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A Comparative Study of Transactional Styles Inventory–Teachers (TSI-T) for Engineering and School Faculty

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Abstract: *This study presents a comparative analysis of interpersonal communication patterns and behavioural styles of teachers from engineering colleges and schools using the Transactional Styles Inventory–Teachers (TSI-T). It examines six key transactional styles—Nurturing, Regulating, Task-Oriented, Adaptive, Assertive, and Innovative—to understand differences in teacher–student interactions across educational contexts. The study highlights the importance of transactional styles in influencing classroom climate, student motivation, and teaching effectiveness. A descriptive quantitative methodology was adopted, with data collected through the standardized TSI-T tool and analyzed using OEQ, OK/Not-OK indicators, and score comparisons. The findings reveal both similarities and differences in behavioural patterns, particularly in areas like assertiveness, regulation, and adaptability. Overall, the study emphasizes the need for balanced transactional styles and targeted faculty development programs to enhance effective teaching–learning processes*

Keywords: Operating Effectiveness Quotient, Transactional Styles Inventory – Teachers

I. INTRODUCTION

Transactional Styles Inventory (TSI) is a psychological tool designed to assess individuals' interpersonal and communication patterns across various professional roles. It is widely applicable to teachers, managers, counsellors, and other professionals. Human interactions occur across three key dimensions: task-oriented (goal achievement), normative (rules and discipline), and emotional (relationships and feelings). Over time, individuals develop consistent behavioural patterns across these dimensions, known as interpersonal styles.

Transactional Analysis (TA) provides a theoretical foundation for understanding these styles by explaining behaviour through three ego states: Parent, Adult, and Child. These ego states influence how individuals communicate, respond, and manage relationships. In educational settings, teachers' transactional styles significantly affect classroom climate, student motivation, and learning outcomes. Tools like the Transactional Styles Inventory–Teachers (TSI-T) translate these psychological concepts into measurable behavioural indicators.

The framework aligns with the National Education Policy (NEP 2020), which emphasizes holistic development, emotional intelligence, and learner-centered education. TA supports NEP's vision by promoting self-awareness, effective communication, and emotionally supportive learning environments.

Teaching effectiveness depends not only on subject expertise but also on teachers' behavioural and interactional styles. Engineering and school faculty operate in different academic contexts, yet both must manage diverse classrooms and student needs. Despite the importance of interpersonal behaviour, there is limited comparative research examining transactional styles across these two groups.

The present study addresses this gap by analyzing and comparing transactional styles of engineering and school teachers using TSI-T. It also evaluates how these styles align with NEP goals and contribute to effective teaching–learning processes. The study further provides insights for faculty development, emotional wellbeing, and institutional

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improvement. The study focuses on comparing transactional styles of teachers from engineering colleges and schools using the TSI-T framework. It examines behavioural patterns related to communication, emotional support, discipline, and task management.

II. LITERATURE REVIEW

The concept of the Transactional Styles Inventory–Teachers (TSI-T) is grounded in the theoretical foundations of Transactional Analysis (TA), behavioural science, and teacher communication psychology. Existing literature highlights extensive research on interpersonal interactions and teacher behaviour; however, the application of TA-based behavioural frameworks specifically tailored to teachers remains relatively limited. The origins of TSI-T can be traced to the pioneering work of Eric Berne (1961, 1964), who introduced the Parent–Adult–Child (PAC) ego state model. Berne's theory explains that interpersonal communication is shaped by ego states, which determine behavioural patterns and transactional responses. His concept of repetitive interaction patterns, termed "games," provides insight into dysfunctional communication behaviours.

Building on this foundation, Udai Pareek (1974) contributed significantly to behavioural science through his conceptual model of human interaction, emphasizing role-based behaviour and interpersonal responsiveness. Although not directly linked to TSI-T, his work laid the groundwork for behavioural assessment tools in educational and organizational contexts. Similarly, Schiff (1975) advanced TA by distinguishing structural and functional ego states and explaining behavioural scripts, which help in understanding consistent interaction patterns among teachers.

Further developments by Stewart and Joines (1987) integrated TA with modern psychology, elaborating on ego states, life positions, and behavioural drivers. Their work provides the theoretical basis for key TSI-T constructs such as OK/Not-OK responses and the Overall Effectiveness Quotient (OEQ).

In educational contexts, researchers have demonstrated the relevance of TA in enhancing teacher effectiveness. Tudor (2008) emphasized that TA improves teacher–student relationships and classroom climate, while Mellor (2009) highlighted the importance of emotional awareness in managing classroom interactions and reducing conflict.

Research in educational psychology also supports the role of teacher behaviour in influencing learning outcomes. Hargreaves (1998) identified the emotional dimension of teaching as central to student motivation and engagement. Barrow (2000) categorized teacher communication styles, aligning closely with TSI-T dimensions such as nurturing, assertive, and regulating behaviours. Additionally, Marzano (2003) identified clarity, consistency, and emotional stability as key factors in effective classroom management.

The Prosocial Classroom Model by Jennings and Greenberg (2009) further reinforces the importance of teachers' social-emotional competence, linking it to student behaviour and academic success. This aligns with the OEQ concept in TSI-T, which reflects the balanced use of constructive transactional styles.

Overall, the literature establishes a strong theoretical and empirical foundation for the use of TA-based tools like TSI-T in analyzing teacher behaviour, while also highlighting the need for more focused comparative studies across different educational contexts.

III. RESEARCH METHODOLOGY

This study adopts a **descriptive comparative research design** to examine the transactional styles of engineering and school faculty using the Transactional Styles Inventory–Teachers (TSI-T). The methodology is grounded in **Transactional Analysis (TA)**, which explains interpersonal behaviour through Parent, Adult, and Child ego states and their influence on communication patterns.

The TSI-T framework assesses six major transactional styles—**Nurturing, Regulating, Task-Oriented, Adaptive, Assertive, and Innovative**—along with their corresponding **OK (constructive)** and **Not-OK (dysfunctional)** behavioural expressions. These styles reflect how teachers manage emotional, normative, and task-related interactions in educational settings. The **Overall Effectiveness Quotient (OEQ)** is used as a composite indicator to evaluate the balance between healthy and ineffective behavioural responses.

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Sampling Design

The target population includes **engineering faculty (undergraduate level)** and **school teachers (primary and secondary levels)**. A sample was drawn from selected institutions in Pune and Ahilyanagar. The TSI-T questionnaire was administered to approximately 80–90 respondents, out of which **37 valid responses from each group** were considered for analysis. The sample represents diverse academic disciplines and teaching contexts, enabling meaningful comparison.

Data Collection

Data was collected using a **structured questionnaire based on the TSI-T instrument** developed by Udai Pareek. The questionnaire was administered through **Google Forms**, with responses recorded on a five-point Likert scale ranging from "rarely" to "almost always." The instrument measures behavioural tendencies across paired OK and Not-OK styles.

Data Analysis

The collected data was analysed using **descriptive statistical techniques**, including mean, standard deviation, percentage analysis, and tabular comparison. The **Overall Effectiveness Quotient (OEQ)** was computed using standard scoring procedures to assess behavioural effectiveness. Additionally, an **independent sample t-test** was applied to examine significant differences between groups based on gender and teaching context.

Key Measures

Mean and Standard Deviation were used to assess central tendency and variability.

OEQ measured the balance between constructive and dysfunctional behaviours.

t-test determined statistical significance of group differences.

IV. RESULT

This section presents the analysis and interpretation of data collected using the Transactional Styles Inventory–Teachers (TSI-T) from engineering and school faculty. The objective is to examine transactional styles, compare behavioural patterns across groups, and assess overall effectiveness using the Overall Effectiveness Quotient (OEQ).

Demographic Profile

The sample comprised 37 engineering faculty and 37 school teachers. The demographic analysis indicates that the majority of respondents in both groups were above 40 years of age and had more than 10 years of teaching experience, reflecting a mature and experienced population. Engineering faculty showed relatively balanced gender representation, whereas school faculty had a higher proportion of female respondents. Most participants belonged to institutions with large student strength (>500), indicating exposure to complex teaching environments.

Transactional Style Analysis

The comparative OEQ scores across six transactional styles (refer to Figure 1: Graphical representation of OEQ with transactional styles for college and school faculty) reveal both similarities and contextual differences:

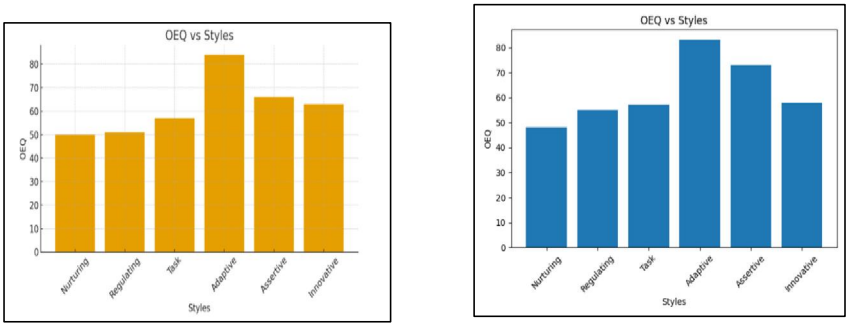

Figure 1: Graphical representation of OEQ with transactional styles for college and school faculty

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Nurturing Style: Engineering faculty (Mean = 50) scored slightly higher than school faculty (Mean = 48), indicating marginally stronger structured emotional support. However, both groups demonstrate moderate nurturing behaviour.
Regulating Style: School faculty (Mean = 55) scored higher than engineering faculty (Mean = 51), reflecting stronger emphasis on discipline, norms, and classroom control in school settings.
Task-Oriented Style: Both groups reported identical mean scores (Mean = 57), suggesting equal emphasis on task completion, academic performance, and problem-solving.
Adaptive Style: This emerged as the **highest scoring style** for both groups (Engineering = 84; School = 83), indicating strong flexibility, openness to change, and situational responsiveness among teachers.
Assertive Style: School faculty (Mean = 73) showed higher assertiveness compared to engineering faculty (Mean = 66), suggesting greater confidence in managing classroom interactions.
Innovative Style: Engineering faculty (Mean = 63) scored higher than school faculty (Mean = 58), indicating greater inclination toward creativity and new teaching approaches.
Overall, the findings suggest that **contextual teaching environments influence behavioural styles**, with school teachers emphasizing regulation and assertiveness, while engineering faculty demonstrate higher innovation.

Gender-Based Analysis
The gender-wise comparison (Figure 2: Interpretation of Transactional Styles by Gender and Institution) highlights notable behavioural patterns:

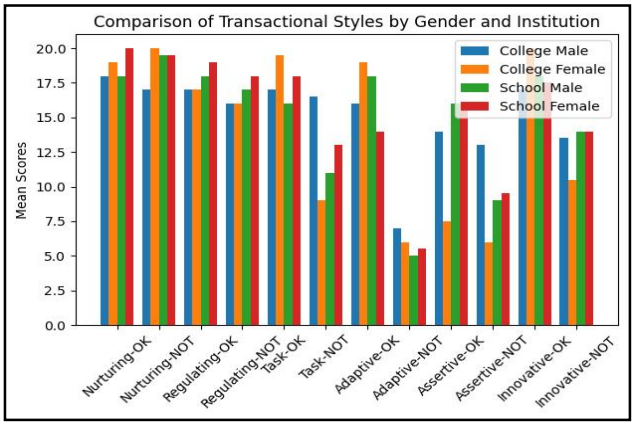

Figure 2: Interpretation of Transactional Styles by Gender and Institution

Nurturing Style: Female teachers scored higher in supportive (OK) behaviours but also showed higher rescuing (Not-OK) tendencies, indicating emotional involvement with a risk of over-dependence.
Regulating Style: Minimal gender differences were observed in engineering faculty, while school teachers—particularly females—showed slightly higher regulatory behaviour.
Task Style: Female college faculty demonstrated higher problem-solving (OK) and lower task-obsessive (Not-OK) behaviour, indicating effective task management without rigidity. Male faculty showed relatively higher task-obsessive tendencies.
Adaptive Style: High innovative (OK) scores and low bohemian (Not-OK) scores across all groups indicate strong adaptability and controlled creativity.
Assertive Style: School faculty (both genders) exhibited higher confronting (OK) behaviour, whereas male engineering faculty showed relatively higher aggressive (Not-OK) tendencies.
Innovative Style: Female college faculty scored highest in resilience (OK), indicating strong emotional stability and creativity. Sulking (Not-OK) behaviour remained moderate across all groups.

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Hypothesis Testing

An independent sample **t-test** was conducted to examine differences across gender and institutional context. The results indicate that:

Sr. No	Styles	t-test value
1	Nurturing	0.13
2	Regulating	-0.04
3	Task	-0.59
4	Adaptive	0.36
5	Assertive	-1.38
6	Innovative	-0.87

Gender based College teachers Transactional Styles (t-Test Results)

Sr. No	Styles	t-test value
1	Nurturing	-1.85
2	Regulating	-4.38
3	Task	-1.22
4	Adaptive	2.37
5	Assertive	1.55
6	Innovative	0.38

Gender based School teacher Transactional Styles (t-Test Results)

Figure 3: Gender based t-Test Results

Most transactional styles do not show statistically significant differences, suggesting **common behavioural patterns among teachers**.

However, **Task-Oriented and Assertive styles** show significant variation, particularly across gender and institutional type.

This leads to partial rejection of the null hypothesis, indicating that while overall behavioural tendencies are similar, specific styles are influenced by contextual and demographic factors.

The analysis reveals that both engineering and school faculty demonstrate high adaptability and moderate effectiveness across transactional styles. However, variations exist in regulating, assertive, and innovative behaviours, influenced by teaching context and gender. Notably, higher Not-OK tendencies such as rescuing and aggression in certain groups highlight areas requiring behavioural intervention.

V. CONCLUSION

The study concludes that both engineering and school faculty demonstrate moderately effective transactional styles, with strong emphasis on adaptability and task orientation. However, the consistently high **Rescuing (Not-OK)** behaviour across both groups indicates a tendency toward over-involvement, which may limit the development of student independence. This reflects a partially teacher-centered approach to learning.

In alignment with NEP 2020, there is a need for a behavioural shift from direct problem-solving to facilitative teaching that promotes learner autonomy, critical thinking, and self-directed learning. Strengthening balanced transactional styles through targeted faculty development can enhance teaching effectiveness and support the creation of more independent and competent learners.

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