

Teacher Effectiveness and Student Engagement in Secondary Education

Dr. Ravinder Kumar

Associate Professor

C. R. Kisan College, Jind

Email : dhonchak22@gmail.com

Abstract

Teacher effectiveness and student engagement are important factors in secondary education. Students' behavioral, emotional, and cognitive engagement is influenced by teacher support, feedback, classroom management, clear explanations, and positive teacher–student relationships. This paper reviews recent research using peer-reviewed studies and international evidence from OECD TALIS and PISA. The findings show that effective teacher support is associated with stronger student engagement, better academic performance, higher self-efficacy, stronger school belonging, and lower mathematics anxiety. A 2024 meta-analysis of 141 studies involving 525,129 students also reported a positive relationship between teacher support and

school engagement. Other factors affecting engagement include school climate, academic workload, course difficulty, safety, peer relationships, and socio-economic support. The study suggests that improving teaching practices, communication, feedback, and teacher–student relationships can strengthen student engagement in secondary schools.

Keywords: teacher effectiveness; student engagement; secondary education; teacher support; teacher–student relationship; classroom management; instructional practices; school belonging

1. Introduction

Secondary school is a developmental stage where teacher quality is particularly important. Students in secondary school study many different subjects and learn from

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many different teachers daily. They encounter more rigorous academic assessments and are more concerned about issues of autonomy, social status, relatedness, and academic relevance than younger students. As a result, measures of teacher quality in secondary school go beyond assessments of subject-area knowledge and test performance. Other indicators of teacher quality in secondary school include skills related to subject instruction, identifying and addressing student misunderstandings, adapting instruction, classroom management, expressing high, but achievable, expectations for students, fostering a positive classroom environment, providing meaningful feedback, and motivating student persistence. Indicators of student engagement in secondary school include behavioral engagement, such as attendance and perseverance; emotional engagement, or feelings of interest and belonging in the school context; and cognitive engagement, or motivation to engage in challenging learning tasks. New studies suggest that these types of engagement are related but not equivalent. For example, a student might behave

engagedly without feeling emotionally engaged or feel emotionally engaged without the cognitive strategies needed for academic success. Teacher quality in secondary school is important in part because it affects students' levels of different types of engagement (Vargas-Madriz, Konishi, & Wong, 2024; OECD, 2023).

The importance of the problem is supported by international evidence. In TALIS 2018, lower secondary teachers were surveyed about their confidence in motivating and teaching students. Most of the participating OECD education systems had high levels of teacher confidence in their ability to motivate and teach students, but lower levels of confidence in their ability to motivate students who were uninterested in learning. Just 68% of surveyed teachers said they were “quite a bit” or “a lot” confident in their ability to motivate students who were uninterested in learning, compared to 86% confident in their ability to help students believe they are capable students and 81% confident in their ability to help students value critical thinking skills (OECD, 2019). A PISA 2022 study found declines in teacher support between 2012 and 2022 in many

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education systems. In most OECD countries, roughly 3 in 10 students said their teachers rarely or never provide additional help or support with learning, and almost 4 in 10 students said their teachers rarely or never show interest in all their students' learning in most lessons or teach until students demonstrate understanding (OECD, 2023). These findings do not confirm that teacher practices affect student motivation and achievement but suggest that a gap exists between the supports adolescents need and those they receive.

2. Understanding Teacher Effectiveness

Teacher effectiveness refers to a teacher's ability to create a learning environment that supports student engagement and academic achievement. In secondary schools, effectiveness depends on subject knowledge as well as communication, classroom management, instructional skills, and the ability to respond to students with different levels of motivation. Strong content

knowledge helps teachers explain concepts, connect new learning with previous knowledge, ask suitable questions, and provide useful feedback, but content knowledge alone does not ensure effective teaching. The OECD Teaching and Learning International Survey identifies classroom management, instruction, and student engagement as three major areas of teacher self-efficacy (OECD, 2019). TALIS 2018 reported that about 90% of lower-secondary teachers felt confident in providing alternative explanations and asking appropriate questions, while around 85% were confident in varying instructional approaches and about 80% in varying assessment methods (OECD, 2019). Effective instruction also involves clear lesson purposes, step-by-step explanation, relevant examples, and constructive formative feedback. Such feedback can strengthen students' confidence and engagement by helping them understand their progress and areas for improvement.

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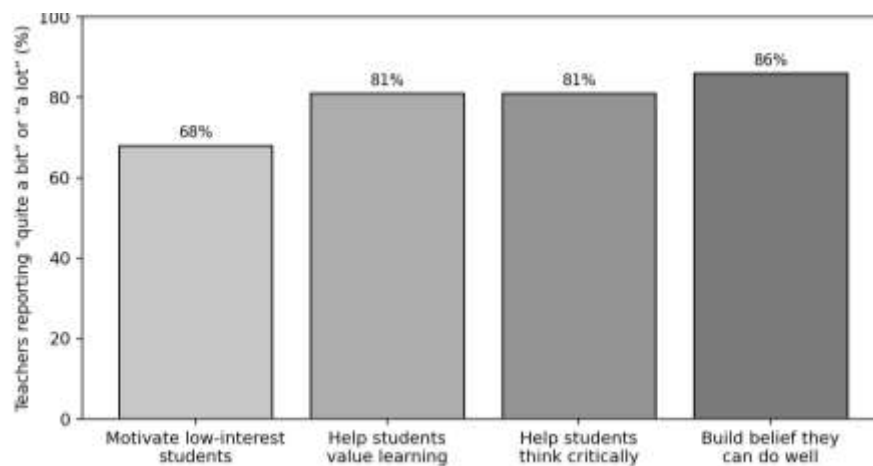


Figure 1. OECD TALIS 2018 indicators of teacher self-efficacy for student engagement. Source: OECD (2019), TALIS 2018 Results, Volume I.

Classroom management is an important part of student engagement because students learn more effectively in orderly, fair, and emotionally supportive environments. Effective management does not simply mean strict discipline; it includes clear expectations, consistent rules and consequences, active monitoring, smooth transitions, and a classroom culture in which students feel comfortable learning from mistakes. PISA 2022 findings suggest that stronger classroom discipline was associated with better mathematics achievement and student well-being, while unsafe school conditions were linked with weaker teacher support and a lower sense of belonging (OECD, 2023). Teacher effectiveness also

depends on relational competence. Jowett et al. (2023), in a study of 294 secondary students in England, found that teacher–student relationship quality, including closeness, commitment, and complementarity, was directly and indirectly related to student outcomes through positive emotions. Similarly, Roorda, Jorgensen, and Koomen (2019) found among 476 seventh-grade students that engagement differed across teachers and subjects, with weaker relationships and lower engagement often occurring in more challenging subjects. These findings suggest that student engagement should not be viewed as a fixed characteristic, since students may be highly

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engaged with one teacher or subject but less engaged with another.

3. Student Participation in Secondary Education Programs

Student engagement includes behavioral, emotional, and cognitive dimensions that together shape students' participation in school. Behavioral engagement refers to attendance, compliance with school expectations, participation, and persistence with academic tasks. Emotional engagement concerns students' feelings and beliefs about school, including interest, enjoyment, anxiety, frustration, and perceptions of acceptance by teachers and peers. Cognitive engagement reflects students' motivation, learning strategies, and willingness to work with challenging content. Although these dimensions are related, they should be examined separately because students may show different patterns across them. For example, a student may attend regularly and follow classroom rules but show little motivation for difficult learning tasks, while another may be highly motivated but avoid classroom participation because of peer-related concerns. Vargas-Madriz et al. (2024), in a meta-analysis of 141 studies

involving 525,129 students, found positive relationships between teacher support and different forms of school engagement, with variations according to school level, gender, language background, study design, and data source. These findings support the view that student engagement is multidimensional and influenced by several interacting factors.

Engagement during secondary school can also change over time and is influenced by students' earlier experiences. Quin, Heerde, and Toumbourou (2018) found that teacher support in Grade 10 was associated with higher academic and affective engagement in Grade 11 and with lower absence and disciplinary problems. Earlier engagement and achievement also predicted later outcomes, showing that teachers work within patterns that students have already developed. Similar findings have been reported in Asian settings. Chong et al. (2018), in a study of 3,776 Grade 7 and 8 students in Singapore, found that cognitive engagement played an important role in linking teacher support and self-confidence with learning outcomes, while affective engagement also contributed to several relationships. These findings suggest that

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schools should promote deeper cognitive involvement rather than focusing only on attendance or classroom participation. Challenging tasks, opportunities to explain ideas, meaningful classroom interactions, and constructive feedback can help students develop stronger and more sustained engagement across subjects.

4. Relationship Between Teacher Effectiveness and Student Engagement

Recent research shows a strong relationship between teacher effectiveness and student engagement. Vargas-Madriz et al. (2024), in a meta-analysis of 141 studies involving more than 500,000 students, found that teacher support was positively associated with different dimensions of student engagement. Teacher support includes academic guidance, feedback, assistance, encouragement, and caring behavior. These forms of support may influence students differently because some teachers may be particularly effective in explaining academic content, while others may be stronger in providing emotional support. Secondary

school students generally benefit from both academic and emotional support, although their needs may vary according to subject, individual characteristics, and stage of schooling.

Evidence from PISA 2022 supports these findings. Students reporting higher levels of teacher support in mathematics generally showed better mathematics performance, greater confidence in independent learning, stronger feelings of belonging, and lower mathematics anxiety (OECD, 2023). Across OECD countries, a one-unit increase in reported teacher support was associated with an average five-point increase in mathematics achievement, although this association should not be interpreted as causal. These findings indicate that effective teacher support can contribute to both students' academic experiences and emotional engagement by encouraging help-seeking, reducing anxiety, strengthening motivation, and creating a classroom environment in which students feel supported when facing academic difficulties.

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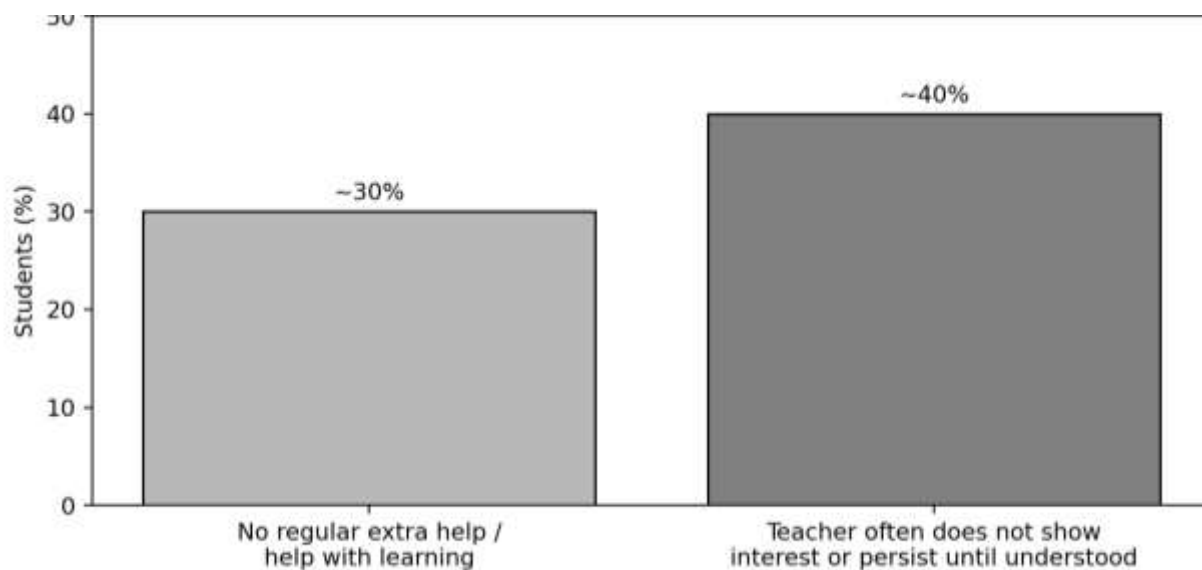


Figure 2. Reported gaps in teacher support in PISA 2022 (OECD average, approximate percentages reported in OECD summary text). Source: OECD (2023).

Longitudinal research shows that teacher–student relationships can influence changes in school engagement over time. Engels et al. (2021), studying 5,382 students from Grades 7 to 9, found that positive teacher–student relationships were associated with increased engagement, whereas negative relationships were linked with declining engagement. Changes in behavioral and emotional engagement were also related to differences in mathematics achievement. Similarly, Huang, Sang, and Chao (2022) examined 838 eighth-grade students in rural China and found that positive teacher–student relationships were strongly associated with

school engagement, with self-esteem partly explaining this relationship. These findings suggest that supportive relationships may be especially important for students with lower self-esteem or fewer academic resources.

Recent studies also show that teacher effectiveness can influence engagement indirectly through emotional and psychological factors. Gómez-Hombrados, Rey, and Extremera (2026) found that perceived teacher emotional intelligence was positively related to teacher support and student engagement, with teacher support partly mediating this relationship. Shao et al. (2025) similarly reported positive

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relationships among teacher support, academic self-efficacy, positive academic emotions, and student engagement. Together, these findings suggest that effective teachers influence not only students' immediate

classroom participation but also their confidence, emotions, and perceptions of support, which can strengthen engagement over time

Table 1. Selected Recent Empirical Evidence Linking Teacher Factors and Student Engagement

Study	Sample / data	Key numerical evidence	Relevance
Gómez-Hombrados et al. (2026)	718 adolescents at Time 1; 518 at Time 2	Two-wave, 5-month design; teacher support partially mediated links between perceived emotionally intelligent teacher behaviour and engagement	Shows relational support as a mechanism
Shao et al. (2025)	Secondary-school students	Teacher support positively related to learning engagement through self-efficacy/resilience/emotion pathways	Shows multiple motivational pathways
Vargas-Madriz et al. (2024)	141 studies; 525,129 students	Positive association between teacher support and school engagement; moderators included school level, sex, design, language discrepancy and informant	Large meta-analytic evidence base
Jowett et al. (2023)	294 secondary students (150 PE; 144 mathematics)	Relationship quality showed direct and indirect links with student outcomes through positive affect	Relationship quality as part of teaching effectiveness
Huang et al. (2022)	838 eighth graders	Positive teacher–student relationship was a strong predictor; self-worth partly mediated the relationship with engagement	Students with lower self-worth may depend more on positive relationships

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Engels et al. (2021)	5,382 adolescents, Grades 7–9	Closeness positively and conflict negatively predicted engagement trajectories	Longitudinal evidence
Thornberg et al. (2020 online)	234 survey participants; 120 focus-group participants	Relationship quality predicted engagement one year later after controls	Mixed-methods support
Roorda et al. (2019)	476 seventh graders	Relationship and engagement differed by teacher/subject; hardest subject had least favourable relationship and engagement	Engagement can be subject-specific
Quin et al. (2018)	665 continuing Grade 11 students plus 54 dropouts	Teacher support with later academic engagement $r=.37$; emotional engagement $r=.35$; absences $r=-.14$	Shows association but also importance of prior engagement

5. Factors Influencing Teacher Effectiveness and Student Engagement

Teacher effectiveness is strongly shaped by working conditions, including workload, available time, class size, administrative support, student characteristics, and school safety. OECD analysis of PISA 2022 teacher data indicates that teachers who reported adequate time for their work and better work–life balance were more likely to report stronger student relationships and classroom management (OECD, 2024). This matters because effective engagement requires time

for feedback, alternative explanations, individual support, monitoring student participation, and building trust. Heavy workloads, large classes, and frequent disruptions can therefore limit teachers' ability to apply engagement strategies even when they possess the necessary skills. Teacher self-efficacy is another important factor. TALIS 2018 showed that teachers felt less confident about engaging students who were uninterested in schoolwork than about many other teaching tasks (OECD, 2019). Repeated difficulty in re-engaging resistant students may reduce teachers' confidence

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and lead to more directive teaching or lower expectations. Professional development should therefore focus on practical re-engagement strategies, such as diagnosing reasons for disengagement, using smaller achievable tasks, providing limited choices, connecting lessons with real-life applications, offering private correction, and monitoring individual progress.

Student characteristics and school climate also influence how teacher support affects engagement. Research by Huang et al. (2022) and Zhang and Hu (2025) suggests that factors such as self-esteem, academic self-efficacy, and motivation can partly explain the relationship between teacher–student relationships, perceived teacher support, and engagement. Intrinsic motivation appears particularly important, indicating that effective support should help students

develop independence rather than dependence on teachers. Teachers can strengthen engagement by assigning appropriately challenging tasks, offering meaningful choices, explaining the relevance of learning activities, and showing consistent care and respect. School safety further affects these processes. PISA 2022 findings show that students in less safe schools tend to report weaker teacher support and lower levels of school belonging (OECD, 2023). Unsafe environments may also force teachers to devote more time to discipline and supervision instead of instruction and individual support. For this reason, efforts to improve student engagement should address not only classroom teaching but also bullying, supervision, school safety, and accessible systems through which students can seek help.

Table 2. Major Factors That Can Strengthen or Weaken the Teacher Effectiveness–Engagement Link

Level	Strengthening conditions	Constraining conditions	Likely engagement effect
Teacher	Clear explanations; adaptive feedback; emotional competence;	Work overload; low efficacy for re-engaging disaffected students;	Changes attention, persistence, trust and willingness to seek help

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	high self-efficacy; fair management	inconsistent expectations	
Classroom	Orderly routines; autonomy support; appropriate challenge; psychologically safe mistakes	Disruption; humiliation; excessive control; unclear tasks; weak feedback	Affects behavioural, emotional and cognitive engagement simultaneously
Student	Self-efficacy; self-worth; prior success; intrinsic value; resilience	Repeated failure; anxiety; low belonging; learned helplessness	Influences how teacher actions are interpreted
School	Supportive leadership; manageable workload; safety; collaboration; professional learning	Staff shortages; unsafe climate; fragmented policies; excessive administrative demand	Shapes teachers' capacity to sustain effective practice
Family/peer context	Home support; constructive peer norms; attendance	Chronic absence; adverse peer norms; weak home-school communication	Can reinforce or counter classroom engagement

6. Impact of Teacher-Student Relationships and Teaching Practices

Teacher-student relationships affect student engagement by affecting students' perceptions of teacher expectations. Unfavorable assignments from supportive teachers are likely to be perceived as

challenging; unfavorable assignments from antagonistic teachers are likely to be perceived as unfair and as signals that the teacher believes the student will fail. A study by Thornberg, Forsberg, Hammar Chiriak, and Bjereld (2020, online; 2022 print) of 234 quantitative and 120 qualitative survey respondents in Swedish compulsory schools

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found that teacher-student relationship quality was a significant predictor of student engagement a year later, even after controlling for other predictors such as age and sex and prior student engagement. Qualitative responses by students described both “teacher being” and “teacher doing.” These categories are helpful because students' reactions depend on both teachers' behaviors, such as teaching and evaluating student work, and perceptions of teachers' personal qualities, such as respect, patience, interest in students, and trustworthiness. Teachers need to be aware of both aspects to promote positive student engagement.

Need-supportive teaching strategies are one model for aligning instruction with adolescent development. Zeinstra et al. (2023) found that in one eighth-grade classroom over an entire school year, videos of classroom activities showed positive effects of teachers' efforts to build student perceptions of autonomy, competence, and relatedness on momentary engagement during lessons. Patall et al. (2024), using a national sample of full-time public-school teachers in the United States, found that secondary school teachers reported using

fewer need-supportive strategies than elementary school teachers and that differences in reported use were associated with differences in student engagement. Adolescence is a time of increasing interest in and need for autonomy, and overly controlling strategies may increase compliance without genuine interest or investment. Autonomy-supportive strategies do not mean letting students choose whether to learn. Strategies include explaining the purpose of an activity, listening to student viewpoints, giving students some choice in activities when possible, and avoiding controlling language. Using these strategies along with clear instructions can help make students active learners.

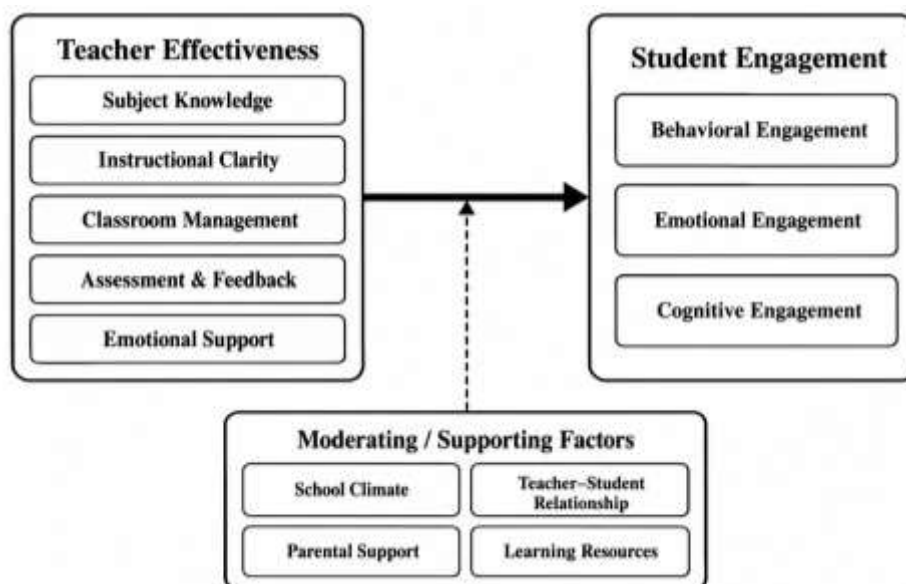
Feedback is a common activity that combines relational and instructional aspects. Good feedback should address three questions: the learning objective, the student's current level of achievement with respect to the objective, and the next steps to take. Mark-only feedback has little impact on cognitive outcomes by failing to change student actions. Other types of feedback, including excessive or judgmental feedback, can reduce students' sense of autonomy. Telling

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students in detail why their arguments are not fully developed, where they made errors in calculations, what evidence is lacking to support an argument, and how to revise a paper to make it clearer can boost students' sense of competence by providing actionable information. Relational factors, such as students' beliefs about the teacher's motives for providing feedback, can also affect whether students use feedback to improve. Overall, the teacher-student relationship can shape how instructional activities are interpreted.

Teaching strategies impact engagement by affecting cognitive engagement. Middle and high school students may become disengaged

if instruction is always too advanced, but they may also become disengaged if it is too repetitive and lacks cognitive challenge. Best practices include other strategies to promote cognitive engagement, such as modeling, eliciting student explanations, promoting retrieval and use of information rather than simple recall, and providing scaffolds that are phased out over time. Chong et al. (2018) found that cognitive engagement mediated the relationships between teacher support, self-efficacy, and positive youth outcomes. Interventions to increase engagement should be evaluated based on cognitive processes, in addition to or instead of student actions.



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Figure 3. Conceptual framework linking teacher effectiveness, student engagement, and moderating/supporting factors.

7. Challenges and Strategies for Improving Teacher Effectiveness and Student Engagement

Several barriers can limit teacher support and student engagement in secondary schools. OECD (2023) reported that perceived teacher support declined in many education systems between 2012 and 2022, with many students indicating that they did not consistently receive the help, encouragement, or academic support they needed. Schools can respond through structured formative assessment, timely interventions, common feedback practices, teacher collaboration, and early identification of attendance or coursework concerns. Engagement should also be examined across subjects because students may participate actively in one class but disengage in another. Roorda et al. (2019) found that teacher–student relationships and engagement differed by subject, particularly when students experienced academic difficulty. Rather than labeling such students as unmotivated, schools should examine teaching practices, subject-specific confidence, missing work, classroom

experiences, and strategies that have been successful with the same students in other classes. Students with a history of academic failure may also need small achievable goals, frequent feedback, revision opportunities, explicit learning strategies, and repeated experiences of respectful teacher support to rebuild confidence and participation.

A further challenge is balancing autonomy with structure. Adolescents may disengage in classrooms that are overly controlling, but they may also struggle when expectations are unclear. Effective practice therefore combines meaningful choice with clear academic goals, timelines, and behavioral expectations. Patall et al. (2024) and Zeinstra et al. (2023) suggest that supporting students' needs for autonomy, competence, and relatedness can strengthen engagement. Teacher capacity is equally important. OECD (2024) links stronger teacher–student relationships and classroom management with more manageable work demands and better work–life balance. Schools can support sustained engagement by reducing unnecessary administrative tasks, providing

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mentoring, encouraging collaborative planning, and coordinating behavior policies. These strategies recognize that student engagement is not solely an individual

student responsibility; it is also shaped by teaching practices, school organization, teacher well-being, and the quality of everyday classroom relationships.

Table 3. Practical Strategies for Secondary Schools

Priority	Recommended practice	What it targets	Implementation indicator
Instructional clarity	Use clear learning goals, worked examples, checks for understanding and alternative explanations	Cognitive engagement and competence	Students can explain the goal and next step in their own words
Formative feedback	Give specific, actionable feedback before final judgement	Persistence and self-regulation	Students revise work using feedback rather than only receiving marks
Relationship quality	Use respectful communication, private correction, regular check-ins and consistent fairness	Belonging and emotional engagement	Students report that teachers listen, help and treat them fairly
Autonomy support	Offer bounded choice and explain the purpose of tasks	Intrinsic motivation and ownership	Students make meaningful choices while meeting common standards

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Classroom management	Teach routines, respond predictably and protect learning time	Behavioural engagement	Less lost time and fewer repeated disruptions
Early re-engagement	Monitor attendance, incomplete work and participation across subjects	Prevention of chronic disengagement	Support begins before failure becomes persistent
Teacher conditions	Protect collaboration time and reduce avoidable workload	Consistency and teacher capacity	Teachers can plan, respond to data and provide timely support

8. Conclusion

The literature shows a clear relationship between teacher effectiveness and student engagement. Effective teaching depends on subject knowledge, instructional clarity, communication, classroom management, assessment skills, emotional awareness, and positive teacher–student relationships. Vargas-Madriz et al. (2024) found a positive association between teacher support and student engagement across 141 studies involving 525,129 students, while OECD findings also connect teacher support with academic achievement and well-being. Engagement is further influenced by factors such as self-efficacy, motivation, prior achievement, school safety, peer

relationships, and family support. Schools can strengthen engagement through constructive feedback, supportive relationships, clear expectations, appropriate student choice, and regular monitoring of engagement across subjects.

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(IJMIS)**

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