

# Learning Motivation among Vocational College Students: An Integrative Conceptual Framework of Socio-Emotional Competence, Self-Efficacy, and Emotion Regulation

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## ABSTRACT

Learning motivation plays an important role in students' engagement, persistence, and academic development, especially in vocational education, where learning often involves practical tasks, performance evaluation, and emotional pressure. Although previous studies have shown that socio-emotional competence, self-efficacy, and emotion regulation are all related to motivation, these factors are usually discussed separately. As a result, there is still a lack of an integrated explanation of how learning motivation develops among vocational college students. To address this gap, this paper proposes an integrative conceptual framework to explain learning motivation in vocational education from a socio-emotional perspective. In this framework, socio-emotional competence is viewed as a foundational resource that helps students manage interpersonal and emotional challenges in the learning process. Self-efficacy is positioned as a mediating factor that connects socio-emotional competence with learning motivation, because students who better understand and manage emotions are more likely to believe in their own abilities and stay motivated. Emotion regulation is treated as a moderating factor that can strengthen or weaken this process, especially when students face stress, setbacks, or evaluation pressure. By bringing these three factors together, the paper offers a clearer understanding of why vocational students may show different levels of motivation even in similar learning environments. This framework not only extends current research on learning motivation in vocational education, but also provides useful ideas for future empirical studies and for educational practices that support students' emotional development, confidence, and sustained motivation.

**Keywords:** vocational education, learning motivation, socio-emotional competence, self-efficacy, emotion regulation

## INTRODUCTION

Learning motivation has long been identified as a critical determinant of students' academic engagement, persistence, and long-term educational success (Ryan & Deci, 2020; Schunk & DiBenedetto, 2020). Students who are motivated are more likely to invest effort, persist in the face of difficulties, and actively engage with learning tasks, whereas low levels of motivation are associated with disengagement and increased risk of dropout. In vocational education, where learning is closely linked to skill acquisition and preparation for the labor market, maintaining students' motivation is particularly important and, at the same time, especially challenging.

Vocational education and training (VET) systems play a central role in supporting workforce development and facilitating school-to-work transitions in many countries. However, international reports consistently point to motivational difficulties among vocational students, including lower levels of academic engagement and higher dropout rates compared with general education pathways (OECD, 2023). These challenges are often attributed to structural characteristics of vocational programs, such as intensive practical requirements, performance-based assessment, and uncertainty regarding future employment outcomes. While these contextual factors are undoubtedly important, growing evidence suggests that they do not fully explain why vocational students differ substantially in their motivational engagement under similar learning conditions (Billett et al., 2022).

A distinctive feature of vocational learning environments is the strong emotional load associated with practice-oriented instruction. Practical training, simulations, and workplace-based learning frequently involve public performance evaluation, immediate feedback, and comparison with peers, which intensify students' emotional experiences, including anxiety, frustration, and self-doubt (Pekrun et al., 2017; Hascher & Hagenauer, 2020). As a result, learning motivation in vocational education is not solely a matter of cognitive appraisal of task value or expected success but is closely intertwined with students' emotional experiences and their capacity to manage these experiences effectively.

Despite the acknowledged importance of learning motivation, existing research in vocational education remains theoretically fragmented. Dominant motivational theories, such as self-determination theory and expectancy-value theory, have provided valuable insights into the sources and dynamics of motivation (Ryan & Deci, 2020; Eccles & Wigfield, 2020). However, these frameworks are often applied independently and were primarily developed in general education contexts. Consequently, they offer limited guidance for understanding how motivational processes unfold in vocational settings characterized by high emotional demands and complex social interactions.

In parallel, a growing body of research has highlighted the role of socio-emotional factors in shaping students' engagement and persistence. Constructs such as socio-emotional competence, self-efficacy, and emotion regulation have each been shown to relate to learning motivation and academic engagement across educational levels (Mahoney et al., 2018; Schunk & DiBenedetto, 2020; Ben-Eliyahu et al., 2022). In vocational education, these factors appear particularly salient, as students must navigate emotionally demanding learning tasks while simultaneously developing occupational identities and confidence in their practical abilities ((Hascher & Hagenauer, 2020; Virtanen et al., 2014).

However, studies examining socio-emotional factors in vocational education have largely focused on individual constructs in isolation. Research on socio-emotional competence often emphasizes its role in general adjustment and well-being, self-efficacy studies typically examine direct effects on performance or persistence, and emotion regulation research frequently treats regulation as an outcome rather than a contextual process shaping motivation. As a result, there is a lack of integrative conceptual models that explain how these socio-emotional processes jointly contribute to learning motivation among vocational college students.

To address this gap, the present concept paper aims to develop an integrative framework that conceptualizes learning motivation in vocational education as a socio-emotionally embedded process. Specifically, the paper proposes that socio-emotional competence functions as a foundational personal resource that supports students' engagement with emotionally demanding learning environments; self-efficacy serves as a key mediating mechanism through which socio-emotional resources are translated into sustained learning motivation; and emotion regulation operates as a contextual moderator that shapes the stability and effectiveness of motivational processes under conditions of stress and evaluation. By clarifying the relationships among these constructs, this paper seeks to advance theoretical understanding of learning motivation in vocational education and to provide a foundation for future empirical research and educational practice.

## LITERATURE REVIEW

### Learning motivation

Learning motivation refers to the processes that initiate, direct, and sustain students' engagement in learning activities. In educational research, motivation has been widely associated with students' effort investment, persistence in the face of challenges, and academic achievement (Ryan & Deci, 2020). Motivated students are more likely to engage deeply with learning tasks, regulate their learning behaviors, and persist toward long-term goals, whereas low motivation is linked to disengagement and increased dropout risk.

In vocational education contexts, learning motivation has distinctive characteristics. Vocational students often evaluate learning activities based on their perceived relevance to future employment and skill acquisition rather than intrinsic interest in abstract knowledge (Guay et al., 2021). As a result, motivation in vocational education tends to be more context-dependent and sensitive to instructional design, assessment practices, and perceived

labor market outcomes (Billett et al., 2022). When learning tasks are clearly connected to occupational goals, students' motivation is more likely to be sustained; when such connections are weak, motivation may decline.

Moreover, learning motivation in vocational education is closely intertwined with emotional experiences. Practice-oriented learning frequently involves public performance evaluation, immediate feedback, and comparison with peers, which can intensify emotions such as anxiety and frustration (Pekrun et al., 2017). These emotional experiences shape students' willingness to engage, persist, or withdraw from learning activities. Consequently, understanding learning motivation in vocational education requires attention not only to cognitive appraisals of task value and expectancy but also to the socio-emotional processes that enable students to cope with emotionally demanding learning environments.

### **Socio-emotional competence**

Socio-emotional competence generally refers to a set of abilities related to emotional awareness, emotion management, social understanding, and interpersonal skills that support effective functioning in social and academic contexts (Denham, 2006; Mahoney et al., 2018). In recent years, socio-emotional competence has increasingly been recognized as a critical factor influencing students' engagement, persistence, and overall adjustment in educational settings.

Research suggests that students with higher levels of socio-emotional competence are better equipped to manage negative emotions, respond constructively to feedback, and maintain positive relationships with peers and instructors (Taylor et al., 2017). These capacities are particularly relevant in vocational education, where learning often takes place in collaborative and practice-based settings that require frequent interaction and emotional regulation. Students who lack socio-emotional competence may experience heightened stress and disengagement when confronted with performance demands, whereas those with stronger socio-emotional skills are more likely to remain engaged despite challenges (Hofmann et al., 2020).

From a motivational perspective, socio-emotional competence can be viewed as a foundational personal resource. Rather than directly producing learning motivation, it provides emotional stability and social support that enable students to cope with demanding learning conditions. This resource-based view suggests that socio-emotional competence creates favorable psychological conditions under which motivational engagement can be initiated and sustained in vocational learning environments.

### **Self-efficacy**

Self-efficacy refers to individuals' beliefs about their capability to organize and execute actions required to achieve specific goals (Bandura, 1997). Within educational contexts, self-efficacy has consistently been identified as a key predictor of students' effort, persistence, and academic engagement (Schunk & DiBenedetto, 2020). Students with higher self-efficacy are more likely to approach challenging tasks with confidence, invest sustained effort, and persist in the face of setbacks.

In vocational education, self-efficacy plays a particularly important role due to the performance-oriented nature of learning. Students are frequently required to demonstrate practical competence through tasks, simulations, and workplace-based assessments, making beliefs about personal capability highly salient. Empirical studies indicate that vocational students' self-efficacy predicts engagement in complex tasks, resilience during skill acquisition, and intentions to continue vocational programs (Lent et al., 2023).

Importantly, self-efficacy does not develop in isolation. Emotional experiences, feedback interpretation, and social comparison processes all contribute to the formation and stability of efficacy beliefs (Zimmerman, 2000). Students who are able to manage anxiety and interpret feedback constructively are more likely to develop stable self-efficacy beliefs, which in turn support sustained learning motivation. These findings suggest that self-efficacy may function as a key mechanism through which socio-emotional resources are translated into motivational engagement.

### **Emotion regulation**

Emotion regulation refers to the processes by which individuals monitor, evaluate, and modify their emotional reactions in order to achieve adaptive functioning (Gross, 2015). In educational settings, emotion regulation has

received increasing attention as a factor shaping students' engagement, motivation, and learning outcomes, particularly in high-pressure and evaluative contexts (Harley et al., 2019).

Practice-oriented vocational learning environments place substantial emotional demands on students. Public performance evaluation, time pressure, and direct feedback can elicit intense emotional responses that interfere with motivation if not effectively regulated (Hascher & Hagenauer, 2020). Research indicates that students who employ adaptive emotion regulation strategies, such as cognitive reappraisal, are better able to sustain motivation and remain engaged during challenging learning tasks, whereas maladaptive strategies are associated with disengagement and motivational decline (Putwain et al., 2018; Ben-Eliyahu et al., 2022).

Rather than acting as a direct determinant of motivation, emotion regulation may function as a contextual factor that shapes how other motivational resources operate under stress. Even students with strong socio-emotional competence and high self-efficacy may experience motivational breakdowns if they are unable to regulate emotions effectively in demanding situations. This perspective highlights the importance of considering emotion regulation as a moderating process within models of learning motivation in vocational education.

## **Theoretical Foundations**

The conceptual framework proposed in this paper is grounded in established theoretical perspectives that explain how socio-emotional processes shape motivation in educational settings. Rather than advancing a new grand theory, this paper draws selectively on existing theories to justify the proposed relationships among socio-emotional competence, self-efficacy, emotion regulation, and learning motivation in vocational education contexts.

### **Social cognitive theory**

Social cognitive theory provides a foundational explanation for the role of self-efficacy in motivational processes. According to this perspective, individuals' beliefs about their capabilities influence how they think, feel, and act in achievement-related situations (Bandura, 1997). Self-efficacy shapes effort investment, persistence in the face of difficulty, and resilience following failure, making it a central mechanism through which personal resources are translated into motivated behavior.

Recent extensions of social cognitive theory emphasize the contextual and emotional antecedents of self-efficacy beliefs. Emotional experiences, feedback interpretation, and social interactions are viewed as key sources of efficacy information that influence the development and stability of self-efficacy over time (Schunk & DiBenedetto, 2020; Lent et al., 2023). In vocational education, where students are frequently exposed to performance evaluation and emotionally salient feedback, these processes are particularly pronounced. Social cognitive theory therefore provides a strong theoretical basis for conceptualizing self-efficacy as a mediating mechanism linking socio-emotional competence to learning motivation.

### **Control–value theory of achievement emotions**

Control–value theory of achievement emotions offers a complementary framework for understanding how emotions and emotion regulation shape motivation in educational contexts. This theory posits that achievement emotions arise from individuals' appraisals of control over learning activities and the value they assign to these activities, and that these emotions, in turn, influence motivation, engagement, and learning outcomes (Pekrun, 2006; Pekrun et al., 2017).

Within this framework, emotion regulation plays a critical role in determining how emotional experiences affect motivation. Students who are able to regulate emotions effectively can buffer the negative effects of anxiety or frustration and maintain motivational engagement under pressure, whereas poor regulation may amplify the disruptive impact of negative emotions (Putwain et al., 2018; Harley et al., 2019). In practice-oriented vocational learning environments characterized by high evaluative demands, control–value theory provides a clear rationale for treating emotion regulation as a contextual factor that shapes the stability of motivational processes rather than as a direct predictor of motivation.

## **Socio-emotional learning perspectives**

Socio-emotional learning (SEL) perspectives conceptualize socio-emotional competence as a set of malleable skills that support adaptive functioning across academic, social, and emotional domains. These perspectives emphasize that emotional awareness, interpersonal skills, and self-management capacities are foundational resources that enable students to engage effectively with learning environments (Taylor et al., 2017; Mahoney et al., 2018).

Recent research extends SEL perspectives beyond primary and secondary education to postsecondary and vocational contexts, highlighting the relevance of socio-emotional competence for persistence and engagement in applied learning environments (Hofmann et al., 2020; OECD, 2023). From this viewpoint, socio-emotional competence does not directly determine learning outcomes but creates favorable psychological conditions under which motivational mechanisms, such as self-efficacy, can operate effectively. SEL perspectives therefore support the positioning of socio-emotional competence as a foundational resource within the proposed conceptual framework.

## **Integrative perspective**

Taken together, these theoretical perspectives provide complementary support for an integrative socio-emotional view of learning motivation in vocational education. Social cognitive theory explains how socio-emotional resources are translated into motivated behavior through self-efficacy beliefs, control-value theory clarifies how emotional experiences and regulation shape motivational stability under pressure, and socio-emotional learning perspectives highlight the foundational role of emotional and interpersonal competencies. By integrating these perspectives, the present concept paper establishes a coherent theoretical foundation for examining the relationships among socio-emotional competence, self-efficacy, emotion regulation, and learning motivation.

## **Relationship Between Variables**

Building on the preceding literature review and theoretical foundations, this section discusses the proposed relationships among socio-emotional competence, self-efficacy, emotion regulation, and learning motivation in vocational college students. Rather than testing specific hypotheses, the discussion aims to clarify how these constructs are theoretically and empirically connected, thereby providing the rationale for the proposed conceptual framework.

## **Socio-emotional competence and learning motivation**

Existing research suggests that socio-emotional competence is positively associated with students' learning motivation across educational contexts. Students who possess higher levels of socio-emotional competence tend to demonstrate greater emotional stability, more adaptive coping strategies, and stronger engagement in learning activities (Mahoney et al., 2018; Taylor et al., 2017). These characteristics are particularly relevant in vocational education, where learning frequently involves emotionally demanding tasks and social interaction in practice-based settings.

In vocational learning environments, socio-emotional competence enables students to manage anxiety, frustration, and self-doubt that commonly arise during skill acquisition and performance evaluation. By reducing the disruptive impact of negative emotions, socio-emotional competence supports sustained engagement and willingness to persist in challenging learning tasks (Hofmann et al., 2020). From this perspective, socio-emotional competence can be expected to have a direct and positive association with learning motivation, as it creates favorable emotional and interpersonal conditions for motivational engagement.

However, the influence of socio-emotional competence on learning motivation is unlikely to be entirely direct. While socio-emotional skills may help students remain emotionally balanced, motivational engagement also depends on students' beliefs about their ability to succeed in learning tasks. This suggests that additional motivational mechanisms may intervene between socio-emotional competence and learning motivation.

## **The mediating role of self-efficacy**

Self-efficacy has consistently been identified as a central motivational mechanism influencing effort, persistence, and engagement in educational settings (Schunk & DiBenedetto, 2020). In vocational education,

where students are frequently required to demonstrate practical competence, self-efficacy beliefs are particularly salient determinants of motivational engagement (Lent et al., 2023).

Socio-emotional competence is closely linked to the development of self-efficacy. Students with strong socio-emotional skills are better able to regulate anxiety, interpret feedback constructively, and maintain positive social interactions, all of which contribute to more favorable efficacy beliefs (Zimmerman, 2000; Ben-Eliyahu et al., 2022). Through these processes, socio-emotional competence supports the formation and stabilization of self-efficacy beliefs, which in turn promote sustained learning motivation.

From an integrative perspective, self-efficacy can be conceptualized as a mediating mechanism that translates socio-emotional resources into motivational action. Rather than socio-emotional competence directly generating motivation, it influences motivation indirectly by shaping students' confidence in their ability to meet learning demands. This mediating pathway helps explain why students with similar socio-emotional profiles may differ in motivational engagement depending on the strength of their self-efficacy beliefs.

### The moderating role of emotion regulation

Emotion regulation is increasingly recognized as a key factor shaping motivational processes under conditions of stress and evaluation. Rather than exerting a uniform direct effect on motivation, emotion regulation determines how effectively students can mobilize their psychological resources in emotionally demanding situations (Harley et al., 2019; Putwain et al., 2018).

In vocational education, emotion regulation is particularly salient due to the visibility of performance outcomes and the frequency of evaluative feedback. Students who employ adaptive emotion regulation strategies, such as cognitive reappraisal, are better able to buffer negative emotional responses and maintain motivational engagement during challenging learning activities (Ben-Eliyahu et al., 2022). In contrast, maladaptive regulation strategies may amplify emotional distress and weaken the motivational impact of socio-emotional competence and self-efficacy.

Accordingly, emotion regulation can be conceptualized as a moderating factor that shapes the strength and stability of the relationships among socio-emotional competence, self-efficacy, and learning motivation. Even when students possess strong socio-emotional skills and high self-efficacy, inadequate emotion regulation may undermine motivation in high-pressure learning contexts. Conversely, effective emotion regulation may enhance the positive effects of socio-emotional competence and self-efficacy on learning motivation, particularly in emotionally demanding vocational settings.

### Conceptual Framework

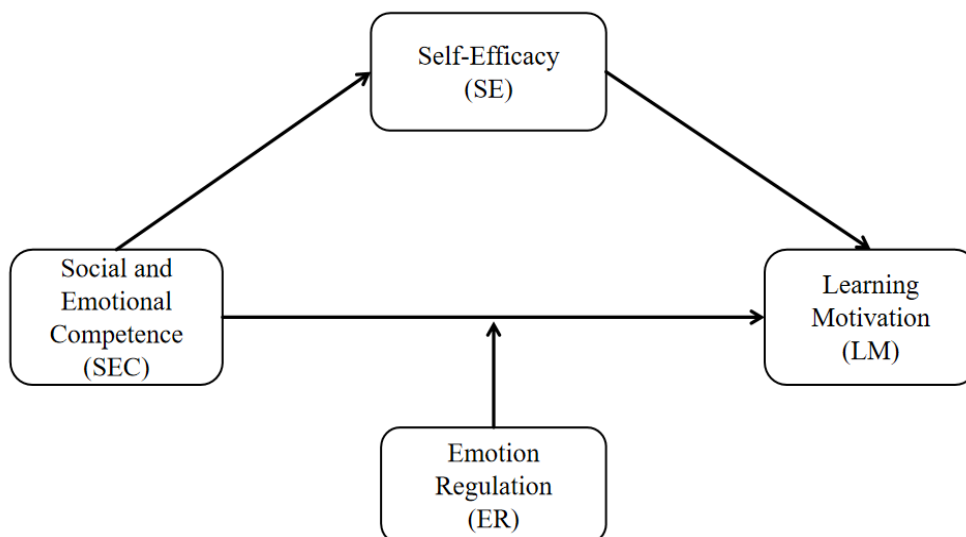


Figure 1 Conceptual framework of the paper

Based on the preceding discussion, this paper proposes an integrative conceptual framework that explains learning motivation in vocational college students as a socio-emotionally embedded process. The framework synthesizes existing literature by positioning socio-emotional competence, self-efficacy, and emotion regulation within a coherent relational structure that captures their distinct but interconnected roles in shaping motivational engagement. Figure 1 below illustrates the conceptual framework of this paper.

In the proposed framework, socio-emotional competence is conceptualized as a foundational personal resource. It encompasses students' capacities for emotional awareness, emotion management, and interpersonal functioning, which enable them to cope with the emotional and social demands of vocational learning environments. Rather than directly producing learning motivation, socio-emotional competence provides the psychological conditions that support engagement by reducing emotional disruption and facilitating adaptive responses to challenge.

Self-efficacy occupies a central mediating position within the framework. Drawing on social cognitive theory, self-efficacy represents students' beliefs about their capability to successfully perform learning tasks. The framework suggests that socio-emotional competence contributes to the development and stabilization of self-efficacy by shaping how students interpret emotional experiences, feedback, and social interactions. In turn, self-efficacy directly influences learning motivation by increasing students' willingness to invest effort, persist in the face of difficulty, and engage with demanding learning activities.

Emotion regulation is conceptualized as a contextual moderator that shapes the strength and stability of motivational processes. In emotionally demanding vocational learning environments, students' ability to regulate emotions determines whether socio-emotional resources and efficacy beliefs can be effectively mobilized. Effective emotion regulation buffers the negative impact of stress and evaluation, thereby sustaining motivation, whereas poor regulation may undermine motivation even among students with strong socio-emotional competence and high self-efficacy.

Taken together, the framework conceptualizes learning motivation as an emergent outcome of interactions among foundational socio-emotional resources, proximal motivational mechanisms, and contextual regulatory processes. By integrating these elements, the proposed framework offers a dynamic and process-oriented understanding of learning motivation that is particularly suited to the emotionally intensive nature of vocational education contexts.

## Implications

The present concept paper makes several contributions to the literature on learning motivation and vocational education. First, it advances theoretical understanding by integrating socio-emotional competence, self-efficacy, and emotion regulation into a single conceptual framework. Existing research has often examined these constructs in isolation, resulting in fragmented explanations of motivational processes. By clarifying their respective roles as foundational resources, mediating mechanisms, and contextual moderators, this paper provides a more coherent account of how learning motivation is shaped in vocational education.

Second, the paper contributes to vocational education research by explicitly addressing the socio-emotional demands of practice-oriented learning environments. While traditional motivational theories emphasize cognitive appraisals of value and expectancy, the proposed framework highlights the importance of emotional experiences and regulation processes in sustaining motivation under conditions of performance pressure and evaluation. This perspective helps explain why vocational students with similar cognitive abilities may exhibit divergent motivational trajectories and offers a more context-sensitive understanding of engagement and persistence.

Third, the proposed framework offers clear directions for future empirical research. By specifying the relational structure among socio-emotional competence, self-efficacy, emotion regulation, and learning motivation, the framework provides a foundation for testing mediated and moderated relationships using quantitative and mixed-methods approaches. Future studies may examine these processes longitudinally, across different vocational programs, or in diverse cultural contexts to assess the generalizability and boundary conditions of the framework.

Finally, the paper has practical implications for vocational education practice. The framework suggests that efforts to enhance learning motivation should not focus solely on instructional design or skill training but should also address students' socio-emotional development and regulatory capacities. Interventions that foster socio-emotional competence, support the development of self-efficacy, and strengthen emotion regulation strategies may be particularly effective in promoting sustained motivational engagement in vocational learning environments.

## CONCLUSION

This concept paper set out to examine learning motivation among vocational college students through an integrative socio-emotional lens. Drawing on recent literature from educational psychology and vocational education, the paper proposed a conceptual framework that positions socio-emotional competence, self-efficacy, and emotion regulation as interconnected processes shaping motivational engagement in vocational learning contexts.

Specifically, the paper conceptualized socio-emotional competence as a foundational personal resource that supports students' engagement with emotionally demanding learning environments. Self-efficacy was identified as a key motivational mechanism through which socio-emotional resources are translated into sustained learning motivation, while emotion regulation was positioned as a contextual moderator influencing the stability and effectiveness of motivational processes under conditions of stress and evaluation. By clarifying these relationships, the paper addressed limitations of existing research that has often examined socio-emotional factors and motivation in isolation.

By adopting a concept paper approach, this study does not aim to test empirical hypotheses but rather to provide a coherent theoretical structure that can guide future research. The proposed framework offers a foundation for empirical studies examining mediated and moderated pathways linking socio-emotional processes and learning motivation, particularly within the emotionally intensive and practice-oriented context of vocational education. Future research may build on this framework using longitudinal designs, cross-context comparisons, and mixed-methods approaches to further elucidate motivational dynamics among vocational learners.

In conclusion, this paper contributes to the literature by reconceptualizing learning motivation in vocational education as a socio-emotionally embedded process. By integrating socio-emotional competence, self-efficacy, and emotion regulation into a unified framework, the paper offers a more comprehensive and context-sensitive understanding of motivational engagement. This perspective has the potential to inform both theoretical advancement and practical efforts to support motivation and persistence among vocational college students.

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