



## The Influence of Extrinsic Factors on Subject Selection among Intermediate Students

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### Abstract:

This research was conducted to assess the extrinsic sources, that affect students' choices of subjects at the intermediate level regarding the jobs available, repertoire in the society, and further education opportunities. The study was undertaken among first-year male and female students from the sciences and arts streams of public and private institutions in District Mianwali. Data was collected using structured questionnaire t-tests and Spearman's rho correlation in the use of SPSS. The study found that extrinsic motivations played a major role in choosing subjects. The factors like, probability of having a job in the future, the need for a job according to the contemporary world, the advancement to a higher level of education, and media play instrumental roles in making subject choices by the students. Nevertheless, factors like gender biases, merit limitations, career guidance, and constraints of the school environment also played a role. According to the findings, the external factors exert a significant influence on academic options, underlining the need for further enhancement of career counseling, as well as comprehensive supportive measures on the level of the learning establishments and the government. The study was conducted only in district Mianwali of the Punjab province hence results could be applied with limited scope and could not be applied in other areas until in the future, researchers repeat it in other districts and provinces too. The study is an addition to the theory of learning and will be equally beneficial to the government functionaries of the education department in the planning and management of educational policies and strategies.

**Key Words:** Job Opportunities, Societal Trends, Future Scope, Extrinsic Factors, Intermediate Students.



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## Introduction

Education is a question of life and death for Pakistan. This world is changing so fast that unless there is corresponding advancement, not only shall we be left behind but may be swallowed up completely. Quaid-e-Azam Muhammad Ali Jinnah (Speech to NWFP student federation in 1943). In the capacity of a teacher, the proposed area of research has always been at the core of interest with the researcher and the researcher continuously attempted to discover what factors make a student choose a specific course (Lashari, 2015). However, the researcher failed to identify adequate research works that are related to the mentioned area, especially around Mianwali. Such a gap of research attracted the researcher and compelled him/her to contribute and conduct the study.

In Pakistan, few students by their own choice select subjects whereas the subject and career choice of most of the students are affected by several internal as well as external factors. By keeping the above-mentioned scenario in mind, it is the most important issue to be cautious for those motives which make an impact on the subject choices of the students after matriculation (Tholen, Duysak, & Nooij, 2017). These motives can be aptitude, interest, inspiration, scope, status, job opportunities, trends, and culture or parent, teacher, peer, and siblings' motives. Keeping the above-mentioned scenario in view, it is the most important issue to be aware of the motives, which influence the subject choice of students after matriculation (Zepke, 2018). These motives can either be intrinsic (aptitude, interest, and inspiration), extrinsic (scope, status, job opportunities, trends, and culture), or interpersonal (parents, teachers, peers, and siblings) motives (Jerrim & Moss, 2019). Furthermore, the student interest has elements regarding self-efficiency, quality of the institutes, teaching methods, environment, resources, etc. (Liu, 2020).

Learners' motivation and education achievement are related in that they can affect one another. Motivation brought about a high distinction between the high achievers and the low achievers. Completion as well as sustainability of the deeds and achievements of learners is a result of motivation. Motivation also improves skills since the learner comprehends and assesses issues profoundly, not superficially (Everaert *et al.*, 2017).

Cognitive involvement includes the use of developed mental methods while; Behavioral engagement includes conflict, attention, and duration (Wang & Liou, 2017). Interest refers to students' inclination toward an assignment, the pleasure or boredom they experience while doing the assignment, and learning in general, worry, and concern (Pekrun, 2011).

Extrinsic motivation supports determination and performance by offering incentives for the favorable activities that are expected. Reward and recognition support determination and action helping as optimistic for the chosen performance maximum and instant outcomes with fewer issues. The issue with extrinsic motivation is that at times it can distort real self-regulating learning (Ali, Alharbi, Alothman, Badjah, & Alwarthan, 2018). Another factor is implicated in extrinsic motives that they are not long-term result orientated. As for the incentives, the interest of the person ceases to exist, according to Mazorenko and Boateng (2019) media plays a very significant role in the students' decision-making power; with the help of commercial ads such as different posters and advertisements introduces doors to different occupations. Television Radio Magazines Newspapers left long indelible impressions on students' personalities and/ or their decisions. Some studies back up the profession, skills, and knowledge of parents as an influence on the career choice of students. Additional cultural motives must also be designated as motivational consequences and factors as well. Similarly, Wang & Liou (2017) pointed out that East Asian countries have less motivation or self- concept than western countries.

Physics and chemistry are found in the list of the most influencing subjects. In the current world, that is the question that is being asked most frequently. That also concerns the European Union; therefore, it recommended several proficient and efficient strategies to improve students' awareness and motivation to science (Merga & Gardiner, 2019). It has not affected the whole of Europe but continues in many other countries in the world. One of the components of competency identified in Spain is the subject of Mathematics as a component in science and technology. Students may choose physics and chemistry one year before the Compulsory Secondary Education (del Estado, 2013).

Since motivation has multiple impacts on the choice of subjects taught to students, it is quite challenging for students of the East Asian countries to make informed decisions due to multiple factors that are involved in motivation such

as; The intrinsic motives including interest, curiosity, preferences, attentiveness, abilities and so on; The Extrinsic Motives including scope, status, trends, jobs, environment, directions, counseling and so on; The Interpersonal Motives including (Alaka, Oyedele, Owolabi, Kumar, Ajayi, Akinade, & Bilal, 2018; Fredricks *et al.*, 2016). Motivation is a state in which a person forwards several or some ways to achieve certain objectives. Motivation is the sum of processes that organize the individual for different goals based on the permanence of movement (Kucukozkan, 2015).

### *Problem Statement*

Intermediate education plays a crucial role in shaping students' future academic and career trajectories, serving as a bridge between basic and higher education. At this critical stage, students are influenced by various factors-intrinsic, extrinsic, and interpersonal-when selecting their subjects. While intrinsic motivations like aptitude and interest are important, extrinsic factors such as job opportunities, future scope, status, and contemporary trends often significantly impact students' decisions. Despite the recognized importance of these external influences, there is limited research on how extrinsic factors specifically affect subject selection among intermediate students. This study seeks to investigate the influence of extrinsic factors on subject choice among intermediate students in the three tehsils of District Mianwali, covering both public and private institutions offering science and arts subjects. Understanding the role of these extrinsic motivations is essential for developing effective educational and career counseling strategies that support students in making informed decisions aligned with their future aspirations. The study was conducted to examine and investigate the influence of extrinsic motives on the subject choice of students taking admission in intermediate.

### *Research Question*

How do extrinsic motives determine the subject choice of the students of the intermediate?

### *Hypotheses*

**H<sub>0</sub>-1:** There is no significant difference in perception among male and female students about the influence of extrinsic motives on the selection of subjects.

**H<sub>0</sub>-2:** There is no significant correlation of perception among Science and Arts students about the influence of motives on the selection of subjects

### **Method**

The main purpose of this study is to analyze The Influence of Extrinsic Factors on Subject Selection among Intermediate Students. The present study was conducted by the quantitative research method whereas the survey research was applied for reaching the findings and conclusion of the research. The population for this study consisted of all 5,126 first-year students enrolled during the 2020-2021 academic session in public HSSC, degree colleges, and private intermediate colleges in District Mianwali. The district comprised 33 institutions, including 13 HSSCs (8 for boys and 5 for girls), 6 degree colleges for girls, 4 degree colleges for boys, and 10 private institutions. A systematic random sampling technique was employed to ensure a representative sample. The sample size of 400 respondents was calculated proportionally using the LR Gay sampling formula, ensuring adequate representation from all subject areas. Data was gathered using a structured questionnaire designed on a five-point Likert scale, developed in line with the research objectives. To ensure the validity of the instrument, 10 experienced teachers reviewed the questionnaire, helping to identify and eliminate any potential inconsistencies. The reliability of the instrument was then measured through Cronbach's Alpha coefficient using SPSS, yielding a value of 0.82, indicating strong reliability.

A pilot study was conducted with 40 students to test the clarity and effectiveness of the questionnaire. The data collected from the main study was analyzed using both descriptive and inferential statistical techniques. Descriptive analysis involved the summarization and presentation of data, while inferential analysis was applied to test the research hypotheses. Data analysis was performed using SPSS, employing the T-test and Spearman's rho correlation to draw conclusions based on the hypotheses. This approach allowed the researcher to accurately assess the influence of extrinsic factors on subject selection among intermediate students.

## Result and Findings

**Hypothesis (H<sub>0</sub>):** There is no significant difference in perception among male and female students about the influence of extrinsic motives on the selection of subjects.

**Table 1**  
*T-statistics*

Statistics	Male	Female	Calculated t- value	tabulated t-value	A
<i>n</i>	207	193			
$\bar{x}$	2.78	2.64	3.926	1.960	0.5
S	.358	.356			

T-test was conducted to examine the difference in perception between male and female students regarding the influence of extrinsic motives on subject selection. The mean scores showed a minor difference, with male students scoring 2.78 and female students scoring 2.64, accompanied by standard deviations of .358 and .356, respectively. However, the calculated t-value of 3.926 was found to be greater than the tabulated t-value of 1.960. Despite the small difference in mean scores, the statistical analysis revealed that male and female students perceive the influence of extrinsic motives on subject selection differently. As a result, the hypothesis was rejected, concluding that there is a significant difference in the perception of extrinsic motives between male and female students.

**Hypothesis (H<sub>0</sub>):** There is no significant correlation of perception among Science and Arts students about the influence of motives on the selection of subjects.

**Table 2**  
*Relationship Analysis*

	Science and Arts	Correlation Result
Intrinsic motives influence selection	Spearman's rho	.746
	Sig. (2-tailed)	
	n	400
Extrinsic motives influencing selection	Spearman's rho	.595
	Sig. (2-tailed)	.000
	n	400

The Spearman's rho correlation test, conducted using SPSS version 25, was applied to assess the assumed association between different variables. The analysis revealed a strong positive correlation between intrinsic motives and subject selection, with a Spearman's rho correlation coefficient of .746\*\*, significant at the 0.01 level (2-tailed). Similarly, the test also indicated a significant and strong correlation between extrinsic motives and subject selection, with a correlation coefficient of .595\*\*, also significant at the 0.01 level (2-tailed). These findings suggest that both intrinsic and extrinsic motives have a considerable influence on students' subject choices.

## Discussion and Conclusion

The analysis of extrinsic motives in subject selection among intermediate students reveals significant insights into the factors influencing their choices. It was found that most students disagreed with the notion that their schools played a vital role in influencing their subject selection, indicating that institutional guidance may not be as impactful as expected. However, a strong agreement emerged among students that they chose their subjects to meet the demands of the modern age, suggesting that future-oriented factors, such as relevance to technological advancements and job market needs, heavily influence their decisions. Students also aligned their choices with societal trends, showing that peer influence and societal expectations play a crucial role. Job opportunities were a particularly strong motivating factor, with most students agreeing that their subject choices were driven by the prospects of securing employment in the future. Ngesi's detailed study revealed that the learners from low socio-economic background chose the wrong

option and as a rule, chose the occupation of short programs for financial reasons (Ngesi, 2003). Conversely, the status symbol attached to subjects was largely disregarded, as students did not view subject selection as elevating their social standing.

Higher education opportunities were another dominant extrinsic factor, with students selecting subjects that provided better chances of progressing in their academic careers. Financial considerations were also acknowledged, as a portion of students cited financial issues as a reason for their choice, highlighting the impact of economic circumstances on educational decisions. Media inspiration was another significant influence, as students tended to select subjects that were portrayed favorably or deemed popular through media channels. Good academic performance in specific subjects also motivated students, as they felt more confident in pursuing areas where they had previously excelled. While observing what Semali said about television, radio, magazines, and newspapers they influenced long-term personality and students' decisions (Semali, 2003). Interestingly, career counseling provided by schools was found to be ineffective or unavailable, with students strongly disagreeing that it had any influence on their decisions. However, the scope of the subjects-referring to their long-term potential for career development-was a significant factor for many students. Family background and socio-economic status also influenced some students, but not universally, indicating that while these factors are relevant, they are not dominant in every case. There was also some agreement that gender biases and societal practices affected subject choices, especially where traditional gender roles or expectations were prevalent. Nevertheless, the home environment and the profession of parents were generally not seen as major influencing factors. Finally, students with clear future career plans and those focused on upgrading their family's social status were particularly driven by their subject choices, demonstrating that personal and familial aspirations play a crucial role in academic decisions.

In conclusion, extrinsic factors such as job prospects, higher education opportunities, societal trends, media influence, and financial issues significantly shape the subject selection of intermediate students. Conversely, institutional factors like school counseling and status-related considerations appear to have minimal impact, underscoring the importance of external influences over institutional or symbolic factors in guiding student choices. After data collection and analysis, and interpretation of the findings of the study it was deemed that Intrinsic, extrinsic, and Interpersonal motives did have the potential to influence the subject selection of students at the intermediate level. Regarding the extrinsic reasons, the respondents opted for this subject due to the availability of immense jobs, opportunities, and needs of the hour, more prospects for higher studies, and the vastness of the subjects. With regards to the choice of subjects, media inspiration was also cited as determining the same. However, the respondents had challenges because gender bias and merit restriction were issues with them. The respondents disagreed with them on the issue of the school's importance in choosing subjects and the lack of career information within the school.

### Limitations and Future Directions for Research

The study was conducted only in district Mianwali of the Punjab province hence results could be applied with limited scope and could not be applied in other areas until in the future, researchers repeat it in other districts and provinces too. The study is an addition to the theory of learning and will be equally beneficial to the government functionaries of the education department in planning and management of educational policies and strategies. As for delimitations are concerned, these are listed as follows:

1. Interlinked with these motives are numerous which affect the choice of subject of the student, but this study was delimited to the intrinsic and extrinsic motives of the Intermediate students after matriculation in the Mianwali district only.
2. The population of this study was restricted to the first-year students of intermediate only.

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### Declaration of Interest

The authors declare that there is no clash of interest.

## References

- Alaka H. A., Oyedele L. O., Owolabi H. A., Kumar V., Ajayi S. O., Akinade O. O., Bilal M. (2018). Systematic review of bankruptcy prediction models: Towards a framework for tool selection. *Expert Systems with Applications*, 94, 164-184.
- Ali I., Alharbi O. M., Alothman Z. A., Badjah A. Y., Alwarthan A. (2018). Artificial neural network modelling of amido black dye sorption on iron composite nano material: Kinetics and thermodynamics studies. *Journal of Molecular Liquids*, 250, 1-8.
- Everaert, P., Opdecam, E., & Maussen, S. (2017). The relationship between motivation, learning approaches, academic performance and time spent. *Accounting Education*, 26(1), 78-107. <https://doi.org/10.1080/09639284.2016.1274911>
- Fredricks, J. A., Filsecker, M., & Lawson, M. A. (2016). Student engagement, context, and adjustment: Addressing definitional, measurement, and methodological issues. *Learning and Instruction*, 43, 1-4. <https://doi.org/https://doi.org/10.1016/j.learninstruc.2016.02.002>
- Gay, L. R., Mills, G. E., & Airasian, P. W. (1976). *Educational research: Competencies for analysis and application*. Merrill Columbus, OH.
- Jerrim J., Moss G. (2019). The link between fiction and teenagers' reading skills: International evidence from the OECD PISA study. *British Educational Research Journal*, 45, 181–200.
- Küçüközkan, Y. (2015). Leadership and motivation theories: A theoretical framework. *Munich Personal RePEc Archive*, 86–115.
- Lashari, T. A. (2015). *The effect of integrated affectivecognitive teaching and learning approach on student's learning in engineering education*. Universiti Tun Hussein Onn Malaysia: Tesis Ph:D.
- Liu, I.-F. (2020). The impact of extrinsic motivation, intrinsic motivation, and social self-efficacy on English competition participation intentions of pre-college learners: Differences between high school and vocational students in Taiwan. *Learning and Motivation*, 72, 101675. <https://doi.org/https://doi.org/10.1016/j.lmot.2020.101675>
- Mazorenko, O. V., & Boateng, E. K. (2019). *Intrinsic and extrinsic motivation: factors and engagement*.
- Merga M., Gardiner V. (2019). The role of whole-school literacy policies supporting reading engagement in Australian schools. *English in Australia*, 53, 37-50.
- Ngesi, M. J. (2003). *A study of systemic processes influencing educational change in a sample of ISI Zulu medium schools*.
- Pekrun, R. (2011). *Emotions as drivers of learning and cognitive development BT - New perspectives on affect and learning technologies* (R. A. Calvo & S. K. D'Mello (eds.); pp. 23–39). Springer New York. [https://doi.org/10.1007/978-1-4419-9625-1\\_3](https://doi.org/10.1007/978-1-4419-9625-1_3)
- Semali, L. (2003). Ways with visual languages: Making the case for critical media literacy. *The Clearing House*, 76(6), 271–277.
- Tholen, R., Duysak, S., & Nooij, J. (2017). *monitor beleidsmaatregelen 2016-2017. onderzoek in opdracht van het ministerie van onderwijs, Cultuur en Wetenschap*
- Wang, C.L., & Liou, P.Y. (2017). Students' motivational beliefs in science learning, school motivational contexts, and science achievement in Taiwan. *International Journal of Science Education*, 39(7), 898–917. <https://doi.org/10.1080/09500693.2017.1310410>
- Zepke, N. (2018). Learning with peers , active citizenship and student engagement. *Enabling Education*, 9(1), 61-73. <http://doi.org/10.5204/ssj.v9i1.433>

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