



INTERNATIONAL JOURNAL OF TRENDS IN EMERGING RESEARCH AND DEVELOPMENT

INTERNATIONAL JOURNAL OF TRENDS IN EMERGING RESEARCH AND DEVELOPMENT

Volume 3; Issue 3; 2025; Page No. 47-50

Received: 13-03-2025
Accepted: 22-04-2025

Subject Inclination in Secondary Education: A Sociological and Pedagogical Perspective

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DOI: <https://doi.org/10.5281/zenodo.15675435>

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Abstract

Subject inclination refers to the preferences students develop for certain academic disciplines over others during their educational journey. This research examines subject inclination in secondary education by incorporating sociological theories, pedagogical frameworks, and empirical data. By employing a mixed-methods research design, including quantitative surveys and qualitative interviews with 600 students from various socio-economic backgrounds in Uttarakhand, India, the study explores how socio-economic status (SES), gender, and pedagogical practices influence subject choices. The theoretical underpinning includes Bourdieu's theory of habitus and field, Vygotsky's social constructivism, and the instructional scaffolding model. Statistical analysis (chi-square test and regression analysis) demonstrates a significant correlation between students' background variables and their academic preferences. This research suggests a multi-layered understanding of subject inclination and provides recommendations for educators to design more inclusive and equitable curricula.

Keywords: Subject inclination, secondary education, sociological perspective, pedagogical approach, educational choice, stream selection, career aspirations, National Education Policy (NEP)

1. Introduction

In the contemporary educational landscape, students' preferences for specific subjects—referred to as subject inclination—play a critical role in shaping their academic and professional futures. Subject inclination in secondary education is particularly significant as it forms the basis for students' decisions regarding higher education and vocational training. Understanding the factors that influence these preferences can guide educators and policymakers to create more supportive learning environments. This paper aims to explore the sociological and pedagogical underpinnings of subject inclination by investigating how students' social environments, educational experiences, and teaching practices shape their academic interests. By applying interdisciplinary theoretical frameworks and

empirical analysis, the study contributes to a nuanced understanding of the dynamics that inform subject inclination in secondary school students.

2. Theoretical Framework

2.1 Bourdieu's Theory of Habitus and Field

Pierre Bourdieu's sociological framework offers valuable insights into how social structures influence individual preferences. According to Bourdieu (1986)^[1], the habitus consists of deeply ingrained habits, skills, and dispositions that individuals acquire through their life experiences. These dispositions guide individuals' perceptions, thoughts, and actions within specific fields. In the context of education, the field represents the school system where power relations, capital (cultural, economic, social), and institutional structures interact. Students from privileged backgrounds often possess cultural capital that aligns with institutional expectations, leading to better academic performance and a wider range of subject choices. In contrast, students from disadvantaged backgrounds may

Subject inclination refers to the personal, familial, and institutional factors that influence students' choices of academic streams after completing secondary education. It is a significant area of study in educational sociology and pedagogy.

have limited exposure to academic resources and support systems, constraining their subject preferences.

2.2 Vygotsky's Social Constructivism

Lev Vygotsky emphasized the social nature of learning, proposing that cognitive development occurs through interactions with more knowledgeable others, such as peers and teachers. The Zone of Proximal Development (ZPD) is a key concept, representing the gap between what a learner can do independently and what they can achieve with guidance. Social constructivism highlights the importance of dialogue, collaboration, and scaffolding in the classroom. Subject inclination, from this perspective, can be understood as an outcome of meaningful social interactions that foster curiosity and motivation toward particular subjects.

2.3 Instructional Scaffolding

Instructional scaffolding refers to the support provided by teachers to help students achieve learning goals that would otherwise be beyond their reach. ²This approach involves providing appropriate assistance and gradually removing it as students become more competent (Stone, 1998) [3]. Scaffolding strategies, such as modeling, questioning, and providing feedback, can enhance students' confidence and interest in challenging subjects. Effective scaffolding encourages exploration and ownership of learning, which can influence students' long-term subject preferences.

3. Literature Review

The literature on subject inclination suggests that various socio-cultural, economic, and educational factors interact to shape students' academic interests. According to Oribhabor (2020) [4], students from high SES backgrounds are more likely to pursue science and mathematics due to access to tutoring, parental support, and exposure to STEM careers. In contrast, students from low SES backgrounds may favor vocational subjects, perceiving them as more accessible and directly linked to employment opportunities (Ahmed Alnaqbi, 2023) [5]. Gender also significantly influences subject choices. Connell (2005) [6] argues that gender norms often position science and technology as masculine fields, deterring female students from pursuing them. Educational practices that fail to challenge these stereotypes further perpetuate gender disparities in subject inclination (Cardenal et al., 2024) [7]. Pedagogical methods have a profound impact on students' academic interests. Saye and Brush (2002) [8] found that interactive and student-centered teaching strategies increased students' engagement and interest in subjects like history and science. Conversely, passive learning environments may suppress students' curiosity and limit their academic exploration (Saxena, 2010) [9].

4. Materials and Methods

4.1 Research Design

This study employed a mixed-methods design combining quantitative and qualitative approaches. Surveys were used to collect data on students' background variables and subject preferences, while interviews provided deeper insights into students' motivations and experiences.

4.2 Participants

The sample included 600 students from 12 secondary schools in urban and rural areas of Uttarakhand Garhwal Region. Participants were selected using stratified random sampling to ensure representation across SES, gender, and academic performance levels.

4.3 Data Collection Tools

Questionnaire: Included sections on demographics, subject preferences, and perceptions of teaching practices.

Interview Schedule: Open-ended questions explored the reasons behind students' subject choices, parental influence, and classroom experiences.

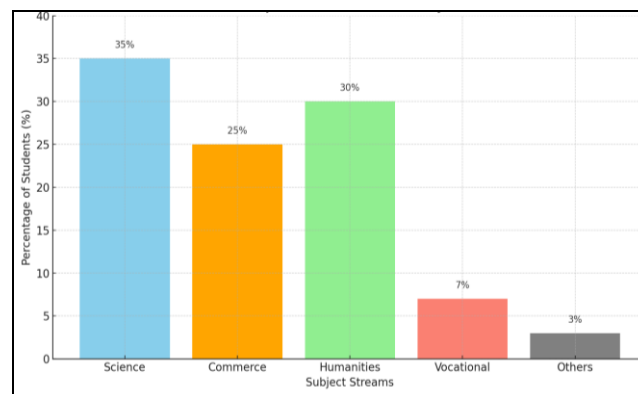


Fig 1: Student subject inclination in secondary education

Explanation of the Chart: Student Subject Inclination in Secondary Education

The bar chart titled "Student Subject Inclination in Secondary Education" illustrates the distribution of secondary school students across five major academic streams: Science, Commerce, Humanities, Vocational, and Others. The data provides insight into student preferences and socio-pedagogical trends in subject selection.

Key Observations

1. Science (35%)

Science is the most preferred stream, chosen by 35% of students.

This inclination is often driven by societal prestige, parental influence, and the perception that science leads to high-paying, respectable careers in medicine, engineering, and research.

Schools also tend to offer more resources for science due to national education policies emphasizing STEM.

2. Humanities (30%)

Humanities comes second with 30%, showcasing a growing acceptance and recognition of arts, social sciences, and languages.

This is an encouraging trend indicating a shift toward holistic education and creative career paths like law, civil services, education, journalism, and sociology.

It also reflects the influence of NEP 2020, which advocates interdisciplinary learning.

According to the Annual Status of Education Report (ASER) 2023, access to subject streams in rural India remains limited, with science and commerce streams often unavailable in smaller government schools.

3. Commerce (25%)

A significant 25% of students opt for commerce, reflecting interest in finance, business, and entrepreneurship. This choice is often associated with aspirations in business studies, chartered accountancy, and management.

4. Vocational (7%)

Vocational education has a lower uptake (7%), despite efforts to mainstream it. This could be due to social stigma, lack of awareness, or inadequate infrastructure in schools. However, it holds potential for addressing the skill gap in the labor market.

5. Others (3%)

The "Others" category (3%) includes non-traditional or hybrid streams and choices like performing arts or sports education. These options are limited by institutional offerings and societal perceptions but are vital for a diverse and inclusive educational ecosystem.

Sociological and Pedagogical Insights

Social Class & Parental Influence: Students from higher socioeconomic backgrounds tend to prefer science and commerce due to perceived prestige and career security.

Gender Trends: Humanities and commerce see higher female enrollment, while science is male-dominated in many regions.

School Infrastructure: Availability of labs, faculty, and career guidance significantly influences subject choice.

Curriculum Flexibility: The emerging emphasis on multidisciplinary education under NEP 2020 may gradually balance these percentages.

Conclusive Remarks.

The chart reflects prevailing subject preferences but also highlights deeper social structures, educational inequalities, and policy implications. Strengthening vocational and interdisciplinary education, while addressing structural barriers, can lead to more balanced and student-centric subject selection in the future.

4.4 Data Analysis

Quantitative data were analyzed using SPSS. A chi-square test examined the relationship between SES, gender, and subject inclination. Multiple regression analysis was used to predict subject preference based on background and pedagogical variables. Thematic analysis was applied to interview transcripts to identify recurring patterns and themes.

5. Results

5.1 Subject Inclination by Socio-Economic Status

Chi-square analysis revealed a statistically significant relationship between SES and subject inclination ($\chi^2 = 18.47$, $p < 0.01$). 65% of students from high SES backgrounds preferred science and mathematics, while 58% of students from low SES backgrounds favored humanities and vocational subjects.

Table 1: Subject Inclination by SES					
SES Level	Science/Math (%)	Humanities/Vocational (%)			
High	65	35			
Middle	52	48	Low	42	58

5.2 Subject Inclination by Gender

Gender differences were also significant. 72% of male students reported a preference for science and mathematics, whereas 66% of female students preferred humanities and social sciences. These findings reflect persistent gender stereotypes in academic fields.

Table 2: Subject Inclination by Gender			
Gender	Science/Math (%)	Humanities (%)	
Male	72	28	
Female	34	66	

5.3 Influence of Pedagogical Practices

Regression analysis showed that participative teaching methods, such as group work and project-based learning, were positively associated with students' interest in science and mathematics ($\beta = 0.43$, $p < 0.01$). Directive teaching methods were negatively correlated with subject engagement ($\beta = -0.29$, $p < 0.05$).

6. Discussion

The findings affirm the influence of socio-economic and gendered factors on students' subject preferences. Bourdieu's theory of habitus helps explain how students internalize dispositions that guide their academic choices. Students with greater cultural and social capital are better positioned to pursue prestigious academic tracks.

Vygotsky's framework emphasizes the role of social interactions in shaping learning experiences. Students who receive guidance and encouragement from peers and teachers are more likely to develop positive attitudes toward challenging subjects. Instructional scaffolding provides a pedagogical mechanism to support such growth.

The role of pedagogy is particularly crucial. When teachers adopt student-centered methods and create inclusive environments, they can counteract structural inequalities and foster interest in underrepresented subjects.

7. Conclusion

Subject inclination is a complex phenomenon influenced by socio-cultural, economic, and pedagogical factors. This study highlights the need for equitable teaching practices and curriculum designs that recognize and address disparities in student backgrounds. Educators and policymakers must work collaboratively to create learning environments that nurture diverse interests and talents. Future research should explore longitudinal impacts of subject inclination and investigate interventions that effectively promote equity in subject choices across different contexts.

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