

RESEARCH ARTICLE

The Interplay of Personality Types and Performance Metrics in Arabic/English Translation: A Focus on MBTI's Feeling and Thinking Dichotomy

YAZID ABDULRAHMAN AL ISMAIL

Associate Professor of Translation Studies, Department of English Language & Translation, College of Arabic Language & Social Studies, Qassim University, Buraydah, Qassim, Saudi Arabia

Corresponding Author: YAZID ABDULRAHMAN AL ISMAIL, E-mail: y.a.alismail@qu.edu.sa

ABSTRACT

This study investigated the influence of MBTI personality types, specifically feeling (F) and thinking (T), on performance metrics in text translation tasks. Utilizing a blend of emotive, cognitive, and operational skills as performance indicators, we examined how time spent on tasks, final scores and confidence levels correlate with these psychological typologies. The results support previous literature in revealing the prowess of thinking types in analytical tasks; however, they also unveil nuances such as the strong performance of feeling types in translation. Overall, the findings challenge conventional notions of self-efficacy across MBTI types, opening new avenues for multidisciplinary research to illuminate the interplay between personality and performance in translation.

KEYWORDS

Translation, MBTI, psychological typologies, performance metrics, feeling and thinking types, self-efficacy, time management, confidence levels

ARTICLE INFORMATION

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1. Introduction

The sophisticated relationship between psychological typologies and performance in linguistic tasks has long been a subject of scholarly debate. According to Carl Jung (1921, 1971), who introduced the psychological types that form the basis of the Myers-Briggs Type Indicator (MBTI), human behavior is not random. Rather, it follows specific repeatable patterns based on how individuals prefer to gather information and make decisions. Yet the following question remains: to what extent do these inherent psychological types affect our ability to understand and translate text, particularly under time limitations and fluctuating confidence levels?

Previous studies have explored the impact of MBTI types on various cognitive and social performances. For example, Furnham (1996) reported a moderate link between MBTI types and academic performances in specific fields. Other researchers have revealed a potential correlation between MBTI types and workplace success (e.g., Pittenger, 2005). Despite this, text translation which demands a unique blend of emotive, cognitive, and operational skills has been largely unexamined in this context.

In our globalized society, it is becoming ever more pertinent to understand these dynamics. Successful translation is not simply a linguistic conversion, as it involves cultural, emotional, and often intuitive understanding on both sides. This makes the task challenging, even for seasoned professionals, as suggested by the growing body of literature on translation competence (Pym, 2010). As Jung (1961, p. 60) profoundly stated, "The shoe that fits one person pinches another; there is no recipe for living that suits all cases." Therefore, given the intricate interplay of individual psychological types and task-specific requirements, it would be naive to assume a one-size-fits-all strategy for text translation.

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This study aimed to fill the gap in the literature by examining the relationship between feeling (F) and thinking (T) MBTI types, the final scores achieved in text translation tasks, confidence levels and the time spent on translations. In doing so, we elucidated whether inherent personality types play a significant role in the interplay of these variables, thereby offering a new lens through which the training and evaluation of translators can be reviewed and developed.

2. Literature Review

The relationship between personality types and translation quality has been the subject of a large body of research in translation studies.

For instance, Karimniia and Mahjubi (2013) found that intuitive participants outperformed their sensing counterparts, particularly in translating expressive texts. However, there was no significant distinction between thinkers and feelers. Feist (1998) reported that individuals identified as F types were more likely to excel in creative endeavors, suggesting a nuanced emotional depth that could be valuable in artistic or humanistic professions. Concomitantly, F types were less successful in leadership roles, often due to their emphasis on harmony and interpersonal relationships over decisive action.

By contrast, T types excel in analytical and logical tasks, making them more likely to succeed in STEM (science, technology, engineering, and mathematics) fields (McCrae & Costa, 1985). Their propensity for rational decision-making and systematic analysis gives them a distinct advantage in disciplines requiring a high level of theoretical understanding and problem-solving skills.

Barrick and Mount (1991) found that F types tend to have lower self-esteem than T types, often manifested as self-doubt and hesitance in decision-making. Conversely, Spence and Helmreich (1983) found that T types generally displayed higher levels of self-efficacy, defined as the belief in one's ability to achieve goals. This often translates into higher confidence levels, particularly when faced with challenging tasks.

Time management, another key performance indicator, has also been studied in relation to personality types. A robust finding in this area is that T types tend to be more punctual and organized than their F type counterparts (Costa & McCrae, 1985). This inclination for structure often allows T types to manage their time better and fulfill their obligations efficiently. By contrast, F types are more prone to procrastination and are generally less organized in their daily routines (Steel, 2007). The implications of this could be significant in work settings where deadlines and time management are crucial.

Nicholson (2005) also employed the MBTI tool to examine the personality characteristics of interpreter trainees from various language backgrounds. The results revealed that individuals with a thinking preference were more likely to be drawn to the interpreting profession than those with a feeling preference.

Lehka-Paul's (2018) study employed a unique approach by examining the revision strategies employed by translators with respect to their thinking or feeling psychological functions. The results indicated that F types tend to make immediate evaluative decisions and changes, while T types are more likely to postpone substantial changes until later stages of the translation process. They also suggested that practicing translators invested more time in end-stage revisions than students, irrespective of their personality type.

Al-Ismail's (2020) study examined the relationship between the performance of Arabic-English translation students and their personality types, as set by the MBTI. One of the key findings was that a mix of introverted feeling and thinking students displayed higher levels of patience and produced higher-quality translations than their extroverted counterparts. This suggests that personality traits could play a significant role in translation, particularly in tasks that require a focus on quality and attention to detail.

This research is a robust addition to the existing literature, particularly for its focus on the English-Arabic language pair and its implications for educational settings.

3. Methodology

In the current study, we explored the influence of personality types (feeling and thinking) on the translation performance of undergraduate translation students in conjunction with other key variables such as confidence level and time. Firstly, however, a thorough distinction must be made between the two types.

In the MBTI framework, the thinking and feeling preferences serve as indicators for how individuals approach decision-making (Myers et al., 1998, pp. 6-7).

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Thinking (T): Individuals with a thinking preference emphasize logic, facts, and objective criteria when arriving at decisions. They typically approach problems in a detached and analytical manner, aiming for a solution based on principles or logic. Truth often takes precedence over tact for these individuals.

Feeling (F): Those with a feeling preference make decisions based on personal values, emotional considerations, and the impact on interpersonal relationships. They are usually empathetic and compassionate, with a focus on harmony and cooperation among individuals.

While both types are capable of making rational decisions, the primary distinction lies in the criteria that they emphasize: T types prioritize objective logic, whereas F types consider relational and emotional factors (Myers et al., 1998).

3.1 Participants and Materials

The participant pool for this study comprised 49 undergraduate students, all of whom were male and specialized in translation studies. Each participant gave his consent to participate and also expressed a keen interest in the topic. Within the analytical framework, these participants were classified as F type translators or T type translators.

Data collection occurred in two separate phases: firstly, the MBTI was utilized for personality assessment; secondly, participants were given specific translation tasks. Two types of texts were selected for these tasks—Text 1, which was informative and Text 2, which was expressive.

3.2 Procedures

During the initial phase, the MBTI® was administered in order to assess participants' personality types. To ensure the accuracy of the results, a certified practitioner specializing in MBTI confirmed each personality classification. Following this, the study progressed to the secondary phase. In this part of the study, participants were tasked with translating a pair of English to Arabic texts. They were permitted to make use of internet resources, including online dictionaries, during the self-managed time they were allocated for these tasks. To maintain both objectivity and quality, the translations were later evaluated by an accredited translator in accordance with the guidelines set by the American Translators Association ATA.

4. Results and Discussion

Upon completion of the MBTI assessments and translation tasks, participants were sorted into two main categories. Sixteen were categorized as F type translators and 32 as T type translators. The data were then prepared for further analysis, which is discussed in subsequent sections of this paper. The following tables display the overall scores¹ for all variables and the average scores for both F and T types.

Name	MBTI_1	F/T	Final score T1	Quality points T 1	T1 time	Final score T2	Quality points T2	T2 time	Confidence	Confidence Level
A1	INFP	F	10	0	80	0	3	20	1	6
A2	INFP	F	13	0	50	17	0	17	1	7
A3	INFP	F	12	0	50	15	0	21	1	8
A4	INFP	F	9	0	64	6	0	35	1	8
A5	ISFP	F	6	0	31	2	3	20	1	10
A6	ISFP	F	3	0	46	13	0	32	1	7
A7	ISFP	F	16	0	54	68	0	31	2	5
A8	ISFP	F	14	0	108	35	0	30	2	5
A9	ISFP	F	17	0	45	17	0	43	1	7
A10	ISFP	F	25	0	83	25	0	17	1	7

 Table 1

 Overall scores for translation tasks, personality types, time, and confidence

¹ Note that, according to ATA guidelines, higher scores indicate poorer performance, while lower scores are indicative of better performance.

A 1 1		_	10	0	6.4	10	0	66	2	2
ATT D1	ISFP	F	12	0	64	16	0	66	2	3
BI		T	20	0	76	32	0	35	1	8
B2	ISTP	- I - T	17	0	89	9	0	24	1	8
B3	ISTP	- I - T	8	0	30	21	0	20	1	8
B4	ISTP	1 - T	3	0	75	7	0	32	1	10
B5	ISTP	1 -	46	0	49	35	0	27	1	7
B6	ISTP	-	14	0	32	/	0	16	1	9
B7	ISTP		29	2	35	21	0	25	2	3
88	ISTP		24	0	48	11	0	21	1	/
B9	ISTP	-	11	0	75	24	0	34	1	/
B10	ISTP	Т	0	0	94	9	0	39	1	8
C1	ISTJ	Т	7	0	84	8	0	44	1	8
C2	ISTJ	Т	6	0	39	15	0	59	2	3
C3	ISTJ	Т	9	0	54	40	0	28	1	8
C4	ISTJ	Т	15	0	45	23	0	37	1	6
C5	ISTJ	Т	9	0	103	9	0	46	1	8
C6	ISTJ	Т	5	0	46	23	0	27	1	7
C7	ISTJ	Т	11	0	82	9	0	38	1	10
C8	ISFJ	F	33	0	40	16	0	22	1	8
C9	ISFJ	F	7	0	59	8	0	27	1	6
C10	ISFJ	F	6	0	30	6	0	24	1	6
D1	ESTP	Т	13	0	27	18	0	21	1	8
D2	ESTP	Т	16	0	21	18	0	58	1	9
D3	ESTP	Т	3	0	72	12	0	29	1	7
D4	ESTP	Т	11	0	26	19	0	11	1	8
D5	ESFP	F	21	0	45	30	0	16	1	8
D6	ESFP	F	9	3	56	17	0	30	1	10
E1	ENTJ	Т	33	0	43	78	0	36	1	8
E2	ESTJ	Т	14	0	52	14	0	32	1	10
E3	ESTJ	Т	45	0	30	25	0	71	1	7
E4	ESTJ	Т	27	0	75	15	0	25	1	8
E5	ESTJ	Т	4	3	25	17	0	62	1	10
E6	ESTJ	Т	12	0	87	15	0	40	1	10
F1	ENTP	Т	26	0	63	19	0	23	2	4
F2	ENTP	Т	6	0	21	3	3	40	1	10
F3	ENTP	Т	9	0	49	19	0	32	1	8
G1	INTJ	Т	9	0	67	12	0	23	1	7
G2	INTJ	Т	7	0	62	15	0	30	1	8

МВТІ Туре	Participant	Avg. Final Score T1	Avg. Quality Points T1	Avg. Time T1 (min)	Avg. Final Score T2	Avg. Quality Points T2	Avg. Time T2 (min)	Avg. Confidence Level
INFP	A1, A2, A3, A4	11	0	61	9.5	0	23.25	7.25
ISFP	A5, A6, A7	13.57	0	61.86	19.57	0.57	37.71	5.71
ISFJ	C8, C9, C10	15.33	0	43	10	0	27	6.67
ESFP	D5, D6	15	1.5	50.5	23.5	0	23	9
INTP	B1	20	0	76	32	0	35	8
ISTP	B2, B3, B4	16.11	0.11	58.33	16.89	0	25.67	7.22
ISTJ	C1, C2, C3	8.86	0	64.71	16.43	0	38.14	7.86
ESTP	D1, D2, D3, D4	10.75	0	36.5	16.75	0	29.75	8

Table 2Average values for each type

4.1 Statistical Findings

Three primary statistical analyses were conducted to investigate various metrics related to task performance and the distribution of confidence levels across different MBTI types: Pearson correlation analysis, a correlation matrix, and a chi-square test.

The findings revealed a negative correlation between time taken and final scores for tasks T1 and T2, with coefficients of -0.61 and -0.74, respectively. In the specific context of the current study, where a lower score is considered better, this negative correlation suggests that spending more time on a task is associated with improved performance.

The correlation matrix analysis reaffirmed the Pearson correlation analysis, indicating that the longer time spent on tasks T1 and T2 is beneficial for achieving lower scores.

Running the chi-square test revealed a p-value of 0.013, suggesting a statistically significant relationship between MBTI types and confidence levels. This implies that different MBTI types have varying confidence levels when approaching tasks.

The overarching aim of the study was to explain the intricacies of task performance metrics and how they intersect with psychological profiles such as MBTI types. In line with this, the negative correlation between time taken and final scores demonstrates that quality rather than speed might be the critical determinant of better performance.

Notably, the findings resonate with those of Al-Ismail's (2020) study, which presented initial evidence to suggest that introverted MBTI types tend to spend more time on tasks and achieve better scores. This further emphasizes the potential importance of personality traits in influencing performance metrics and could be a critical factor to consider in training and employment settings where performance quality is more valuable than speed. However, it is essential to note that these results are correlational and do not imply causation. Further research could focus on understanding the mechanisms that underlie these observed relationships.

In addition, this study adds empirical support to the theory that time spent on a task and personality traits such as MBTI types can significantly impact task performance. These insights could be particularly beneficial for organizations and educational settings where a nuanced understanding of performance metrics is crucial.

5. Discussion

A comprehensive data set was analyzed in order to explore the relationship between MBTI personality types, translation performance, and confidence. Several noteworthy observations can be drawn by comparing the feeling types (INFP, ISFP, ISFJ, ESFP)² with the thinking types (INTP, ISTP, ISTJ, ESTP). These are as follows:

² According to the MBTI framework, types are based on four dichotomies: Extraversion/Introversion (E/I), Sensing/Intuition (S/N), Thinking/Feeling (T/F), and Judging/Perceiving (J/P) (Myers et al., 1998).

Feeling Group:

INFPs typically performed well in both T1 and T2 translations, with lower average final scores (which are better). However, they did not earn quality points, suggesting that while they may be consistent, they do not necessarily excel in producing outstanding translations. ISFPs also performed reasonably well, but had a tendency to score slightly higher (worse) on average than INFPs, especially in T2 translations. They earned some quality points in T2, indicating outstanding work.

With regard to ISFJs, their scores were not as low as those of INFPs or ISFPs, but they were generally consistent across T1 and T2 translations. As in most F types, they did not attain any quality points, indicating a lack of outstanding translations. The ESFPs group attained one of the higher (worse) average final scores for both T1 and T2, but did achieve some quality points in T1, suggesting occasional outstanding translations.

Thinking Group:

The INTPs group achieved a high (worse) final score for T1, suggesting room for improvement. quality points were not earned, indicating a lack of exceptional translations. ISTPs attained moderate average final scores for T1 and T2. A small number of quality points for T1 suggests there were instances of exceptional work.

The ISTJs group performed remarkably well, especially in T1 translations, as evidenced by their low (good) average final scores. They did not, however, earn any quality points, indicating consistent, but not necessarily outstanding performance. The ESTPs group yielded moderate average final scores for both T1 and T2, as in most other T types, they attained zero quality points.

5.1 General Metrics

Both specific and average scores for each group were analyzed to better understand the distinctions between F and T types in translation performance.

Feeling Group :

INFPs: The average final score for T1 translations was 11, compared with 9.5 for T2. This suggests a high level of consistency, as the scores for T1 and T2 were quite close. However, no quality points were obtained in either task, indicating that although F types performed well, they did not reach a level of excellence.

Confidence Level: An average of 7.25 indicates a reasonable level of self-assessment.

Time Efficiency: On average, INFPs took 61 minutes for T1 and 23.25 minutes for T2, signifying an improvement in time efficiency from T1 to T2.

ISFPs: The average final score for T1 was 13.57, but for T2, it was notably higher at 19.57. ISFPs also achieved a small number of quality points (0.57) for T2, suggesting a degree of excellence in that task.

Confidence Level: With an average of 5.71, this group was less confident than INFPs, even though their performance was not substantially worse.

Time Efficiency: ISFPs took around 61.86 minutes for T1 and 37.71 minutes for T2, indicating an improvement in speed from T1 to T2.

Thinking Group:

INTPs: The sole participant achieved a final score of 20 for T1 and 32 for T2, indicating room for improvement as both are higher (worse) scores.

Confidence Level: A score of 8 suggests the participant felt relatively confident despite poor final scores.

Time Efficiency: This individual took 76 minutes for T1 and 35 minutes for T2, revealing a significant increase in speed in the second task.

ISTPs: The average final score was 16.11 for T1 and 16.89 for T2, which is generally consistent. They earned an average of 0.11 quality points for T1, suggesting a degree of excellence.

Confidence Level: With an average of 7.22, this group appears to have been reasonably confident.

Time Efficiency: ISTPs took 58.33 minutes for T1 and 25.67 minutes for T2, indicating an improvement in time efficiency.

ISTJs: Their average final score for T1 was 8.86, significantly better than their T type counterparts, while for T2 it was 16.43.

Confidence Level: Their average confidence level was 7.86 which is reasonable given their performance.

Time Efficiency: ISTJs took an average of 64.71 minutes for T1 and 38.14 minutes for T2, indicating a clear improvement.

5.2 Comparative Analysis

Best T1 Performers: ISTJs achieved the lowest average score of 8.86, followed by INFPs with a score of 11.

Best T2 Performers: INFPs attained the lowest average score of 9.5, closely followed by ISTJs with a score of 16.43.

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Quality Points: The ISFP group was the only one to achieve a certain level of quality points (0.57), which suggests they exhibited a more varied performance that ranged from poor to outstanding.

Confidence vs. Performance: ESFPs exhibited the highest average confidence level (9), but achieved a relatively high (worse) average final score, suggesting a disconnect between self-perception and performance.

Time Efficiency: On average, ESTPs were the fastest, completing T1 in 36.5 minutes and T2 in 29.75 minutes.

Nonetheless, the data suggest that F type groups generally achieved better final scores, but earned fewer quality points. The T type groups, especially ISTJs, performed well in translation tasks, but also lacked quality points. The confidence levels across all types did not always correlate with performance, indicating possible inaccuracies in self-assessment. Overall, the time efficiency of each group improved from T1 to T2.

The current findings align and deviate in certain respects from earlier studies. Previous literature suggested that T types generally outperform F types in tasks requiring analytical skills (McCrae & Costa, 1985); however, our results indicate that, based on their final scores, F types, particularly INFPs, fare well in translation tasks. Additionally, ISTJs from the T type group demonstrated strong performance, consistent with prior research emphasizing their meticulous nature and attention to detail (Karimniia & Mahjubi, 2013). Notably, both groups fell short in accumulating quality points, a parameter not usually discussed in earlier studies, but one that speaks to the level of excellence achieved beyond simple task completion. This could imply a more complex interplay between personality types and different metrics of performance and quality (Lehka-Paul, 2018; Al-Ismail, 2020).

Moreover, in this study, confidence levels across all types did not necessarily correlate with performance, which adds a nuanced layer to the conventional understanding of self-efficacy among different types (Barrick & Mount, 1991; Spence & Helmreich, 1983). Overall, while the current study confirms some of the previous findings, it also opens avenues for further nuanced investigations into the relationship between MBTI types and performance metrics.

6. Conclusion

The current study confirms and challenges existing literature on the relationship between MBTI personality types and performance metrics in translation tasks. While some of the results support previous findings—such as the generally strong performance of T types in analytical tasks (McCrae & Costa, 1985)—they also uncover nuances, particularly the promising performance of F types, such as INFPs, in translation. The lack of correlation between confidence levels and performance across MBTI types introduces additional complexities, challenging the conventional understanding of self-efficacy among different personality types.

The current study opens several avenues for future research. Firstly, further investigation is needed to understand why both T and F types fall short in accumulating quality points. This would be a novel focus area that may help unravel the complex interplay between personality types and performance and quality metrics. Secondly, examining the roles of other MBTI dimensions such as judging-perceiving in similar tasks could provide a more comprehensive understanding of how personality influences performance. Finally, future studies may also benefit from a multidisciplinary approach, incorporating psychological theories and instruments beyond MBTI such as Gallup, Big Five or Birkman assessments to better understand individual performance in translation and other professional tasks.

By building upon existing research and addressing these gaps, future studies will significantly enrich our understanding of the relationships between personality types, self-efficacy, and performance metrics across various disciplines.

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References

- Al-Ismail, Y. (2020). Effect of personality types variation on translation quality. Journal of Arabic and Human Sciences Qassim University JAHS, 14(2), 43–75.
- [2] Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. Psychological Bulletin, 117(1), 3–26.
- [3] Costa, P. T., Jr., & McCrae, R. R. (1985). The NEO Personality Inventory manual. Odessa, FL: Psychological Assessment Resources.
- [4] Feist, G. J. (1998). A meta-analysis of personality in scientific and artistic creativity. Personality and Social Psychology Review, 2(2), 290–309.

- [5] Karimniia, H., & Mahjubi, P. (2013). Cognitive Styles: Translation Performance and Translation Strategies. International Journal of English Linguistics, 3(6), 87–97.
- [6] Lehka-Paul, K. (2018). Translation Revision: A Study of the Performance of Professional vs. Student Translators. Translation Studies, 11(1), 61–79.
- [7] McCrae, R. R., & Costa, P. T. (1985). Openness to Experience. In R. Hogan, & W. H. Jones (Eds.), Perspectives in Personality (pp. 145–172). JAI Press.
- [8] McCrae, R. R., & Costa, P. T., Jr. (1985). Updating Norman's five-factor model: Theory and measurement. Journal of Personality and Social Psychology, 49(1), 75–91.
- [9] Nicholson, N. (2005). Meeting the Maestro. Journal of Organizational Behavior, 26(1), 49-63.
- [10] Spence, J. T., & Helmreich, R. L. (1983). Achievement-related motives and behaviors. In J. T. Spence (Ed.), Achievement and achievement motives (pp. 10–74). Freeman.
- [11] Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of research on procrastination. Psychological Bulletin, 133(1), 63-96.
- [12] Jung, C. G. (1921). Psychological Types: The Collected Works of C. G. Jung, Vol. 6, Bollingen Series XX. Princeton, New Jersey: Princeton University Press.
- [13] Jung, C. G. (1971). Psychological Types: The Collected Works, Vol. 6. London: Routledge and Kegan Paul.
- [14] Moral Stories. (n.d.). Retrieved 25 November 2022. https://www.moralstories.org/evening-dinner-father/
- [15] Myers, I. B., McCaulley, M. H., Quenk N. L., & Hammer A.L. (1998). MBTI Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator (3rd ed.). Palo Alto, CA: Consulting Psychologists' Press.
- [16] The American Translators Association (ATA). (n.d.). Explanation of Error Categories. Retrieved 25 December 2022. https://www.atanet.org/certification/how-the-exam-is-graded/error-categories
- [17] The American Translators Association. Framework for Standardized Error Marking. (n.d.). Retrieved 25 July 2023. https://www.atanet.org/certification/Framework 2017.pdf
- [18] The Myers-Briggs Company. (n.d.). Retrieved 25 June 2023. https://www.themyersbriggs.com/en-US