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Original Article

The Way Forward for Secondary School Students: The Role of Self-Determination Theory and Intrinsic Motivation

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ABSTRACT

This study aimed to use self-determination theory to explore if teachers have ignited or thwarted students' intrinsic motivation in secondary schools, and therefore, become or not become autonomous in their own learning. According to the theory, human motivation requires consideration of the innate psychological needs of individuals. These needs include autonomy, competence, and relatedness. The study was carried out by reviewing the literature on self-determination theory. The words used to retrieve the articles from the databases included self-determination theory, human motivation, intrinsic motivation, extrinsic motivation, autonomy, competence, and relatedness. It is reported that when students are intrinsically motivated, they become engaged in their own learning, and they can participate fully in the required activities. Under the right classroom conditions, the students are also autonomously motivated—that is, they are engaged in their academic work with authenticity and vitality. It is identified that when students understand the worth and purpose of the activities that are given to them to perform, they feel ownership, and autonomously carry out the activities. The autonomy-supportive environment is conducive to the students' engagement in an integrative emotional regulation, and therefore, this conducive environment enhances students' well-being, reducing emotional dysregulation, and fostering high-quality interpersonal relationships. So, teachers are discouraged from being authoritarian in their classrooms but encouraged to provide conducive learning environments for students to intrinsically engage in their education so that they can flourish.

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INTRODUCTION

We are teachers, and our goal is to amicably and professionally transfer the knowledge that we have gained over the years from our antecedents to future generations. This knowledge, as we know it, is not a commodity that we can store in a bank or in a post office and give to our progeny, relatives, or charitable organizations, as a token of appreciation for any good they have done to us, unless we transform it into books or audios. Even if we transform the knowledge into books or audio and give it to our family members, they may not be interested in it or be able to use it. But when we transfer the knowledge to students during our teaching process, it is transformed into different products, because each of the students we teach is an autonomous factory that can produce more and new knowledge, spreading it like wildfire.

Our goal, as teachers, is to develop students and provide them with the ability to make their own decisions about what they think and what they want to do. Many of these students come from different tribal, social, cultural, racial, religious, and political backgrounds. Each of them is a vase of dreams, wants, and aspirations, which they want to achieve at any moment that it is made available to them. How have we, as educators, motivated or discouraged our students when we transfer our knowledge to them so that they can achieve their aspirations and dreams? Have we provided them with opportunities to flourish? Have we ignited the flames that flicker in their hearts to want to achieve more, or we have simply turned off the flames? These flames drive their intrinsic motivation, and if we turn them off by being non-supportive or authoritarian, we have essentially turned off their intrinsic motivation. In this review, we seek to unravel how self-determination theory (SDT) helps explain intrinsic motivation and how it can help teachers inspire this motivation in secondary school students.

The term *motivatio*n comes from the Latin word *movere*, which means *to be moved*. In schools, motivation is all about the forces that move students to participate, study, learn, develop, and achieve their goals . What are these forces that intrinsically motivate students to want to move and achieve their goals? According to Deci & Ryan (2000), some of these forces include schemas, expectations, values, strivings, orientations, strategies, interests, efficacies, intentions, and emotions. Although self-determination theory is used to explain motivation in students, other mini theories also help us understand people's behaviour. We are also aware that there are other mini theories of motivation that focus specifically on academic motivation. These theories are the attribution theory, expectancy-value theory, achievement goal theory, and social cognitive theory (Ryan, et al., 2023). Nonetheless, in this study, we focus on self-determination theory.

According to SDT, human motivation spans a continuum of relative autonomy or volition. This continuum extends from the motives that are enacted with an internal perceived locus of causality at one end to the motives that are enacted with external and impersonal perceived loci of causality at the other end. Furthermore, SDT also suggests that an autonomy-supportive environment is conducive to engaging students in an integrative emotional regulation, thereby, enhancing their well-being, reducing emotional dysregulation, and fostering high-quality and interpersonal relationships . As teachers, we strongly believe that fulfilling the three fundamental human needs—autonomy, competence, and relatedness in secondary school settings is central to autonomous regulation in students' academic pursuit and increased academic success.

In secondary school environments, students' autonomy involves a sense of personal initiative and the capacity to make decisions across various learning areas and other social activities. In this context, students need competence, which pertains to feeling effective in navigating through academics, confidently undertaking challenging tasks and achieving success. They need relatedness, which comprises a sense of feeling socially included, and in practice, being part of the group (Rahim, et al., 2024). If teachers can address these human psychological needs, they may improve students' engagement in learning. Consequently, interventions that are grounded on supporting students' autonomy, competence, and relatedness may improve students' well-being, which may then lead to their academic success. Presently, there remains a dearth of research that explores the application of SDT principles

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among secondary school students. Therefore, this study aimed to review and document the factors and processes that lead students in secondary schools to uphold or lose their intrinsic motivation, and how SDT helps to explain these factors.

THEORETICAL FRAMEWORK

It is reported that one of the important goals of education is to develop an autonomy-supportive learning environment so that students can manage their learning process and take more and more responsibility for it and its results (Rahim, et al., 2024). Furthermore, based on our observations in the classrooms, active, conscious, and meaningful learning by students is a prerequisite for high academic achievements (Brandisauskiene, et al., 2023). This proposition is what self-determination theory is all about. For more than two decades now, SDT has been used to explain the factors that stimulate and support students' desire to learn, in what may be referred to as practical motivation.

Self-determination theory is broad, and it explains how human practical motivation is sustained or thwarted. According to the theory, understanding human practical motivation requires consideration of the innate psychological needs of the individuals such as autonomy, competence, and relatedness (Deci & Ryan, 2000). These human psychological needs may be considered as nutrients, which when made available, can provide individuals with the necessary adjustments, integration, and growth. When these needs are met, the individuals develop a feeling of safety and well-being.

Since SDT is broad, one of its mini theories is the *Basic Psychological Needs Theory*, which postulates that human beings have three basic psychological needs: autonomy, which is defined as the feeling that one is in control of his or her own behaviours and goals (Li, et al., 2024), competence, which is the feeling of having the skills and the resources necessary to succeed in the behavioural pursuits, and relatedness, which is the feeling of being attached to and belonging to a group of people (Knittle, et al., 2023). From these perspectives, SDT proposes that when human psychological needs are thwarted, the functioning of these people is suboptimal, and the risk of ill-being increases . When these basic psychological needs are satisfied, evidence suggests that psychological well-being and high functioning typically follow (Knittle, et al., 2023).

Presently, SDT is applied across many social domains including parenting, education, healthcare, sports, physical activity (Tapia-Serrano, et al., 2024), psychotherapy, and virtual worlds, as well as the fields of work and management (Deci & Ryan, 2000). The theory offers a system that allows people to understand the basis of motivation and the relation of the basic needs to well-being, flourishing, and quality of life. The theory proposes that people's actions and their well-being are affected by their motivation to do their activities. Therefore, SDT differentiates types of motivation and maintains that these types of motivation have functionally different catalysers, concomitants, and consequences (Deci, et al., 2017).

Human Motivation

As teachers, we encourage our students to be independent learners by motivating them to implore their endogenous selves so that they can achieve the best in all subjects that we teach. As reported elsewhere, we also believe that encouraging students to be autonomous in schools is a worthy endeavour, which can enable them to think critically and to take ownership of their work in all areas of life. Our belief is grounded in constructivism theory, which suggests that students can learn and understand better when they can make meaning out of the knowledge presented to them.

As teachers, we know that human motivation to achieve a goal or a desired outcome in life is influenced by some burning within, an inner flicker of light. This inner burning is the intrinsic motivation. But human beings can also be motivated by other external factors. The causes of motivation in students that come from the external circumstances of life that surround them are extrinsic motivators. Extrinsic rewards, what is sometimes referred to as the *carrot and stick* approach to motivation, include conditions such as deadlines, evaluations, and close supervision. These conditions tend to diminish intrinsic motivation for the activity to be performed. So, intrinsic motivation is endogenous and intrinsically controlled, whereas extrinsic motivation is exogenous and externally

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controlled. Presently, secondary school teachers are gradually, but systematically moving away from extrinsically motivating students to achieve a goal because this action is academically not only counterproductive, but it is also short-lived.

Intrinsic Motivation

Intrinsic motivation is a unique type of autonomous motivation. It encompasses activities for which the motivation lies in the behaviour itself. Intrinsic motivation primarily stems from the enjoyment of an activity. This means that a person engages in the behaviour simply for the sake of doing so, and not to achieve any external rewards or goals. This form of motivation can be seen in children who enjoy an activity, for example, solving the Rubik's Cube, and they are almost always drawn into doing that activity without any form of external reward. As teachers, we want our students to intrinsically engage in their own learning.

Many times, we are intrinsically motivated to teach our subjects and we always find joy in doing so. What drives us to enjoy teaching our subjects is not the salary increase or the friendliness of the administration, but our love to see students do well and succeed in our subjects. As reported by Deci & Ryan (2017), employees are autonomously motivated for at least parts of their jobs, if not for all aspects of them, and when they are intrinsically motivated, they display high-quality performance and wellness. They further explained that intrinsic and extrinsic incentives are not additive, and the effects of rewards are undermined when people are intrinsically motivated to do a job. Therefore, autonomous motivation predicts persistence, performance quality, and well-being over time than controlled forms, and each of these forms of motivation appears to relate well to student behaviours in the classrooms and the work that they do.

In the secondary school students' learning process, for example, calculations in physics, mathematics, and chemistry are not simple undertakings that students find happiness in. The knowledge required to build an understanding of these subjects must not be fragmented, but flow in the student's mind so that there is a sense in what the subjects entail. We know that making sense of the subject is influenced by how teachers have provided instructions, the environments in which the student is, including family dynamics, and the genetic makeup of the student to understand the subject. This does not mean that the student is incapable of learning, but it may mean that the student requires more time to conceptualise and internalise the grit of the subjects.

The concept of genetic involvement in human intelligence has been adequately explored. Intelligence or *cognitive ability*, which students demonstrate through their work in the classrooms is a human phenotype, which reveals the effects of genetic expression or genotype. The idea of cognitive intelligence grew from research, and the evidence indicates that all cognitive tests are positively correlated. People who score well on one cognitive test tend to score well on all the other cognitive tests, no matter how different the cognitive skills being assessed appear to be (Deary, et al., 2022). This is the aetiology of individual differences in human intelligence, and it appears to provide evidence of why some students are intrinsically motivated and persist in a task and score high, while others simply give up and fail to achieve the required standard.

Extrinsic Motivation

Extrinsic motivation is a behaviour which involves doing an activity to attain a desired result, which may be tangible, such as students who score high in mathematics receiving free lunch. Therefore, extrinsic motivation encompasses all instrumental behaviours. If extrinsic rewards are removed, what happens?

When students are externally regulated, they perceive their behaviour as being controlled by others, often through contingent rewards or threats. As teachers, we have seen that external regulation can powerfully motivate specific behaviours, but this action often comes with collateral damage in the form of long-term decrements in autonomous motivation and wellbeing, sometimes with negative spillover effects, where students fail to perform better in the subject. Furthermore, and as an example, introjected regulation makes students focus on approval or disapproval of their work from

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their teachers (Stefanou, et al., 2004). However, we want students to be autonomous and to intrinsically self-regulate. In this way, they will identify with the importance or value of their academic work.

As reported earlier, because students can act on their own, they become autonomously self-regulated and flexible in both selecting and sustaining their behaviour and persisting in their activities. Furthermore, the most mature and volitional form of extrinsic motivation is when students can assimilate and integrate their identifications, and they can act through integrated regulation. When students have identified and integrated their behaviour to achieve their goals, they become wholeheartedly engaged and purposive concerning the target activities, therefore, with no inner barriers or conflicts (Deci, et al., 2017).

Autonomy

The term autonomy means the freedom that individuals exercise from the influence of external control. It shows a sense of initiative and ownership in one's actions. As Ryan & Deci (2020) reported, autonomy is supported by experiences of interest and value, but it is also undermined by experiences of being externally controlled, whether by rewards or punishments. In the context of secondary school students, when we talk about students' autonomy, we intend to inspire the students to exercise their volition and willingness when they do their schoolwork, an idea that students are autonomously motivated. Furthermore, when we talk about motivation, we describe an approach to academic practice, a way of conducting courses, which emphasises students' independence and responsibility for decision-making. As such, autonomy is an integral part of any kind of learning, and we encourage students to be autonomous. Some researchers use the word autonomy to refer to student-centred learning values where teachers create safe learning environments for students to thrive. In these environments, students feel comfortable interacting with teachers and peers. In these learning environments, students become responsible for their own learning.

Similarly, research by Deci, et al. (2017) reveals that autonomy characterises students who engage in their activities with a full sense of willingness, volition, and choice. Most often, students are autonomously regulated to carry out their activities because they are intrinsically motivated. When students are intrinsically motivated and engage in their activities, under the right classroom circumstances, they are also autonomously motivated—that is, engaged with authenticity and vitality (Stefanou, et al., 2004). In our view, when students understand the worth and purpose of the activities that are given to them to perform, they feel ownership and act autonomously in carrying out these activities. In addition, if the students receive clear instructions, feedback, and support, they become more autonomously motivated and perform better, learn better, and adjust better. In comparison, when students' motivation is controlled through contingent rewards or power dynamics, and as reported by Deci, et al., (2017), the extrinsic locus that results can narrow the range of their efforts, and therefore, produce short-term gains on the targeted outcomes. These controlled measures have negative spillover effects on subsequent performance and work engagement.

Competence

The idea of competence is a very important concept in education and students' learning in their classrooms. A competent student can understand his or her schoolwork without the need to constantly require support from the teacher. Being competent demonstrates that the student can interpret the concept required and he or she can respond appropriately to the concept. In this context, it is assumed that the quality of work and teaching presented to students was appropriate for the year level. Students gain competence through practice and having an interest in the study. To have an interest in the subject depends on their intrinsic behaviours on how they learn, which may be influenced by genetics and family dynamics.

The work by Stefanou, et al., (2004) revealed that boredom, laziness, and anti-intellectualism reflect a lack of perceived value in the work to be carried out by the students, and therefore, incompetence. Procrastination and work avoidance connote a lack of motivation, and therefore, incompetence. Within SDT, a lack of motivation is called amotivation, and it is often associated with a lack of value or of

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perceived competence. Amotivation can also stem from students' feelings of incompetence or their lack of interest or non-valuing of school subjects. For example, students can unconsciously adopt the ideas or attitudes of other people, including their incompetent peers. Some parents or teachers may convey to students the acceptance and approval of non-valuing of academic achievements when they perform to certain standards or expectations—this is a kind of introjection regulation.

Relatedness

Student relatedness in secondary schools involves students' need to belong, to be involved in activities, and to have security. Such feelings are easily met in village or community schools where teachers and students come from the same locality. In such situations, the students will always belong, have the feeling of personal support and security, and therefore, develop the confidence that it is okay to make mistakes and they will not be harshly reprimanded.

However, over the years, times and environments have changed. Schools and classrooms are now different, and they vary widely. In most classrooms, students come from every tribe, race, language, and religion. Likewise, teachers come from everywhere. Many students and teachers meet for the first time in their classrooms. With the changes in the dynamics of the classrooms across secondary schools, relatedness is a hurdle that many students find themselves battling with. In normal circumstances, being strangers in the classroom does not take long for both students and teachers. In some cases, however, being strangers remains longer for some students than others, and this is where the students begin to feel lonely, overwhelmed, and unwelcome.

A situation of being strangers leads students to develop a lack of motivation, and therefore, they disengage from their schoolwork. In this instance, SDT should help teachers to readjust and refocus the students. The teachers must become democratic in their classrooms so that the students can develop trust. In the process, the teachers can influence students' motivation, participation, and completion of work.

It is revealed that authoritarian teachers significantly contribute to students' low academic achievements, intense anxiety, preference for easy work, and dependence on others, including teachers, to evaluate their work (Stefanou, et al., 2004). Likewise, a body of research has shown that significant relationships between teachers and students lead to increased intrinsic motivation (Deci, et al., 2017), preference for optimally difficult work, striving for excellence and understanding of difficult concepts, a sense of enjoyment and vitality, and perceived competence. As teachers, we are also aware that students in classrooms where teachers show greater sensitivity, responsiveness, predictability, and emotional warmth in their interactions have greater motivation and engagement in learning. Students in these classrooms have less conflict, and they always perform better. Hence, perhaps, authoritarian teachers and leaders in secondary schools are the thwarters of students' autonomy and intrinsic motivation.

METHOD OF THE STUDY

The study was carried out by reviewing the literature on self-determination theory. The information gained was used to explain why students in secondary schools uphold or lose intrinsic motivation in their learning, and therefore, disengage. The words used to retrieve the articles using the Google search engine and other databases such as Elsevier or ScienceDirect, Google Scholar, ERIC, Tayler & Francis online, and SAGE included self-determination theory, human motivation, intrinsic motivation, extrinsic motivation, autonomy, competence, and relatedness. Thirty-nine full articles were retrieved from the databases and reviewed. The information collected was collated and presented in this report.

FINDINGS OF THE STUDY

The findings of the study are presented in Table 1 and Table 2. The study reveals that classroom dynamics can either support or frustrate students' autonomy, students' intrinsic motivation, students' competence, and students' relatedness. These classroom dynamics include teachers' actions and behaviours. Teachers can create and foster classroom practices that support students to become

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autonomous in their learning or frustrate them so that they disengage in learning. The practices have been clearly explained and they are supported by self-determination theory and the mini theories on human psychological wellbeing. Table 1 shows the mini theories and what they mean, and Table 2 shows the types of motivation and the different catalysers of psychological behaviour.

Table 1: Self-Determination Theory is a Macro-theory, which Contains Mini theories.

Cognitive evaluation theory (Deci, et al., 1975)	• The theory explains the effects of social context on intrinsic motivation. • The theory explains how environmental events like rewards, social contexts like classroom climates, and intrapersonal events like self-set goals influence intrinsic motivation. • These events can be controlling or amotivating. • The theory explains the controversy on the effect of extrinsic rewards on intrinsic motivation.
Organismic integration theory (Deci & Ryan, 1985)	• The theory explains the phenomena which are concerned with the internalisation and integration of extrinsic motivation. • The theory explains that behaviour is regulated in part by internal structures that are elaborated through experience. • The theory explains that human beings are by nature active.
Causality orientations theory (Koestner & Zuckerman, 1994)	• A theory of general individual differences in motivational orientations. • The theory has identified three distinct causality orientations: autonomy, control, and impersonal orientation. • The theory proposes the generalised effects of orientations on motivation and behaviour.
Basic psychological needs theory (Vansteenkiste, et al., 2020)	• The theory addresses the issue of psychological well-being. • The theory serves to tie together the first three mini-theories. • The theory explains the reason for universal psychological needs for competence, autonomy, and relatedness.
Goal content theory (James, et al., 2019)	• The theory is concerned with the "what" or content of people's goals in life and their lifestyles, and the processes through which these goals develop. • The theory informs that intrinsic goal content positively predicts task performance, dedicative performance, interpersonal performance, and adaptive performance. • The theory explains that extrinsic goal content positively predicts task performance and adaptive performance. • The theory informs that intrinsic goals enhance the relationship between extrinsic goals and task performance.
Relationships motivation theory (Deci & Ryan, 2014)	• The theory is concerned with the processes that promote high-quality close relationships.

Table 2: Prerequisite for Motivation in Secondary School Students

Intrinsic motivation (Oudeyer & Kaplan, 2007)	• Endogenous in origin. • Involves spontaneous exploration and curiosity. • Driven by self-interests. • Arises from enjoyment of an activity without expecting any tangible reward. • The theory explains that people participate in an activity for inherent satisfaction rather than for some separable consequence.

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	• The theory explains that people act for the fun or challenge entailed rather than because of external products, pressures, or rewards.
Extrinsic motivation (Ryan & Deci, 2020)	• Exogenous in origin. • Driven by external motivators or catalysers. • It is externally controlled by rewards or threats. • Doing an activity to receive an external reward.
Autonomy (Ryan, et al., 2023)	• Freedom of individuals from the influence of external control.
Competence (Stefanou, et al., 2004)	• To understand a task without the need to constantly require support from others.
Relatedness (Vallerand & Bissonnette, 1992)	• The need to belong, to be involved in an activity, and to be secured. • The feeling of personal support.

DISCUSSION

This review aimed to use self-determination theory to explain how teachers promote or thwart intrinsic motivation in secondary school students during their teaching. It is now reported that, for the most part, teachers have always ignited motivation in students to pursue their academic goals. In the study, it has been identified that the term autonomy refers to student-centred learning values in which the teachers create a safe learning environment where the students feel comfortable and confident in interacting with the teachers and their peers. In this learning environment, the students take responsibility for their learning. Furthermore, it has been identified that teachers have always encouraged students to have the feeling of control over their behaviours and goals.

When a student is intrinsically motivated to carry out an activity, the locus of causality is within himself or herself. However, when the student receives external rewards to carry out the activity, he or she begins to perceive that he or she is doing the activity for the external rewards, and so, the perceived locus of causality changes from the student to the external rewards, leaving him or her with less intrinsic motivation. This is not what teachers want from their students. Teachers want students to be intrinsically motivated so that they feel competent and self-determined. Teachers want to give students rewards and feedback that strengthen them and their intrinsic motivation because they know that negative feedback or punishment weakens or decreases intrinsic motivation. Teachers do not encourage rewards that are controlling because these rewards change the locus of causality process, and the students feel incompetent and become self-deregulated.

We are aware that there are several classroom dynamics and characteristics that support the self-determination of secondary school students. These characteristics include the amount of choice and the positive feedback regarding competence. These classroom dynamics and the teacher's good-intentioned strategies increase students' perception of control, and they begin to persist in their academic pursuits. However, if teachers scrutinise the work of students and question their intelligence, it leads to doubts, which results in a negative spillover effect on students in subsequent performance. This observation is supported by the work of Stefanou, et al., (2004), which also suggests that threats, deadlines, and some form of evaluation and surveillance negatively affect student self-determination.

Indeed, the more teachers control and pressure learning, the more they obstruct the tendencies of students to be actively involved and participate in their learning. Based on this argument, teachers' behaviour can be categorised as being need supportive or need thwarting (Brandisauskiene, et al., 2023). In the context of secondary schools, the goal of teachers is to foster and create classrooms that support students to become autonomous, implore their intrinsic motivation, and become self-determined learners.

According to SDT (Deci & Ryan, 2017), and in our observations, most students are by virtue of their being and nature active and inquisitive. They take initiative and get engaged. They are intrinsically

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motivated to learn new ideas. However, the role of the environment cannot be underestimated. Therefore, the student's three basic psychological needs, autonomy, competence, and relatedness are a precondition for developing the intrinsic motivation to learn. Intrinsically motivated students tend to achieve their learning goals early and easily because they are actively engaged in learning these activities. Many of these students can motivate themselves to learn to strive for mastery and enjoy their activities (Brandisauskiene, et al., 2023).

Self-determination theory points to the possibility that intrinsic motivation can be affected. When students perceive themselves as incompetent, they begin to lose their intrinsic motivation. Therefore, if there is an environmental event which enhances people's perception of incompetence, their intrinsic motivation will decrease. If the event diminishes, their intrinsic motivation will increase. Ryan (1982) reported that an environmental event decreases intrinsic motivation by making the perceived locus of causality more external or by deflating students' perceptions of competence. Equally, an event that increases intrinsic motivation does so by making the perceived locus of causality more internal or it bolsters students' perceptions of competence.

The present study underscores a research study that was carried out to validate the factors that influence motivation. In that study, 1042 first-term junior college students were enrolled in a compulsory college course. These students were asked to complete a scale assessing intrinsic motivation, and five styles of extrinsic motivation, namely, external regulation, introjection, identification, integration, and amotivation toward their academic activities. At the end of the semester, students who dropped out of the course and those who persisted were identified. The findings of the study showed that the students who persisted in the course had reported at the beginning of the semester that they were intrinsically motivated, more identified, and integrated, and less amotivated toward academic activities than students who dropped out of the course.

In the present study, we report that teacher fairness in the classrooms, in grading students, and in communicating with students is extremely important for students' well-being, intrinsic motivation, academic success, and in reaching their self-determination in secondary schools. Therefore, it is important how teachers create the conditions in the classrooms that can compensate for a lack of personal and social factors that the students need to experience. From our observations, we know that teachers' fairness in the classrooms is a vital sign of a supportive climate where students can achieve success and develop autonomy, relatedness, and competence. From these observations and the review studies, we conclude that teachers' actions through need-supporting or need-thwarting behaviours strongly influence students' motivation, learning, and academic success.

CONCLUSION

Secondary schools and students' classrooms are replete with motivational constructs, reflecting the need for teachers to influence, provide incentives, and inspire students to fully participate in their own learning. As teachers, we have always asked the question: What encourages students to fully engage in learning? Are there causes, correlates, and outcomes of student motivation? And how can teachers improve educational approaches to motivate students to learn?

The present study shows that when students are intrinsically motivated, they are likely to achieve better than when they are extrinsically motivated. As reported by Domenico, et al., (2024), these findings suggest that students' intrinsic behaviours are enacted out of interest or for the enjoyment that ensues with the enactment of the activities. For example, some students are curious to carry out calculations in mathematics, physics, and chemistry. In doing so, they make sense of what they are doing. The study further suggests that introjected regulation is a form of controlled type of extrinsic motivation where students are less autonomous. This type of motivation refers to behaviours that a student should or must perform in a particular way or risk loss of teacher approval. Therefore, as reported, it must be emphasised that when students' behaviour is enacted for introjected reasons, their engagement is often conflicted, ambivalent, and unstable (Domenico, et al., 2024).

As explained by Ryan, et al. (2023), the central aim of education is to enhance students' flourishing. For

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students to flourish, there is a need not only to develop the cognitive capacities of the students but also the capacities for agency, prosocial relationships, and psychological wellness. Therefore, SDT has provided strong evidence that the teaching styles which support students' basic needs for autonomy (students can self-regulate their experiences and actions), relatedness (students can maintain their social connections with others), and competence (students have the feeling of being effective in their actions) foster the aspects of students' flourishing. These teaching styles can enhance the quality of students' engagement, learning, and social relationships. The present study further provides strong evidence that students' motivation and agency reciprocally influence teachers' tendency to be supportive, and teacher-student amicable relationships can enhance the learning climates.

Future Direction

More observational research will be carried out in secondary school settings to fully understand students' intrinsic motivational behaviours in the classrooms and how teachers influence these behaviours.

Conflict of Interest

There is no conflict of interest in any form or shape.

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