

UNDERSTANDING OVER-EDITING BEHAVIOR OF INDONESIAN TRANSLATORS: A COGNITIVE READINESS APPROACH

Ryan Hilman Aziz^{1*}, Esti Junining², Sri Endah Tabiati³

University of Brawijaya, Indonesia

¹ ryanhilmanaziz@student.ub.ac.id, ² tabiati@ub.ac.id, ³ esti@ub.ac.id

Abstract

Due to the excessive usage of the assisted-translation machine, abundant translators create defective translation documents. This phenomenon expands to the ignorance of translators' foundational abilities, such as mastering metalinguistic skills and vocabulary expansion. Thus, this study investigates to what extent translators rely on assisted-translation machines to translate rather than preparing their cognitive and psychological maturity, culminating in over-editing behavior. It uses a survey method to collect data from an Indonesian translator's community, namely "Himpunan Penerjemah Indonesia" (HPI), reflecting the translators' over-editing behavior in translating documents from their clients. Before distributing the questionnaire, the authors employed a pilot test, achieving high feasibility. Firstly, it found that cognitive readiness plays a significant role in translation processes because, in either translation agencies or self-employment, translators must master specific language knowledge for both source- and target language. Secondly, both full- and full-member translators revealed different perspectives on translating readiness, indicating mental maturity differences due to lack of experience, different mindsets, and broad knowledge capacities and capabilities, leading to dissimilar behavior in utilizing technology. Finally, this study commemorates that thorough consideration before using technology is necessary, contemplating its benefits and drawbacks and positing translators' skills and knowledge as a fundamental translation process, diminishing over-editing behavior.

Keywords: Translators; Over-Editing; Operational Cognitive Readiness; Mental Preparation

INTRODUCTION

These days, the translation profession has widened into multiple industries and fields, such as business, law, and sciences. On the other hand, technologies have been a translation boundary for countless years, supporting translators' tasks, and one of them is machine translation (MT). Furthermore, MT has made a long way since 2013, presenting MT as a threat and a challenge concurrently, as proved by (ELIS) (ELIS, 2022). Holistically, it revealed that from independent language professionals' views, MT is recognised as an opportunity ($\pm 70\%$) rather than a threat, using it to some extent. Also, from companies' perspectives, more than 78% of companies implemented and planned MT usage. Even more, from the Translation Memory (TM) context, private companies, national/local agencies, and international public agencies implement or plan MT with 85-88%. Thus, these surveys reflect the increase in technology usage related to translation industries. However, these surveys only provide the technology usage in translation, ignoring any actual human-computer interaction (HCI) problems. Thus, this technology escalation conceals a fundamental problem for translators, particularly over-editing. This phenomenon emerges majorly from large-scale technological use in translation activities. Moreover, over-editing behaviour occurs due to machine-assisted translation dependencies, either unconsciously or consciously (O'Brien & Simard, 2014; O'Hagan, 2019). Moreover, over-editing is related to preferential change, which is unnecessary word changes. Also, the

preferential change becomes more frequent, especially for post-editors, because of abundant alternative words suggested by MT (Yang, 2022). As a result, this suggestion constructs translators' psychology, leading to high MT dependency compared to their translation abilities, reducing their self-efficacy. Self-efficacy in a translator's context is a belief in their ability to translate text after knowing what they need to deal with, being willing to try and being brave to complete the tasks (Keming & Aiping, 2022; Miraglia et al., 2017). In short, technologies reduce translators' motivation, which could further affect their mental preparation, magnifying over-editing occurrences. As a significant consequence of machine-assisted usage, over-editing has become a contemporary issue in translation due to suggested words too extensively. However, this issue broadly develops into another problem, for instance, nonsense word usage for intended readership and inter-sentence connection deficiencies (Muñoz Martín, 2016; Yang, 2022). These abundant issues occur because translators, especially post-editor, rely on machine-translation engines instead of their abilities, creating defective translation results (Moorkens & O'Brien, 2017; I. S. Robert et al., 2022). Furthermore, there are pros (Popič, 2014; Rega, 1999; Screen, 2019; Van Egdom & Pluymaekers, 2019) and cons (Bundgaard & Christensen, 2019; Keming & Aiping, 2022; Mellinger & Shreve, 2016; I. Robert & Brunette, 2016) from extant literature investigating the over-editing problem with computer-assisted translation tools and individual capabilities. Even worse, the translation engine presence emerges opaque boundaries between professionals and non-professionals (Bundgaard & Christensen, 2019; Marin-Lacarta & Vargas-Urpi, 2019). Based on the above short literature, both assisted, and non-assisted machines mirror the same issue: over-editing due to low mental maturity and high technology dependency. Thus, the authors believe translators should have the psychological and cognitive maturity to diminish over-editing behavior and generate higher-quality translation documents. Also, this study takes place from a psychological perspective embedded in translators themselves that they should embrace, creating their cognitive readiness to translate high-quality texts. Therefore, this article brings another perspective to further comprehend translators' over-editing behavior by exploring their OCR and simultaneously recognizing the universal over-editing behavior from both literary and non-literary translator professions.

Over-editing is a recent terminology that emerged in the linguistic field due to the technology usage of the translation profession. Over-editing refers to technology's involvement in revising translation documents through machine-assisted suggestion (O'Hagan, 2019). Furthermore, this behavior tends to occur in post-editors compared to other translation jobs because of excessive technological usage. This statement is correct because post-editors rely on technologies first before starting their tasks involving the cognition domain. They do this because independent post-editors usually have plentiful translation tasks rather than revisors due to the ease and velocity of using CAT tools (O'Brien & Simard, 2014). As a result, this phenomenon may produce further consequences, such as a heavy workload and client pressure, culminating in low translation quality. In addition, post-editors commonly read the suggestion given by MT without considering the content. In other words, this over-editing behaviour results from excessive technology usage, exacerbating their creativity in translating documents. The readiness terminology first comes from the military context, starting with combat readiness. Combat readiness covers all elements supporting the military forces in conducting missions practically and fundamentally. Moreover, this readiness focuses explicitly on the armies' constituent units structurally and all related resources. Further, it enlarges into various readiness concepts and multi-discipline studies, including behavioral research, which is cognitive readiness. Cramer et al. (2021), through their research, classified cognitive readiness into three types. The first type is Strategic Cognitive Readiness (SCR) which is an individual's potential to perform assigned planning and organizational duties in modern military operations' complex and unpredictable environment. Thus, SCR focuses on an individual's internalized and actualized flexibility (Ericsson, 2014). Second, Operational Cognitive Readiness (OCR) is a

mental model constructed by individual skills, knowledge, abilities, motivations, and personal dispositions to sustain and be competent in any unpredictable environment of modern military operations (Bierman et al., 2009; Ne’eman & Shaul, 2021). In short, OCR concentrates on pre-tasks or fundamental keys internalized by a person before starting any task. Finally, Tactical Cognitive Readiness (TCR) is a state of mental acuity for ensuring an acceptable level of performance during assigned missions (Preddy et al., 2019). This TCR focuses on in-tasks context, measuring the knowledge related to an in-charged task, culminating in the benchmark performance measurability.

From a translation perspective, cognitive readiness refers to translators’ endowed mentality before translating documents. Based on a mental model concept, translators’ performance and quality are the outcomes of psychological and cognitive motivation as a foundation (Dansby Olufowote et al., 2020; Ne’eman & Shaul, 2021; Vorozhbitova et al., 2017). In particular, translators should construct their cognitive readiness to translate high-quality texts by expanding their knowledge capacities and capabilities, such as mastering target-source languages and vocabulary expansion (Jakobsen, 2018; Specia et al., 2018; Yang, 2022). Furthermore, psychologically, to achieve the highest readiness, translators should widely overcome their mindset and specific knowledge domain culminating in easiness to reaching cognitive readiness when positively internalizing and mastering these boundaries, conquering any translation problems, including over-editing. In short, the cognitive readiness of translators reflects a positive and growth mindset, leading to a secure attachment process in translation activities. Ultimately, by considering the OCR framework from Grier (2012) becoming the translators’ behaviour context, this study explores whether their mental maturity could diminish over-editing behaviour in translating documents. In short, it investigates OCR owned by revisors and post-editors, universally recognising the behavioural over-editing of literary and non-literary translator professions.

METHOD

An online survey is advantaged by its flexibility due to the scope population, reaching each pointed participant worldwide (Sumiyana et al., 2022). In other words, online surveys also could access large and geographically distributed populations and achieve quick returns (Saputra & Hadi, 2023; Sumiyana et al., n.d.). Therefore, by conducting a survey method, this study could investigate the wide range of over-editing behaviour in Indonesia, revealing the high need for OCR due to the critical role of translation knowledge in localisation activities rather than translation technologies from all axis views of translator types and translation experience levels. Moreover, by referring to Grier (2012) to measure OCR and over-editing behavior at once (see the **Appendix**), it constructs an online survey method using Google Forms, exhibiting the possible characteristics of translation context and all translation specialisation choices for all translators. In addition, before distributing the research questionnaire, the authors employed a pilot test, achieving the bilingual item questionnaires feasibly, supported by eleven translation professionals.

Due to focusing on the Indonesian setting, the data sources of this study will be from an Indonesian translator’s community, namely “Himpunan Penerjemah Indonesia” (HPI). Furthermore, HPI is a professional translator association that embraces all translators and interpreters, including recognising sworn translators with more than 40 specialisations and publishing the official HPI certification. Shortly, HPI is the research population, depicting the relationship between the over-editing issue of translators and the use of OCR as mitigating tools. Therefore, this study uses HPI as the data source because of its relevance and reliability to this study in mitigating the over-editing behaviour of professional translators.

Data analysis is a method used to process and predict research results to obtain a conclusion (Christensen et al., 2020; Lester et al., 2020; Raskind et al., 2019), validating and confirming research phenomenon and the constructed research baselines. Moreover, descriptive analysis is an analysis method that explains the magnitude of sensory characteristics, disclosing comprehensive information about the targeted population and phenomenon occurrences based on research constructs (Kemp et al., 2018). Thus, by utilizing SPSS v25, this study uses a tiered-descriptive analysis adapted from Smidt et al. (2019); Wang & Fan (2020), explaining comprehensive information of its data collection in a translation context and connecting the data with the over-editing phenomenon and OCR as the fundamental problem-solving. In particular, tiered-descriptive analysis in this study is separated into several levels as follows. First, the authors disclose participants' characteristics, such as gender and education, exhibiting respondents' demography, mainly Indonesian translators. Second, we also analyse the data from the questionnaire scores compiled as its research model and validated by its validity, reliability, and goodness of fit test results. Also, these validation series could conclude the observed data point as the actual population distribution of Indonesian translators (Marin-Lacarta & Vargas-Urpi, 2019; Mellinger, 2017; Saleh & Weda, 2018). Third, the researchers exhibit respondents' specific characteristics: translation experiences, their primary occupation, specialised fields of translation, membership type, and translation technology preferences, depicting their translation behaviour and cognitive maturity and their technological dependency (Cronin, 2013; Jakobsen, 2018; O'Hagan, 2019). Finally, From these three-tiered-descriptive analyses, this study concludes the occurrence probabilities (Raskind et al., 2019; Smidt et al., 2019; Wang & Fan, 2020) of over-editing behaviour in Indonesia based on their experiences, translation specialisation and preferences of technology usage.

RESULTS AND DISCUSSION

Results

This study collected 270 respondents out of ±3,000 HPI members, reflecting 0.09% of the actual translators' population. This number of respondents represents the importance of translation skills and knowledge domain maturity dominated by male translators. On the education side, the translators came from the diploma level, amounting to 187 (69.26%), as presented in **Table 1**. Moreover, the prominently observed translators are registered as junior members exhibiting leader-subordinate relationships in translation companies. This leader-subordinate relationship also shows the quality assurance of the resulting translation documents with a quality control mechanism through two or three levels. Moreover, this control mechanism of the translation process generally contains at least a translation, editing, and proofing section before being submitted to clients. Thus, this study concludes that cognitive readiness should be foundational in translation processes because all quality control mechanisms require in-depth cultural and advanced language knowledge.

Table 1. Respondents' Demography

	Frequency	%
Gender:		
Male	152	56.30
Female	118	43.70
Current Education:		
Diploma	187	69.26
Bachelor	20	7.41
Master	10	3.70

PhD.	53	19.63
Membership Categorization:		
Junior Member	144	53.34
Full Member	126	46.66

Note: n: 270

The collected data exhibit that all answers varied with two major continuum points due to the high differences in perspectives between junior and senior translators. However, this study average noted that most full-member translators answered the highest score on the four-point Likert scale, reflecting a high degree of mental maturity. Moreover, the mentioned high degree of maturity is confirmed by the mean value of operational cognitive readiness of 3.018, close to the median value (3.000) and mode (3.000). Also, OCR varied by 0.775, representing the different perspectives of full- and junior members in arguing their views about translating readiness. Therefore, this study concludes that the sturdy answers’ variance valued among the full-member and the junior-member translators indicates the different mental maturity due to lack of experience, having different mindsets, and broad knowledge capacities and capabilities. Nevertheless, the junior-member translators’ answers acknowledge that they are in the upgrading process of broadening their translation skills.

Table 2. Descriptive Statistics

Variables	Min.	Max.	Mean	Modus	Median	Variance
Self-Regulation:						
Self-efficacy	1	4	3.026	3.000	3.000	0.492
Self-checking	2	4	3.541	4.000	4.000	0.367
Operational Cognitive Readiness:						
The ability to achieve cognitive structure	1	4	3.018	3.000	3.000	0.775

Note: n=270

This study shows collected results meeting the reliability measurement, represented by the Cronbach Alpha reliability value of 0.782 as the lowest among variables. Furthermore, each variable achieves a high-reliability level in the range of Cronbach Alpha value between >0.7-0.8, reflecting the overall-used item questionnaire as reliable, excluding the OCR10 questionnaire item. On the other hand, from the reliability test results, **Table 3** also displays internal consistency and positive correlation, presented by Pearson’s correlation coefficient value of all items at the 0.01 level, which is acceptable for further analysis. Therefore, this study achieves robustness for all constructed research instruments’ validity and reliability.

Table 3 Validity and Reliability Test Results

Variables	Item	Pearson’s Correlation	Cronbach’s Alpha
Self-Regulation (SR):			
Self-efficacy (SE)	SR_SE1	0.632**	0.865
	SR_SE2	0.298**	
	SR_SE3	0.403**	

	SR_SE4	0.584**	
	SR_SE5	0.448**	
	SR_SE6	0.638**	
	SR_SE7	0.360**	
	SR_SE8	0.575**	
	SR_SE9	0.535**	
	SR_SE10	0.683**	
Self-checking (SC)	SR_SC1	0.330**	0.782
	SR_SC2	0.722**	
	SR_SC3	0.678**	
	SR_SC4	0.501**	
	SR_SC5	0.555**	
Operational Cognitive Readiness (OCR):			
The ability to achieve cognitive structure	OCR1	0.562**	0.896
	OCR2	0.624**	
	OCR3	0.523**	
	OCR4	0.539**	
	OCR5	0.462**	
	OCR6	0.546**	
	OCR7	0.673**	
	OCR8	0.331*	
	OCR9	0.692**	
	OCR11	0.600**	
	OCR12	0.750**	
	OCR13	0.684**	
	OCR14	0.627**	
	OCR15	0.485**	
	OCR16	0.657**	
	OCR17	0.537**	
	OCR18	0.340**	
	OCR19	0.595**	

Note: **significant at 0.01 level, *0.05 (two-tailed); n=270

We collected the observed data covering forty-eight specialized translations based on the HPI membership registration forms to analyse Indonesian translators' over-editing behavior further. Reached from the observed data, specialization types in general, marketing, legal (general), education, management, legal (law), and business and commerce are the highest seven among forty-eight specializations (see **Table 4**). Moreover, these tiers revealed the high demand for specialized translation in Indonesia, representing the high-specific growth of the sub-industries nationally and internationally. Specifically, the authors found that most novice translators prefer to use MT because they can utilize it, fulfilling the high demand for translation documents widely. Likewise, most junior translators that use MT are more than five specialized translations due to its superiority, speed, and high-level productivity of translation results. Conversely, experienced translators tend to utilize TM due to already having broad translation knowledge and experience, as represented by their specialized translation field. Along with their experience in translating, they have fewer than four specializations, focusing on translation quality and specific knowledge mastery, compared to broadening their translating specialization domain.

Table 4. Translation Specialization

Specialization	Profession			Total (n:270)	
	Translator	Interpreter	Both (Translator & Interpreter)	Frequency	%
General	141	0	40	181	67,04
Marketing	55	0	20	75	27,78
Legal – General	16	0	40	56	20,74
Education	46	0	10	56	20,74
Management	35	0	20	55	20,37
Legal – Law	23	0	30	53	19,63
Business and Commerce	34	0	18	52	19,26
Games and Entertainment	40	0	9	49	18,15
Environment	19	0	28	47	17,41
Culture	38	0	9	47	17,41
Information Technology	14	0	30	44	16,30
Legal – Contracts	9	0	30	39	14,44
Engineering	29	0	10	39	14,44
Film – TV	37	0	0	37	13,70
Technical	26	0	10	36	13,33
Tours and Travel Industry	15	0	20	35	12,96
Social Science	34	0	0	34	12,59
Subtitling	30	0	0	30	11,11
Automotive	17	0	10	27	10,00
Mining- Mineral & Coal	0	0	20	20	7,41
Books – Non-Fiction	10	0	10	20	7,41
Religion	20	0	0	20	7,41
Banking	0	0	19	19	7,04
Medicine – Pharmacy	19	0	0	19	7,04

Law Enforcement	8	0	10	18	6,67
Books - Fiction	9	0	8	17	6,30
Agriculture	10	0	7	17	6,30
Accounting	9	0	7	16	5,93
Art – Architecture	7	0	8	15	5,56
Finance	0	0	14	14	5,19
Food Industry	0	0	10	10	3,70
Government – Politics	0	0	10	10	3,70
Hospitality Industry	10	0	0	10	3,70
Fashion - Clothing	0	0	9	9	3,33
Geography	9	0	0	9	3,33
Literature – Poetry	9	0	0	9	3,33
Oil and Gas	0	0	8	8	2,96
Sports	8	0	0	8	2,96
Electrical - Electronics	0	0	7	7	2,59
Chemistry	0	0	6	6	2,22
Biology	0	0	0	0	0,00
Forestry	0	0	0	0	0,00
Geology	0	0	0	0	0,00
Insurance	0	0	0	0	0,00
Military – Defense	0	0	0	0	0,00
Music	0	0	0	0	0,00
Science	0	0	0	0	0,00
Voice-over	0	0	0	0	0,00

Note: n: 270

From all the collected data, this study showed that most translators in Indonesia work as full-time translators, and most of them spread throughout all translation agencies. However, it also revealed that due to massive technological development, this translation job embraces all people to be translators as long as they have those specific translation abilities (Cronin, 2013; Mellinger & Shreve, 2016; Van Egdom & Pluymaekers, 2019), as proved by freelance as the second largest sample (19.63%) after full-time translators (69.26%). In other words, this study infers that in the presence of MT and TM, translation job opportunity is more accessible because the requirement does not necessarily come from an English or linguistic educational background.

Table 5. Respondents' Main Occupation and Experiences

	Frequency	%
Main Occupation		
Translator	187	69.26
Public/Private Servant	20	7.41
Instructor	10	3.70
Freelance	53	19.63
Translation Experiences		
0-2 years	70	25.92
3-5 years	20	7.41
6-9 years	119	44.07
10 years or more	61	22.60

Note: n: 270

Interestingly, the significant respondents were recognized as experienced translators aged 3-10 years (74.08%), so most translation technology preferences are computer-assisted translation or CAT tools. Moreover, this dominant CAT tool usage by experienced translators indicated the importance of operational cognitive readiness due to only focusing and storing on specific vocabulary domains from different specializations (O'Hagan, 2019; I. Robert & Brunette, 2016; Rushmer et al., 2019). Therefore, this study infers that due to mature translators already achieving high-specific translation knowledge capacities and capabilities, they rely on their ability to translate documents rather than using MT, culminating in high-quality translation documents.

Conversely, this study also recognizes that all novice translators prefer MT, such as DeepL Translator and Apertium, rather than CAT tools because they could expand more translation specialization, focusing on profit potentials. In addition, this technological dependency leads to defective translation documents, prioritizing massive MT usage (Jakobsen, 2018; O'Hagan, 2019) and producing more translation documents with a broader specialization scope rather than developing hone translation skills and the translated documents' quality. This finding infers that the over-editing behavior appears and grows firstly from a moral hazard dilemma and leads to unprincipled and opportunistic technological usage, focusing on the potential and quickly generated income and ignoring translation quality. Hence, individual mental maturity plays a crucial role in how mature and professional translators are created, leading to constructing high-cognitive readiness and positioning technology as facilitators or tools. Finally, this article concluded that over-editing behavior is inversely related to translators' experiences, followed by their self-motivation, translation career maturity, knowledge expansion, and vice-versa.

Table 6. Translation Technology Preferences

	Frequency	%
Technological Preferences:		
Computer-assisted Translation	169	62.60
Machine Translation	101	37.40

Note: n: 270

CONCLUSION

This study demonstrated the interconnection between translators' over-editing behavior issues and their cognitive readiness by analyzing their perspective significantly on self-regulation management, ability to achieve cognitive structure, and translation technology preferences via tiered-descriptive analysis. Therefore, based on the result, this article concluded that over-editing behaviour comes from translators' mental immaturity, followed by their translation experience. Moreover, this translation experience gained by translators constructed their mental maturity due to the experiential learning cycle repeatedly, achieving the fittest learning model, actualizing them in translating documents and culminating in excellent translation results. Finally, this study underlined that translators should heed their technological usage with its multiplying matrices benefit individually and collectively before utilizing long-term translation technology.

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