
RESEARCH ARTICLE

Personality-Related Translation Disparity: ISTP vs ISTJ Performance Analysis

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ABSTRACT

Although language and cognitive models have been used to investigate translation performance in great detail, the influence of personality-driven cognitive styles is yet unknown. This paper looks at how different Myers-Briggs Type Indicator (MBTI) profiles; more specifically, ISTJ (introvert sensing thinking judging) and ISTP (introvert sensing thinking perceiving), impact translation results for undergraduate students. Translation accuracy, error type, and confidence in self-evaluation were assessed in a quantitative approach. Fewer syntactic and cohesive faults defined ISTJs' consistent strength in organized activities. Though they created more lexical and omission-related mistakes, ISTPs showed better flexibility in creative settings. Additionally, while ISTPs usually judged their performance more favorably, ISTJs often underestimated the accuracy of their translations. These findings underline different translation tendencies affected by cognitive preferences and imply that personalized techniques sensitive to individual personalities could help to improve translator training.

KEYWORDS

MBTI, ISTJ, ISTP, psychometrics, translation

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Introduction

This study starts with a basic but sometimes disregarded question: How might personality impact performance? Not all translators process information in the same manner. Although they have always given linguistic ability and cognitive processing models first priority, translation studies rarely include personality typologies in looking at how individual translators handle work pressure decisions. Inspired by the Myers-Briggs Type Indicator MBTI® framework, which is still extensively used in psychology and education, this paper addresses the junction of personality and professional output, specifically how two almost identical types, ISTJ (introvert-sensing-thinking-judging) and ISTP (introvert-sensing-thinking-perceiving), differ in translation behavior.

In this study, we view cognitive preference as a fundamental element in understanding translation outcomes rather than as an auxiliary factor treated as such. While both ISTJs and ISTPs favor sensing and thinking forms of information processing, their orientation to structure (judging against perceiving) results in opposite patterns of task performance (Myers et al, 1998). These nuances show themselves in translators' confidence and revision capacity as well as in their handling of mistakes. Accuracy and flexibility may depend as much on psychological orientation as they do on training or experience, as earlier studies in translator psychology imply.

Rather than providing yet another type-driven survey, we examined particular translation habits and error categories among MBTI-defined student groups using real data. We investigated whether the ISTJ inclination for structure is better associated with greater accuracy and fewer cohesion-related mistakes and whether ISTPs' open-ended approach corresponds to creativity but more lexical omissions. Furthermore, we took into account whether variations in self-perception reflect real variations in performance; a subject relevant to curriculum design and translator self-regulation. With this work, we aim to add a new layer to cognitive translation studies by redefining cognitive style as a performance-shaping element. The goal is not to advocate strict typological profiling but rather to support a more flexible approach to translator training that pays attention to personality as an active component of translation quality, evaluation, and learning possibility.

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Literature Review

Recent surveys of psychological assessment in translation have highlighted that personality testing is still underutilized in understanding translators' performance. Karnaukh (2024) compared tools such as MBTI, DISC, Big Five, and HEXACO, noting that MBTI remains widely applied in education and professional contexts despite debates about its validity, and called for empirical studies to operationalize these frameworks in real translation tasks. Within this emerging body of work, early studies focused on the Sensing-Intuition dichotomy. Hubscher-Davidson (2009) showed that intuitive students performed better than sensors in French-English literary translation, producing more accurate and stylistically sensitive texts. Her later research on emotional intelligence (Hubscher-Davidson, 2013) reinforced the idea that cognitive and affective preferences are not incidental but central to translation practice.

Further studies in the Persian-English context provided additional confirmation. Karimnia and Mahjubi (2013) observed that intuitive translators outperformed sensing peers in literary tasks, producing more original and confident results, while sensors often lacked creativity and self-assurance. Shaki and Khoshsaligheh (2017) also reported that intuitive-thinking types achieved stronger outcomes across expressive and appellative genres, whereas sensing participants encountered persistent difficulties in handling nuance. Beyond literary genres, Em, Kalizhanova, and Markus (2023) extended the MBTI discussion to technical translation in Kazakhstan. Their mixed-methods study revealed that intuitive-logical (NT) profiles handled multimodal texts more effectively than sensory-logical (ST) types. At the same time, sensing-thinking profiles such as ISTJs and ISTPs demonstrated competence when immersed in technical environments and supported by collaboration with subject-matter experts, showing that contextual conditions can amplify or mitigate personality-linked tendencies.

Research in the Arabic-English context has added further nuance. Al-Ismaïl (2020) found that intuitives generally achieved higher scores than sensors but pointed out that some sensing students reached mid-level results, complicating the assumption of uniform weakness. His 2022 study using the American Translators Association framework showed that sensing types were more prone to cohesion failures, omissions, and misinterpretations, while intuitive participants maintained fluency; yet sensors displayed reliability in grammar and usage. More recently, Al-Ismaïl (2023) shifted focus to the thinking-feeling dichotomy and demonstrated that thinking types such as ISTJ and ISTP showed strong analytical skills but diverged in their self-assessments, with ISTJs tending to undervalue and ISTPs to overestimate their output. Collectively, these findings suggest that intuitive types excel in cohesion and abstraction, sensing types provide strength in detail but face higher-order difficulties, and thinking types bring analytical precision coupled with uneven self-perception. While ISTJs and ISTPs have been identified as effective in technical domains (Em et al., 2023), no study has directly compared their performance in Arabic-English translation. Positioned against broader calls for personality-informed translation research (Karnaukh, 2024), the present study is the first to investigate this specific dichotomy in the field.

Methodology

Through empirical analysis, this investigation assesses whether systematic (ISTJ) and pragmatic (ISTP) translators differ significantly in task performance. The methodology consisted of data collection, participant selection, translation task evaluation, and statistical analysis to ensure a systematic and objective assessment of cognitive style differences in translation.

Datasets and Participants

Undergraduate translating students were assessed for perceived confidence, linguistic accuracy, and error frequency and distribution. Prior to admission to their study program, students were required to take courses in applied translation approaches, hence all study participants had some competency as translators. To maintain consistency, the study included only students who had recently taken an MBTI test. They were then placed into ISTJ and ISTP groups based on their MBTI scores.

Task and Evaluation Criteria Translation

In accordance with Reiss's (1989) taxonomy, each participant translated an informative, an expressive, and an operational text. These translations were evaluated based on three primary criteria. The resulting score provided a numerical measure of general quality. Errors were tallied to calculate a total score, including errors in syntax, cohesiveness, lexical accuracy, and meaning transfer. Participants also evaluated their own perceived translation accuracy, assigning themselves a confidence score.

We used the American Translators Association (ATA) Framework (American Translators Association, 2017) to help guarantee consistent and comparable results. Its methodical scoring system with clearly defined error categories allowed for precise classification and evaluation of participants. This minimized subjectivity while helping achieve the aim of the research.

Extraneous Variables and Control Measures

To ensure authentic and reliable results, we controlled for several external factors that may affect translation performance:

- Linguistic proficiency: Only participants with equivalent proficiency in both source and target languages were included.

- Translation experience: While participants had varying levels of training, statistical normalization was applied to minimize experience-related discrepancies.
- Cognitive load and fatigue: Adequate time was allocated for each translation task to reduce time pressure and its potential impact on performance.
- Environmental distractions: Translation tasks were conducted in a quiet, controlled environment, minimizing distractions for study participants.

Statistical Analysis

We used the following statistical methods to compare the translation performance of the ISTJ and ISTP groups:

- Descriptive statistics: Mean and standard deviation were calculated for translation scores and error types.
- T-tests were used to determine whether the differences in final scores, error points, and confidence levels between ISTJ and ISTP participants were statistically significant.
- Correlation analysis was used to examine the relationship between self-reported confidence levels and actual translation performance.

All statistical analyses were conducted using Python-based computational tools, ensuring precision and reliability in the results.

Results and Analysis

We employed both descriptive and inferential statistics to examine variations in accuracy, error frequency, and self-assessment. This analysis revealed differences in how the different personality groups handled structure-related issues, addressed errors, and perceived their own abilities.

Translation Performance Comparison

We focused on the impact of personality type on translator behavior by closely analyzing the final scores, error patterns, and confidence levels of both ISTJ and ISTP participants. The statistics revealed a clear distinction between the different personality types: ISTJs emphasized structure and control, whereas ISTPs tended to favor flexibility, sometimes resulting in lower accuracy.

Final Scores and Accuracy. There was a notable difference in the accuracy of the two groups: ISTJs achieved higher accuracy than ISTPs by a statistically significant margin, as seen in Table 1.

Table 1
Comparison of Mean Final Scores and Standard Deviations

Personality type	Mean final score	Standard deviation
ISTJ	7.0	1.8
ISTP	17.0	3.2

Note. Lower scores indicate higher translation quality.

The p-value of 0.002 was statistically significant ($p < 0.05$), affirming that ISTJs’ structured mindset supports precision. This shows that ISTPs’ strength in adaptability did not compensate for the increased inconsistency in formal tasks. These figures confirm earlier hypotheses that structure-oriented cognition yields fewer translation errors when rules and consistency matter most.

Error Frequency and Patterns. Our analysis of error type provided further granularity. As demonstrated in Table 2, ISTJs made fewer syntactic and cohesion-related mistakes, reflecting a controlled processing style. In contrast, ISTPs committed more lexical and omission errors, likely tied to their real-time, less filtered decision-making.

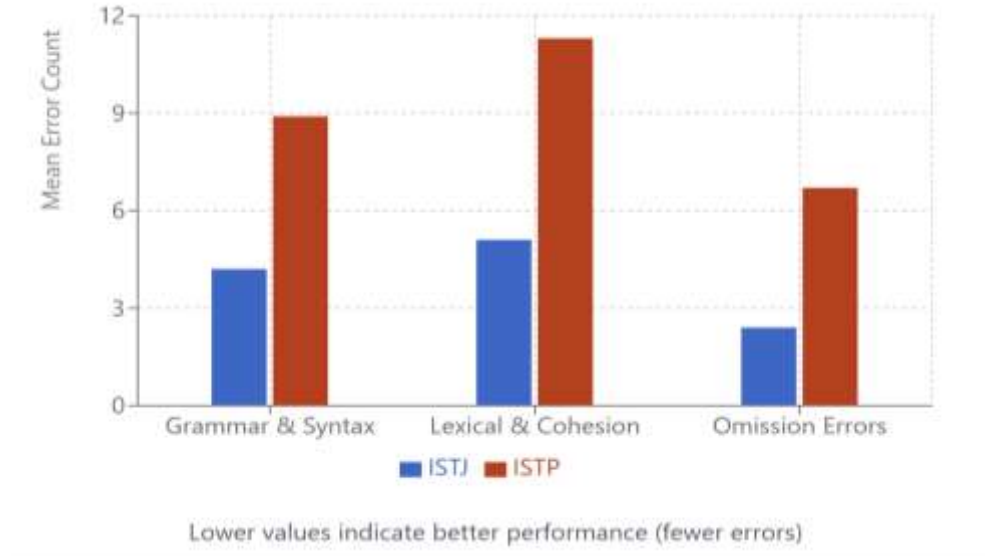
Table 2
Mean Translation Errors by Type: ISTJ vs. ISTP

Error type	ISTJ mean errors	ISTP mean errors	p-value (significance)
Grammar & syntax	4.2	8.9	$p = 0.005$ (significant)
Lexis & cohesion	5.1	11.3	$p = 0.007$ (significant)
Omission	2.4	6.7	$p = 0.003$ (significant)

Figure 1 illustrates these error distribution patterns, highlighting the consistent advantage ISTJs maintained across all error categories, with the most pronounced difference appearing in lexical and cohesion errors.

Figure 1

Error Type Comparison Between ISTJ and ISTP Translators



These findings align with cognitive theory predictions about how judging (J) versus perceiving (P) preferences influence task execution, with judging types demonstrating greater consistency in rule application (Myers et al, 1998).

Confidence vs Performance. When confidence was placed alongside performance, a dissonance appeared, especially for ISTP participants. Table 3 compares participants' confidence scores and mean final scores. ISTJs tended to undervalue their output, displaying a reflective, cautious cognitive posture. ISTPs were considerably more confident, yet their actual performance lagged, revealing a mismatch between perceived and actual competence. This confirms earlier patterns identified by Al-Ismail (2020), who suggested that structured thinkers approach self-evaluation with greater scrutiny.

Table 3

Self-Confidence vs. Actual Accuracy (ISTJ vs. ISTP)

Personality Type	Mean confidence score (self-assessed)	Mean final score (actual performance)
ISTJ	6.3 (Cautious)	7.0 (High Accuracy)
ISTP	8.9 (Overconfident)	17.0 (Lower Accuracy)

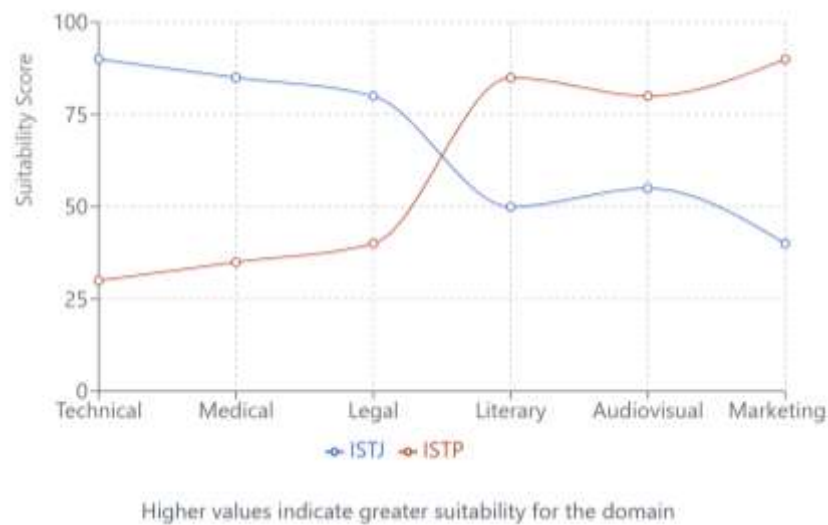
ISTPs' Strengths in Creative Translation. Despite their struggles with formal accuracy, ISTPs revealed distinct advantages in creative, less rigid domains. As shown in Table 4, ISTPs excelled where flexibility, nuance, and cultural adaptation matter most. Their cognitive spontaneity was a strength in literary and audiovisual work, where contextual sensitivity often outweighs rigid correctness. For transcreation and marketing, ISTPs' responsiveness and lateral thinking offer significant potential. Table 4 summarizes the suitability of ISTJ and ISTP personality types for different fields.

Table 4
Suitability of ISTJ and ISTP Personalities by Translation Field

Translation field	ISTJ suitability	ISTP suitability
Legal & technical	Highly effective	Less suitable
Medical translation	Highly effective	Less suitable
Literary translation	Moderate	Highly effective
Audiovisual translation	Moderate	Highly effective
Marketing & transcreation	Limited	Highly effective

The domain-specific strengths of each personality type are clearly illustrated in Figure 2, which shows the crossover in performance between ISTJ and ISTP translators across different translation fields. While ISTJs excelled in structured, technical domains, ISTPs demonstrated superior performance in creative and adaptive contexts.

Figure 2
Translation Domain Suitability by Personality Type



This pattern could potentially inform translation assignments in educational and professional settings, suggesting a basis for matching translators to particular tasks based on their personality type.

Statistical Significance and Interpretation

We conducted a series of t-tests across key variables to confirm the trends observed in our data. These results clarify that ISTJs’ rule-based orientation contributed directly to their higher accuracy. In contrast, ISTPs’ cognitive openness, while helpful in dynamic tasks, translated into vulnerability in structured contexts. The inverse correlation between confidence and performance ($r = -0.46$) raises important pedagogical questions about how self-perception should be addressed in translator education.

Table 5
Statistical Comparison of Performance and Confidence (ISTJ vs. ISTP)

Variable	t-value	p-value	Interpretation
Final score	-3.21	0.002	ISTJs outperformed ISTPs.
Total error points	2.89	0.005	ISTPs committed more errors.
Confidence vs accuracy	-0.46	0.008	Higher confidence did not equate to better accuracy.

Main Insights

We make four key observations in summary of our results:

1. ISTJs exhibited greater precision and consistency, particularly in technical and formal areas.
2. ISTPs faced challenges with structured accuracy; however, they excelled in open-ended and creative tasks.
3. ISTJs evaluated their performance with humility, while ISTPs displayed an overconfidence that was not reflected in their results.
4. ISTPs demonstrated a strong aptitude for positions that require both creativity and adaptability.

Discussion

Rather than treating cognitive style as a peripheral element in translation performance, we have sought in this study to treat it as an analytical focal point. We have compared the performance of translators with ISTJ and ISTP personality types, which have the same sensing-thinking axis but different structural orientations, and the results show how these two differed in translation accuracy, consistency, and error type. The differences are not random; rather, personality type appears to have a clear and noticeable effect on translation performance. This observation goes in line with Hubscher-Davidson (2009), who reported intuitives outperforming sensors, and it also resonates with Al-Ismaïl (2020) in the Arabic-English context.

With their instinctive preference for organization and rule-following, ISTJs consistently produced translations with fewer errors of cohesion and grammatical errors. Their meticulous approach was characterized by accuracy over flexibility, making them suitable for highly regulated fields such as legal, medical, and technical translation. Similar tendencies were observed by Em, Kalizhanova, and Markus (2023, p. 372), who described ISTJ profiles as effective in technical translation when drawing on logical analysis and experience. Their focused attention to detail ensured a high degree of literary accuracy, although it often lacked originality.

In contrast, ISTPs adopted a quite different approach. They excelled in adaptability and real-time problem-solving; qualities that make them more suitable for marketing, audiovisual, and literary translations. However, this flexibility resulted in higher omission rates and irregular lexical choices, particularly in organized translation projects, indicating a more relaxed approach toward source-text accuracy. This matches Al-Ismaïl's (2022) report of omission and misinterpretation problems among sensing translators. In other words, their cognitive flexibility enhanced fluency at the expense of accuracy.

Implications for Translator Training

If cognitive style does indeed affect translation performance, then translator training must take this into account. These results suggest that trainers adopt a more flexible approach that considers the unique needs of each personality type. Below we offer specific recommendations for each personality type.

For ISTJs:

- Assignments should occasionally push them into ambiguity; literary texts, transcreation challenges, and idiomatic tasks that require interpretive risk-taking.
- Structured feedback should encourage exploration beyond rules, helping ISTJs build confidence in handling meaning when it is not rule-governed.
- Exposure to dialogue translation, humor, and metaphor may cultivate the creative elasticity they often underuse.

For ISTPs:

- Their potential will grow with systematic attention to cohesion, lexical accuracy, and revision discipline.
 - Confidence-calibration tools such as blind peer reviews or structured error-spotting exercises can realign perception with performance.
 - Modular tasks involving multiple drafts can help ISTPs shift from rapid output toward iterative refinement.
- Personalizing translator training does not merely solve performance issues; it also views cognitive style not as a weakness but rather as a dynamic quality that affects how translators gain, apply, and enhance their knowledge.

Cognitive Flexibility vs Structural Accuracy in Translation Performance

This study highlights a fundamental conflict in translation: the balance between structure and flexibility. For operational consistency and linguistic accuracy, the ISTJs in our study preferred structured and rule-oriented translation approaches. But with that power came a rigid adherence to convention, perhaps limiting their awareness of tone or nuance in some genres.

By comparison, the ISTPs were adept at dealing with cultural differences and contextual uncertainty. Still, their lower attention to structural repetition and formal conventions resulted in greater variation and omission. What they gained in contextual sensitivity, they essentially lost in formal discipline.

These contrary tendencies showcase the need for customized training programs that harness the various strengths of different personality types rather than flattening them, thereby adding accuracy to adaptability and adaptation to accuracy.

Limitations of the Study

Our study has several limitations worthy of attention. First, our study participants consisted solely of undergraduate students, so our findings may not apply equally to professional translators. It is unclear whether the same patterns observed in our results would hold true under workplace conditions, deadlines, and client-specific demands. Furthermore, our analysis focused exclusively on final accuracy and error patterns but did not consider translation speed, cognitive load, or eye-tracking data. It can be said that examining these would provide deeper insights into how different personality types process texts in real-time. To summarize, a broader sample, combined with real-time cognitive data, could deepen understanding and extend the usefulness of our findings to the professional sphere.

Future Research Directions

If translation is shaped by cognition, and cognition is shaped by personality, then future research must explore these connections more thoroughly. The following avenues could deepen our understanding in this area:

- Professional translators: Replicating the current study with experienced practitioners could reveal whether cognitive differences diminish with training or simply express themselves differently.
- Revision behavior: Investigating how ISTJs and ISTPs (or other types like ESTP and ESTJ) revise their work would shed light on their post-translation strategies and error-correction tendencies.
- Real-time cognition: Think-aloud protocols and eye-tracking could clarify how decision-making unfolds during high-cognitive-load tasks, particularly when facing ambiguity.
- AI and post-editing: Given their rule-governed accuracy, might ISTJs be particularly adept at post-editing as machine translation (including artificial intelligence tools) becomes more and more important? In adjusting machine output for stylistic clarity or cross-cultural tone, would ISTPs excel?

Through these lines of research, the field can move closer to making translator education as flexible, adaptable, and self-aware as the practice it aims to foster.

Conclusion

By means of this investigation, we were able to verify that a translator's cognitive orientation influences not only language competency or task familiarity but also translation performance. Especially in domains requiring accuracy, ISTJs' methodical and cautious approach generates quite precise translations. Though more likely to make structural mistakes, ISTPs show agility in fields needing adaptable interpretation and innovation.

In the end, this study challenges trainers to reface translation pedagogy. We might ask students: How can training meet them where they intellectually stand rather than expecting them to fit a one-size-fits-all model of excellence? In response, we are getting closer to producing not only more self-aware and confident translators, but also better ones.

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