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The Role of Academic Motivation in Shaping Goal Orientation: Evidence from University Students

Anam Zafar[1], Ushna Attiq[2], Syeda Gul Nayab[3], Faqeeha Sharif[4]

[1,2,3,4] Department of Psychology, University of Gujrat, Gujrat Pakistan

Corresponding Author: zafaranam30@gmail.com

Abstract

This study investigated the predictive role of academic motivation on goal orientation among undergraduate students The study encompassed 200 student subjects that provided a way of responding to the Academic Motivation Scale (Vallerand et al., 1992) and the Achievement Goals Questionnaire (Elliot & McGregor, 2001). The authors used descriptive statistics, correlation analysis and multiple regression to demonstrate the relationship between intrinsic motivation, extrinsic motivation and amotivation with different patterns of goal orientations. Results indicated a significant positive association between overall academic motivation and goal orientation ($r = .59$, $p < .001$), with academic motivation explaining 35% of the variance. Multiple regression analyses revealed that both intrinsic ($\beta = .28$, $p = .001$) and extrinsic motivation ($\beta = .40$, $p < .001$) significantly predicted goal orientation, whereas amotivation did not emerge as a significant predictor ($\beta = –.03$, $p = .652$). These findings highlight the differential influence of motivational types on students' goal-directed behaviors, emphasizing the importance of fostering intrinsic and extrinsic motivation to enhance adaptive learning strategies. The study contributes to the understanding of motivation-goal orientation dynamics in a South Asian context and provides practical implications for educational policy and teaching practices aimed at promoting mastery and performance goals.

Keywords: Academic Motivation, Intrinsic Motivation, Extrinsic Motivation, Amotivation, Goal Orientation, University Students

Introduction

Student's academic motivation is an indispensable concept in educational psychology as it determines the learning behavior, propensity and scholarly performance. It is the inner workings that come into force, guide, and maintain goal-oriented behaviors within education (Schunk et al., 2022). Motivation acts not only as a determining factor to do the engagement, but also an inducer of the achievement. Goal orientation is closely linked to this construct as it depicts the reasons or purposes with which the students undertake academic activities (Elliot & Hulleman, 2017). It is hence very important to understand the interaction between goal orientation and academic motivation as means of explaining how students can manage their learning and succeed in college (Murayama et al., 2022). Academic motivation has usually been divided into; extrinsic, intrinsic and amotivation. Intrinsic motivation is described as something that influences a person to engage in learning as a result of curiosity, interest, or internal satisfaction and extrinsic motivation is a

behavior that is compelled by things like grades, recognition, or approval (Ryan & Deci, 2020). Instead, motive or lack of motive as expressed by motivation or lack of motivation is called by motive or motive failure which is explained by a lack of intention or purpose in performing academic work. These are the motivational orientations that determine the kind of goals which people in school pursue. As an example, intrinsically motivated students have a greater chance of embracing mastery-oriented goals that dwell on learning and personal development, whereas extrinsically motivated students tend to consider mastering performance-oriented goals based on proof of competence in comparison to other people (Sideridis, 2020; Zhen et al., 2019). Goal orientation theory presents a model by which to make sense of these variances. The achievement goals are generally divided into mastery goals (concerned with understanding and the mastering of the content) and performance goals (concerned with outdoing the rest or being afraid of failure; Elliot & McGregor, 2001). When students have mastery goals, they are likely to use deep learning strategies, show perseverance against adversity, and show learning-related positive emotions (Senko & Dawson, 2021). Performance-avoidance goals, instead, tend to go in conjunction with experiencing anxiety and fear of failure, surface-level learning, and the like (Putwain et al., 2020).
The motivational orientations of students are also explained by the self-determination theory (Ryan & Deci, 2020) according to which the sense of self-agency, competence, and connections is the psychological need that sometimes becomes the higher-order motivation to learn. Favorable learning conditions that support such needs are prone to bring about intrinsic motivation and mastery goals, whereas the reverse case is high competition or control effectiveness that tends to lead to extrinsic motivation and performance goals. This indicates the importance of institutional practices, teaching strategies, and cultural elements throughout the process of motivational impact in the academic objectives of students (Guay et al., 2021). The evidence that empirically supports the predictive consequences of motivation in developing achievement goals is strong. Another example is the study, conducted by Cho and Choi (2020), which revealed that students who exhibited a higher capacity to be intrinsically motivated and focused on their mastery goals spoke of much better academic performance compared to their extrinsically motivated peers. Likewise, Noreen and Rana (2021) noted the correlation between motivational orientations and academic achievement in the university students in Pakistan, pointing out that mastery-oriented goals must be promoted. Even though this was found, the connection between goal orientation and academic motivation has been given less attention in the South Asian scenario. Educational processes in Pakistan place a strong emphasis on rote learning and performance on examinations, and intentionally neglect the development of intrinsic motivation or self-regulation of learning procedures (Khan & Akhtar, 2020). The context identifies the necessity of local research that enables us to examine how various aspects of academic motivation are used to forecasting the goal orients of students.

Objectives of the Study

This paper set out to investigate the influence of academic motivation on the goal orientation of university students. It aimed to review the relationship between overall academic motivation and goal orientation, and the predictive capability of the different types of motivations; intrinsic, extrinsic and amotivation of students on their goal-oriented tendencies. By doing so, the study gives a detailed explanation of the roles that different dimensions of motivation play in influencing achievement goals of students.

Hypotheses

H1: Academic motivation will significantly and positively predict goal orientation among university students.

H1a: Intrinsic motivation will positively predict goal orientation.

H1b: Extrinsic motivation will positively predict goal orientation.

H1c: Amotivation will not significantly predict goal orientation.

Significance of the Study

The inter-relationship of academic motivation to goal orientation has some significant policy implications and educational practice. Motivation not only determines what students learn but also how and why they continue to learn, therefore, it is critical to assess the predictive test in terms of goal orientation promotion of student learning success. This study contributes to the literature by extending insights into a South Asian context, where limited research has addressed these constructs in higher education. Research results could inform educators about strategies to foster mastery-oriented goals and intrinsic motivation, moving beyond rote learning approaches prevalent in Pakistani institutions. On the practical side, the results of the study can be used to guide the interventions intended to improve resilience, reduce performance anxiety, and lead to self-regulated learning among university students. Also, policymakers and educators can use these results to make curriculum and policy decisions that promote supportive learning environments, which facilitates intrinsic motivation and adoption of mastery goals. In such a way, the study enriches the body of knowledge available in the global context on the topics of academic motivation and goal orientation and makes it culturally relevant.

Literature Review

Academic motivation is the key indicator that determines the learning behaviors of students and performance. Specifically, based on self-determination theory, motivation in the academic setting is typically classified into intrinsic motivation, extrinsic motivation, and amotivation (Ryan & Deci, 2020). Intrinsic motivation is a kind of engagement in learning that aims at satisfying personal needs and curiosity, whilst the intrinsic motivation focuses on rewards or incentives in terms of grades, recognition and career achievements. In contrast, de-motivation is the absence of desire to act, which usually leads to withdrawal of attention to academic tasks (Deci & Ryan, 2017). These are the dimensions of motivation and together they will determine how students interact with learning experiences and align with their overall rationale. The theory of goal orientation provides supplemental information by elaborating how students self-regulate their performance when participating in achievement situations (Elliot & Murayama, 2021). The goal orientation is usually either mastery orientation (or learning orientation) and performance orientation. Mastery-oriented students are those who strive to be competent and learn in comparison to performance-oriented students who strive to show ability in relation to others (Harackiewicz et al., 2021). It has found that incentive processes can directly influence conversion of goal orientations indicating that motivation processes have a key role in influencing the adoption of goals orientations among students where their reasons as to why students are learning heavily determine their academic goals approach. As empirical data have shown, intrinsic motivation has a positive correlation with mastery-oriented intentions because intrinsically motivated learners tend to value development and endurance (Niemiec & Ryan, 2009; Froiland & Worrell, 2019). Although extrinsic motivation is sometimes criticized, it has also been shown to be associated positively with performance-related

goals, particularly when rewards and rewards and recognition are associated with academic performance (Howard et al., 2021). On the other hand, amotivations are always and steadily connected with not so constructive learning behavioral patterns and disengagement as well as having no precise goal set (Cerasoli et al., 2014). These results indicate that the nature of motivating students is what predicts to a great extent whether the goals set with them would be that of the mastery or performance pathways. Recent research also publishes that academic motivation is not a consistent predictor but functions, through its sub-dimensions. To illustrate this point, intrinsic motivation has been found to promote deep learning strategies, persistence, and adaptive goal orientation in a cross-cultural setting (Froiland & Oros, 2020). Following the same vein, extrinsic motivation internalized has the potential to promote continuity in higher education in the face of adversity (Ryan & Deci, 2020). Conversely, amotivation posits a decreased engagement and weaker adherence to academic self-direction thus ruining student performance (Howard et al., 2021). Whereas there have been much research on academic motivation and goal orientation as independent factors, there is less research on the predictive relationship between the two aspects in a common model, specifically within a South Asian context. The existing evidence to answer this question much is based on samples of Westerners, and it is not clear whether or not such motivational dynamics are similar across cultural and educational backgrounds (Schunk et al., 2022). Further, literature mainly looks at the academic motivation as a common concept without examination of how the sub-dimensions make differentiated predictions about goal orientation. This forms a loophole in the explanation that seeks to define how the intrinsic motivation, extrinsic motivation and amotivation have roles to play towards the academic aspirations of the students.

The current research helps fill the gap because it investigates the links between overall academic motivation and its subtypes and the goal orientation of university students. The study has managed to enlighten both practical aspects of motivational frameworks as well as the extent of knowledge in theories when it comes to the interests of future researchers.

Methodology

Research Design

The present investigation utilized a correlational research methodology to explore the association between academic motivation and goal orientation in undergraduate populations. A correlational approach was considered suitable because it enabled the evaluation of how fluctuations in academic motivation components (intrinsic motivation, extrinsic motivation, and amotivation) relate to various forms of goal orientations (mastery and performance approaches and avoidances) in authentic educational settings. This design enabled the exploration of predictive relationships without manipulating variables, ensuring ecological validity.

Population and Sampling Technique

The target population consisted of undergraduate students enrolled in University of Gujrat, Pakistan. Participants were selected using a purposive sampling technique to ensure the inclusion of students across diverse academic disciplines and years of study. A total of 200 students were recruited for the study, which provided sufficient statistical power for correlational and regression analyses. The sample was an acceptable size in accordance with the recommendable size to be utilized in

behavioral and social science study and was a valid study of the hypotheses of the correlation between academic motivation and goal orientation.

Inclusion and Exclusion Criteria

The respondents had to qualify by being in the ages of 18 and 30 years, studying in full time undergraduate programs and by giving their informed consent after being enlightened on the aims and processes of the study. The full-time enrolment option was used to control the level of academic exposure since part-time students may have different motivational effects depending on other external commitments. The students were excluded on the basis of being outside expected age range, either part time or nontraditional academic program enrollees, and refusal to participate. These criteria made the studied academic situation more similar and minimized the risk of confounding factors.

Measures

The sample was gained by means of two standardized psychometric questionnaires and a demographic survey. Two other scales were used to measure the intrinsic motivation, extrinsic motivation, and amotivation: the Academic Motivation Scale (AMS-C 28) developed by Vallerand et al. (1992). The tool consists of 28 items using 7 point Likert-scale, and the internal consistency (alpha greater than .85) was reported in other studies on large student sample. The AGQ (Elliot and McGregor, 2001) was used to measure the goal orientations, i.e. Mastery-approach goals, mastery-avoidance goals, performance-approach goals, and performance-avoidance goals. The AGQ is composed of 12 items which can be ranked on a five point Likert scale, and this questionnaire has a very high reliability rate of above 80 and as such it can be considered to be helpful in an academic environment. In addition, a demographic details form was applied in acquiring information about the age, sex, academic discipline, and academic year of the participants.

Procedure

After receiving an institutional permission and ethical approval, the data were gathered in classroom environments and departmental settings. Prior to participating in the study, all the participants were made aware of the objectives and procedures of the study and signed a written consent form to participate. Every participant took about 25-30 minutes to complete the questionnaires under the guidance of the researcher. Data collection was conducted within the time span of two weeks, which gave similar circumstances of administration.

Ethical Considerations

This study adhered to ethical standards for research involving human participants. All participants were informed of their right to voluntary participation and withdrawal without penalty. Anonymity and confidentiality were maintained by coding responses and storing data securely. Ethical approval was granted by the relevant institutional review board, ensuring that the study complied with recognized ethical guidelines in psychological and educational research.

Data Analysis

The information underwent analysis using IBM SPSS Statistics Version 26. Summary statistics were employed to characterize participant demographics and academic motivation and goal orientation measures. Cohen's correlation analysis was implemented to examine relationships between the two variables. Furthermore, regression modeling was performed to assess how academic motivation factors influenced goal orientation categories. Effect sizes were included to offer enhanced clarity regarding the strength of the associations.

Results

Descriptive statistics

Descriptive statistics were calculated for all study variables. Participants (N = 200) reported moderate levels of goal orientation (M = 41.63, SD = 9.17), with observed scores ranging from 20 to 60. For motivational factors, the mean score for intrinsic motivation was 50.61 (SD = 12.39), with values spanning from 16 to 77, whereas extrinsic motivation showed a slightly higher mean of 58.36 (SD = 13.96), ranging between 24 and 84. Amotivation reflected comparatively lower levels among participants, with a mean of 14.38 (SD = 6.39) and a minimum–maximum range of 4 to 28. These results suggest that extrinsic motivation was relatively stronger than intrinsic motivation in the sample, while amotivation remained comparatively low.

Table 1: ***Correlation Analysis (N=200)***

Variables	1	2
1. Academic Motivation	-	.594**
2. Goal Orientation	.594**	-

Note. Correlation is significant at the 0.01 level (2-tailed)

A Pearson correlation analysis was conducted to examine the association between academic motivation and goal orientation. Results indicated a significant positive correlation between the two variables, r (198) = .59, p < .001, suggesting that higher academic motivation is associated with higher goal orientation.

Table 2: ***Simple Linear Regression Predicting Goal Orientation from Academic Motivation***

Predictor	B	SE B	B	T	p	95% CI [LL, UL]
Constant	15.18	2.60	-	5.84	<.001	[10.06, 20.30]
Academic Motivation (Total)	0.21	0.02	.59	10.40	<.001	[0.17, 0.25]

Note. R^2 = .35, Adjusted R^2 = .35, F (1, 198) = 108.07, p < .001.

The results of a simple linear regression revealed that academic motivation significantly predicted goal orientation. Specifically, higher levels of academic motivation were associated with greater goal orientation, B = 0.21, SE = 0.02, β = .59, t(198) = 10.40, p < .001, 95% CI [0.17, 0.25]. The model was statistically significant, F(1, 198) = 108.07, p < .001, accounting for 35% of the variance

in goal orientation ($R^2 = .35$, Adjusted $R^2 = .35$). These findings suggest that students' motivation plays a substantial role in shaping their academic goal orientations.

Table 3: ***Multiple Regression Predicting Goal Orientation from Intrinsic motivation, Extrinsic motivation and Amotivation***

Predictor	B	SE B	β	t	P
Constant	16.62	2.60	—	6.39	<.001
Intrinsic motivation	0.21	0.06	.28	3.43	.001
Extrinsic Motivation	0.26	0.05	.40	4.90	<.001
Amotivation	-0.04	0.08	-.03	-0.45	.652

Note. $R^2 = .39$, Adjusted $R^2 = .38$, $F(3, 196) = 41.39$, $p < .001$.

The results of the multiple regression analysis indicated that the model significantly predicted goal orientation, $F(3, 196) = 41.39$, $p < .001$, explaining 39% of the variance ($R^2 = .39$, Adjusted $R^2 = .38$). Both intrinsic motivation ($B = 0.21$, $SE = 0.06$, $\beta = .28$, $t = 3.43$, $p = .001$) and extrinsic motivation ($B = 0.26$, $SE = 0.05$, $\beta = .40$, $t = 4.90$, $p < .001$) emerged as significant positive predictors of goal orientation. In contrast, amotivation did not significantly predict goal orientation ($B = –0.04$, $SE = 0.08$, $\beta = –.03$, $t = –0.45$, $p = .652$). These findings suggest that students with higher levels of intrinsic and extrinsic motivation are more likely to adopt stronger academic goal orientations, whereas amotivation does not play a significant role in this relationship.

Discussion

This research endeavored to investigate how academic motivation influences university students' goal orientations. In particular, it aimed to analyze the relationship between comprehensive academic motivation and goal orientation while establishing how well various motivational categories; intrinsic motivation, extrinsic motivation, and amotivation, predict students' goal-directed behaviors. The results substantially confirmed the hypothesized relationships, demonstrating the complex interaction between motivational elements and academic goal formation.

H1: Academic Motivation and Goal Orientation

As in Hypothesis 1, academic motivate on was significantly positively correlated with goal orientation ($r = .59$, $p < .001$). Regression analysis also indicated a significant relation between academic motivation and goal orientation with the latter explaining 35 percent of the variation ($R^2 = 0.35$). These findings exemplify the significant factor that academic motivation adopts in determining a student's goal orientation. Past studies have also cited the significance of motivation during academic success. An example is when Kusurkar et al. (2020) asserted that intrinsic motivation encourages perseverance, elaboration, and increased performance. Also, Alamer and Lee (2021) reported that learning in the intrinsic motivation group was connected to a higher level of academic resilience and mastery orientation, which supports the current findings.

H1a: Intrinsic Motivation and Mastery-Approach Goals

Similar to Hypothesis 1a, the intrinsic motivation was revealed as a significant positive predictor of mastery-approach goals (beta = .28, p = .001). That is, students who take pleasure in a sense of personal satisfaction and gratification in their learning process are likely to embrace strategies that activate the mastery approach. These findings are consistent with self-determination theory (Deci & Ryan, 2020) and the empirical research of Kusurkar et al. (2020) that has highlighted how intrinsic motivation encourages persistence and deeper processing activities and better performance. Recent research by Alamer and Lee (2021) also noted that the above mentioned characteristics of intrinsically motivated learners are linked to greater academic resiliency and mastery oriented engagement, which further confirms the current discoveries.

H1b: Extrinsic Motivation and Performance-Approach Goals

As to Hypothesis 1b, the extrinsic motivation variable displayed significant results in terms of predicting performance-approach goals (r = .40, p < .001). This implies that extrinsic rewards, achievement and competition is a key motivating factor towards enabling students to do better than the others. Similar observations have been made by Vansteenkiste et al. (2004) who indicated that extrinsic motivation is positively associated with achievement provided there are strong performance constructs in place. In a similar vein, Schunk and DiBenedetto (2020) noted the high level of external regulation as an effective method of short-term academic achievement but not its sustainability.

H1c: Amotivation and Goal Orientation

In contrast to the Hypothesis 1c, amotivation was not a significant predictor of goal orientation (0.03, p = .652). The indicated fact implies that students with no aspirations or those who find no great use of academic undertakings do not necessarily assume maladaptive learning practices. This is correlated with other studies that associated amotivation with disengagement and failure in their academics. In particular, Wigfield and Eccles (2021) concluded that low academic achievement as well as a higher risk of dropout are based on amotivation. But the results of the present study indicate that the relationship between amotivation and goal orientation is perhaps more multifaceted and it should be considered again.

The results of the present study concur with those of the previous research based on self-determination theory (SDT) that posits that mastery-oriented goal orientations reflectively positively associate with autonomous types of motivation and coping with learning (Vansteenkiste et al., 2004). At that, Benita et al. (2014) remark, that mastery goals are the most advantageous when they are autonomous in nature, and, thus, intrinsic motivation is central to deep engagement. In comparison, extrinsic motivation has also been found to be the basis of performance-approach goal, more often undertaken with a controlled motive of the external rewards or social comparison (Vansteenkiste et al., 2004). This trend is consistent with the current manuscript, in which performance-oriented striving was most significantly predicted by extrinsic motivation. In addition, the substantiation of the correlation between amotivation and avoidance orientations adds to the previous records, which indicate that amotivation specifies non-engagement, dysfunctional coping responses, and poorer learning outcomes (Leroy & Bressoux, 2016).

Implications for Educational Practice

The substantial proportion of variance explained in the current model (R 2 =.39) confirms the soundness of these effects and reflects the theoretical premise underlying the 2 x 2 achievement goal framework, which predicts separate approach and avoidance tendencies grounded in underlying motivational orientations (Elliot and McGregor, 2001). These results bear relevant implications to education practice. The focus of the educators should be to emphasize intrinsic motivation through learning experiences that enhance autonomy, competence, and relatedness as these are some of the key elements of intrinsic motivation contributing to a more adaptive goal orientation (Ryan & Deci, 2020). Also, the extrinsic motivation style can help to achieve the performance-approach goals, but one should be sure not to interfere with the intrinsic motivation because of the so-called over justification effect (Deci, Koestner, & Ryan, 1999). Lastly, interventions that can improve the perceived competence and value of academic tasks can help address amotivation by alleviating disengagement and/or adopting more adaptive goal orientations.

Conclusion

The current study presents empirical data that accentuate the role of academic motivation in goal orientations of university students. In particular, both the intrinsic and extrinsic motivation came out as significant predictors of goal orientation, but amotivation did not show any meaningful impact. These results show the relative effect of motivational types on the achievement goals of students and emphasis the importance of cultivating intrinsic and the extrinsic motivation in encouraging adaptive learning approach. Collectively, the research supports the fact that academic motivation is multi-dimensional and plays an essential role in the development of goal-oriented behavior in higher education contexts.

Limitations and Future Directions

The present study has limitations in spite of the fact that it provided helpful insights into the predictive relevance of academic motivation in regards to student's goal orientations. The cross-sectional design limits the ability to draw causal inferences, and reliance on self-reported measures may introduce response biases. Moreover, the research population was limited to one particular university, and this can preclude the research findings to be generalized to other university settings. In future research, a longitudinal or experimental design should be introduced to prove the cause-and-effect relation and samples of different institutions should be taken to extend external validity. Additionally, studies of prospective moderating and mediating factors, e.g. cultural context, academic discipline, or teaching practices can lead to a more complete picture of motivation effects on goal-directed behavior. The mentioned limitations will allow future studies to improve their theoretical and applied significance concerning the topic of academic motivation and goal orientation.

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