10.54254/2753-7048/2026.HT30707

4. Conclusion

This research adds to past studies by studying several teaching methods together in one model. It fills a gap because most previous research only looked at one method at a time. The findings also develop Self-Determination Theory and Expectancy-Value Theory by using real data from a developing country. They show that task value can connect external teaching actions with internal motivational outcomes. The study also gives practical suggestions for teachers and schools. It highlights the need to design lessons that support students' independence and to organize group learning carefully. It also suggests that video lectures can be effective, especially in areas with fewer educational resources.

However, there are some limits. The study used a single survey, memory-based answers, and data only from three provinces in Cambodia. These may make it hard to apply the findings to other contexts. Future research could use long-term or experimental methods, include more regions, and add interviews to better understand students' experiences.

References

[1] Wulf, Gabriele, and Rebecca Lewthwaite. "Optimizing Performance through Intrinsic Motivation and Attention for Learning: The OPTIMAL Theory of Motor Learning." Psychonomic Bulletin & Review, vol. 23, no. 5, 29 Jan. 2016, pp. 1382–1414, https: //doi.org/10.3758/s13423-015-0999-9.

[2] Wigfield, Allan, and Jacquelynne S. Eccles. "Expectancy–Value Theory of Achievement Motivation." Contemporary Educational Psychology, vol. 25, no. 1, Jan. 2000, pp. 68–81, www.sciencedirect.com/science/article/pii/S0361476X99910159, https: //doi.org/10.1006/ceps.1999.1015. Accessed 5 Oct. 2025.

[3] Ruos, Daro, et al. "The Impact of Instructional Behaviors on Learning Motivation via Subjective Task Value in High School Students in Cambodia." Scientific Reports, vol. 15, no. 1, 19 May 2025, www.nature.com/articles/s41598-025-02147-z, https: //doi.org/10.1038/s41598-025-02147-z. Accessed 5 Oct. 2025.

[4] Boyd, Donte T., et al. "Examining the Role of Autonomy Support, Goal Setting, and Care Coordination Quality on HIV PrEP Adherence in Black Men Who Have Sex with Men: HPTN 073." AIDS Patient Care and STDs, vol. 37, no. 1, 1 Jan. 2023, pp. 22–30, https: //doi.org/10.1089/apc.2022.0139.

[5] Morris, Julia E, and Wesley Imms. "Flexible Furniture to Support Inclusive Education: Developing Learner Agency and Engagement in Primary School." Learning Environments Research, 16 Dec. 2024, https: //doi.org/10.1007/s10984-024-09522-z.

[6] Husman, Jenefer, et al. "Instrumentality, Task Value, and Intrinsic Motivation: Making Sense of Their Independent Interdependence." Contemporary Educational Psychology, vol. 29, no. 1, Jan. 2004, pp. 63–76, https: //doi.org/10.1016/s0361-476x(03)00019-5. Accessed 5 Oct. 2025.

[7] Ryan, Richard M., and Edward L. Deci. "Intrinsic and Extrinsic Motivation from a Self-Determination Theory Perspective: Definitions, Theory, Practices, and Future Directions." Contemporary Educational Psychology, vol. 61, no. 1, Apr. 2020, pp. 1–11, www.sciencedirect.com/science/article/abs/pii/S0361476X20300254, https: //doi.org/10.1016/j.cedpsych.2020.101860. Accessed 5 Oct. 2025.

[8] Cornell University. "Increasing Student Motivation & Participation | Center for Teaching Innovation." Teaching.cornell.edu, 2024, teaching.cornell.edu/teaching-resources/engaging-students/increasing-student-motivation-participation. Accessed 5 Oct. 2025.

[9] Ryan, R. M., and E. L. Deci. "Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being." Psycnet.apa.org, 2000, psycnet.apa.org/doiLanding?doi=10.1037%2F0003-066X.55.1.68. Accessed 5 Oct. 2025.

[10] Trung, Dang Ngoc, and Do Xuan Truong. "The Benefits of Cooperative Learning: An Overview." Technium Education and Humanities, vol. 4, 30 Mar. 2023, pp. 78–85, https: //doi.org/10.47577/teh.v4i.8709.