

Using Metacognitive Questionnaires to Develop Translator Trainees' Strategic Sub-competence: A Case Study

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Abstract

The status quo in higher education around the globe has shifted from teacher-centered approaches to learner-centered ones. Yet, researchers in the field of translation teaching argue that advances made in teaching and learning in other educational areas are not apparent in translation classrooms. Although translator educators embrace learner-centered approaches, more efforts are required to make translation training classrooms more learner-centered. Translator educators must meet this challenging transition if they wish to achieve the goals of 21st-century education. Research in the field of education has shown that metacognition can help learners be in charge of their learning. Thus, this study seeks to develop translation trainees' strategic sub-competence through the use of metacognitive questionnaires. The results of this study confirm the positive effect of metacognitive questionnaires on the development of translation trainees' strategic sub-competence. The findings also show an increase in planning and evaluation strategies and a shift from focusing on individual words to paying more attention to the target text.

Keywords: metacognition, social constructivism, translation competence, translation education, translation pedagogy, translation training

1. Introduction

1.1 Introduce the Problem

A new trend in the field of Translation Studies, known as Translator Studies, can be seen, where the focus is placed on the translator rather than the process or the product of translation (Pietrzak, 2018). However, research in the area of translator education demonstrates that this field "has been largely divorced from educational research in general and from research on second language acquisition and foreign language teaching in particular" (Király, 2015, p. 9). The training of translators has experienced numerous significant changes over the last two decades. One such change has shifted the focus of translation training courses from a series of translation problems and difficulties to targeting sets of skills and competencies. This advancement in the field of translation training courses resulted from interdisciplinary research on translation and education science. However, researchers concerned with translation teaching seem to agree that this area is "almost half a century behind advances made in educational science concerning teaching and learning" (Echeverri, 2015, p. 308). Meeting the challenges of such a transition represents the goal of education, and "metacognition is a good place to start," as it can increase control over learning.

According to the Process in the Acquisition of Translation Competence and Evaluation research group (known as PACTE, 2008), translation competence constitutes the required procedural expert knowledge system whenever undertaking a translation task. This form of competence comprises several interrelated sub-competences, including bilingual, knowledge of translation, extra-linguistic, instrumental, and strategic elements (PACTE, 2008, p. 106). The focus of the study in hand is on the strategic sub-competence, given that it is the sub-competence that applies to the early stages of teaching translation trainees, and it helps develop strategic awareness (Fernández & Zabalbeascoa, 2012). Strategic sub-competence relates primarily to four functions: planning, monitoring, self-evaluating, and activating the various sub-competences of translation (Fernández & Zabalbeascoa, 2012).

Translation trainees verbalizing their reflections on translations represent a largely unexamined field of research (Fernández & Zabalbeascoa, 2012). In fact, the field that looks into metacognitive translation has "so far received scant coverage" (Pietrzak, 2018, p. 819). However, the limited literature available in the field demonstrates that

using metacognitive questionnaires raises trainees' awareness of solutions to translation problems (Fernández, 2008). Further, researchers in the field believe that the two areas of metacognition and translation have not undergone sufficient study (Shreve, 2006). Developing expertise and translation competence are ranked among the emerging areas of study in the field of translation (Göpferich & Jääskeläinen, 2009). Thus, the present study aims at filling in a gap in this regard. This study is based on three major concepts, namely translation competence, metacognition, and social constructivism, which will be the focus of the following section.

1.2 Literature Review

Translation competence and translation competence acquisition are comparatively new areas of study in comparison to other disciplines (Albir, 2015). Translation competence only became "an object of study in its own right" at the turn of this century (Albir, 2015, p. 258). To laypeople, translation competence is the by-product of second language (L2) competence. However, researchers in the translation field realize that "there is more to translating than knowing two or more languages" (Göpferich & Jääskeläinen, 2009, p. 174).

The translation competence concept comes from the notion of linguistic competence (PACTE, 2000), and is defined as "the underlying system of knowledge, skills, and attitudes required to translate" (PACTE, 2014, p. 87). According to PACTE researchers, translation competence is primarily procedural rather than declarative expert knowledge. Translation competence comprises five interrelated sub-competences: bilingual, knowledge of translation, extra-linguistic, instrumental, and strategic competence. Of these five sub-competences, the PACTE group explains, knowledge of translation competence, instrumental competence, and strategic competence form the core of translation competence since any bilingual should possess knowledge of both languages along with extra-linguistic knowledge.

The PACTE group further explains that the most crucial of all five sub-competences is the strategic sub-competence due to its interaction with the other sub-competences during the translation process and its role in decision-making and problem-solving (PACTE, 2014). Research in the field illustrates that the strategic sub-competence plays a significant part in translation competence due to its use in planning translation tasks. It activates, monitors, and compensates for any limitations in the other sub-competences, recognizes any translation problems, makes use of translation strategies, and monitors and evaluates the translation process and product (PACTE, 2003).

The acquisition of translation competence represents a dynamic, spiral, non-linear process integrating sub-competences and learning strategies (PACTE, 2014). Such an acquisition also sees the relevant sub-competences, identified above, "developed and restructured" (p. 93). These sub-competences' interrelatedness means they compensate for each other, yet they do not necessarily develop at the same time nor the same rate. The acquisition of translation competence relies on the direction of translation, the language pairs, the field of specialized translation, and the learning environment (PACTE, 2014). Since translation competence comprises interrelated sub-competences, acquiring it involves a dynamic process that entails building new knowledge based on old information (PACTE, 2000).

Translation is a complex task involving several similarly complex cognitive sub-processes, including reading, comprehension, writing, and semantic transfer between two different linguistic systems (Shreve, 2009). Further, completing a translation task requires the aid of other higher-order cognitive skills, such as problem-solving, reasoning, decision-making, and self-reflection (Shreve, 2009). This ability to reflect on, make sense of, and control cognition is known as metacognition.

Metacognition

Flavell first coined the term metacognition in the 1970s. The term is defined as "cognition about cognition" (Flavell, 2000, p. 16); in other words, metacognition means "thinking about thinking" (Baker, 2011). Since the term's introduction, studies on metacognition have indicated that it is "a most powerful predictor of learning" (Veenman et al., 2006, p. 3). Originally, metacognition referred to "knowledge about and regulation of one's cognitive activities in learning processes" (p. 3). It is, in fact, "one's ability to reflect upon, understand, and thereby modulate one's own cognition" (Shreve, 2009, p. 255). Metacognition has an essential role in helping translators understand complex translation tasks (Shreve, 2009). Echeverri (2015) believes that exploring the metacognitive aspect of translation means translator education could benefit from "a sound theoretical foundation for a learner-centered approach" which could lead to learner autonomy (p. 305).

The significance of metacognition is widely acknowledged. However, as Veenman et al. (2006) state, "inconsistency marks the conceptualization of the construct" (p. 4). The majority of these conceptualizations, the authors explain, share the view that metacognition relates to "higher-order cognition about cognition" (p. 4). This

idea posits the existence of an agent of higher-order status that works on “overlooking and governing the cognitive system, while simultaneously being part of it” (p. 5). Numerous terms have emerged over the years under the umbrella of metacognition. Two of the most distinct ones are metacognitive knowledge and metacognitive skills. Metacognitive knowledge refers to declarative knowledge, including the person, task, and strategy knowledge, whereas metacognitive skills concern procedural knowledge corresponding to self-regulation and problem-solving.

One of the distinguishing traits of metacognition is that it is always conscious and used at one’s own will; it is used when paying active attention to the progress of a higher-order ongoing task; and its use results from a failure in this progress (Shreve, 2009). Thus, metacognition occurs following some kind of cognitive failure, as it helps to bring the task back under control with the intent of completing it successfully (Shreve, 2009). Metacognition plays a significant role in the learning process as it influences the way learners plan, monitor, and direct their learning. One crucial virtue of metacognition, according to the literature, is that it helps students take an active role in their learning, rather than passively receiving instruction. When learners are made aware of their own thinking, the responsibility of monitoring learning shifts from the teacher to the learners themselves, the result of which is “positive self-perceptions, affect and motivation” among learners (Paris & Winograd, 1990, p. 15).

Research in the field demonstrates that a sufficient level of metacognition could compensate for limitations in students’ cognitive abilities (Veenman et al., 2006). However, Bergen (2009) believes that for translation students, the ability to use metacognition “does not necessarily come naturally” (p. 242), necessitating the need for training. According to Anderson (2008), metacognition is divisible into five major and interrelated components: preparing and planning for learning, selecting and using strategies, monitoring learning, orchestrating strategies, and evaluating learning.

Social Constructivism

The strategic sub-competence, which forms the core of this study, is “developed within a community of apprentices, whereby they inductively acquire socially co-constructed knowledge, by using the scaffolding provided not only by the teacher, but also by their peers” (Fernández & Zabalbeascoa, 2012, p. 742). Kiraly’s socio-constructivist approach to translator education symbolizes a shift from teacher-centered conceptions of translation teaching to learner-centered ones. Kiraly (2000) explains that through communication and negotiation with peers and more knowledgeable others, “we acquire a feel for correctness, appropriateness, and accuracy” (p. 4). Based on the view that “knowledge is intersubjectively constructed,” Kiraly (2000) believes that “learning must be socially situated” (p. 4).

Social constructivism represents a theory of learning emphasizing the role played by culture and socialization in the formation and development of individuals’ cognitive skills. Being part of a community, including professional communities of practice such as translators, allows individuals to “acquire the cognitive tools and knowledge shared by the community” (Echeverri, 2015, p. 323), which paves the way for individuals to acquire new knowledge based on previously obtained knowledge and experiences.

Wallace (2015) states that the underlying assumption of social constructivism is that students are active agents of their learning. Thus, such empowerment represents the key that gives learners the expertise to be critical, autonomous, and acquire both linguistic and professional competence during their development as trainee translators. In fact, Wallace (2015) explains that “the encouragement of collaboration is strategic for professional survival in nearly all disciplines” (p. 29). Collaboration, Wallace believes, prompts further participation by the learner in the learning process, along with an increase in self-reflection, peer-to-peer help, and self-monitoring. Wallace further explains that collaboration helps instructors develop a higher awareness of what learners do and do not understand. Undoubtedly, as Wallace puts it, “more heads are better than one, producing richer results” (p. 30).

Metacognition and Translation

Research demonstrates that translation trainees can attain expertise by developing their strategic sub-competence through metacognitive questionnaires (Fernández & Zabalbeascoa, 2012). The awareness and beliefs about the factors influencing the outcomes of cognitive efforts are known as metacognitive knowledge (Echeverri, 2015). In the case of translators, Echeverri states, this type of knowledge becomes apparent when making the effort to concentrate during a translation task, rereading a text to verify one’s understanding of it, and consulting the dictionary to confirm the meaning of a word or term. Further, knowing that certain kinds of text require more attention than others or that some people process certain types of information better than their colleagues also forms metacognitive knowledge in translation (Echeverri, 2015).

With a focus on metacognition and translation, Fernández and Zabalbeascoa (2012) conducted a pedagogical

intervention in a two-part translation undergraduate course. Their case study aimed to develop the translation students' strategic sub-competence through metacognitive questionnaires. The researchers used post-translation metacognitive questionnaires to help their participants reflect on aspects of the translation process, identify translation problems, and justify their solutions. After analyzing the students' responses to the questionnaires, the researchers found that the most frequently reported problems focused on genre-specific style conventions and expressions. The researchers also noticed an increase in the solutions and successful application of translation strategies, which, according to them, signifies development in the strategic sub-competence.

Echeverri (2015) also reported on an attempt to uncover the metacognitive challenges of the translation profession. The belief here was that revealing the metacognitive knowledge of professional translators informs and, thus, positively influences the teaching and learning of future translators. Echeverri's study focused on the reports provided by undergraduate students enrolled in the cooperative option of the undergraduate program in specialized translation at the Université de Montréal in Canada. Students who join the cooperative option have the opportunity to work for three periods of at least 15 weeks alongside professional translators. At the end of this internship period, the students are required to write a report regarding their experience, describing the workplace, the tasks accomplished, translation tools used, and the advantages of this internship on personal and professional levels. Echeverri's study focused on the part of the students' reports that emphasized the advantages of their internships, as it correlates to a self-evaluation of their experiences.

Echeverri's study sought to answer the following research question: "Why do students who have the chance to do a translation internship in a professional environment think that they learn more during their internships than during a whole term of traditional courses?" (Echeverri, 2015, p. 311). Following a content analysis approach, the researchers identified instances associated with metacognitive activities, such as planning, monitoring, and evaluation. The study also generated a list of ten metacognitive factors, including: adaptation, awareness, interpersonal relationships, motivation, responsibility, reviewing, self-assessment, self-confidence, self-control, and strategies. This list, according to the researchers, embodies the metacognitive factors that integrate students into the translators' professional world.

Even though metacognition and self-regulation have recently gained much attention in the area of educational research, they have not been widely studied in the field of translation studies (Pietrzak, 2018). Further, Mellinger (2019) states that "observational and exploratory work are needed to establish a baseline of student perceptions of their translation behaviour" (p. 605). Such exploratory studies will help in the development of empirically-based research which will inform pedagogical approaches that could help translation trainees performance in specialized translation (Mellinger, 2019). However, recent studies have been advocating for "structured metacognitive practice in the translator training environment" (Pietrzak, 2022, p. 2), and thus, the study in hand is an attempt to fill in a gap in this regard.

2. Method

This case study reports on the use of post-translation metacognitive questionnaires to help translation trainees evaluate their translations. In line with other studies that have investigated metacognitive activity (Mellinger 2019; Fernández & Zabalbeascoa, 2012; Li, 2018), the study targeted a rather small sample of participants, comprised of 55 female undergraduate students enrolled in a specialized, English-Arabic translation course at the College of Language Sciences at King Saud University in Riyadh, Saudi Arabia. The researcher herself taught the course to students in their fourth year of study, with previous instruction in translation courses. Most participants had already completed up to seven written and oral translation courses.

The literature shows the employment of a variety of methods to collect data on translation processes and how translation students generally approach translation problems, including think-aloud protocols, retrospective verbalizations, dialogue protocols, questionnaires, interviews, key-logging, translation journals, video recordings, eye-tracking, and Integrated Problem and Decision Reporting (IPDR) (Göpferich & Jääskeläinen, 2009; Mellinger, 2019). Each method mentioned here has advantages and disadvantages, as they provide "access to specific aspects of the translation process while leaving other aspects in the dark" (Göpferich & Jääskeläinen, 2009, p. 173). Verbal report data elicited through instruments such as interviews, questionnaires, and translation journals, are characterized as "soft, qualitative and subjective" (p. 172).

The aim of using metacognitive questionnaires is to develop translation trainees' strategic sub-competence (Fernández & Zabalbeascoa, 2012), and to foster reflective practice (Mellinger, 2019). In fact, previous studies that involve some form of process-oriented recording have demonstrated the positive impact of such tools on translation learning (Li, 2018). Post-translation metacognitive questionnaires have helped uncover two particular aspects of the students' strategic sub-competence: planning and evaluation. The participants were required to

complete the metacognitive questionnaires in class as they worked in small groups when translating texts. The texts were taken from the religion genre, and students were required to translate from Arabic into English and vice versa. This approach was purposefully implemented so that students could benefit from the scaffolding of knowledge provided by their peers, given that reflection includes motivational and socio-emotional processes (Fernández & Zabalbeascoa, 2012).

The participants had to complete two questions after translating the texts. The first question was, What are the translation problems you think you have successfully solved? and the second one was, What makes you think you have solved these problems successfully? The former question fosters the identification of translation problems, while the latter helps the participants justify their solutions, with extra attention paid to successfully applied strategies. Using such questionnaires breaks down the process of strategic translation into easily manageable chunks for translation trainees (Fernández & Zabalbeascoa, 2012). These questionnaires also lead participants to become more aware of the strategies used to solve translation problems. Therefore, this qualitative research study attempted to answer the following research question:

What effect do post-translation metacognitive questionnaires have on Saudi, female, undergraduate translation trainees' strategic sub-competence?

To answer this research question, the participants' responses to the two questions in the metacognitive questionnaires underwent separate analyses. I read through the responses numerous times before attempting to analyze them thematically. The thematic analysis was approached deductively, as I dealt with the data with pre-existing concepts and ideas based on the literature review. To ensure the results' validity, I analyzed the data qualitatively and coded the data the first time and then left it aside for a couple of months before repeating the analysis. Then, I compared the two analyses and found very few discrepancies that have been resolved based on the knowledge I have of the nature of the course and the students. This study's results are undoubtedly transferrable to contexts with similar parameters.

The students' answers to the first question underwent coding using pre-existing codes. Three principal themes emerged from the analysis of the students' responses to question one (i.e., What are the translation problems you think you have successfully solved?) which are: genre-specific problems, vocabulary problems, and stylistic problems. According to Siren and Hakkarainen (2002), 'problem' in the field of translation studies often refers to "different textual elements which cannot be translated without deliberation, if at all ... problem-solving, then, refers to such deliberation and rendering of a textual element (or omitting it)" (p. 76).

On the other hand, the students' responses to question two underwent full coding based on a classification of metacognitive strategies found in the literature. Metacognition is subdivided into five primary interrelated categories: planning for learning, selecting and using strategies, monitoring learning, orchestrating strategies, and evaluating learning (Anderson, 2008). This taxonomy has helped analyze responses to the second question in the metacognitive questionnaires to identify participants' use of metacognitive strategies, which, in turn, indicates their strategic sub-competence.

3. Results

This section will present the results of the study in the light of the two major themes that emerged from the data analysis, i.e., translation problems trainees have faced and their justifications for solutions they have resorted to.

3.1 Translation Problems

To identify any translation problems, the participants' responses to question one in the metacognitive questionnaire (i.e., What are the translation problems you think you have successfully solved?) were classified into three groups: genre-specific problems, vocabulary problems, and stylistic problems. One point worth mentioning here is that there exists a degree of overlap between the boundaries of these categories. However, of the three types of issues encountered in all texts, vocabulary problems occurred the least.

I distinguished purposefully between vocabulary problems and genre-specific ones. In this study, the former category refers to generalized vocabulary problems, such as finding the meaning of a word in the dictionary, with no particular reference to the word being a specialized term. Thus, if the responses include words or vocabulary without referring to the genre or providing genre-specific examples, they can be classified under vocabulary problems. The latter, on the other hand, relates to problems concerning the genre dealt with in the course, including specialized vocabulary items, terms, expressions, phrases, text types, and the like. If the participants' responses have the words *term* or *terminology* or state the genre of study, then I directly classified the response under genre-specific problems. Stylistic problems in this study correlate with sentence structure, punctuation, capitalization, and other problems associated with stylistics, such as clarity, ellipsis, and redundancy. Figure 1 below demonstrates

the frequency of these problem types according to the texts.

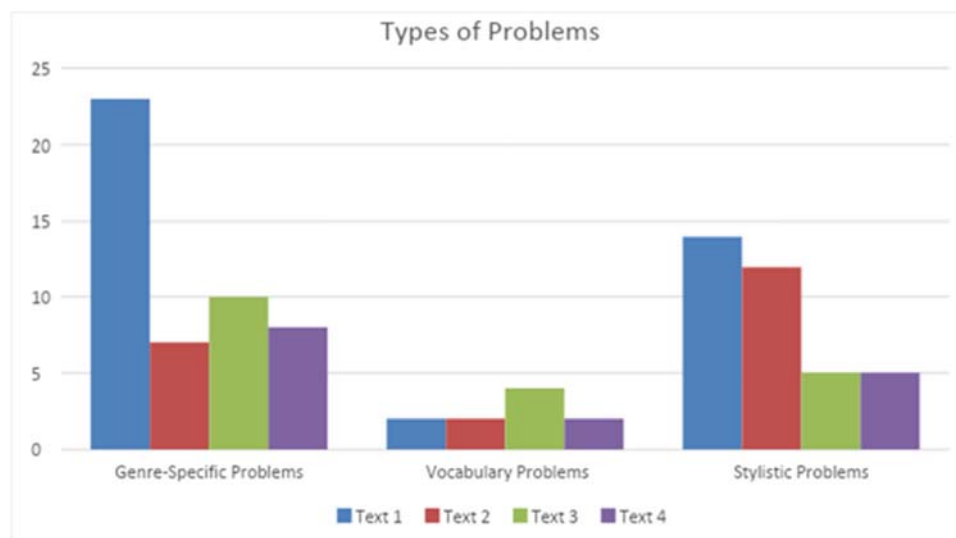


Figure 1 Identification frequency for problem types according to the texts

Figure 1 illustrates that by the end of the study, the students reported fewer translation problems. For instance, the number of problems reported in Text 4 was less in all three categories. This situation could indicate the development of the students' strategic sub-competence over the course of the study. The decrease in the number of translation problems reported by the participants could also result from the genre-specific knowledge they acquired, which enabled them to deal more strategically with translation tasks and issues.

Figure 1 further shows a significant decrease in genre-specific problems. At the start of the study, genre-specific issues were prevalent and the most reported of all three problem types. This decrease can also indicate an increase in the trainees' knowledge of the genre and how to deal with associated problems following introductory lectures and subsequent practice. Genre-specific issues reported by the participants include:

- Whether to translate or transliterate a word
- Literal translation or the equivalent
- Translating phrases
- Using correct terms for acts of worship
- Finding equivalents for new terms
- Lack of equivalents in the target language
- Not being familiar with text type

On the other hand, instances mentioned by participants that were classified as vocabulary problems include:

- Finding meanings of words
- Vocabulary
- Choosing the best translation of words
- Hidden meanings

Stylistic problems also gradually and consistently decreased over the course of the study. This situation may reflect the amount of students' practice as well as an increase in the participants' genre-specific knowledge. Examples of stylistic problems mentioned by the participants include:

- Prepositions that come with certain verbs
- Structure of sentences
- Arabic-English structure
- Spelling when transliterating

Breaking down Arabic sentences
 Difficult Arabic structure
 Connecting ideas (references, pronouns)
 Structure of expressions
 Breaking down long Arabic sentences
 Highly sophisticated Arabic structure
 Avoiding grammatical mistakes
 Connection between ideas
 Difficulty in delivering meaning
 Difficulty in structuring sentences

3.2 Justifications for Solutions: Metacognitive Strategies

To reveal the participants' use of metacognitive strategies, which is an indication of their strategic sub-competence, their responses to question two in the metacognitive questionnaire (i.e., What makes you think you have solved these problems successfully?) underwent analysis in light of the division of metacognition into planning, selecting strategies, monitoring, orchestrating strategies, and evaluation. Figure 2 below illustrates the occurrence of these strategies according to the texts.

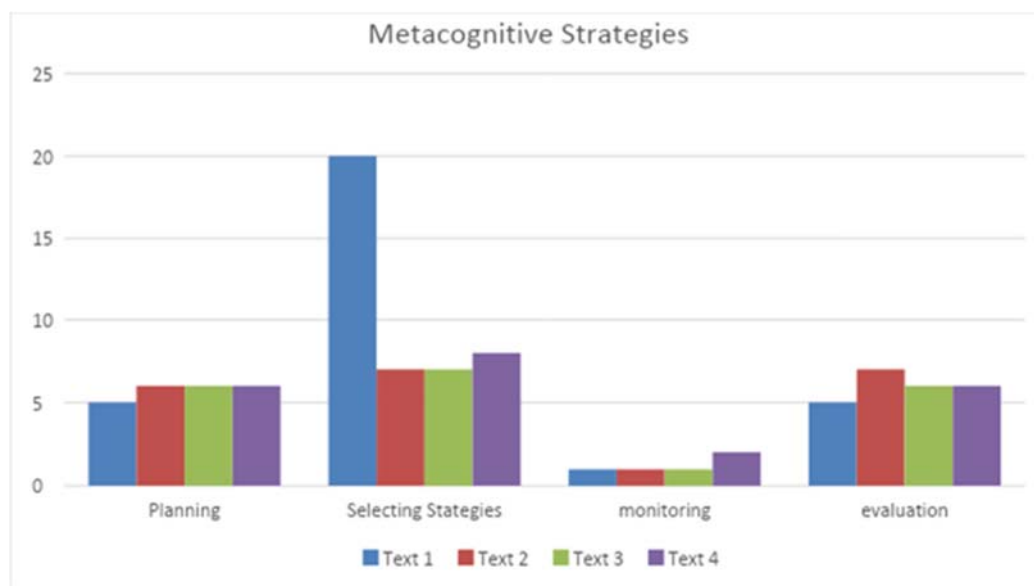


Figure 2 Types of justifications

Figure 2 shows that monitoring represents the least metacognitive strategy mentioned by the participants. Monitoring occurs when students encounter a problem and decide consciously to stop and redirect their efforts and focus more on some aspect of the text. Thus, monitoring strategies do not lend themselves easily to post-translation questionnaires. Some of the very few monitoring instances reported by the participants include:

Deep understanding of the text
 Trying to understand the text
 Being able to understand the meaning of certain words

These justifications provided by the students were classified as examples of monitoring strategies because they imply concentrated efforts to make sense of the meaning behind texts.

The effective use of strategies never occurring in isolation could explain the absence of orchestrating strategies from Figure 2. For data analysis, I had to break down the students' responses regarding strategy use and thus could

not classify clusters of strategies into one category. However, responses in the reports which potentially exemplify orchestrating strategies include:

- We detached ourselves from the Arabic structure and tried to get the point across ...
- We shared our ideas together regarding the last paragraph and reached the best translation, translating the new words and then reading the whole text to ensure the correct understanding and finally rendering it without referring back to the source text

Figure 2 also shows that planning strategies increased by the end of the study. Thinking or reading about a topic before tackling a translation task is a common metacognitive strategy that helps activate any relevant background knowledge and can facilitate the undertaking of the task. Therefore, group discussions, reading about the translation topic, and activating background knowledge by consciously remembering any previous information related to the text exemplify the planning strategies in the participants' responses. Instances of planning strategies reported by the participants include:

- Reading about the subject
- Sharing and discussing
- Relying on religious background knowledge
- Reading paragraphs in the target language to help with the structure
- Having background knowledge of the topic

Figure 2 further demonstrates an increase in the number of evaluation strategies reported by the participants. Evaluation of learning can occur at two levels: judging the completion of a task or judging strategy use. The participants' responses reveal a number of instances of evaluating their learning, such as asking the teacher, thinking about what makes sense, and group members agreeing on a solution to translation problems. Examples of the participants' use of evaluation strategies include:

- We went with what sounded more natural
- Changing the structure to make it suitable for the target language
- We tried multiple structures and found what sounded more natural
- For the structure, we revised the text and edited the structure
- Proofreading
- Agreeing on the best translation
- Double-checking by comparing the two texts

The justification type with the highest number of occurrences, as seen in Figure 2, is selecting strategies. Instances classified under this justification type include:

- Looking the words up in the dictionary
- Searching reliable sources
- Online dictionary
- Translating phrases literally
- Internet search for the translation
- Checking the dictionary
- Looking for meanings using Google
- Using the dictionary
- See the word in context

These examples show that many strategies reported by the participants involved dictionaries and/or other reliable sources. However, Figure 2 demonstrates a significant drop in the use of these strategies by the conclusion of the study, while the results presented above indicate an increase in planning and evaluation strategies. This situation highlights the development of the translation trainees' metacognitive knowledge and their strategic sub-competence.

4. Discussion

The study in hand has attempted to discern the impact of using post-translation metacognitive questionnaires on translation trainees' strategic sub-competence. The findings confirm that using metacognitive questionnaires in translation training positively impacts the students' strategic sub-competence, as seen in the students' increased use of planning and evaluation strategies. Further, the decrease in the number of problems reported by the participants could also indicate the positive effect of metacognitive questionnaires. This decrease could reflect the development of the participants' genre-specific knowledge, helping them become more capable of completing the translation tasks.

Strategic sub-competence is considered the most significant of all five translation sub-competences because it interacts with the other sub-competences and plays a crucial role in decision-making and problem-solving processes. Thus, any development in the translation trainees' strategic sub-competence most likely indicates growth in their translation expertise. Research on the development of expertise bears a connection to metacognitive knowledge. This situation arises because expertise relates not only to the level of knowledge experts have but also the way they organize such knowledge. Thus, they can make the most appropriate use of their skills and knowledge. Developing metacognitive knowledge promotes students' capacity to oversee their own learning, become better at solving problems, analyze new situations and information, evaluate main aspects, and determine how best to improve (Vanvelzen, 2012).

The majority of problems reported at the start of this study focused on general or specialized vocabulary. Thus, students' justifications for their solutions primarily referred to the use of dictionaries and other translation resources. Further, many of the problems mentioned in Text 1 were genre-specific. Therefore, with an increase in students' genre-specific knowledge, there appeared to be a justifiable decrease in such issues. During the course, the participants reported fewer vocabulary and genre-specific problems. It was towards the end of the study when the participants provided responses showing their focus on the target text rather than individual words. Studies conducted on translation expertise show that the relevant skills correlate to the procession of larger chunks of text, moving beyond the level of single vocabulary items (Angelone & Garcia, 2019). As translation competence increases, the translation units translators focus on become larger. In other words, the development of translator expertise allows for the tackling of more complex problems, such as more thorough textual considerations rather than basic equivalent searches (Göpferich & Jääskeläinen, 2009). This was demonstrated in the students' responses to the final text in this study, which can explain the decrease in both the number of problems reported by the participants and their dictionary use.

Most problems reported by the participants throughout the study centered mainly on genre-specific and stylistic issues. This development aligns with the findings of the research conducted by Fernández and Zabalbeascoa (2012), which revealed that the most identified translation problems were strategically relevant ones concerned with general conventions of style and genre-specific expressions. Similar to the results of the study in hand, Fernández and Zabalbeascoa (2012) also noted that solutions to these two particular types of problems were the most frequently justified ones. They also reported an increase in the number of successfully applied translation strategies, which indicates the gradual development of the trainees' strategic sub-competence.

Anderson (2008) states that strong learners have the capacity to realize when they cannot understand something and need to find a solution. Such a situation relates to monitoring strategies and is evident in the participants' responses to reading about the topic, making use of available resources, or even rereading the text to clarify its meaning. Some examples provided by the participants include a deep understanding of the text, trying to understand the text, and being able to understand the meaning of some words. These instances were classified as monitoring strategies due to the fact that they imply concentrated efforts to find the meanings behind the source texts.

Despite the occurrence of occasional monitoring instances, it was the least reported of metacognitive strategies in this study. This finding could result from the fact that this type of metacognitive strategy is best revealed through using other data collection tools, such as think-aloud protocols and journals, where the learners report on their use of strategies while undertaking the task of translation. Conversely, the metacognitive questionnaires used in this study were answered after the completion of the translation task. However, Siren and Hakkarainen (2002) state that "experts have strong self-monitoring skills" (p. 74). They carry out tasks, find solutions to problems, and can direct and control such processes. Developing expertise increases a translator's ability to self-monitor and self-evaluate (Angelone & Garcia, 2019).

Göpferich and Jääskeläinen (2009) explain that as translation competence increases, so too does the translator's awareness of related problems, producing better translation equivalents, editing and revision, and critically

monitoring their translation solutions. The study revealed these concerns in the participants' responses to the metacognitive questionnaire. For instance, one response stated: to detach myself from the source text, make sure to read the text as many times as possible until completely understanding it, and then setting the source text aside and translating. At the end, double-checking by comparing the two texts. Another response stated: translating new words, then reading the whole text to ensure the correct understanding of it, and finally rendering it without referring back to the source text.

The results of this study also revealed an increase in translation trainees' evaluation strategies. Echeverri (2015) explains that evaluating any cognitive activity relates to constantly checking how the outcomes of such an activity compare to a criterion of effectiveness. This activity is most evident in the translators' efforts to comprehend the source text, as they constantly refer to what they have read and what they already know about the topic. Such evaluation of reading comprehension, Echeverri (2015) states, is a metacognitive activity. This form of evaluation revealed itself in the participants' responses, such as when they mention proofreading, relying on background knowledge, checking with the teacher, and the like.

The study conducted by Echeverri and colleagues (2015) identified the ten metacognitive factors which help translation students enter the world of professional translators. These metacognitive factors include "adaptation, awareness, interpersonal relationships, motivation, responsibility, reviewing, self-assessment, self-confidence, self-control, and strategies" (p. 318). The results of Echeverri's study confirm that teaching and learning should include the metacognitive dimension of translation rather than a mere focus on the subject matter. "The instrumental role of metacognition for translation learners manifests itself in the notion of control" (Echeverri, 2015, p. 306), as it helps translators become agents of their own learning. Compared to the results of the present study, this development was seen in the participants' responses to the metacognitive questionnaires. These responses highlighted the decreased number of reported translation problems, which could be explained as an indication of the growth of self-control and self-assessment.

The study in hand has several pedagogical implications that might help enrich the experience of translation trainees. Research in the field demonstrates that an "increase in local task awareness regarding terminology and register suggest that metacognitive behaviour can change within a relatively short time frame" (Mellinger, 2019, p. 616). Echeverri (2015) states that "metacognition constitutes an interesting starting point to structure learner-centered approaches to translation education" (p. 319), an approach utilized in translation training classrooms around the globe. Although metacognition should remain brief and infrequent in classrooms, it can still have a powerful effect on learners (Paris & Winograd, 1990). Researchers further argue that metacognitive knowledge is "multidimensional, domain-general in nature, and teachable" (Sternberg, 2001, p. 251).

The literature on metacognitive training emphasizes teaching learners how to strategize in certain settings to carry out specific tasks. Such training should not simply teach them an entire inventory of strategies (Paris & Winograd, 1990). Real-life examples support this claim: good craftsmen do not simply gather tools but utilize such tools wisely, independently, and selectively to achieve their goals. Research indicates that it is not the strategies students use when learning that matters, but rather knowing when to use the correct strategies, coordinating between strategies, and possessing different strategies (Sternberg, 2001).

Metacognition can be incorporated in translation training classrooms by means of dialogue, examples, helping learners become aware of their thinking processes, as occurred in this study, and encouraging them to read and learn more about metacognition (Echeverri, 2015). However, "metacognition should not be regarded as a final objective for learning or instruction. It is embedded in ongoing thinking and problem solving and is an intermediate step to proficiency" (Paris & Winograd, 1990, p. 22).

5. Conclusion

Research focusing on the relationship between translation and metacognition remains in its infancy given that many studies have been either exploratory or descriptive (Echeverri, 2015). However, this study differs in that it attempted to train translation students to think about their thinking through answering questions that help identify translation problems they face while translating and then provide justifications for their solutions to those problems.

Translation trainers should aim to structure sessions that facilitate thinking about what occurs during the translation process. Such an approach will most likely lead to improved translation skills. Metacognitive training represents a valuable use of translation training time. Numerous tools are employable in translation training classes to achieve such an aim, including translation training journals, translator self-evaluated videos, group work evaluation forms, and think-aloud protocols, which all aim at making translation classrooms more learner-centred.

The results of this study demonstrate the positive effect of using metacognitive questionnaires on translation

trainees' strategic sub-competence, as shown in the increased usage of planning and evaluation strategies and the fall in problems reported by the end of the study. The results further demonstrated the participants' move from focusing on individual words to paying fuller attention to the target text, which indicates development and a rise in their translation expertise. However, this study has a number of limitations that have to be acknowledged, including: the small number of participants, the inclusion of one gender (i.e., females), the use of a single data collection method, and the limited time span of the study. Thus, the results of the present study may not be generalizable to other educational settings. In fact, the limited scope of this study entails that any conclusions reached are rather tentative, and replication in various translation training settings are required to further determine whether behaviour of a similar nature can be detected and the extent to which these results can be validated.

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References

- Albir, A. (2015). The acquisition of translation competence: Competences, tasks, and assessment in translator training. *Meta*, 60(2), 256–280. <https://doi.org/10.7202/1032857ar>.
- Anderson, N. (2008). Metacognition and good language learners. In C. Griffiths (Ed.), *Lessons from Good Language Learners* (pp. 99–109). Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511497667.010>
- Angelone, E., & Garcia, A. (2019). Expertise acquisition through deliberate practice: Gauging perceptions and behaviors of translators and project managers. In H. Risku et al. (Eds.), *Translation Practice in the Field: Current Research on Socio-cognitive Processes* (pp. 123–160). John Benjamins Publishing Company. <https://doi.org/10.1075/bct.105.07ang>
- Baker, L. (2011). Metacognition. In V. Aukrust (Ed.), *Learning and Cognition in Education* (pp. 128–134). Elsevier.
- Bergen, D. (2009). The role of metacognition and cognitive conflict in the development of translation competence. *Across Languages and Cultures*, 10(2), 231–250. <https://doi.org/10.1556/Acr.10.2009.2.4>
- Echeverri, Á. (2015). Translator education and metacognition: Towards student-centered approaches to translator education. In Y. Cui & W. Zhao (Eds.), *Handbook of Research on Teaching Methods in Language Translation and Interpretation* (pp. 297–323). IGI Global Education. <https://doi.org/10.4018/978-1-4666-6615-3.ch016>
- Fernández, F. (2008). An example of a collaborative translation project incorporating mediation instruments as a

- means of encouraging self-regulation. In M. Garant & L. Walker (Eds.), *Current Trends in Translation Teaching and Learning* (pp. 121–151). Volume II. Publications of the Department of Translation Studies.
- Fernández, F., & Zabalbeascoa, P. (2012). Developing trainee translators' strategic subcompetence through metacognitive questionnaires. *Meta*, 57(3), 740–762. <https://doi.org/10.7202/1017089ar>
- Flavell, J. H. (2000). Development of children's knowledge about the mental world. *International Journal of Behavioral Development*, 24, 15–23. <https://doi.org/10.1080/016502500383421>
- Göpferich, S., & Jääskeläinen, R. (2009). Process research into the development of translation competence: Where are we, and where do we need to go? *Across Languages and Cultures*, 10(2), 169–191. <https://doi.org/10.1556/Acr.10.2009.2.1>.
- Kiraly, D. (2000). *A Social Constructivist Approach to Translator Education*. St. Jerome.
- Kiraly, D. (2015). Occasioning translator competence: Moving beyond social constructivism toward a postmodern alternative to instructionism. *Translation and Interpreting Studies Association*, 10(1), 8–32. <https://doi.org/10.1075/tis.10.1.02kir>.
- Li, X. (2018.) Self-assessment as 'assessment as learning' in translator and interpreter education: Validity and washback. *The Interpreter and Translator Trainer*, 12(1), 48–67. <https://doi.org/10.1080/1750399X.2017.1418581>
- Mellinger, C. D. (2019). Metacognition and self-assessment in specialized translation education: Task awareness and metacognitive bundling. *Perspectives*, 27(4), 604–621. <https://doi.org/10.1080/0907676X.2019.1566390>
- PACTE. (2000). Acquiring translation competence: Hypotheses and methodological problems in a research project. In A. Beeby et al. (Eds.), *Investigating Translation* (pp. 99–106). John Benjamins. <https://doi.org/10.1075/btl.32.13pac>
- PACTE. (2008). First results of a translation competence experiment: 'Knowledge of Translation' and 'Efficacy of the Translation Process. In J. Kearns (Ed.), *Translator and Interpreter Training: Issues, Methods and Debates* (pp. 104–126). Continuum.
- PACTE. (2014). First results of PACTE Group's experimental research on translation competence acquisition: The acquisition of declarative knowledge of translation. *MonTI*, 1, 85–115. <https://doi.org/10.6035/MonTI.2014.ne1.2>
- Paris, S., & Winograd, P. (1990). How metacognition can promote academic learning and instruction. In B. Jones & L. Idol (Eds.), *Dimensions of Thinking and Cognitive Instruction* (pp. 15–51). Lawrence Erlbaum Associates.
- Pietrzak, P. (2018). The effects of students' self-regulation on translation quality. *Babel*, 64(5–6), 819–839. <https://doi.org/10.1075/babel.00064.pie>
- Pietrzak, P. (2022). *Metacognitive translator training: Focus on personal resources*. Palgrave Macmillan Cham. <https://doi.org/10.1007/978-3-030-97038-3>
- Shreve, G. (2006). The deliberate practice: Translation and expertise. *Journal of Translation Studies*, 9, 27–42.
- Shreve, G. (2009). Recipient-orientation and metacognition in the translation process. In R. Dimitriu & M. Schlesinger (Eds.), *Translators and their Readers* (pp. 255–270). Les Editions du Hazard.
- Siren, S., & Hakkarainen, K. (2002). Expertise in translation. *Across Languages and Cultures*, 3(1), 71–82. <https://doi.org/10.1556/Acr.3.2002.1.5>.
- Sternberg, R. (2001). Metacognition, abilities, and developing expertise: What makes an expert student? In H. Hartman (Ed.), *Metacognition in Learning and Instruction: Theory, Research and Practice* (pp. 247–260). Kluwer Academic Publishers. https://doi.org/10.1007/978-94-017-2243-8_12
- Vanvelzen, J. H. (2012). Teaching metacognitive knowledge and developing expertise. *Teachers and Teaching: Theory and Practice*, 18(3), 365–380. <https://doi.org/10.1080/13540602.2012.629843>.
- Veenman, M. V. J., Van Hout-Wolters, B. H. A. M., & Afflerbach, P. (2006). Metacognition and learning: Conceptual and methodological considerations. *Metacognition Learning*, 1, 3–14 <https://doi.org/10.1007/s11409-006-6893-0>
- Wallace, M. (2015). Team-based learning in introductory translation courses. In Y. Cui & W. Zhao (Eds.), *Handbook of Research on Teaching Methods in Language Translation and Interpretation* (pp. 27–45). IGI Global Education. <https://doi.org/10.4018/978-1-4666-6615-3.ch002>

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