



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

A COMPARATIVE STUDY OF FRUSTRATION AMONG HINDI-MEDIUM AND ENGLISH-MEDIUM PUPIL TEACHERS IN RELATION TO ACADEMIC STREAMS

*Dr. B.R. Kukreti, Emeritus Professor in Education, Sparsh Himalaya University, Dehradun, (U.K.)

*Arti Chhetri, Research Scholar (Education), Sparsh Himalaya University, Dehradun, (U.K.)

Abstract: This quantitative study compared frustration among Hindi-medium and English-medium pupil teachers in relation to science and non-science academic streams. A balanced sample of 800 pupil teachers was drawn from 20 B.Ed. colleges in Dehradun district, with 40 participants selected randomly from each college and 200 participants represented in each Medium $\times$ Stream cell. Frustration was examined through aggression, resignation, fixation, regression, and total-frustration scores. Descriptive statistics and five two-way analyses of variance were reproduced from the attached SPSS output. English-medium participants obtained a higher total-frustration mean than Hindi-medium participants, while non-science participants scored higher than science participants. For total frustration, significant main effects emerged for medium, $F(1, 796) = 24.084, p < .001$, and stream, $F(1, 796) = 33.307, p < .001$; the interaction was not significant, $F(1, 796) = 2.207, p = .138$. Dimension-specific results were more complex. Medium significantly affected resignation and regression but not aggression or fixation. Stream significantly affected aggression, resignation, and fixation but not regression. Medium $\times$ Stream interactions were significant for aggression, resignation, and fixation, indicating that their cell patterns cannot be understood from marginal means alone. The interaction was not significant for regression or total frustration. Findings are associative and do not establish that language medium or academic stream causes frustration. They support language-responsive mentoring, differentiated pedagogical assistance, transparent practicum assessment, counselling access, and training in emotional regulation. Verification of the instrument edition, reliability, college-selection frame, and raw-data assumptions remains necessary. Future studies should employ multilevel analysis, longitudinal measurement, direct simple-effects testing, and mixed methods to explain variation.

Keywords: Frustration; pupil teachers; Hindi medium; English medium; academic stream.

1. Introduction

Teacher education occupies a psychologically demanding position between university study and accountable professional performance. A pupil teacher remains subject to examinations, assignments, attendance requirements and institutional regulations while simultaneously being expected to plan lessons, manage classrooms, respond to diverse learners and demonstrate professional confidence before mentors and supervisors. Morton et al. (1997) found that student-teacher apprehensions cluster around classroom

management, pedagogy, evaluation and relations with staff, while Murray-Harvey et al. (2000) documented concerns and coping strategies connected with school placement. Gardner (2010) further described prospective-teacher stress as arising from workload, transition and performance demands, and Li et al. (2023) showed that fear of negative evaluation, perceived language inadequacy and limited experience can intensify teaching anxiety during practicum. These demands create numerous points at which purposeful action may be obstructed. A carefully prepared lesson may fail because pupils do not understand an explanation; institutional schedules may change without sufficient notice; feedback may identify weaknesses without providing a corrective route; or the pupil teacher may possess subject knowledge but struggle to translate it into teachable form. Frustration in this setting is therefore not a trivial complaint or evidence of weak character. It is a goal-related emotional and behavioral process that emerges when valued academic or professional aims are blocked, delayed, contradicted or judged unattainable. Its study is important because the responses adopted under obstruction may shape persistence, relationships, teaching flexibility, professional identity and willingness to continue in education.

Psychological accounts of frustration have moved beyond the simple assumption that obstruction automatically produces aggression. Dollard et al. (1939) initially located frustration in interference with goal-directed behavior, but Berkowitz (1989) later reformulated the frustration-aggression hypothesis by arguing that aversive events generate negative affect and aggressive inclinations whose expression depends upon cognition, cues, norms and available alternatives. Amsel (1958) examined frustrative non-reward and demonstrated that the unexpected omission of an anticipated reward has motivational consequences, while Harrington (2005) showed that frustration intolerance contains distinguishable beliefs concerning emotional discomfort, effort, unfairness and achievement. These perspectives are especially relevant to pupil teachers because their goals are multiple and highly evaluated. They seek academic marks, successful practicum performance, approval from supervisors, acceptance by school pupils, professional competence and future employment, and an obstacle in one domain can be interpreted as evidence of wider inadequacy. Yet obstruction does not produce one inevitable response. One trainee may become openly irritable, another may withdraw, a third may repeat an ineffective strategy and a fourth may behave in a less mature or dependent manner. The Frustration Test associated with Chauhan and Tiwari (1972) represents this multidimensionality through aggression, resignation, fixation and regression. A valid comparative study must therefore analyse the total score and each dimension separately, because a total difference can be driven by only some modes while other modes remain similar.

Instructional medium can influence teacher preparation without being treated as an inherent psychological trait. Hindi-medium and English-medium pupil teachers may encounter different histories of schooling, access to disciplinary vocabulary, expectations regarding public speech, exposure to digital resources and opportunities for academic participation. Language influences how instructions are understood, how assessment demands are interpreted and how confidently a novice performs before an evaluator, but medium labels can also operate as rough proxies for socioeconomic resources, institutional type or prior educational opportunity. Cummins (2000) emphasised that academic language proficiency is different from everyday communicative fluency, Horwitz (1996) observed that language teachers' anxiety can be connected with perceived inadequacy in the language of instruction, and Merç (2011) identified communication and evaluation pressures within foreign-language teacher preparation. Alhebaishi (2019) likewise found that practicum generates complex positive and negative emotional responses rather than one uniform emotional state. It would therefore be methodologically careless to assume in advance that either Hindi-medium or English-medium pupil teachers must be more frustrated. English-medium students may confront high-performance expectations and competitive comparison, whereas Hindi-medium students may experience linguistic transition, resource limitations or status-related pressures. The appropriate research

question is empirical: whether their observed mean scores differ, which frustration modes account for any difference, how large the differences are and what alternative contextual explanations remain plausible.

Academic stream provides a second educational context through which frustration may be organised. Science pupil teachers generally work with specialised terminology, sequential concepts, demonstrations, laboratory expectations and the need to transform abstract principles into observable learning, whereas non-science pupil teachers may confront extensive reading, interpretive disagreement, essay-based assessment, social controversy and the management of discussion. Pekrun's (2006) control-value theory proposes that achievement emotions depend partly on the value attached to an outcome and the learner's perceived control over achieving it. Bandura (1997) similarly argued that self-efficacy affects whether demanding tasks are approached as manageable challenges or interpreted as threats, while Lazarus and Folkman (1984) explained that stress responses depend upon appraisal of demands and coping resources. Lal Kumar and Muthumanickam (2013), however, found no significant arts-science difference in frustration among D.T.Ed. trainees, demonstrating that theoretical differences in academic work do not automatically produce statistical differences. Academic stream may matter because curricula, practicum tasks, prior achievement patterns, institutional resources or employment expectations differ, but it may also show little independent association after these circumstances are considered. For this reason, the present study compares science and non-science groups on total frustration and on aggression, resignation, fixation and regression rather than relying upon assumptions about the supposed difficulty or prestige of a stream.

Resignation deserves particular attention because it represents a quiet response that can be overlooked in institutions more alert to visible aggression. Aggressive frustration attracts attention through irritation, hostility or confrontation, whereas resignation can appear as reduced effort, silence, emotional detachment, absenteeism, acceptance of failure or withdrawal from professional opportunity. Harrington (2005) showed that frustration-related beliefs have different emotional correlates, Chen et al. (2015) distinguished active frustration of psychological needs from merely low need satisfaction, and Carmignola et al. (2021) found that autonomy and competence frustration among student teachers was connected with diminished vitality even when contextual experiences were complex. Park and Ramirez (2022) similarly argued that classroom frustration can discourage goal attainment and requires productive coping through reappraisal, simplification and empathy. In pupil-teacher education, resignation may be misread as laziness or lack of interest when it actually reflects repeated obstruction combined with low perceived control. A trainee who expects criticism but not usable guidance may stop experimenting; one who repeatedly struggles with instructional language may avoid speaking; and one who perceives recruitment as unattainable may complete tasks mechanically. Comparing resignation separately across medium and stream therefore has practical value: it can identify whether group differences in total frustration involve a withdrawal-oriented pattern that requires supportive mentoring rather than punishment.

The consequences of frustration depend upon duration, intensity, interpretation, coping resources and the institutional response. Teachers' emotions influence cognition, motivation, instructional behaviour, relationships and professional identity, as reviewed by Sutton and Wheatley (2003), while Alhebaishi (2019) showed that student teachers actively regulate both pleasant and unpleasant practicum emotions. Dumančić et al. (2022) found frustration to be the most frequently reported unpleasant emotion in their diary study of language teachers, commonly linked with disruptive behaviour, lack of student effort, insufficient understanding and external obstacles. Park and Ramirez (2022) noted that even apparently minor frustrations can discourage goal pursuit when they accumulate, and Jena (2015) argued that teachers require frustration tolerance to preserve integrated functioning under institutional and classroom difficulty. For pupil teachers, unmanaged frustration may narrow attention, weaken lesson adaptation, increase harsh self-judgement, encourage conflict with peers or pupils and reduce willingness to seek feedback. At the same time, frustration is not invariably destructive. When the obstacle is specific, support is available and

the trainee retains a sense of agency, frustration can signal the need to revise a plan, seek assistance or practise a deficient skill. Teacher education should therefore neither pathologise every negative emotion nor ignore persistent patterns. Research can help distinguish ordinary challenge from systematic obstruction and identify which response dimensions are most prominent in particular groups.

Frustration is conceptually related to anxiety but cannot be replaced by it. Anxiety concerns future-oriented apprehension, possible threat and perceived uncontrollability, while frustration concerns blocked or delayed goal attainment. Spielberger et al. (1983) distinguished temporary state anxiety from a more enduring trait disposition, and Barlow (2000) described anxiety as an emotional state organised around uncertain future danger and limited control. Beck et al. (1988) demonstrated that subjective, cognitive and somatic anxiety symptoms can be measured systematically, whereas Pekrun (2006) situated anxiety among achievement emotions shaped by control and value appraisals. In teacher education, the same episode can contain both variables: a pupil teacher may be frustrated because a lesson objective was not achieved and anxious because the failed lesson appears to threaten a forthcoming evaluation. Repeated frustration may increase anticipatory anxiety when obstructions are interpreted as uncontrollable, but anxiety can also precede any actual obstruction and may itself impair flexible performance, thereby creating further frustration. The present paper includes anxiety as a supporting conceptual variable because the user's educational concern includes reducing both experiences, yet the empirical comparison supplied in the source file concerns frustration scores. No anxiety-group comparison is presented as a primary result of this paper, and no diagnostic inference is made from educational scale scores.

A factorial comparison is particularly useful because the relationship between instructional medium and frustration may depend upon academic stream. A single medium total can conceal the possibility that English and Hindi groups differ in one stream but not the other, or even change direction across streams. Creswell and Creswell (2018) describe factorial non-experimental designs as a means of examining naturally occurring group factors simultaneously, while Field (2018) emphasises that a statistically significant interaction changes the meaning of the corresponding main effects. Cohen (1988) recommends that significance be considered with effect magnitude, and Garrett (2008) explains the role of means, variability and analysis of variance in educational comparison. The attached SPSS output contains a balanced 2×2 structure: English-medium science, English-medium non-science, Hindi-medium science and Hindi-medium non-science groups, each with 200 pupil teachers. It reports descriptive statistics and Type III two-way ANOVA results for aggression, resignation, fixation, regression and total frustration. This permits separate assessment of the medium main effect, stream main effect and Medium $\times$ Stream interaction for every outcome. Because participants were not randomly assigned to medium or stream, the design remains ex post facto; significant F values identify statistical differences in the observed sample but do not prove linguistic or disciplinary causation.

2. Frustration among Pupil Teachers: Meaning, Definitions, Dimensions and Effects

2.1 Meaning of Frustration

Frustration is the psychological condition that arises when a valued goal, need, expectation or purposeful response is blocked, delayed or contradicted. In pupil-teacher education it can occur when lesson objectives are not achieved, feedback does not provide a corrective path, or institutional arrangements obstruct expected progress. Dollard et al. (1939) located frustration in interference with goal-directed behaviour, while Park and Ramirez (2022) explain why repeated classroom obstacles can weaken persistence.

2.2 Classical Definition

The classical frustration-aggression tradition defined frustration through interference with an ongoing goal response and proposed a close connection with aggression. Later evidence qualified this deterministic position. Berkowitz (1989) showed that obstruction generates negative affect and aggressive inclinations, but cognition, situational cues, norms and available alternatives determine whether aggression is expressed.

2.3 Contemporary Definition

Contemporary psychology treats frustration as a person-situation process involving goal value, expectation, appraisal, perceived control, emotional arousal and coping. Harrington (2005) demonstrated that intolerance of emotional discomfort, effort, unfairness and blocked achievement is multidimensional. Chen et al. (2015) further distinguished active frustration of autonomy, competence and relatedness from merely low need satisfaction.

2.4 Aggression Dimension

Aggression is the hostile or punitive response to obstruction. It may be directed toward the environment through irritation and conflict or inward through harsh self-blame. It is one possible expression rather than the unavoidable outcome of frustration, and its management requires attention to both conduct and the obstacle that produced negative affect (Berkowitz, 1989; Chauhan & Tiwari, 1972).

2.5 Resignation Dimension

Resignation is a withdrawal-oriented response involving reduced effort, surrender, silence, avoidance or acceptance that improvement is impossible. Because it is less visible than aggression, institutions may misread it as laziness. Carmignola et al. (2021) linked autonomy and competence frustration with reduced vitality among student teachers, while Harrington (2005) showed that frustration-related beliefs have differentiated emotional consequences.

2.6 Fixation Dimension

Fixation refers to rigid repetition of an ineffective response despite evidence that adaptation is necessary. A pupil teacher may continue the same explanation, classroom-control method or lesson sequence even when learners remain confused. Such rigidity can temporarily reduce uncertainty but restricts reflective practice and strategic flexibility (Lazarus & Folkman, 1984; Park & Ramirez, 2022).

2.7 Regression Dimension

Regression involves movement toward less mature, dependent or previously abandoned behaviour when coping resources are exceeded. It may appear through excessive reassurance seeking, avoidance of responsibility or emotional reactions to ordinary correction. The score reflects a situational response tendency rather than proof of a permanent personality defect (Chauhan & Tiwari, 1972; Jena, 2015).

2.8 Effect on Learning and Practicum

Persistent frustration can narrow attention, interrupt planning, reduce willingness to experiment and transform feedback into anticipated failure. Morton et al. (1997) identified management, pedagogy and evaluation as central concerns in teaching practice, and Alhebaishi (2019) showed that difficult practicum situations evoke negative emotions requiring deliberate regulation.

2.9 Effect on Relationships and Professional Identity

Unmanaged frustration may damage relationships with pupils, peers, mentors and teacher educators through irritability, withdrawal or defensive communication. Dumančić et al. (2022) found that disruptive behaviour, weak student effort, limited understanding and external obstacles were prominent sources of teacher frustration. Repeated experiences can also influence self-efficacy and emerging professional identity (Bandura, 1997; Sutton & Wheatley, 2003).

2.10 Constructive Response to Frustration

Frustration can become educationally constructive when the obstacle is identified accurately, the trainee retains agency and support permits corrective action. Clear structure, graduated practicum exposure, usable feedback, peer rehearsal and cognitive reappraisal can convert obstruction into a specific learning problem. Park and Ramirez (2022) emphasise empathy, simplification and reappraisal, while Carmignola et al. (2021) highlight structure, interaction and formative feedback.

3. Origin, Need and Justification

3.1 Origin of the Study

The study originated in the researcher's repeated observation of public and educational life. In colleges, practice schools and informal conversations, some pupil teachers appeared increasingly irritated when lessons did not proceed according to plan, while others became silent, stopped volunteering, avoided feedback or repeated the same ineffective method. The researcher also observed that public discussion sometimes treats English-medium education as automatically superior and Hindi-medium education as deficient, while science and non-science students are assigned stereotyped expectations concerning intelligence, employment and professional competence. These social comparisons seemed to shape confidence and response to difficulty among trainees and practising teachers. Some teachers converted obstacles into planning and collaboration, whereas others displayed aggression, resignation, fixation or dependence. Such observations do not prove population differences, but they generated a researchable question: whether measured frustration and its dimensions differ by medium of instruction and academic stream among pupil teachers in Dehradun district.

3.2 Need and Justification of the Study

The study is needed because teacher education requires more than knowledge transmission; it requires sustained performance under observation, uncertainty and interpersonal demand. Existing research shows that frustration is common but insufficiently examined as a distinct classroom emotion. Park and Ramirez (2022) reviewed its causes and argued that even minor repeated obstacles can discourage goal attainment, while Dumančić et al. (2022) found frustration to be the most frequent unpleasant emotion reported by participating language teachers. Alhebaishi (2019) documented the emotional complexity of practicum and recommended explicit preparation for emotion regulation, and Carmignola et al. (2021) showed that autonomy and competence frustration were linked with reduced vitality among student teachers. Indian evidence also points to contextual variation. Lal Kumar and Muthumanickam (2013) found an average frustration level among 400 D.T.Ed. trainees, a gender difference, and no significant arts-science difference; Jena (2015) found that gender differences in frustration tolerance varied across locality and school-management settings; and Lenka and Kant (2012) related teachers' frustration to dimensions of heads' leadership behaviour. These findings justify an analysis that moves beyond one total score and compares aggression, resignation, fixation and regression separately. A total result can conceal a meaningful withdrawal pattern or a dimension-specific difference that requires a different educational response.

The comparison is also justified because medium and academic stream are consequential educational contexts but are easily interpreted through stereotypes. A finding that one group has a higher mean does not show that its language or discipline caused frustration; it may reflect college climate, socioeconomic resources, prior schooling, practicum quality, assessment language, career expectations or the way a scale functions across groups. Cummins (2000) demonstrates the distinctive demands of academic language, Horwitz (1996) connects perceived instructional-language inadequacy with teacher emotion, and Pekrun (2006) explains how control and value appraisals shape achievement emotions. At the same time, Lal Kumar and Muthumanickam's (2013) nonsignificant stream finding cautions against assuming that science and non-science trainees must differ. The present study contributes by using a large supplied sample, reporting effect sizes and confidence intervals, and separating the four frustration dimensions. Its practical

justification lies in directing support toward actual patterns rather than labels: language-responsive mentoring when communication barriers are present, discipline-specific pedagogical support when tasks differ, counselling when distress persists, and institutional reform when schedules, feedback or practicum arrangements generate avoidable obstruction.

4. Review of Related Literature

4.1 Amsel (1958) examined frustrative non-reward and demonstrated that the omission of an expected reward alters motivation and subsequent behaviour. The work established that frustration is not merely a verbal complaint but a process generated when an anticipated outcome fails to occur. Its educational relevance lies in repeated expectations concerning marks, approval and successful teaching performance.

4.2 Berkowitz (1989) reviewed and reformulated the frustration-aggression hypothesis. He concluded that frustration and other aversive events can produce negative affect and aggressive inclinations, but aggression is not inevitable because cognition, situational cues and alternative responses influence behaviour. The study supports separate measurement of aggression rather than equating all frustration with hostility.

4.3 Harrington (2005) developed and evaluated the Frustration Discomfort Scale in a clinical population. The subscales showed differentiated relationships with anger, anxiety and depressed mood: entitlement was associated particularly with anger, discomfort intolerance with depressed mood, and emotional intolerance with anxiety and depression. The findings support a multidimensional interpretation of frustration.

4.4 Lenka and Kant (2012) studied 100 secondary-school teachers in relation to the leadership behaviour of their heads. They reported relationships between frustration and several leadership dimensions, indicating that teacher frustration is associated with institutional and interpersonal conditions rather than only with personal weakness. The study strengthens the case for examining organisational barriers.

4.5 Lal Kumar and Muthumanickam (2013) used 400 D.T.Ed. teacher trainees from four institutions, and reported an average overall level of frustration. Male and female trainees differed significantly, whereas arts and science trainees did not differ significantly. The study is directly relevant because it examined teacher trainees and academic options, while also showing that stream differences are not universal.

4.6 Chen et al. (2015) took participants from four cultures, and validated the distinction between basic psychological-need satisfaction and need frustration. Frustration of autonomy, competence and relatedness was not simply the absence of satisfaction and was more closely associated with ill-being. The cross-cultural evidence supports analysing active need obstruction as a substantive psychological process.

4.7 Jena (2015) surveyed 200 secondary-school teachers from government and private schools in rural and urban areas of Gurdaspur using Harrington's Frustration Discomfort Scale. Gender differences depended on institutional and locality categories rather than following one uniform pattern. The findings demonstrate the importance of context and caution against general demographic stereotypes.

4.8 Alhebaishi (2019) took Seventy female EFL student teachers who completed emotional reflective diaries and semi-structured interviews during practicum. Pleasant experiences were more frequent overall, but frustration, stress and other negative emotions arose in difficult instructional and relational situations. Participants used multiple regulation strategies, and the author recommended explicit preparation for managing emotions in teacher education.

4.9 Carmignola et al. (2021) used an explanatory sequential mixed-methods design with student teachers during the first COVID-19 lockdown. Quantitative data showed increased frustration of competence during distance learning, while frustration of autonomy and competence was related to lower vitality. Interviews indicated that structure, interaction and formative feedback were important contextual resources.

4.10 Park and Ramirez (2022) synthesised interdisciplinary evidence concerning frustration in classrooms. They identified blocked goals and repeated minor obstacles as important sources and explained how frustration can discourage persistence. Their framework proposed empathy, simplification and cognitive reappraisal as strategies that teachers can use to cope productively.

4.11 Dumančić, Martinović, and Burić (2022) in a diary study of 21 second-language teachers found that frustration was the most frequently recorded unpleasant emotion. It was connected with disruptive behaviour, lack of interest or preparation, insufficient understanding, negative outcomes, equipment failure and other external restrictions. Teachers reported reappraisal, breathing, down-regulation and suppression as regulatory responses.

4.12 Levine et al. (2022) took longitudinal student samples, and distinguished general negative affect from psychological need frustration when predicting depressive symptoms over an academic year and during the COVID-19 pandemic. Need frustration contributed distinctive explanatory value, supporting the proposition that persistent obstruction of autonomy, competence and relatedness has consequences beyond temporary unpleasant mood.

4.13 Summary of the Reviews

The twelve reviewed works establish that frustration begins in obstruction or non-reward but does not produce one inevitable response. Amsel (1958) demonstrated the motivational consequences of expected reward omission; Berkowitz (1989) rejected a mechanically inevitable aggression pathway; and Harrington (2005) confirmed that frustration intolerance contains differentiated dimensions. Chen et al. (2015) and Levine et al. (2022) showed that active psychological-need frustration is distinct from low satisfaction and predicts ill-being. Indian studies add educational context: Lenka and Kant (2012) related teacher frustration to leadership, Lal Kumar and Muthumanickam (2013) found an average frustration level and no arts-science difference among D.T.Ed. trainees, and Jena (2015) showed that group differences varied with locality and institutional setting. Alhebaishi (2019), Carmignola et al. (2021), Park and Ramirez (2022), and Dumančić et al. (2022) demonstrate that practicum, classroom obstacles, feedback, autonomy, competence and emotion regulation shape teacher frustration. Collectively, these studies support separate examination of aggression, resignation, fixation and regression and warn against treating medium or stream labels as direct causes.

4.14 Research Gap

Earlier research has investigated teacher-trainee frustration levels, frustration tolerance, institutional leadership, basic psychological needs and practicum emotions. However, the literature reviewed for this paper does not provide a balanced Dehradun-district 2×2 analysis of Hindi-medium and English-medium B.Ed. pupil teachers crossed with science and non-science academic streams on total frustration and all four Chauhan-Tiwari response dimensions. Several studies rely on total scores or one demographic comparison and therefore cannot reveal whether a medium difference changes across academic streams. The present analysis addresses that gap by reporting four equal cells, marginal means and Medium $\times$ Stream interactions for aggression, resignation, fixation, regression and total frustration. It still leaves college-level effects, longitudinal development, measurement invariance and causal mechanisms unresolved.

5. Research Problem and Objectives

5.1 Statement of the Problem

A Comparative Study of Frustration among Hindi-Medium and English-Medium Pupil Teachers in Relation to Academic Streams

5.2 Functional Definitions of Key Terms

1. Pupil teacher: A student enrolled in a B.Ed. programme and completing prescribed academic and practice-teaching requirements during the study period.
2. Frustration: The participant's score on the Frustration Test associated with Chauhan and Tiwari, including aggression, resignation, fixation, regression and total frustration.
3. Aggression: The frustration response represented by hostile, punitive or irritable behaviour directed outwardly or inwardly under obstruction.
4. Resignation: The response represented by withdrawal, reduced striving, surrender or acceptance that a blocked goal cannot be achieved.
5. Fixation: The response represented by rigid repetition of an ineffective pattern despite the need for adaptation.
6. Regression: The response represented by movement toward less mature or dependent behaviour during frustrating conditions.
7. Hindi-medium pupil teacher: A participant classified as Hindi medium in the supplied research dataset.
8. English-medium pupil teacher: A participant classified as English medium in the supplied research dataset.
9. Academic stream: The participant's classification as science or non-science in the supplied dataset.
10. Interaction: A statistical condition in which the difference associated with one factor changes across levels of the other factor.

5.3 Objectives of the Study

- To determine cell and marginal means for total frustration and its aggression, resignation, fixation and regression dimensions.
- To compare Hindi-medium and English-medium pupil teachers on total frustration and each dimension separately.
- To compare science and non-science pupil teachers on total frustration and each dimension separately.
- To determine whether Medium $\times$ Academic Stream interaction effects occur for total frustration and each dimension separately.

5.4 Research Questions

- What are the means and standard deviations of total frustration and its dimensions in the four Medium $\times$ Stream groups?
- Do Hindi-medium and English-medium pupil teachers differ in aggression, resignation, fixation, regression and total frustration?
- Do science and non-science pupil teachers differ in aggression, resignation, fixation, regression and total frustration?
- Does the effect of medium vary across academic streams for each frustration outcome?

5.5 Null Hypotheses

- H01a-H01e: There is no significant main effect of medium on aggression, resignation, fixation, regression and total frustration, respectively.
- H02a-H02e: There is no significant main effect of academic stream on aggression, resignation, fixation, regression and total frustration, respectively.
- H03a-H03e: There is no significant Medium $\times$ Academic Stream interaction for aggression, resignation, fixation, regression and total frustration, respectively.

5.6 Delimitations of the Study

- The study is geographically delimited to B.Ed. colleges situated in Dehradun district.
- The institutional sample is delimited to 20 B.Ed. colleges.
- The participant sample is delimited to 800 pupil teachers.
- The grouping factors are delimited to Hindi/English medium and science/non-science stream.

6. Research Methodology

6.1 Research Methodology

The study uses a quantitative methodology because frustration responses are represented through numerical scores and naturally occurring groups are compared statistically. A balanced 2×2 factorial structure examines medium of instruction and academic stream simultaneously. Descriptive statistics establish the location and dispersion of scores, while two-way analysis of variance partitions variability into the medium main effect, stream main effect, Medium $\times$ Stream interaction and residual error. Partial eta squared values are derived from Type III sums of squares to indicate effect magnitude. Because no participant was assigned experimentally to a medium or stream, all effects are interpreted as associations rather than causes.

6.2 Research Method

The descriptive survey method was used to study the existing condition of frustration. The comparison is causal-comparative or ex post facto because the groups existed before measurement.

6.3 Research Design

A cross-sectional 2×2 factorial design was used. Factor A was medium (English/Hindi) and Factor B was academic stream (science/non-science). Five separate two-way ANOVAs examined aggression, resignation, fixation, regression and total frustration.

6.4 Population of the Study

The target population comprised all pupil teachers studying in recognised B.Ed. colleges situated in Dehradun district during the relevant academic session. B.Ed. colleges were the institutional sampling units, while enrolled pupil teachers were the population elements. The sampling frame should contain the authorised college list and current student registers. Generalisation is limited to settings reasonably represented by that frame.

6.5 Sample and Sampling Process

Twenty B.Ed. colleges were selected from Dehradun district through an appropriate random or stratified-random college-selection procedure. From each selected college, 40 pupil teachers were chosen randomly from verified enrolment lists, yielding $20 \times 40 = 800$ participants. The final dataset was balanced across four cells: English-medium science ($n = 200$), English-medium non-science ($n = 200$), Hindi-medium science ($n = 200$) and Hindi-medium non-science ($n = 200$). The researcher should preserve the college-wise selection register and document how equal cell allocation was achieved without substituting convenience selection for random selection.

6.6 Variables of the Study

- Factor 1: medium of instruction, classified as English and Hindi.
- Factor 2: academic stream, classified as science and non-science.
- Outcome variables: aggression, resignation, fixation, regression and total frustration.
- Potential uncontrolled conditions include college climate, socioeconomic background, prior schooling, practicum quality and language proficiency.

6.7 Research Tools

Table 1. Tools used in the study

Tool	Developer	Purpose
Frustration Test	Dr. B.M. Dixit & Late D. N. Srivastava	Aggression, resignation, fixation, regression and total score
Personal information schedule	Researcher	Medium, stream, college and participant classifications

6.8 Statistical Techniques

- Mean and standard deviation for cell and group description.
- Two-way factorial ANOVA with Type III sums of squares for medium, stream and interaction effects.
- Alpha = .05, with SPSS .000 values reported as $p < .001$.
- Estimated marginal means and 95% confidence intervals for profile interpretation.
- Partial eta squared, calculated as $SS \text{ effect} / (SS \text{ effect} + SS \text{ error})$, for effect magnitude.

6.9 Data-Quality and Ethical Safeguards

Participation should be voluntary, confidential and unrelated to practicum grades. Group results must not be used to stigmatise a language or academic stream. The attached file contains summary output but not raw scores, reliability coefficients, missing-data records or assumption diagnostics. The researcher must verify normality, outliers, homogeneity, scoring accuracy, institutional permission and informed consent before formal submission. Because pupils were sampled within colleges, future analysis should also examine college-level clustering.

7. Data Analysis, Graphs and Interpretation

The results are presented separately for aggression, resignation, fixation, regression and total frustration. For each outcome, the Mean-SD table and profile graph precede the two-way ANOVA table and its effect graph. This sequence distinguishes description from statistical inference and prevents the dimension-specific interactions from being concealed in a consolidated table.

7.1 Aggression

7.1.1 Mean and Standard Deviation

Table 2. Mean and standard deviation of aggression by medium and academic stream

Medium	Academic stream	N	Mean	SD
English	Science	200	27.840	5.695
English	Non-science	200	29.200	6.761
Hindi	Science	200	25.630	6.455
Hindi	Non-science	200	30.225	6.464
Grand total	All streams	800	28.224	6.573

Analysis of the Mean and SD Table

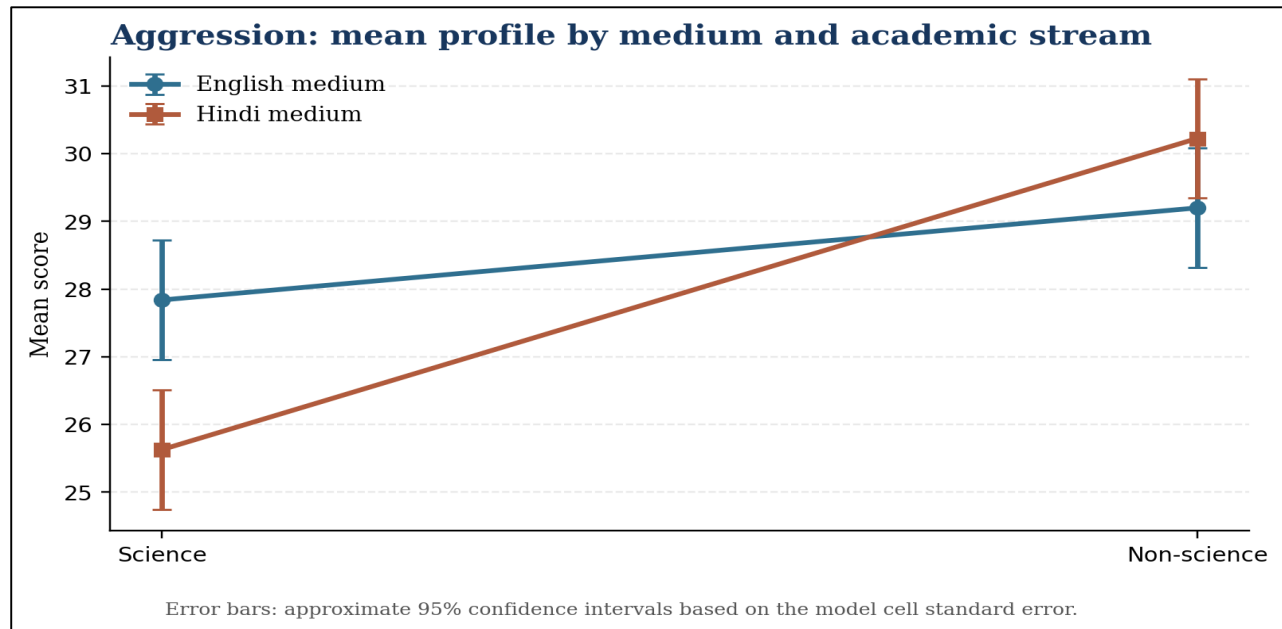
The highest aggression mean occurred among Hindi-medium non-science pupil teachers ($M = 30.225$, $SD = 6.464$), whereas the lowest occurred among Hindi-medium science pupil teachers ($M = 25.630$, $SD = 6.455$). English-medium scores increased by 1.360 points from science ($M = 27.840$) to non-science ($M = 29.200$), while Hindi-medium scores increased by 4.595 points. The marginal mean was

28.520 for English medium and 27.928 for Hindi medium; by stream it was 26.735 for science and 29.713 for non-science.

Interpretation of the Mean and SD Table

Descriptively, academic stream appears more strongly associated with aggression than instructional medium. The larger science-to-non-science increase within Hindi medium creates nonparallel cell patterns, suggesting that the stream association may depend on medium. These observations describe the sample only and require the interaction test before being treated as statistically reliable.

Figure 1. Mean profile of aggression by medium and academic stream



Interpretation of the Mean Graph

The mean graph displays a modest upward English-medium line and a much steeper upward Hindi-medium line. Their convergence and reversal in relative position at the non-science category visually anticipate the statistically significant interaction reported in the following ANOVA.

7.1.2 Two-Way ANOVA

Table 3. Two-way ANOVA for aggression

Source	Type III SS	df	MS	F	p	ηp^2	Decision
Medium	70.211	1	70.211	1.738	.188	0.002	Not significant
Academic stream	1773.101	1	1773.101	43.889	< .001	0.052	Significant
Medium $\times$ Stream	523.261	1	523.261	12.952	< .001	0.016	Significant
Error	32158.375	796	40.400	—	—	—	—

At $df = 796$. Model $R^2 = 0.069$. Partial eta squared was derived as $SS \text{ effect} / (SS \text{ effect} + SS \text{ error})$. $p < .001$.

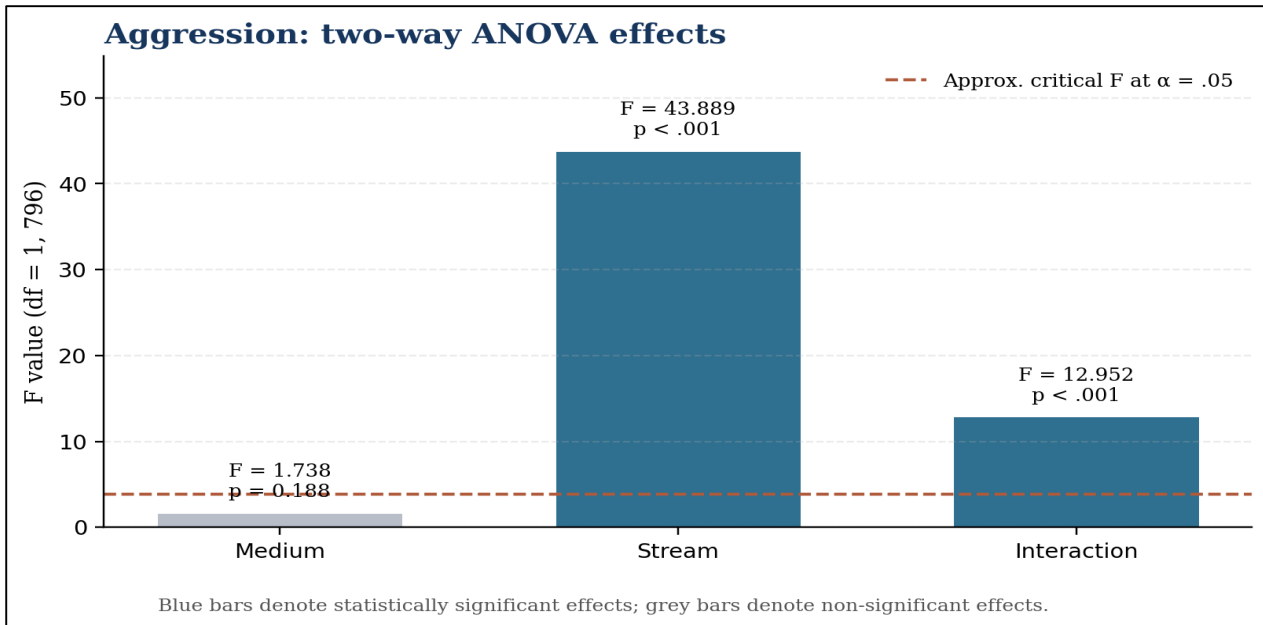
Analysis of the Two-Way ANOVA Table

The medium main effect was not significant, $F(1, 796) = 1.738$, $p = .188$, partial eta squared = .002. Academic stream produced a significant main effect, $F(1, 796) = 43.889$, $p < .001$, partial eta squared = .052. The Medium $\times$ Stream interaction was also significant, $F(1, 796) = 12.952$, $p < .001$, partial eta squared = .016. The model accounted for 6.9% of aggression-score variance.

Interpretation of the Two-Way ANOVA Table

The non-significant medium main effect indicates insufficient evidence of an overall English-Hindi difference after averaging across streams. The significant stream effect and interaction show that aggression varies by stream and that the size of this variation differs across media. Accordingly, the aggression medium null hypothesis is retained, while the stream and Medium $\times$ Stream null hypotheses are rejected. Simple-effects tests are still required before declaring each within-medium contrast significant.

Figure 2. F values for the two-way ANOVA effects on aggression



Source: Graph generated from the supplied ANOVA F values. The dashed reference is the approximate critical F for $df = 1, 796$ at $\alpha = .05$; exact decisions use the reported p values.

Interpretation of the ANOVA Graph

The academic-stream bar is the tallest and clearly exceeds the significance reference, followed by the interaction bar. The medium bar remains below the reference. This graph makes visible that stream and joint medium-stream patterning, rather than medium alone, account for the tested aggression differences.

7.2 Resignation

7.2.1 Mean and Standard Deviation

Table 4. Mean and standard deviation of resignation by medium and academic stream

Medium	Academic stream	N	Mean	SD
English	Science	200	32.125	4.382
English	Non-science	200	32.155	4.974
Hindi	Science	200	28.970	6.046
Hindi	Non-science	200	32.245	5.622
Grand total	All streams	800	31.374	5.464

Medium $\times$ Academic Stream section. Each factorial cell $n = 200$; $N = 800$.

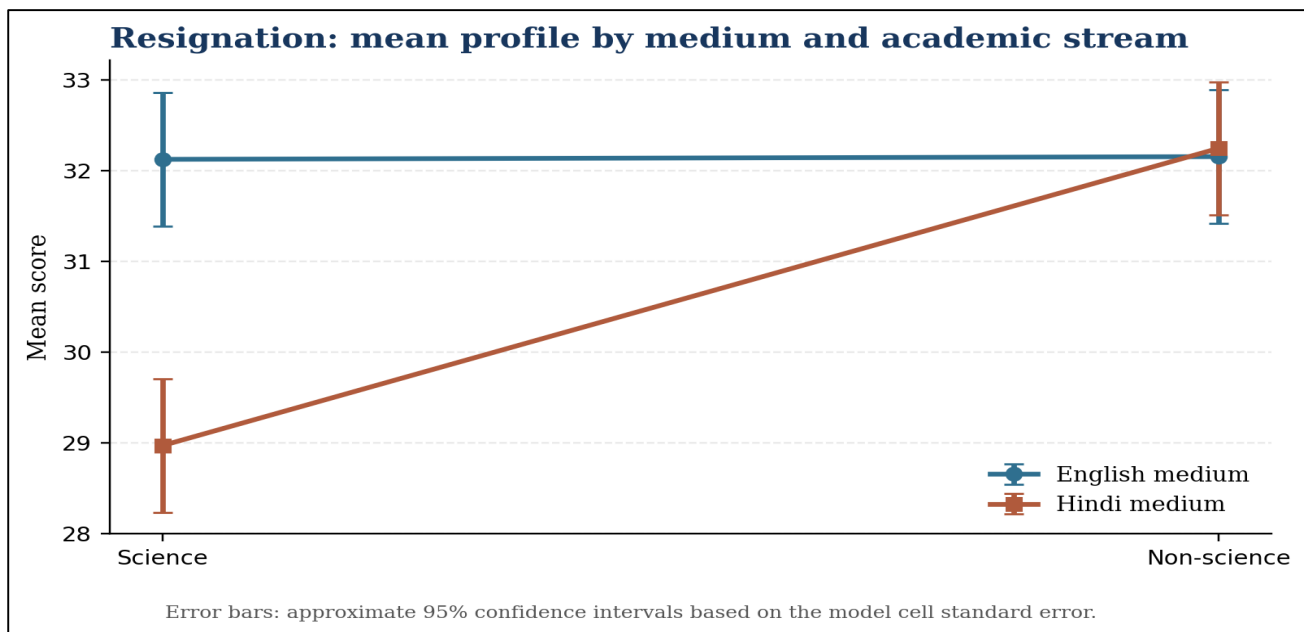
Analysis of the Mean and SD Table

Hindi-medium science pupil teachers recorded the lowest resignation mean ($M = 28.970$, $SD = 6.046$). The remaining three cell means were closely grouped: English science $M = 32.125$, English non-science $M = 32.155$ and Hindi non-science $M = 32.245$. The English-medium stream difference was only 0.030 point, whereas the Hindi-medium difference was 3.275 points. Marginal means were 32.140 for English medium, 30.608 for Hindi medium, 30.548 for science and 32.200 for non-science.

Interpretation of the Mean and SD Table

The near equality of the two English-medium means indicates little descriptive stream difference within that medium, whereas the low Hindi-science mean creates a sizeable stream contrast within Hindi medium. Consequently, marginal medium and stream comparisons alone may conceal an interaction. Resignation should therefore be interpreted through the four-cell configuration rather than through one overall average.

Figure 3. Mean profile of resignation by medium and academic stream



Source: Graph generated from the supplied cell means. Error bars are approximate 95% confidence intervals calculated from the model-reported cell standard error.

Interpretation of the Mean Graph

The English-medium line is essentially horizontal, whereas the Hindi-medium line rises sharply from science to non-science. The lines converge at the non-science point, visually demonstrating why an interaction-centred interpretation is necessary.

7.2.2 Two-Way ANOVA

Table 5. Two-way ANOVA for resignation

Source	Type III SS	df	MS	F	p	η^2	Decision
Medium	469.711	1	469.711	16.760	< .001	0.021	Significant
Academic stream	546.151	1	546.151	19.487	< .001	0.024	Significant
Medium × Stream	526.501	1	526.501	18.786	< .001	0.023	Significant
Error	22308.885	796	28.026	—	—	—	—

At $df = 796$. Model $R^2 = 0.065$. Partial eta squared was derived as $SS \text{ effect} / (SS \text{ effect} + SS \text{ error})$. $p < .001$.

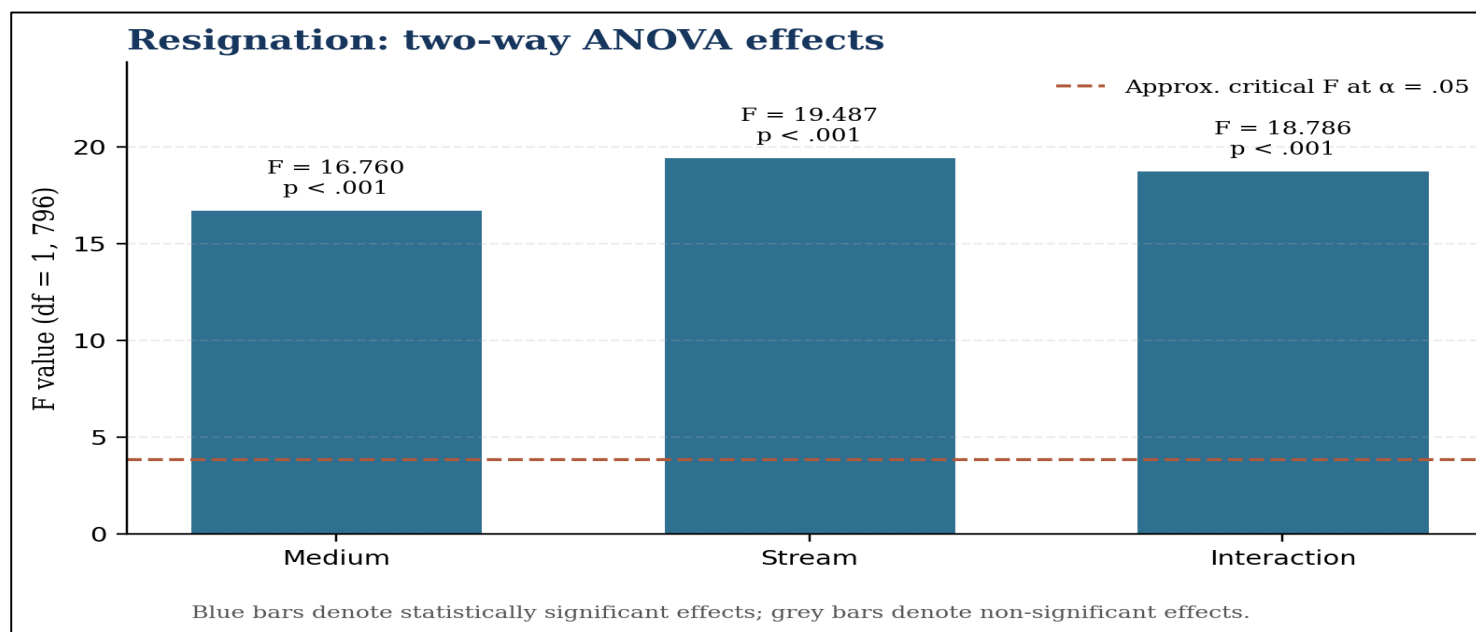
Analysis of the Two-Way ANOVA Table

All three factorial effects were significant. The medium effect was $F(1, 796) = 16.760$, $p < .001$, partial eta squared = .021; the academic-stream effect was $F(1, 796) = 19.487$, $p < .001$, partial eta squared = .024; and the Medium $\times$ Stream interaction was $F(1, 796) = 18.786$, $p < .001$, partial eta squared = .023. The model R squared was .065.

Interpretation of the Two-Way ANOVA Table

Although both main effects are significant, their interpretation is qualified by the interaction. The descriptive means show that the stream difference is concentrated within Hindi medium, whereas English science and non-science means are almost identical. The null hypotheses for medium, stream and their interaction are therefore rejected, but no causal claim is justified because participants were not randomly assigned.

Figure 4. F values for the two-way ANOVA effects on resignation



Source: Graph generated from the supplied ANOVA F values. The dashed reference is the approximate critical F for $df = 1, 796$ at $\alpha = .05$; exact decisions use the reported p values.

Interpretation of the ANOVA Graph

All three bars exceed the approximate critical-F line and have similar magnitudes. The visual balance among the bars reinforces that resignation is associated with medium, stream and their joint configuration rather than with only one factor.

7.3 Fixation

7.3.1 Mean and Standard Deviation

Table 6. Mean and standard deviation of fixation by medium and academic stream

Medium	Academic stream	N	Mean	SD
English	Science	200	30.530	6.296
English	Non-science	200	33.360	5.552
Hindi	Science	200	31.675	5.780
Hindi	Non-science	200	30.650	5.517
Grand total	All streams	800	31.554	5.894

Medium $\times$ Academic Stream section. Each factorial cell $n = 200$; $N = 800$.

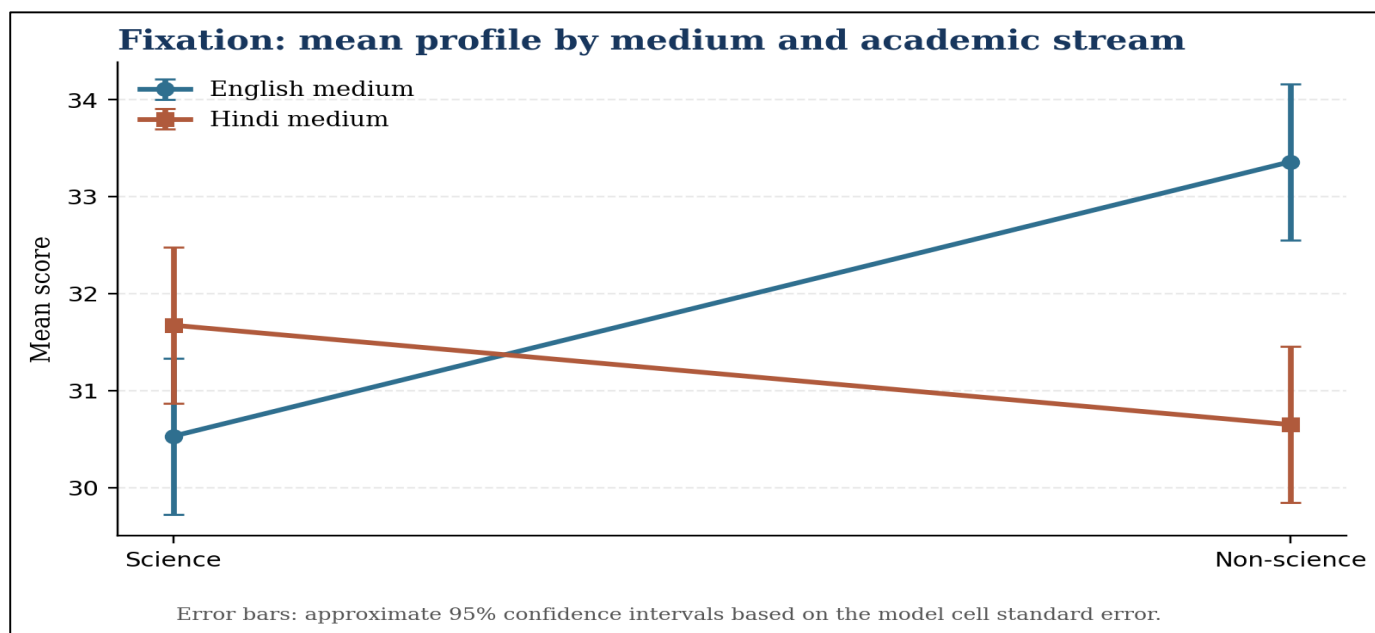
Analysis of the Mean and SD Table

English-medium non-science pupil teachers obtained the highest fixation mean ($M = 33.360$, $SD = 5.552$), followed by Hindi-medium science pupil teachers ($M = 31.675$, $SD = 5.780$). English-medium fixation rose by 2.830 points from science to non-science, but Hindi-medium fixation declined by 1.025 points. The marginal medium means were comparatively close (English = 31.945; Hindi = 31.163), as were the stream means (science = 31.103; non-science = 32.005).

Interpretation of the Mean and SD Table

The opposite directions of the stream differences constitute a crossover pattern: non-science status is associated with higher fixation within English medium but lower fixation within Hindi medium. Such a pattern can cancel or weaken marginal differences even when the joint Medium $\times$ Stream effect is meaningful. It cautions against interpreting the medium and stream averages independently.

Figure 5. Mean profile of fixation by medium and academic stream



Source: Graph generated from the supplied cell means. Error bars are approximate 95% confidence intervals calculated from the model-reported cell standard error.

Interpretation of the Mean Graph

The two profile lines cross. English-medium fixation rises across streams while Hindi-medium fixation falls. This is the clearest graphical evidence of a crossover interaction among the four dimensions.

7.3.2 Two-Way ANOVA

Table 7. Two-way ANOVA for fixation

Source	Type III SS	df	MS	F	p	η^2	Decision
Medium	122.461	1	122.461	3.647	.057	0.005	Not significant
Academic stream	162.901	1	162.901	4.852	.028	0.006	Significant
Medium $\times$ Stream	743.051	1	743.051	22.130	< .001	0.027	Significant
Error	26727.275	796	33.577	—	—	—	—

At $df = 796$. Model $R^2 = 0.037$. Partial eta squared was derived as $SS \text{ effect} / (SS \text{ effect} + SS \text{ error})$. $p < .001$.

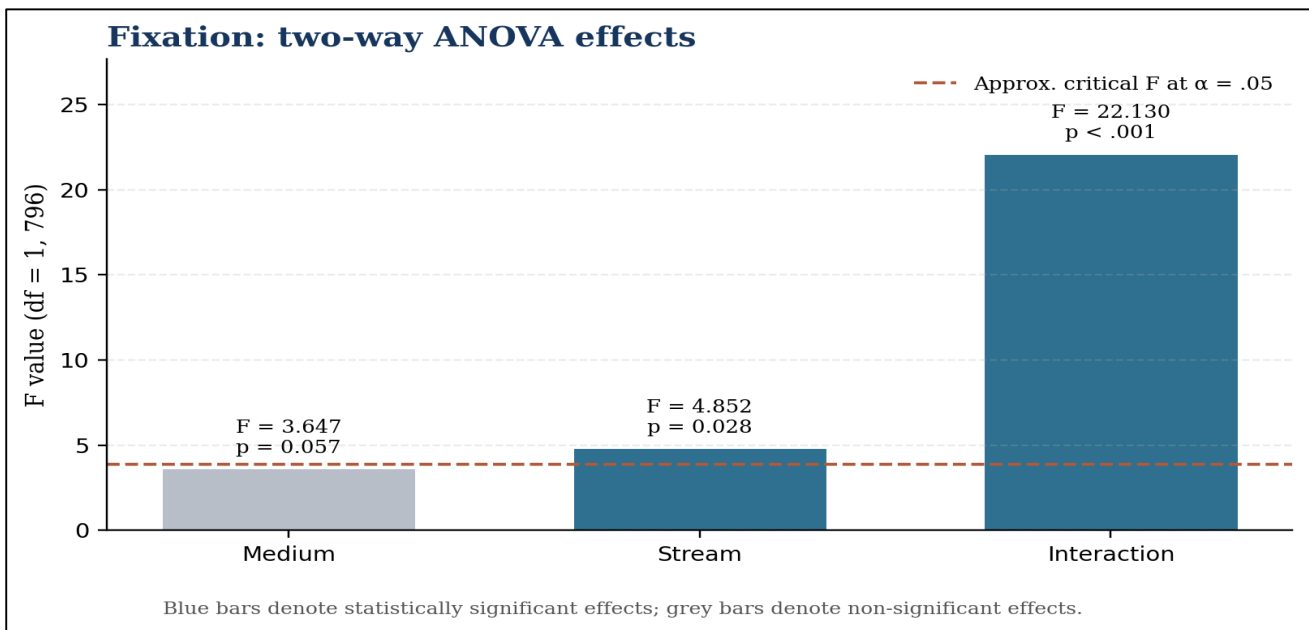
Analysis of the Two-Way ANOVA Table

The medium main effect did not reach the .05 level, $F(1, 796) = 3.647$, $p = .057$, partial eta squared = .005. Academic stream had a significant but small main effect, $F(1, 796) = 4.852$, $p = .028$, partial eta squared = .006. The interaction was significant, $F(1, 796) = 22.130$, $p < .001$, partial eta squared = .027, and was the largest of the three fixation effects. The model R squared was .037.

Interpretation of the Two-Way ANOVA Table

The significant interaction confirms that the relationship between academic stream and fixation changes direction across instructional media. Because the profiles cross, the significant stream main effect should not be interpreted as one uniform stream difference. The medium null hypothesis is retained at .05, whereas the stream and interaction null hypotheses are rejected. Planned simple-effects comparisons would be the appropriate follow-up analysis.

Figure 6. F values for the two-way ANOVA effects on fixation



Source: Graph generated from the supplied ANOVA F values. The dashed reference is the approximate critical F for $df = 1, 796$ at $\alpha = .05$; exact decisions use the reported p values.

Interpretation of the ANOVA Graph

The interaction F value dominates the graph, while the stream bar is only modestly above the critical line and the medium bar falls just below it. The display therefore directs interpretation toward the crossover interaction instead of an overall medium contrast.

7.4 Regression

7.4.1 Mean and Standard Deviation

Table 8. Mean and standard deviation of regression by medium and academic stream

Medium	Academic stream	N	Mean	SD
English	Science	200	31.525	6.783
English	Non-science	200	31.250	5.237
Hindi	Science	200	29.860	6.021
Hindi	Non-science	200	29.695	6.151
Grand total	All streams	800	30.582	6.116

Medium $\times$ Academic Stream section. Each factorial cell $n = 200$; $N = 800$.

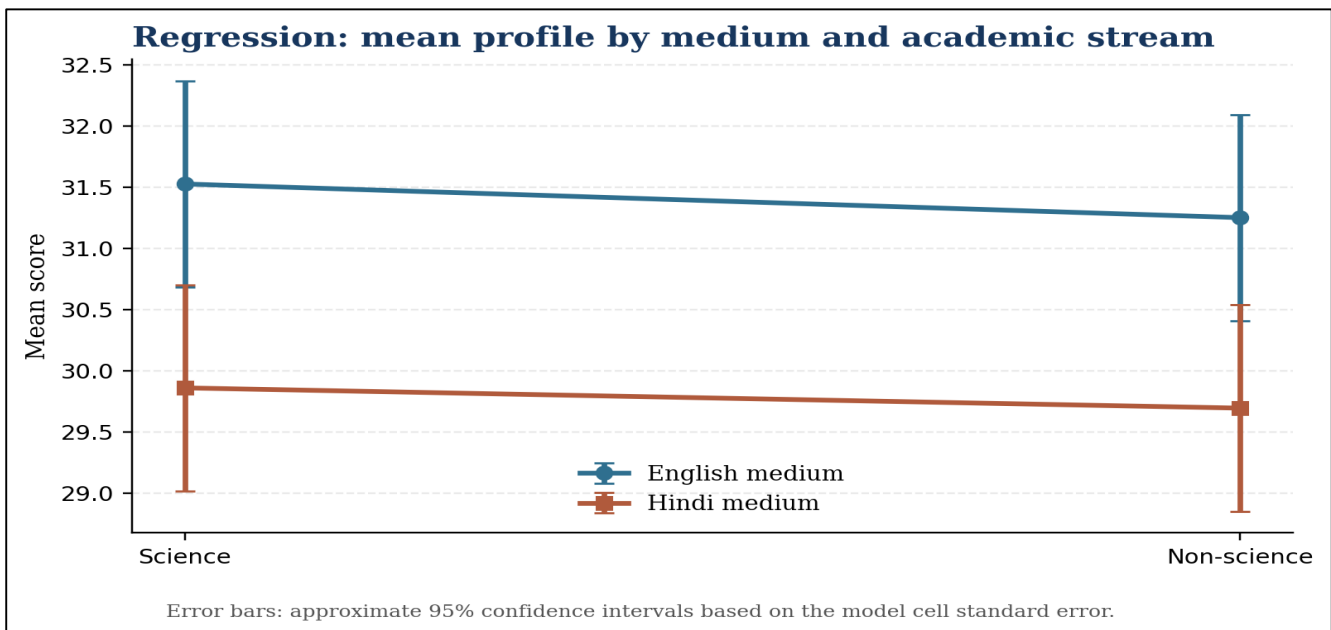
Analysis of the Mean and SD Table

Regression means were higher in both English-medium cells: English science M = 31.525 (SD = 6.783) and English non-science M = 31.250 (SD = 5.237), compared with Hindi science M = 29.860 (SD = 6.021) and Hindi non-science M = 29.695 (SD = 6.151). Within-medium stream differences were very small: -0.275 point for English medium and -0.165 point for Hindi medium. The English marginal mean was 31.388 and the Hindi marginal mean was 29.778.

Interpretation of the Mean and SD Table

The descriptive arrangement suggests a medium-related separation with minimal contribution from academic stream. The two English means are similar to one another, as are the two Hindi means, and the profiles are almost parallel. This pattern is consistent with a possible medium main effect and weak stream and interaction effects.

Figure 7. Mean profile of regression by medium and academic stream



Source: Graph generated from the supplied cell means. Error bars are approximate 95% confidence intervals calculated from the model-reported cell standard error.

Interpretation of the Mean Graph

Both lines are nearly horizontal and parallel, but the English-medium line remains above the Hindi-medium line. The graph therefore anticipates a medium effect without a stream effect or interaction.

7.4.2 Two-Way ANOVA

Table 9. Two-way ANOVA for regression

Source	Type III SS	df	MS	F	p	η^2	Decision
Medium	518.420	1	518.420	14.057	< .001	0.017	Significant
Academic stream	9.680	1	9.680	0.262	.609	0.000	Not significant
Medium $\times$ Stream	0.605	1	0.605	0.016	.898	0.000	Not significant
Error	29355.850	796	36.879	—	—	—	—

Source: Attached SPSS output. Error df = 796. Model R^2 = 0.018. Partial eta squared was derived as SS effect / (SS effect + SS error). SPSS .000 values are reported as $p < .001$.

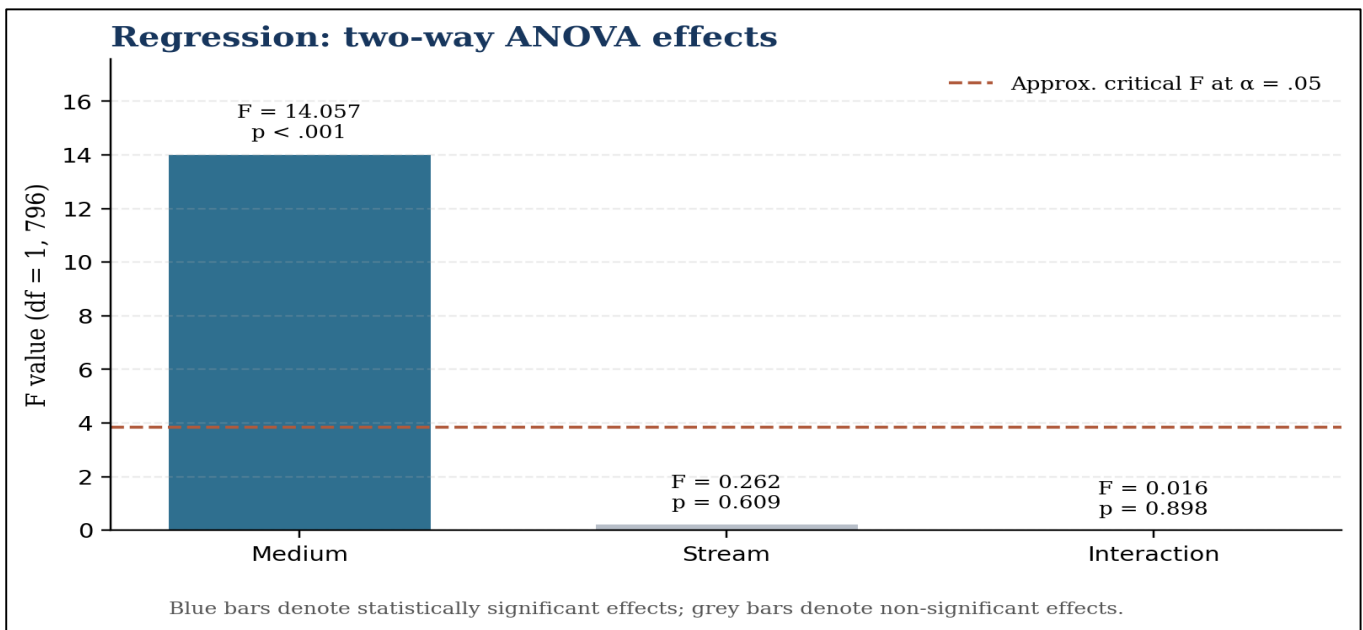
Analysis of the Two-Way ANOVA Table

Medium produced a significant main effect on regression, $F(1, 796) = 14.057$, $p < .001$, partial eta squared = .017. Neither academic stream, $F(1, 796) = 0.262$, $p = .609$, nor the Medium $\times$ Stream interaction, $F(1, 796) = 0.016$, $p = .898$, was significant. The model explained 1.8% of regression-score variance.

Interpretation of the Two-Way ANOVA Table

Regression is associated with medium in this sample: English-medium pupil teachers obtained higher regression means after averaging across streams. Academic stream contributes no reliable main effect, and the nearly zero interaction indicates a stable medium separation across science and non-science groups. Thus, only the medium null hypothesis is rejected; the stream and interaction null hypotheses are retained.

Figure 8. F values for the two-way ANOVA effects on regression



Source: Graph generated from the supplied ANOVA F values. The dashed reference is the approximate critical F for $df = 1, 796$ at $\alpha = .05$; exact decisions use the reported p values.

Interpretation of the ANOVA Graph

Only the medium bar exceeds the significance reference. The stream and interaction bars remain close to zero, providing a clear visual summary of the stable medium separation and the absence of meaningful stream-related patterning.

7.5 Total frustration

7.5.1 Mean and Standard Deviation

Table 10. Mean and standard deviation of total frustration by medium and academic stream

Medium	Academic stream	N	Mean	SD
English	Science	200	122.020	11.805
English	Non-science	200	125.965	10.975
Hindi	Science	200	116.135	12.104
Hindi	Non-science	200	122.815	16.480
Grand total	All streams	800	121.734	13.471

Medium $\times$ Academic Stream section. Each factorial cell $n = 200$; $N = 800$.

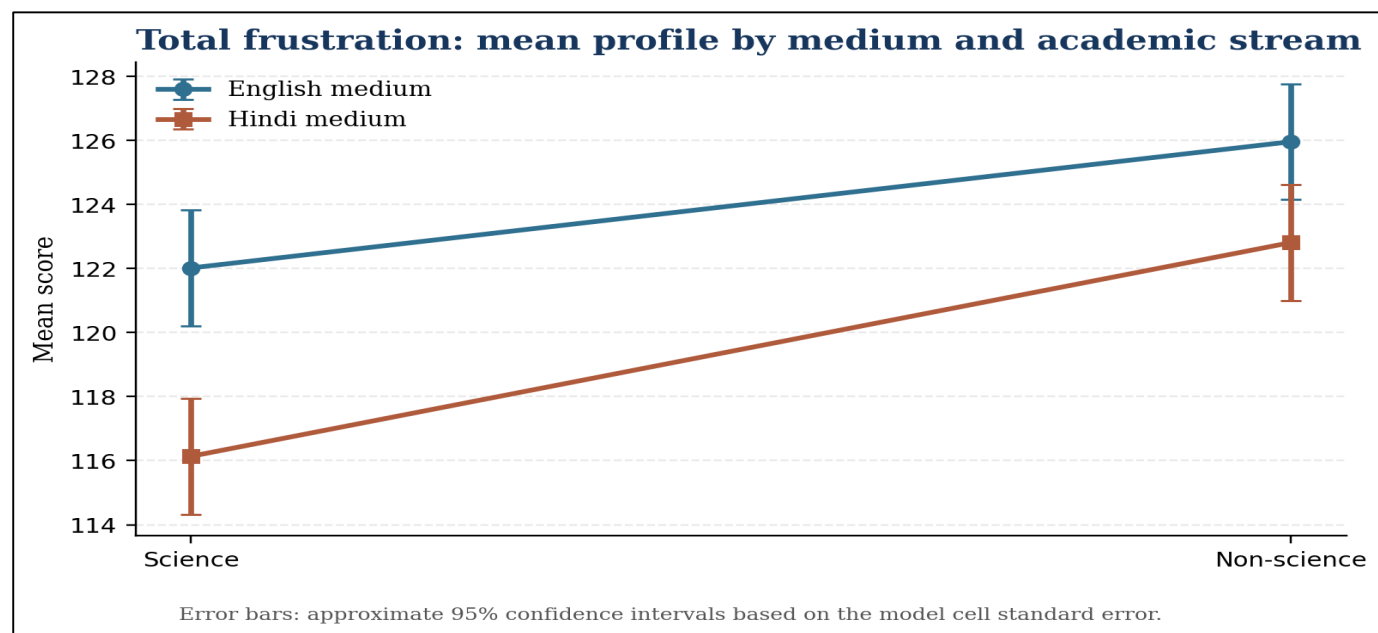
Analysis of the Mean and SD Table

English-medium non-science pupil teachers recorded the highest total-frustration mean ($M = 125.965$, $SD = 10.975$), while Hindi-medium science pupil teachers recorded the lowest ($M = 116.135$, $SD = 12.104$). Total frustration increased from science to non-science by 3.945 points in English medium and by 6.680 points in Hindi medium. Marginal means were 123.993 for English medium and 119.475 for Hindi medium; science and non-science means were 119.078 and 124.390 respectively.

Interpretation of the Mean and SD Table

Both media show higher total frustration among non-science pupil teachers, and English-medium means exceed Hindi-medium means in both streams. The increase is somewhat steeper within Hindi medium, but descriptive nonparallelism does not by itself establish a significant interaction. The inferential table is required to decide whether that difference in slopes exceeds sampling uncertainty.

Figure 9. Mean profile of total frustration by medium and academic stream



Source: Graph generated from the supplied cell means. Error bars are approximate 95% confidence intervals calculated from the model-reported cell standard error.

Interpretation of the Mean Graph

Both profile lines slope upward from science to non-science, and the English-medium line remains higher. Although the Hindi-medium increase is steeper, the confidence intervals indicate uncertainty; the subsequent ANOVA confirms that the interaction is not statistically significant.

7.5.2 Two-Way ANOVA

Table 11. Two-way ANOVA for total frustration

Source	Type III SS	df	MS	F	p	η^2	Decision
Medium	4081.561	1	4081.561	24.084	< .001	0.029	Significant
Academic stream	5644.531	1	5644.531	33.307	< .001	0.040	Significant
Medium × Stream	374.011	1	374.011	2.207	.138	0.003	Not significant
Error	134898.185	796	169.470	—	—	—	—

Source: Attached SPSS output. Error $df = 796$. Model $R^2 = 0.070$. Partial eta squared was derived as $SS \text{ effect} / (SS \text{ effect} + SS \text{ error})$. SPSS .000 values are reported as $p < .001$.

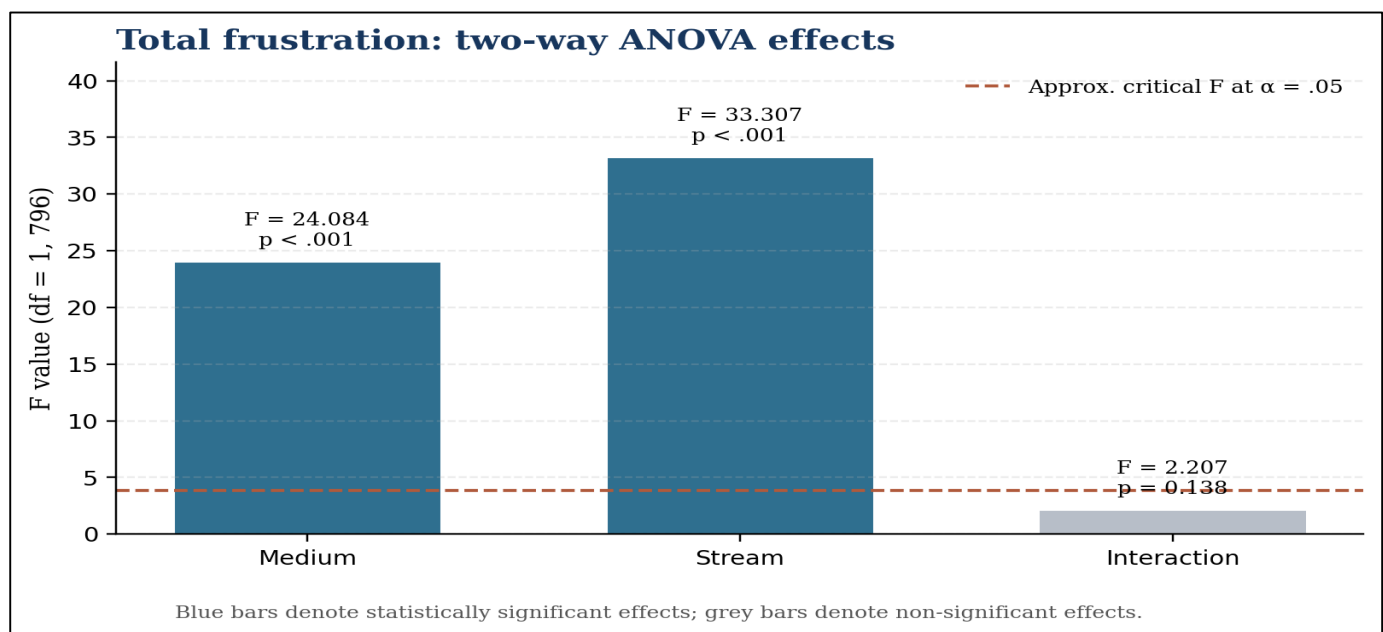
Analysis of the Two-Way ANOVA Table

Total frustration showed significant main effects of medium, $F(1, 796) = 24.084$, $p < .001$, partial eta squared = .029, and academic stream, $F(1, 796) = 33.307$, $p < .001$, partial eta squared = .040. The Medium $\times$ Stream interaction was not significant, $F(1, 796) = 2.207$, $p = .138$, partial eta squared = .003. The complete model accounted for 7.0% of total-frustration variance.

Interpretation of the Two-Way ANOVA Table

English-medium participants had higher total-frustration marginal means, and non-science participants had higher marginal means than science participants. Because the interaction is not significant, the available evidence does not establish that the stream difference varies by medium at the total-score level. The medium and stream null hypotheses are rejected, whereas the Medium $\times$ Stream null hypothesis is retained. The effects are small and associative, not proof that language or discipline causes frustration.

Figure 10. F values for the two-way ANOVA effects on total frustration



Source: Graph generated from the supplied ANOVA F values. The dashed reference is the approximate critical F for $df = 1, 796$ at $\alpha = .05$; exact decisions use the reported p values.

Interpretation of the ANOVA Graph

The medium and stream bars are both statistically significant, with the stream effect larger. The interaction bar remains below the critical-F line. The graph therefore supports two independent marginal associations without reliable evidence of a joint Medium $\times$ Stream effect.

8. Discussion

The total-frustration findings show independent medium and stream associations without a statistically reliable interaction. English-medium participants and non-science participants obtained higher marginal means, but the effect sizes were small. This result differs from Lal Kumar and Muthumanickam's (2013) report of no arts-science difference among D.T.Ed. trainees, illustrating how context, instrument and sample composition can alter group patterns. The result should motivate investigation of assessment expectations, institutional climate, practicum support, career uncertainty and language demands rather than a claim that one medium or stream is inherently frustrating.

Dimension results demonstrate why a total score is insufficient. Aggression, resignation and fixation all showed significant interactions, consistent with multidimensional accounts of frustration (Berkowitz, 1989; Harrington, 2005). The particularly low Hindi-science means for aggression and resignation and the fixation crossover indicate that stream associations differ by medium for selected

response modes. Regression, by contrast, was organised primarily by medium and was stable across streams. Educational interventions should therefore match the observed response pattern rather than applying one generic frustration programme.

The models explained between 1.8% and 7.0% of outcome variance. This modest explanatory power is expected in nonexperimental educational data and cautions against demographic determinism. College climate, mentoring, prior schooling, socioeconomic conditions, perceived control, self-efficacy and measurement error may account for substantial remaining variation. The balanced design strengthens comparison, but the nested selection of pupil teachers within 20 colleges means ordinary ANOVA may underestimate uncertainty if college responses are correlated. Future multilevel replication is therefore important.

9. Main Findings

- The analysed sample comprised 800 pupil teachers in four balanced Medium $\times$ Stream cells of 200.
- English-medium pupil teachers had higher total frustration than Hindi-medium pupil teachers, $F = 24.084$, $p < .001$.
- Non-science pupil teachers had higher total frustration than science pupil teachers, $F = 33.307$, $p < .001$.
- The Medium $\times$ Stream interaction for total frustration was not significant, $p = .138$.
- Medium did not significantly affect aggression, but stream and the Medium $\times$ Stream interaction did.
- Resignation showed significant medium, stream and interaction effects.
- Fixation showed no significant medium main effect, but stream and interaction effects were significant.
- Regression showed a significant medium effect but no stream or interaction effect.
- Hindi-medium aggression and resignation increased more sharply from science to non-science than English-medium scores.
- Fixation produced a crossover interaction: English scores rose across streams while Hindi scores declined.
- Effect sizes were small, and the models left most individual variation unexplained.
- The findings establish group associations, not linguistic, disciplinary or causal inferiority.

10. Suggestions for Reducing Frustration

- Provide confidential wellbeing screening and counselling without connecting disclosure to practicum grades.
- Use staged practicum exposure through observation, microteaching, co-teaching and progressively longer lessons.
- Give transparent rubrics before assessment and behaviour-specific feedback followed by an opportunity to improve.
- Offer Hindi-English academic-language support while respecting multilingual identity and avoiding deficit labels.
- Develop stream-specific workshops for laboratory demonstration, conceptual explanation, discussion and academic writing.
- Train mentors to recognise quiet resignation and rigid fixation as well as visible aggression.
- Teach cognitive reappraisal, realistic self-talk, relaxation, time management and problem decomposition.
- Create peer-support groups in which pupil teachers can discuss blocked goals without humiliation.
- Stabilise schedules and communicate practicum, examination and recruitment information promptly.
- Refer persistent anxiety, functional impairment or self-harm risk to qualified mental-health professionals.

- Evaluate every support programme through pre-post evidence and confidential participant feedback.

11. Educational Implications

- Teacher educators should analyse frustration dimensions separately because total scores conceal aggressive, withdrawal-oriented, rigid and regressive patterns requiring different responses.
- Significant interactions imply that medium-responsive interventions should also consider academic stream. A strategy appropriate for one medium-stream combination may not address another cell's pattern.
- The English-medium and non-science total means should initiate contextual inquiry rather than stereotyping. Curriculum load, feedback, mentoring and career expectations should be investigated directly.
- Practicum should increase controllability through clear standards, rehearsal, formative feedback and correction opportunities while preserving authentic challenge.
- Counselling, academic-language assistance and discipline-specific pedagogical support should operate as connected student services.
- Research-method courses should teach that significant main effects can be qualified by interactions and that statistical significance is not causal proof.

12. Suggestions for Further Research

- Replicate the balanced Medium $\times$ Stream design in other districts and states.
- Use multilevel models to separate pupil-teacher and college-level effects across the 20 colleges.
- Conduct simple-effects tests for significant interactions with planned multiplicity control.
- Verify reliability, factor structure and measurement invariance across Hindi and English forms and academic streams.
- Use longitudinal measurement before, during and after practicum.
- Combine questionnaires with interviews, reflective diaries and classroom observations.
- Study self-efficacy, mentoring, socioeconomic background, language proficiency and career uncertainty as mediators or moderators.
- Evaluate language-responsive mentoring and emotional-regulation programmes through strong quasi-experimental designs.
- Analyse frustration and anxiety jointly with verified instruments and appropriate ethical referral safeguards.
- Preserve de-identified data, codebooks and analysis syntax where consent and institutional rules permit.

13. Conclusion

The study demonstrates that frustration among pupil teachers is shaped by both medium of instruction and academic stream, but the pattern depends upon the dimension considered. Total frustration showed significant medium and stream main effects without interaction, whereas aggression, resignation and fixation showed significant Medium $\times$ Stream interactions. Regression was associated with medium but not stream. These results support differentiated, evidence-based assistance and reject simplistic claims that one language or discipline determines psychological difficulty. Transparent practicum systems, language-responsive mentoring, discipline-specific support and confidential counselling can reduce avoidable obstruction while preserving professional challenge.

References

1. Alhebaishi, S. M. (2019). Investigation of EFL student teachers' emotional responses to affective situations during practicum. *European Journal of Educational Research*, 8(4), 1201-1215. <https://doi.org/10.12973/eu-jer.8.4.1201>
2. Amsel, A. (1958). The role of frustrative nonreward in noncontinuous reward situations. *Psychological Bulletin*, 55(2), 102-119. <https://doi.org/10.1037/h0043125>
3. Bach, A., Guseva, Y., & Hagenauer, G. (2022). Joy, anger, and anxiety during the teaching practicum: How are these emotions related to dimensions of pre-service teachers' self-efficacy? *Zeitschrift für Bildungsforschung*, 12, 277-298. <https://doi.org/10.1007/s35834-022-00343-9>
4. Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman.
5. Barlow, D. H. (2000). Unraveling the mysteries of anxiety and its disorders from the perspective of emotion theory. *American Psychologist*, 55(11), 1247-1263. <https://doi.org/10.1037/0003-066X.55.11.1247>
6. Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology*, 56(6), 893-897. <https://doi.org/10.1037/0022-006X.56.6.893>
7. Berkowitz, L. (1989). Frustration-aggression hypothesis: Examination and reformulation. *Psychological Bulletin*, 106(1), 59-73. <https://doi.org/10.1037/0033-2909.106.1.59>
8. Carmignola, M., Martinek, D., & Hagenauer, G. (2021). 'At first I was overwhelmed, but then-I have to say-I did almost enjoy it': Psychological needs satisfaction and vitality of student teachers during the first COVID-19 lockdown. *Social Psychology of Education*, 24, 1607-1641. <https://doi.org/10.1007/s11218-021-09667-2>
9. Chauhan, N. S., & Tiwari, G. (1972). Frustration Test. Agra Psychological Research Cell.
10. Chen, B., Vansteenkiste, M., Beyers, W., Boone, L., Deci, E. L., Duriez, B., Lens, W., Matos, L., Mouratidis, A., Ryan, R. M., Sheldon, K. M., Soenens, B., Van Petegem, S., Van der Kaap-Deeder, J., & Verstuyf, J. (2015). Basic psychological need satisfaction, need frustration, and need strength across four cultures. *Motivation and Emotion*, 39(2), 216-236. <https://doi.org/10.1007/s11031-014-9450-1>
11. Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
12. Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE.
13. Cummins, J. (2000). *Language, power and pedagogy: Bilingual children in the crossfire*. Multilingual Matters.
14. Dollard, J., Miller, N. E., Doob, L. W., Mowrer, O. H., & Sears, R. R. (1939). *Frustration and aggression*. Yale University Press.
15. Dumančić, D., Martinović, A., & Burić, I. (2022). Dear diary: An exploration of L2 teachers' emotional experiences. *Journal for the Psychology of Language Learning*, 4(2), Article e429122. <https://doi.org/10.52598/jpll/4/2/7>
16. Ekşi, G. Y., & Yakışık, B. Y. (2016). To be anxious or not: Student teachers in the practicum. *Universal Journal of Educational Research*, 4(6), 1332-1339. <https://doi.org/10.13189/ujer.2016.040610>
17. Field, A. (2018). *Discovering statistics using IBM SPSS Statistics* (5th ed.). SAGE.
18. Gardner, S. (2010). Stress among prospective teachers: A review of the literature. *Australian Journal of Teacher Education*, 35(8), 18-28. <https://doi.org/10.14221/ajte.2010v35n8.2>
19. Garrett, H. E. (2008). *Statistics in psychology and education*. Surjeet Publications.
20. Harrington, N. (2005). The Frustration Discomfort Scale: Development and psychometric properties. *Clinical Psychology & Psychotherapy*, 12(5), 374-387. <https://doi.org/10.1002/cpp.465>
21. Horwitz, E. K. (1996). Even teachers get the blues: Recognizing and alleviating language teachers' feelings of foreign language anxiety. *Foreign Language Annals*, 29(3), 365-372. <https://doi.org/10.1111/j.1944-9720.1996.tb01248.x>

22. Jena, P. C. (2015). A study of frustration tolerance among secondary school teachers. *Scholars Journal of Arts, Humanities and Social Sciences*, 3(9A), 1437-1442. <https://doi.org/10.36347/sjahss.2015.v03i09.008>
23. Lal Kumar, A. C., & Muthumanickam, R. (2013). Investigating the frustration of D.T.Ed. teacher trainees. *Global Research Analysis*, 2(2), 54-55.
24. Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.
25. Lenka, S. K., & Kant, R. (2012). Frustration and work motivation of secondary school teachers as a correlate of leadership behavior of their heads. *Academic Research International*, 2(3), 321-328.
26. Levine, S. L., Brabander, C. J., Moore, A. M., Holding, A. C., & Koestner, R. (2022). Unhappy or unsatisfied: Distinguishing the role of negative affect and need frustration in depressive symptoms over the academic year and during the COVID-19 pandemic. *Motivation and Emotion*, 46, 126-136. <https://doi.org/10.1007/s11031-021-09920-3>
27. Li, Q., Xie, Z., & Zeng, G. (2023). The influence of teaching practicum on foreign language teaching anxiety among pre-service EFL teachers. *SAGE Open*, 13(1), 1-15. <https://doi.org/10.1177/21582440221149005>
28. Merç, A. (2011). Sources of foreign language student teacher anxiety: A qualitative inquiry. *Turkish Online Journal of Qualitative Inquiry*, 2(4), 80-94. <https://doi.org/10.17569/tojq.08990>
29. Morton, L. L., Vesco, R., Williams, N. H., & Awender, M. A. (1997). Student teacher anxieties related to class management, pedagogy, evaluation, and staff relations. *British Journal of Educational Psychology*, 67(1), 69-89. <https://doi.org/10.1111/j.2044-8279.1997.tb01228.x>
30. Murray-Harvey, R., Slee, P. T., Lawson, M. J., Silins, H., Banfield, G., & Russell, A. (2000). Under stress: The concerns and coping strategies of teacher education students. *European Journal of Teacher Education*, 23(1), 19-35. <https://doi.org/10.1080/713667267>
31. Park, D., & Ramirez, G. (2022). Frustration in the classroom: Causes and strategies to help teachers cope productively. *Educational Psychology Review*, 34, 1955-1983. <https://doi.org/10.1007/s10648-022-09707-z>
32. Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*, 18, 315-341. <https://doi.org/10.1007/s10648-006-9029-9>
33. Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the State-Trait Anxiety Inventory*. Consulting Psychologists Press.
34. Sutton, R. E., & Wheatley, K. F. (2003). Teachers' emotions and teaching: A review of the literature and directions for future research. *Educational Psychology Review*, 15, 327-358. <https://doi.org/10.1023/A:1026131715856>