

Theoretically informed students' worksheet based on metacognitive strategies for a translation course

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ABSTRACT

This study explores the necessity of equipping tertiary education students in Translation Studies with effective learning tools, particularly through the integration of metacognitive strategies. Acknowledging the persistent relevance of translation in the context of English as a Second Language (ESL) amidst advancements in machine translation, the research emphasizes the importance of contextual accuracy, idiomatic expressions, and cultural nuances in translation tasks. The study highlights the urgency for improved translation skills in the curriculum of English education programs in Indonesia, aligning educational outcomes with vocational needs. To address gaps in students' understanding and proficiency in translation strategies, this research develops a theoretically informed worksheet designed to enhance metacognitive skills. Through a qualitative methodology comprising observations, needs analysis, and focus group discussions, the research systematically applies the ADDIE model to design and refine the worksheet. Findings indicate that incorporating metacognitive strategies significantly enhances students' translation competencies by fostering self-regulation, critical reflection, and effective learning. The study concludes that metacognitive awareness is crucial for translation competence, advocating for the integration of such strategies into the curriculum to prepare students for the complexities of real-world translation challenges. Future research directions are suggested to further enhance pedagogical approaches in Translation Studies.

Keywords: Metacognitive strategies; translation; worksheet

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INTRODUCTION

This study addresses the need of facilitating students in a tertiary education with the necessary learning tools in a Translation Studies course. As a background, translation studies continue to be essential in the current research context of English as a Second Language (ESL), that is in relation to language learning, comprehension, and cross-cultural communication; even though machine and automatic translation have transformed language processing. Machine translation (MT) is the process of using software to automatically translate text or speech from one language to another without direct human involvement (Zhao et. al, 2024). Today, it can be done easily using popularly available free

applications on the internet. These applications normally utilize algorithms such as rule-based, statistical, and neural machine translation models to enhance accuracy. On the other hand, automatic translation is a broader term that refers to any computational process where a system translates text or speech without human intervention (Lin et al., 2021). While often used interchangeably with machine translation, automatic translation can encompass various AI-driven techniques, including neural networks and deep learning models.

In the context of the current study, the urgency of translation studies is related to two rationales. First, in an ESL environment, translation still faces challenges in terms of providing contextual accuracy,

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idiomatic expressions, and domain-specific terminology (Naveen & Trojovský, 2024). In another light, translation also requires the need to bridge gaps in cultural differences, promoting cultural understanding, and developing practical skills in the workforce (Le, 2024). Moentaha (2006) suggested that translation, especially in the ESL context, refers to the process and the result of analysis or synthesis. It is essentially a process of human activity whereby language is used (analysis), which may require transformation from one language to another (synthesis). Translation is also a product of human activities, in which the initial passage is called the authentic passage, while the final text is called the target passage.

As a part of language studies, translation is related to identifying an authentic passage as derivative language, while the translated passage is identified as the objective language. In the translation process, three phases were executed, namely the analysis phase, the transfer phase, and the restructuring phase (Borg, 2018). The interpreter examines the source passage in terms of the grammatical relationship of words to comprehend the intention or idea entirely. The outcomes of the stage, namely the meaning of the source language that has been comprehended, are transformed into the perception of the interpreter from the source language to the target language. After that, in the restructuring stage, the meaning is rewritten in the target language according to the rules and principles.

Another rationale for the urgency of translation studies, especially in the case of this study, is related to the tertiary education curriculum regarding the graduate profile. As the present study is situated in Indonesia, it considers the guidelines for the English education programs in tertiary education institutions that are required to design the curriculum with consideration of the graduate career outcomes. Generally, the courses in tertiary education are suggested to be designed in such a way as to align the education system, national internship programs, and national assessments to enable university graduates to contribute to the relevant work in accordance with the selected study programs (OECD, 2012; UNESCO, 2015; World Bank, 2018). The students in the English department are not only prepared for industries that are directly related to English language education, but they are also expected to widen their insights into other alternatives, including vocational industries such as translation. This stream of career has been a popular choice for students upon graduation from English education programs (Hayati, 2016).

Support for the development of skills necessary in translation work has been provided through the translation courses for the English department students (Tran, 2023). Translation has been an integral part of the curriculum, as one of the scientific and skill courses compulsory for most

English education programs. The course presents concepts of translation studies applicable to English-Indonesian translation and vice versa in the ESL contexts. For example, the course provides the explanation for the concept that ranges from simple units such as lexical grammar translation to more than linguistic conversion, such as into ethics, localization, and cross-cultural communication, making it an indispensable field for professionals engaged in international discourse (Rico, 2010). In its recent formats, the course also considers the awareness of machine translation that still needs improvement, as it is still prone to errors, particularly in complex contexts such as legal, diplomatic, and literary fields, and its application.

To equip students with the appropriate learning approach, this study considers the use of metacognitive strategies. Metacognitive strategies refer to the awareness and regulation of one's own learning processes, including planning, monitoring, and evaluating comprehension (Anderson, 2002). In general, the application of various metacognitive strategies is essential for effective learning. For instance, when preparing for an exam, a student might develop a comprehensive study schedule (planning), engage in self-testing to gauge their understanding of the material (monitoring), and evaluate their performance by reviewing the accuracy of their answers (evaluation). This holistic approach ensures that students actively engage with their learning processes.

Metacognitive strategies lead students to a process called mental modeling (thinking models) (Job & Muralidharan, 2024). In teaching the thinking process, educators need to do the following: (1) focus students' learning attention, (2) emphasize the values of demonstrations, (3) talk in conversational language, (4) make simple and clear steps, (5) help students remember (Yamin, 2013). Meanwhile, according to Efandi et al. (2019), metacognitive strategies are strategies that guide and direct students to think about the right strategy in the process of mastering learning materials. This strategy helps students carry out the thinking process meaningfully (Zakaria, 2017). Due to these features, metacognitive strategies are valuable to integrate with the learning of translation skills to help students attain the learning goals in translation courses (Li & Yuan, 2022; Pietrzak, 2022; Tran, 2023).

In general, it is presumed that the learning of translation studies by optimizing metacognitive strategies contributes to encouraging learners to critically analyze language structures, compare linguistic patterns, and assess the accuracy of translations. Engaging in translation requires learners to reflect on their understanding, anticipate potential errors, and refine their problem-solving skills (Indarti, 2024). By incorporating metacognitive strategies, translation studies not only enhance linguistic proficiency but also promote deeper

cognitive engagement, fostering independent and effective learning (Chen, 2025; Li & Yuan, 2022). One of the arguments for this study is that metacognitive skills and strategies are particularly important in translation studies for a number of reasons (references). The solution that emerged to overcome this problem is to apply metacognitive strategies. Metacognitive strategies are strategies that can help students realize conceptual errors and correct them by asking themselves questions (Weiner, 2003). Metacognitive abilities that need to be trained for students include metacomprehension, including (a) scoring the answer; (b) writing down the level of confidence in the truth of the answer; (c) comparing prior knowledge with acquired knowledge (Blakey & Spence, 1990).

The main purpose of the current study is the attainment of translation skills through the optimisation of metacognitive strategies. Still, this purpose needs to be facilitated using a tangible learning instrument. Hence, the specific observation of the study is concerned with the provision of a worksheet as a learning instrument in translation studies. The worksheet made for this course is designed to fit the required learning achievements. It contains the material on concepts and methods in English translation, aiming for a valid, practical, and effective worksheet to be used in the learning process.

A worksheet is a technical learning instrument typically given in a printed material, or with the current technological advancement, in a digital, user-friendly format containing materials, summaries, and instructions for implementing learning tasks that must be done by students with reference to the course learning outcomes (Prastowo, 2012). The worksheet is quite a basic learning instrument that is expected to help accelerate students' understanding of the given materials, incorporating instruction for activities as well as improving students' attention, encouragement, curiosity, and problem-solving skills. Additionally, Nasrullah et al. (2018) stated that the function of the worksheet is to help students understand concepts through a series of well-designed, targeted questions. The use of student worksheets is known to be useful to provide opportunities for students to express their knowledge and skills in developing their thinking process (Ebtasari & Ismayati, 2016).

Despite the recognized benefits of worksheets and the growing emphasis on metacognitive strategies for translation learning (Chen, 2025; Indarti, 2024; Li & Yuan, 2022), there remains a notable research gap. Most existing studies focus on the theoretical advantages of metacognitive strategy training or the general utility of worksheets, but few have systematically developed, trialed, and empirically validated worksheets that are specifically designed to integrate metacognitive strategies within translation studies for tertiary ESL students.

To address this gap, the present study adopts a structured approach to worksheet development, ensuring both pedagogical effectiveness and practical feasibility. Guided by the National Education Standards Agency (2012), the worksheet design incorporates key aspects such as content, language, presentation, and graphics. In terms of feasibility, it is also suggested that a worksheet should meet three requirements, namely didactic, construction, and technical aspects. These two opinions regarding the feasibility indicators for a student's worksheet will later become the basis for development in this research.

Building on the structured approach to worksheet development, this study focuses on enhancing students' metacognitive awareness and translation competencies through iterative refinement and practical evaluation. By integrating translation theories, conducting needs analyses, and trialing the worksheet in educational settings, the research highlights its pedagogical value in equipping tertiary students with effective learning strategies. Ultimately, the findings underscore the importance of metacognitive-informed instruction in Translation Studies, advocating for its broader implementation to better prepare students for professional translation challenges.

METHOD

The study is qualitative, in which the main data were obtained from observation, needs analysis, and focus group discussion with several participants from students of translation studies classes. The data were collected to combine with the basic theory in metacognitive strategies to develop into a learning instrument in the form of a worksheet. As a part of the data analysis, the worksheet was developed for the translation studies based on the theories of metacognitive strategies. This stage aims to produce products and test the effectiveness of the product (Sugiyono, 2010). In this stage of the research, the principles of research and development are applied. Research and development is a process or steps to develop a new product or improve an existing product, which can be accounted for (Trianto, 2008). The model used in the development was the ADDIE model (Piskurich, 2015), which includes the steps, namely: 1) Needs analysis was the first step in the ADDIE design model to ensure two aspects. First, a Performance Analysis was executed to identify and clarify students' challenges in translation studies that need to be resolved. Second, a Need analysis was conducted as a step needed to determine abilities or competencies; 2) Initial prototype design was the core of the work analysis step, namely studying the problem and then finding alternative solutions that have been successfully identified through the needs analysis step; 3) Development was the third step that include activities to choose, determine problems,

media and appropriate delivery strategies to be used in delivering program material or substance. In this stage, Students' Worksheet based on Metacognitive Strategies was developed and was revised or validated by a team of experts; 4) Implementation was conducted to aim to guide participants to achieve goals, the trial stages of the designed Students' Worksheet based on Metacognitive Strategies to be carried out in one-on-one testing, small group testing, and large group testing to receive input from participants; 5) Evaluation was a process carried out to provide a value for the developed Students' Worksheet to determine the attitude of participants towards learning activities as a whole, to determine the increase in competence in participants. The overall data was then synthesised to draw an interpretation for the validity of the development of the theoretically-informed worksheet as a learning instrument for the translation studies.

RESULTS AND DISCUSSION

The result of the study sheds light on the value of incorporating the principles of metacognitive strategies in the development of a worksheet for the translation studies as a learning instrument. Theoretically, metacognitive strategies are a general concept to refer to how language learning involves conscious control and regulation of cognitive processes to enhance learning effectiveness. When related to the development of translation skills, this means the conscious development of a holistic language transfer that considers the literal language, language features, and context-specific language, which encompasses social contexts and cultural contexts. To map out the process of the overall study, the outline follows that of the ADDIE model, which is detailed in the following sections.

Needs Analysis Stage

The initial stage of the study is the needs analysis stage. At the beginning of the process, questionnaires were distributed to collect data on students' needs for metacognitive strategies in the translation process. This part of the research shed insights on how students may potentially use their cognitive skills in translating. The information obtained at this stage is useful as a foundation to develop students' worksheets based on metacognitive strategies for translation. The translation practice was prepared in the following steps: The first stage was planning stage. It involved selecting appropriate texts for translation, considering factors such as linguistic complexity, cultural relevance, and students' proficiency levels. For Indonesian students translating from English to Indonesian, challenges may include differences in grammatical structures (e.g., verb tenses, articles), idiomatic expressions, and formal vs. informal registers. Proper preparation included assessing text difficulty and estimating the

time required for accurate translation. Secondly, students were taken to the stage of attending translation. Students engaged in close reading and analysis of the source text (English) while comparing it with potential Indonesian equivalents. Given that Indonesian follows a subject-verb-object (SVO) structure similar to English, direct translations are sometimes possible, but nuances in tone, technical terms, and culturally specific references required careful adaptation (Winarto, 2021). In the next stage, encoding translation stage, students elaborated on meanings, took notes, and made annotations to ensure accuracy. Since Indonesian lacks some English grammatical features (e.g., definite/indefinite articles), students had to rephrase sentences naturally while preserving meaning (Coppock & Beaver, 2015). Note-taking helped in tracking difficult terms, such as English phrasal verbs or metaphors that lack direct equivalents in Indonesian. The fourth was reviewing translation stage, where students confirmed their translations by cross-checking with the original text, repeating the process for consistency, and revising ambiguities. Common issues included maintaining formal academic tone (as Indonesian often uses passive voice in formal writing) and ensuring idiomatic fluency rather than literal translations (Roza et al., 2024). Then, in the evaluation stage, after completing the translation, students compared their work with the original text, analyzed discrepancies, and incorporated feedback. For Indonesian students, this step was crucial in identifying recurring errors, such as mistranslations of English prepositions or conjunctions (e.g., "although" vs. "meskipun") and adjusting sentence flow to fit Indonesian readability standards (Napitupulu, 2017). Finally, at the reflection stage, students assessed their translation strategies, identified persistent challenges (e.g., handling complex clauses or specialized jargon), and considered improvements for future tasks. Given the differences between English and Indonesian morphology and syntax, reflection helped students develop better adaptation techniques.

While the translation process appears linear, each stage presented unique difficulties, particularly in ensuring naturalness and cultural appropriateness in the target language (Indonesian). The lecturer played a key role as a facilitator, providing guidance, corrective feedback, and strategies to overcome linguistic and structural obstacles.

Initial Prototype Design

During this process, metacognitive strategies were reviewed to inform the development of the worksheet as a learning instrument by accounting for planning how to approach a learning task, monitoring comprehension and progress during the activity, and evaluating outcomes afterward. Specific to translation studies, it includes setting the goals of the translation course, predicting the challenges in

translation work, selecting appropriate translation strategies, checking and proofreading results of translation, and correcting errors. With this design, the developed worksheet is aimed to facilitate students to use metacognitive strategies to be better equipped and become autonomous and self-regulated, leading to gradual improvement as an apprentice translator.

On another light, the overall process of the study results in insightful notes on the metacognitive process that contributes to the development of skills in translating. The preliminary needs analysis of the study reveals that the technical process of translation was conducted through the translation technique, semantic strategy, and pragmatic strategy. This information was used to develop the initial prototype design. The details of the information is presented in the following paragraphs.

In the translation technique, a majority of respondents (54,3%) indicate that translation is an important issue for English teachers. This is relevant to a study by Moentaha (2006) which hinted that English teachers might not be fully proficient in the source language, leading to a need for techniques that make the content more understandable by using synthesis in their translation. This could imply that language barriers exist, which may affect communication, understanding, or accessibility of information. It is also supported by the fact that the materials or content provided are not fully accessible to a significant portion of the English students. Thus, the appearance of translation techniques can help bridge cultural gaps, ensuring that messages resonate better with the target language. Following Le (2024), it is particularly important if the content includes idiomatic expressions, cultural references, or context-specific information. If the original material is complex or technical, using techniques that simplify or clarify the message, like cohesion changes, can enhance comprehension. This is, however, also caused by the fact that respondents may belong to diverse backgrounds with varying levels of familiarity with the topic. Thus, using the technique of translation can make it more relatable and engaging for different audiences. Therefore, respondents might have previously encountered materials that were poorly translated or adapted, leading to confusion. Their need for effective translation techniques suggests a desire for clearer and more effective communication.

In semantic strategy, 47,6% of respondents show the tendency to prefer using the semantic strategy for processing translation. It indicates a significant interest in focusing on the meaning and context of the source text. A semantic strategy prioritizes conveying the intended meaning of the original text. As suggested by Naveen and Trojovský (2024), this approach often involves interpreting nuances, idioms, and cultural references to ensure that the translation resonates with the target audience.

The fact that nearly half of the respondents favor this approach suggests a recognition of the complexities involved in translation. They may believe that a semantic strategy leads to higher-quality translations that are more relatable and effective in communication. Translators might take this preference into account when developing their methodologies. It could encourage a shift towards training that emphasizes meaning-making over direct translation techniques. This result could reflect trends in language education, localization practices, or even the influence of technology in translation, where semantic analysis tools are becoming more prevalent.

On the other hand, 51% of respondents prefer using a pragmatic strategy for processing translation, which shows that a majority value context and the communicative function of the text over strict semantic fidelity. Considering a study by Rico (2010), transformation from lexical grammar translation to beyond linguistic conversion (ethics, localization, and cross-cultural communication) would help attain the understanding of discourses. In this case, a pragmatic strategy focuses on how language is used in context, considering factors like the audience, purpose, and situational context. It emphasizes the effectiveness of communication rather than just literal meanings. The slight majority indicates a strong recognition of the importance of context in translation. Respondents may believe that understanding the speaker's intent and the cultural nuances leads to more effective and natural translations. This preference may encourage translators to prioritize audience needs and situational appropriateness when making choices, potentially leading to translations that are more engaging and relevant. The use of this strategy could reflect evolving perspectives in translation theory and practice, where communicative competence and cultural adaptability are increasingly emphasized. Overall, the preference for a pragmatic strategy highlights the importance of understanding the broader communicative landscape in translation, making it a vital consideration for effective language processing.

Development and Implementation Stage

The development stage of the project was closely monitored by doing a constant review of the relevant theories for justification. One of the notable observation is the recognition that there is a link between metacognitive strategies and the development of translation skills for the tertiary students at the English department. The developed prototype is expected to enhance the students' translation skill development. Metacognitive strategies are essential in the translation process, enhancing the overall quality and effectiveness of translations as they help translators manage their cognitive processes effectively (Cheng, 2022;

Indarti, 2024; Pietrzak, 2022). Translators must cultivate an awareness of their cognitive activities while translating. This includes recognizing the mental strategies they employ when approaching various translation challenges (Qiu, 2023). By understanding how they tackle problems, such as misinterpreting a phrase or struggling with cultural nuances, translators can better adapt their methods (Vishwakarma, 2023). This awareness allows for real-time adjustments, fostering more informed decision-making. For instance, if a translator realizes they are getting stuck on idiomatic expressions, they can shift to a different strategy, such as seeking additional context or consulting resources (Elmurodovna & Amriddinova, 2025). Another form of metacognitive strategy that is important for translation is self-monitoring, which involves evaluating their comprehension and the effectiveness of their translation choices throughout the process (Barakat, 2024; Hashempour et al., 2015; Indarti, 2024; Pietrzak, 2022; Yang et al., 2025). By actively engaging in self-assessment, translators can identify when they need to revisit earlier sections of the text or adjust their approach. For example, if they find that a particular strategy is not yielding the desired clarity, they can pivot to alternative methods, ensuring a more coherent final product.

Towards the implementation stage, the study considered that translation is a complex skill requiring gradual development, supported in this case by a structured learning instrument in the form of a worksheet. The worksheet's design and implementation were guided by three key principles—**'wants'**, **'lacks'**, and **'needs'**—ensuring a learner-centered approach. First, **'wants'** addressed students' perceived goals, such as their interest in translating informal texts (e.g., social media content), to maintain engagement. Second, **'lacks'** targeted gaps in their skills, such as difficulties with English-Indonesian syntactic differences (e.g., tense markers or culturally specific terms), through focused exercises. Third, **'needs'** aligned the tasks with objective competency requirements, such as accuracy, fluency, and register adaptation, to meet academic or professional standards. More details are given in the following paragraphs.

The first point, **'wants'**, refers to the intention for the development of the worksheet. This initiative was a part of prior research at the university, whereby a refurbishment of the existing learning instrument is necessary, especially for the Translation in Language Teaching Course. The main purpose is to provide students with an interactive and reflective instrument, leading to nurturing their skills in translation. Lecturers, in their roles as both learning facilitators and researchers, have observed this need and hence were motivated to update the available worksheet with a more apt learning instrument. This was also motivated by the observation that students are looking for materials that not only engage them

actively but also allow them to reflect on their learning process, which is crucial for developing metacognitive skills (Kuh, 2003). Metacognitive skills, in the case of this study, are an important skill in supporting the development of translation skills. Metacognition activates conscious processes in which a translator could transfer the meanings from one language to another by accounting for every detail of the language elements and features. Metacognition also helps in being aware of the cultural contexts that are important to incorporate in the translation process (Taşkın & Çömlekçi, 2023). Therefore, in the process, there are several important aspects of effective learning and teaching practices that the students need to learn consciously, i.e., by using a suitable worksheet.

The realization of the **'wants'** aspect in the project is the encouragement for students' active engagement. The worksheet is designed in such a way to motivate students' active participation through interactive activities, such as group discussions, role-playing, or problem-solving tasks. These activities are known to enhance students' engagement, making learning more dynamic and enjoyable. The design of the worksheet is also set to facilitate reflection in learning. The emphasis on reflective worksheets indicates that students value opportunities to think critically about what they are learning. Reflective practices, such as journaling or self-assessment, help students connect new knowledge to their existing understanding and foster deeper learning.

About the aim of the study, sufficient evidence has been found to argue that the designed worksheet supports the development of metacognitive skills necessary for the development of translation skills. Metacognition plays a role in an individual's awareness and comprehension in the thinking process (Jessner & Allgäuer-Hackl, 2022; Pietrzak, 2022). By using reflective worksheets, students can develop skills to monitor their comprehension, evaluate their learning techniques, and adjust their approaches when necessary. This self-regulation is crucial for becoming effective learners. Therefore, the worksheet is a good tool to achieve a holistic learning approach. The combination of interactive and reflective elements suggests that students are looking for a holistic approach to their education. They want to engage with the material actively while also having the space to contemplate and internalize what they have learned.

The second point, i.e., **'lacks'**, in this study, is understood as a gap, as a missing point that needs to be fulfilled. The study highlighted significant gaps in students' knowledge and skills in terms of translation work. Specifically, the data show that students reported a lack of understanding and proficiency in translation strategies and metacognitive strategies. This deficiency suggests that current teaching methods and materials may not adequately address

these critical areas, thereby hindering students' ability to effectively engage in translation tasks (Apsari et al., 2022). This fact emphasizes important concerns in the update for the refurbishment of the learning instruments for the teaching of translation studies.

A specific point of the gap hints at the lack of understanding in Translation Strategies. In the interview, students reported difficulties in grasping various translation strategies, which are essential for effective translation practice. This could mean that they struggle with techniques for accurately conveying meaning, adapting texts for different audiences, or using appropriate linguistic resources. Without a solid understanding of these strategies, students may find it challenging to produce high-quality translations. This leads to the next gap, i.e., insufficient proficiency in metacognitive strategies. The noted deficiency in metacognitive strategies indicates that students may not be effectively monitoring and evaluating their learning processes. Metacognitive strategies include planning how to approach a task, self-assessing progress, and reflecting on what methods work best for them. A lack of these skills can hinder their ability to adapt to their learning and improve over time.

Towards the Evaluation Stage

Due to space constraints, the evaluation stage is not reported here. Instead, the study offers a few notes on the implications that would be beneficial in the evaluation stage. Metacognitive strategies—including self-assessment prompts, guided reflection, and comparative analysis—were embedded throughout the worksheet to help students consciously navigate these principles. By systematically addressing what learners desire (*wants*), struggle with (*lacks*), and must achieve (*needs*), the translation practice fostered both skill development and self-regulated learning.

It was also noted that there is a gap in the implications for teaching methods. The findings suggest that current teaching methods and materials may not adequately address the development of these critical skills. This could be due to a focus on rote learning or theoretical knowledge rather than practical application and critical thinking. If educators are not providing enough opportunities for students to practice translation strategies in real-world contexts, this gap is likely to persist. As a consequence, there is an Impact on Translation Tasks. The inability to effectively engage in translation tasks can have significant repercussions. Students may struggle with assignments, lack confidence in their abilities, and ultimately be less prepared for professional translation roles. This gap can lead to frustration and a negative learning experience.

To address the 'wants' and 'lacks', the study formulated the 'needs', i.e., to address these gaps, students expressed a need for more practice in using

metacognitive strategies within the context of translation. This need underscores the importance of integrating metacognitive strategy training into the curriculum to help students become more aware of their cognitive processes and improve their translation skills (Cohen, 2003). In line with this, the findings of this study highlight the importance of incorporating metacognitive strategies into the translation curriculum. University, as a tertiary education institution, needs to emphasize practice. Students indicated a desire for more practice, specifically in metacognitive strategies, which suggests that they recognize the value of being conscious of their thought processes while engaging in translation tasks. This practice could include techniques like self-monitoring their understanding and adjusting their approach as needed.

One of the consequences is the implication on the teaching method. Students need to be aware of cognitive processes. By focusing on metacognitive strategies, students can become more aware of how they think and learn. This awareness allows them to identify effective methods, recognize when they are struggling, and apply different strategies to improve their understanding and performance. For this purpose, the integration of the metacognitive worksheet into the curriculum becomes important. It underscores the necessity of integrating metacognitive strategy training into the existing curriculum. This could involve explicit instruction on how to plan, monitor, and evaluate their translation work, enabling students to develop skills that support lifelong learning.

The final expected implication is the attainment of translation skill improvement. Enhanced metacognitive awareness can lead to better translation skills. When students learn to reflect on their choices and thought processes, they can produce more accurate and contextually appropriate translations.

CONCLUSION

To sum up, this study has shown that metacognition is central to translation competence, playing a crucial role in dominating, harmonizing, and optimizing other sub-competences. This study introduces an integration of metacognition into translation education to enhance students' metacognitive awareness and thinking. The study showcases the development of a translation worksheet. This method helps students understand that completing each translation task is not the ultimate goal; instead, the focus is on developing translation competence by actively monitoring, regulating, and reflecting on their performance.

The majority of respondents recognize the importance of translation for effective communication, indicating a need for techniques that bridge language barriers and enhance understanding.

Preferences for semantic and pragmatic strategies reflect a desire to prioritize meaning and context, underscoring the complexity of translation tasks. Furthermore, students expressed a need for interactive and reflective worksheets to foster engagement and develop metacognitive skills. However, notable gaps in knowledge and proficiency in both translation and metacognitive strategies suggest that current teaching methods may be insufficient. To address these gaps, it is crucial to integrate metacognitive strategy training into the curriculum, enabling students to become more aware of their cognitive processes and improve their translation skills. By implementing these changes, educators can better prepare students for real-world challenges in translation and language education, ultimately enhancing their effectiveness and confidence in their future careers.

Future studies may be directed to other pedagogical aspects of the teaching of translation work that may contribute to the development of translation skills for ESL professionals who work in multilingual environments, where accurate translation and interpretation are essential. Also, it can be developed to continue updating the provision of an effective method for English education programs to address the ongoing challenges of translation skills.

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CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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APPENDIX

WORKSHEET: Checklist of metacognitive strategies in translation

Guideline:

1. This worksheet is to be used before and after you do your translation practice.
2. Before translation practice: read over your document and tick the relevant response.
3. After translation practice: read over your translated document and use the worksheet as a reflection. Tick the relevant response.
4. The scale given in the worksheet is ascending i.e. 0 (not necessary), 1 (less necessary), 2 (somewhat necessary), 3 (necessary), and 4 (very necessary).

Part 1: Newmark Translation Method

Statement	0	1	2	3	4
Word for word translation					
Literal translation					
Faithful translation					
Semantic translation					
Communicative translation					
Idiomatic translation					
Free translation					
Adaptation					

Part 2A: Chesterman's Syntactic Strategy

Statement	0	1	2	3	4
Literal translation					
Loan translation					
Transposition translation					
Unit shift translation					
Translation of phrase structure changes					
Translation of sentence structure changes					
Translation of cohesion change					
Level shift translation					
Schema change translation					

Part 2B: Chesterman's Semantic Strategy

Statement	0	1	2	3	4
Synonym translation					
Antonym Translation					
Translation of hyponymy					
Converse Translation					
Abstraction changes translation					
Translation of distribution changes					
Emphasis on translation changes					
Paraphrase translation					
Translation of trope changes					
Other semantic translations					

Part 2C: Chesterman's Pragmatic Strategy

Statement	0	1	2	3	4
Cultural filtering translation					
Explicit changes to translation					
Translation of information changes					
Interpersonal change translation					
Translation of illocutionary changes					
Translation of coherence changes					
Visibility changes translation					
Trans-editing changes the translation					