

Motivation for learning and psychological well-being in the context of students' individual

archetypes

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Abstract

In this study, we examine the intrinsic and extrinsic components of motivation and their influence on emotional state, stress resilience, and student satisfaction. We analyze the relationship between learning motivation and psychological well-being based on various theoretical perspectives. A review of relevant theories revealed a strong correlation between motivation and students' psychological states. Thus, intrinsic and extrinsic motivation play a crucial role in higher education. If intrinsic motivation is high and driven by genuine interest, it leads to lower stress, optimal self-esteem, and emotional stability. The educator's role extends beyond delivering content to fostering sustained interest. Balancing intrinsic and extrinsic motivation is essential, as overreliance on external incentives leads to dissatisfaction and burnout. This theoretical study provides a methodological foundation for developing recommendations to enhance educational practices in higher education.

Keywords: Ambiversion, Emotional well-being, Extraversion, extrinsic motivation, Intrinsic motivation, Introversion, Learning motivation, Motivational resonance, Stress resilience, Students' psychological well-being.

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1. Introduction

Learning motivation is a key factor that affects not only academic performance but also the overall psychological state of students. In the face of increasing educational demands and societal expectations, understanding the relationship between motivation and psychological well-being is becoming increasingly relevant. The aim of this paper is to examine how different

types of motivation (intrinsic and extrinsic) influence various aspects of psychological well-being, such as stress levels, life satisfaction, and emotional stability.

Modern educational systems face challenges related to increasing academic requirements, growing competition, and the need for students to adapt to rapidly changing socioeconomic conditions. In this context, learning motivation [1] becomes not only a tool for achieving high academic performance but also an important factor in determining students' psychological well-being [2].

As a complex interplay of internal and external factors, learning motivation influences the level of engagement, interest, and effort a student puts into their academic tasks. Motivation theories, such as self-determination theory, highlight that intrinsic motivation (interest, curiosity) and extrinsic motivation (rewards, grades) affect learning outcomes and students' emotional states in different ways [3]. However, the extent to which these types of motivation are linked to aspects of psychological well-being—such as emotional stability, stress resilience, self-esteem, and life satisfaction—remains insufficiently studied.

In this study, we define learning motivation as a superposition of external and internal stimuli and circumstances that shape students' educational, cognitive, and training engagement. Intrinsic motivation consists of three nearly equivalent components: self-fulfillment, interest in the subject, and enjoyment of learning. Extrinsic motivation, on the other hand, is interpreted as the impact of grades, social recognition, and fear of punishment, which can act as either stimulating or resisting factors depending on the context.

Psychological well-being, in turn, incorporates cognitive and emotional dimensions such as life satisfaction, stress levels, emotional stability, and self-esteem. According to the model proposed by Ryff [4], well-being is measured through six key components:

- Autonomy
- Personal growth
- Life purpose
- Self-acceptance
- Positive relationships
- Environmental mastery

These components are closely connected to the learning process and motivation.

Intrinsic motivation contributes to the development of autonomy, as learning becomes meaningful and self-directed. In contrast, extrinsic motivation based on fear or pressure reduces the sense of autonomy. Internal motives encourage students to use education as a tool for personal development; for example, exploring new topics helps students build confidence in their abilities.

Educational stress is closely linked to the type of motivation. External stimuli often increase anxiety levels, especially when tasks are perceived as mandatory obligations. Intrinsic motives, on the other hand, reduce stress by allowing students to see challenges as opportunities for growth. Intrinsically motivated students are more likely to positively assess their achievements, as their efforts align with their interests. This strengthens self-esteem and contributes to overall life satisfaction.

The objective of this study is to provide a theoretical foundation and analysis of how learning motivation influences changes in students' psychological well-being. This includes examining how variations in intrinsic, extrinsic, and mixed motivation contribute to either the enhancement or deterioration of students' emotional states during their studies.

The significance of this research lies in the fact that understanding the relationship between learning motivation and psychological well-being can facilitate the development of new educational approaches aimed not only at improving academic performance but also at strengthening students' mental health. Creating an environment that supports intrinsic motivation while minimizing the negative effects of external stressors is one of the key strategies for improving higher education systems.

2. Literature Review

The study of learning motivation and its impact on students' psychological well-being has become a crucial topic in educational psychology and pedagogy. Learning motivation not only contributes to academic success but also significantly affects students' psycho-emotional state, stress levels, life satisfaction, and personal development. Various approaches in the literature emphasize the role of motivation in shaping students' well-being, ranging from self-determination and achievement theories to studies highlighting the importance of intrinsic and extrinsic motivation in educational activities.

In recent decades, interest in researching motivation and its influence on students' psychological well-being has increased significantly. This is due to growing demands on educational systems and the necessity of improving students' psycho-emotional state, which is often compromised by stress, overload, and academic pressure. Motivation plays a key role in shaping both academic success and maintaining students' health and well-being. This literature review examines key theories of motivation, their relationship with students' psychological well-being, and research dedicated to the interaction between these factors.

One of the foundational theories of motivation is self-determination theory [5], which distinguishes between two types of motivation: intrinsic (curiosity, interest, enjoyment of learning) and extrinsic (grades, rewards, recognition). According to this theory, intrinsic motivation fosters deeper and more meaningfulengagement in the learning process, whereas extrinsic motivation can lead to surface-level task completion that is not necessarily associated with personal growth. A critical aspect

is that intrinsic motivation not only contributes to academic success but also has a positive effect on psychological wellbeing by reducing stress and improving students' self-esteem.

Achievement theory Atkinson [6] emphasizes motivation driven by the desire for success and the avoidance of failure. This drive can be a source of both positive stress, which stimulates goal achievement, and negative stress, particularly when goals are unattainable or excessively ambitious. Notably, motivation for achievement is linked to psychological well-being through self-confidence and a sense of control over one's life.

Another crucial perspective in understanding motivation is social cognitive theory [7] which highlights self-efficacy as a key concept. Self-efficacy refers to students' belief in their ability to successfully complete tasks, which is directly connected to their motivation and psychological state. A high level of self-efficacy reduces stress and increases confidence, leading to improved psychological well-being.

The connection between motivation and students' psychological well-being has been extensively studied in educational psychology. According to Ryff [8] psychological well-being consists of six key components. These components are closely related to learning processes and motivation.

Intrinsic motivation fosters autonomy by making learning meaningful and self-directed. In contrast, extrinsic motivation based on fear or pressure reduces autonomy. The internal drive encourages students to use education as a tool for self-development; for example, exploring new topics helps students build confidence in their abilities.

Educational stress is strongly linked to motivation type. External stimuli often increase anxiety levels, especially when tasks are perceived as mandatory obligations. In contrast, intrinsic motives reduce stress by allowing students to perceive challenges as opportunities. Students with strong intrinsic motivation tend to evaluate their achievements positively since their efforts align with their interests. This, in turn, strengthens self-esteem and overall life satisfaction.

Studies by Hidi and Renninger [9] have demonstrated that high intrinsic motivation improves students' emotional wellbeing, reduces anxiety and depression levels, and enhances their ability to cope with academic difficulties. Extrinsic motivation can serve as a short-term stimulus, but its long-term impact on students' psycho-emotional state is limited.

Several studies have also indicated that motivation strongly influences students' stress resilience. For example, the works of Elliot and McGregor [10] and Schunk, et al. [11] confirm that achievement-oriented students are more resistant to academic stress and better equipped to handle both academic and personal challenges.

According to Ryan and Deci [12] intrinsic motivation has a positive effect on psychological well-being because it enables students to find enjoyment and meaning in learning. In contrast, excessive reliance on extrinsic motivation—focused on achievements and rewards—can lead to burnout, where students feel overwhelmed and dissatisfied with their academic journey.

Ambiversion, as an intermediate personality type, plays a special role in motivation. Research by Grijalva, et al. [13] suggests that ambiverted students exhibit greater flexibility in their motivational strategies and can adjust their approach based on the educational context. This allows them to maintain high levels of motivation and well-being by balancing extrinsic and intrinsic stimuli according to situational needs.

Uncertainty and pressure within educational systems also influence students' motivation and psychological well-being. In highly competitive educational environments, stress levels among students can be significantly greater, leading to decreased psycho-emotional well-being. Research conducted by Salmela-Aro and Upadaya [14] indicates that under such conditions, both internal and external stimuli can intensify anxiety and stress, affecting motivation and psychological well-being.

Thus, we can conclude that there is a nonlinear and spectrum-based relationship between learning motivation and students' psychological well-being [15]. Specifically, intrinsic motivation contributes to positive emotional states, stress reduction, and greater life satisfaction, whereas extrinsic motivation tends to be effective only in the short term. Additionally, students' personality traits—such as extraversion, introversion, and ambiversion—play crucial roles in how different types of motivation impact their psychological well-being. These findings underscore the importance of an individualized approach in education to optimize motivation and support students' mental health.

Finally, research highlights that motivational resonance, achieved through a harmonious combination of intrinsic and extrinsic motivation, fosters high levels of engagement and psycho-emotional well-being. Considering individual student characteristics and creating an educational environment that supports intrinsic motivation are critical steps toward enhancing students' psychological well-being.

3. Results

3.1. Role Functions

Modern students face increasing educational demands, making the study of factors affecting their psychological wellbeing an important research direction. One such factor is motivation, which determines the quality of the educational experience and students' ability to cope with academic and personal challenges.

We can state that motivation influences well-being through two primary mechanisms:

Emotional-cognitive mechanism – Intrinsic motivation reduces the negative impact of stress, as learning is perceived as meaningful.

Behavioral mechanism – Intrinsic motivation promotes active participation in learning, enhancing self-esteem and personal growth.

The overall relationship between motivation and psychological well-being is illustrated in the following diagram:



Figure 1.

Correlation between motivation and psychological well-being, interpreted through their internal components

Several key mechanisms illustrate how motivation affects psychological well-being:

Table 1.

Role	Funct	ions iı	1 the N	/lechanism of	Motivation	's Influence on	Psychological '	Well-being

Role Function	Parameter	Attributes		
Role of Intrinsic	Learning	Students with high intrinsic motivation experience greater joy in the		
Motivation	Satisfaction	educational process, positively affecting overall life satisfaction.		
	Emotional	Intrinsic motives reduce stress levels as learning is perceived as valuable		
	Stability	rather than obligatory.		
Role of Extrinsic	Short-term	Extrinsic motivation helps in task completion and achieving results, but it		
Motivation	Achievements	does not always lead to long-term improvements in well-being.		
	Distr of Dum out	When extrinsic motives (e.g., fear of failure) dominate, the likelihood of stress		
	RISK OF BUIHOUL	and emotional exhaustion increases.		

There is strong evidence that intrinsic motivation fosters autonomy, as students feel a sense of control over their learning. Conversely, extrinsic motivation can reduce autonomy when actions are dictated solely by external circumstances. However, these relationships are not linear. The impact of each factor can be either positive or negative, depending on its quality. If the quality of motivational factors is low, a state of amotivation may occur—where students lose interest in learning and perceive their tasks as meaningless. This state may arise from excessive pressure or a lack of support.

Students with intrinsic motivation tend to view learning as an opportunity for self-realization, contributing to personal growth. In contrast, a high level of extrinsic motivation can lead to stress due to the need to meet external expectations. Intrinsic motives reduce stress by fostering a positive perception of the educational process.

Thus, learning motivation plays a crucial role in shaping students' psychological well-being. Intrinsic motivation strengthens emotional stability, personal growth, and life satisfaction, whereas excessive reliance on extrinsic motivation increases the risk of stress and burnout. Accordingly, educators and academic administrators should focus on creating conditions that foster intrinsic motivation, ensuring a harmonious balance between academic achievement and psychological health.

3.2. Motivational and Content Components of Students Before the Start of Studies

To determine the motivational parameters of the student body, we conducted sociological surveys among students from the Faculty of Pedagogy and Psychology and the Faculty of Natural Sciences. The research aimed to identify general trends in students' motivational zones and their dependence on academic year progression.

The general system for summarizing the empirical material collected in the first and second stages of research included the following:

Correlation analysis of the motivational-meaningful zone, attitudes toward learning, and indicators of extraversion-introversion and neuroticism.

Factor analysis of the relationships among the motivational sphere, learning attitudes, and personality traits (extraversion-introversion and neuroticism).

To achieve reliable results, each motivational variable was tested multiple times through a combination of research methods, including interviews, observations, surveys, testing, and content analysis of academic materials.

The level of development of each variable was assessed on a four-point scale, with the average score calculated to reflect the overall level of academic motivation among students.

Average levels of academic motivation among students by specialization (explanatory experiment) (in %).				
Specialization	Low Level	Medium Level	High Level	
Preschool Education and Upbringing	45.56	36.29	18.15	
Pedagogy and Primary Education Methods	43.28	37.39	19.33	
Pedagogy and Psychology	43.11	32.47	24.42	
Primary Military Training	39.56	43.95	16.49	
Physical Education and Sports	41.74	41.29	16.96	
Foreign Language (Two Foreign Languages)	33.18	46.24	20.58	
Average Motivation Level Among Students	41.07	39.61	19.32	

The explanatory experiment revealed that the student groups that participated in the study presented low levels of psychological well-being due to a lack of motivation for learning. Specifically, they exhibited a humanistic outlook on social values and an awareness of cultural diversity at a general level.

Additionally, an analysis of higher education curricula demonstrated that current academic programs lack sufficient content aimed at fostering students' academic motivation, including pedagogical motivation.



Figure 2.

Table 2.

Results of the assessment of the influence of psychological well-being on changes in students' learning motivation.

On the basis of these findings, our study designed and implemented an educational system focused on enhancing future teachers' academic motivation.

4. Discussion

4.1. General Context

The results of the theoretical study on the relationship between learning motivation and changes in students' psychological well-being highlight the significance of motivational factors in the educational process. Motivation serves not only as a driving force behind academic activities but also as a crucial indicator of students' psychological health. The imp act of motivation on well-being is multidimensional and depends on the type of motivation, its balance, and individual student characteristics.

As demonstrated in the theoretical analysis, intrinsic motivation has the most positive influence on students' psychological well-being. Students with high intrinsic motivation strive for self-development, find enjoyment in the learning process, and feel that their actions hold personal significance. This contributes to improved self-esteem, reduced stress levels, and greater satisfaction with learning.

The importance of intrinsic motivation underscores the necessity of creating educational conditions that foster students' interest and engagement rather than merely encouraging external achievements (e.g., grades or rewards). This requires

educators to implement interactive, research-based, and creative teaching methods that allow students to perceive their studies as meaningful and purposeful.

Importantly, however, a high level of intrinsic motivation does not always guarantee optimal well-being. If the academic workload is excessive or if students struggle with perfectionism, it can lead to burnout. In this context, it is essential for students to find a balance between personal goals and academic requirements.

Extrinsic motivation, which includes incentives such as grades, social recognition, and rewards, can play both positive and negative roles in learning. In the early stages of education, external stimuli can effectively encourage task completion. However, long-term reliance solely on external motivational factors may lead to diminished interest in learning and burnout.

Extrinsic motivation can be beneficial, particularly in short-term tasks and competitive academic or social environments. However, excessive dependence on external incentives can reduce long-term motivation. This is especially relevant in educational systems where grades play an overly dominant role, leading to "learning for grades" rather than learning for knowledge and self-development. Students driven primarily by external rewards tend to be more vulnerable to stress and dissatisfaction if they fail to achieve the desired results.

Motivational resonance, which emerges when intrinsic and extrinsic motivations are harmoniously combined, is a key factor in sustaining high levels of engagement and psychological well-being. When extrinsic motivation aligns with students' internal interests and goals, it fosters a stable and balanced form of motivation, reducing stress, burnout, and emotional exhaustion while improving psychological well-being.

Motivational resonance is an important component in establishing a supportive educational environment. This can be achieved through an optimal balance between intrinsic and extrinsic motivation, where external incentives contribute to personal growth and the educational process rather than becoming the sole determinant of success. Recognizing this relationship enables educational institutions to design learning experiences that not only promote academic achievement but also enhance students' psychological well-being.

The psychophysiological characteristics of students, such as extraversion, introversion, and ambiversion, play significant roles in their motivation and psychological well-being:

Extraverts tend to have high extrinsic motivation and thrive in social interaction, group activities, and external recognition.

Introverts are more inclined toward intrinsic motivation and feel most fulfilled when they can engage in autonomous work and self-reflection.

Considering these individual traits in educational programs is essential for enhancing students' motivation and wellbeing.

Extraverted students are more engaged in learning when group discussions, collaborative tasks, and interactive elements are present.

Introverted students benefit from independent research opportunities and self-paced learning.

Ambiverts, being adaptable, can adjust their motivation depending on the context, making them well-suited for both group and individual study formats.

The theoretical discussion of the influence of motivation on students' psychological well-being confirms its critical role in education. Intrinsic motivation remains the key factor in ensuring sustainable well-being, whereas extrinsic motivation is effective when applied in a balanced manner. Motivational resonance, achieved through harmonizing internal and external stimuli, represents an optimal model for fostering students' psycho-emotional health. Recognizing individual differences in motivation within educational practices can significantly improve both academic performance and students' overall psychological state.

4.2. Interpretation

Table 2 presents a comparative analysis of students' educational motivation levels across various specializations based on the explanatory experiment. The table specifically illustrates the percentage distribution of students with low, medium, and high motivation levels across different academic fields.

To interpret the data, it is essential to consider the characteristics of the educational programs and student demographics, including the cultural and social factors influencing the learning process.

For example, in the "Preschool Education and Upbringing" (45.56% low motivation) and "Pedagogy and Psychology" (43.11% low motivation) programs, the percentage of students with high motivation is relatively low (18.15% and 24.42%, respectively). This lack of motivation may be linked to insufficient engagement in the programs and a lack of intrinsic motivation stimulation.

Students often exhibit greater interest in dynamic and interactive learning experiences that incorporate creative or visual elements. This suggests that students' interest levels are dependent not only on the subject matter itself but also on how abstract or tangible the teaching approach is.

Specializations with a balanced combination of intrinsic and extrinsic motivation (such as "pedagogy and psychology") tend to have a greater proportion of highly motivated students. This is likely because students' intrinsic interests are rein forced by external stimuli, such as positive feedback, successful practical assignments, and career prospects.

Conversely, specializations where intrinsic and extrinsic motivations are misaligned (such as "preschool education and upbringing") demonstrate a greater proportion of students with low motivation. External requirements, such as educational standards and formal expectations, are often perceived as pressure, which suppresses intrinsic motivation.

In specializations such as "Foreign Language: Two Foreign Languages" (33.18% low motivation) and "Physical Education and Sports" (41.74% low motivation), motivation levels are more balanced. This is likely due to a correlation between students' personal interests, real-life applications, and career aspirations.

Furthermore, English language studies and physical education involve active, applied learning, which fosters higher levels of extrinsic motivation and student engagement.

With respect to psychological archetypes (introversion, extraversion, and ambiversion), motivation levels vary significantly:

Extraverted students rely heavily on external validation and perform well in interactive environments with strong social engagement (e.g., sports, pedagogy, psychology).

Introverted students excel in disciplines requiring deep analysis and theoretical comprehension (e.g., languages, sciences).

Ambiverts thrive in fields that blend individual and group-based learning (e.g., social sciences, mixed-method courses). The motivational differences by psychological archetype can be summarized in the following Table 3:

Ta	ble	3.

Differentiation of motivational patterns by psychological archetypes in the student population.

Parameter	Extraverts	Introverts	Ambiverts
Drimary Motivation	Extrinsic (gradas praise)	Intrinsia (salf davalopment)	Balanced
	Extinisic (grades, praise)	Intrinsic (sen-development)	(Internal& external)
Proformed Loaming Style	Group work discussions	Independent work analysis	Mixed formats
Fielened Leanning Style	The Learning Style Group work, discussions Independent work, analysis		(Flexibility)
Demotivation Risks	Lack of social engagement	High social pressure	Mismatch with context
	Sports, Pedagogy,	Languages, Sciences,	Social Sciences, Hybrid
Example Specializations	Psychology	Analytics	Courses

As shown in the table, differences in students' motivation levels across specializations can be explained through the lens of their individual psychophysiological characteristics. Extraverts, introverts, and ambiverts exhibit distinct motivational patterns that depend on learning formats, interaction styles, and the educational environment. Considering these characteristics in the development of educational programs can significantly enhance students' motivation and satisfaction with their learning experience.

Thus, the individual psychophysiological traits of students (extraversion, introversion, and ambiversion) account for variations in motivation levels across specializations. Extraverts are generally more motivated in socially interactive and group-based learning environments; introverts excel in settings that require individual focus and personal growth, whereas ambiverts can adapt to diverse learning activities, balancing both intrinsic and extrinsic motivation. Recognizing these differences is crucial in designing curricula and teaching methods that effectively stimulate students' motivation.

In general, the social significance of a profession, cultural context, and economic conditions can also influence students' motivation. In countries where teaching professions are highly respected, students may have greater motivation to pursue education-related careers. However, in countries where educational professionals have a lower status (such as those with a strong emphasis on technical and economic fields), students' motivation to pursue pedagogical specializations may be lower.

5. Conclusion

A theoretical study on the influence of learning motivation on students' psychological well-being has demonstrated that motivation is a significant and multifaceted factor that not only determines academic success but also exerts a substantial effect on students' psycho-emotional state. These findings are further supported by the empirical results obtained in this research.

The main conclusions of the study are as follows:

The impact of intrinsic motivation on students' psychological well-being is reflected in their increased satisfaction with the learning process, reduced stress and anxiety levels, and improved self-esteem. Students with high intrinsic motivation are more resilient to external stressors, which contributes to their emotional stability and personal growth.

Extrinsic motivation, unlike intrinsic motivation, can be both positive and negative. In the short term, it encourages students to complete academic tasks; however, excessive reliance on external factors (grades, rewards) may lead to burnout, stress, and a decline in psychological well-being in the long run.

Motivational resonance, which results from a harmonious combination of intrinsic and extrinsic motivation, promotes high levels of engagement and psychological well-being. When external incentives support students' internal interests, they are more capable of overcoming academic challenges while maintaining high levels of motivation.

Individual student characteristics, such as extraversion, introversion, and ambiversion, play crucial roles in how they perceive motivation and how it affects their psychological well-being. Considering these factors enables the fine-tuning of educational processes and motivational strategies, creating a supportive and comfortable learning environment for every student.

Thus, motivation is a key instrument for ensuring not only academic achievements but also students' psycho-emotional well-being. Creating an educational environment that fosters intrinsic motivation while maintaining a healthy balance between internal and external stimuli is essential for improving students' overall psychological state.

The development of teaching methods that accommodate students' individual needs, facilitate their personal growth, and simultaneously support their psychological health is of paramount importance.

Ultimately, learning motivation is not only the foundation for academic success but also a powerful tool for strengthening students' psychological well-being. A harmonious balance of internal and external stimuli, an individualized educational approach, and the development of motivation-oriented curricula are key directions for ensuring emotional stability and personal growth within modern educational processes.

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