The Effects of Self-Evaluation Writing Strategy Checksheets on Writing Self-Efficacy, Writing

Anxiety and Academic Writing Outcomes

Muhammad Fadzli Bin Abdul Hamid

Educational Science and Technology (EST) Programme

Faculty of Behavioural, Management and Social Sciences (BMS), University of Twente

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First Supervisor (Original): Dr. Alieke van Dijk

First Supervisor (Replacement): Dr. Ilona Friso-van den Bos

Second Reader: Dr. Chandan Dasgupta

Abstract

Academic writing is a key feature of higher education, yet some students face extensive difficulties finding success in academic writing. Factors such as low writing self-efficacy and high writing anxiety can hinder students' ability to produce the desired writing outcomes. As a result, they struggle to keep up with the academic requirements of their courses. Previous studies have broadly examined how different intervention strategies can support the writing process. This study seeks to investigate if a specific identified intervention – using writing strategy checksheets to facilitate self-evaluation – can influence the writing self-efficacy and writing anxiety of students in a pre-master's course at a university in the Netherlands, thereby improving writing outcomes. A mixed methods approach with a single group pre-post research design was implemented to study the effects of the intervention on participants' writing self-efficacy, writing anxiety, and writing outcomes in the context of a writing assignment done collaboratively in dyads. 12 students enrolled in the course were initially involved as participants at the start of the study, of which six completed the required usage of the intervention by the end of the study. Changes in their writing self-efficacy and writing anxiety were assessed using digital questionnaires. A focus group discussion and an interview with three participants were also conducted to find out how the intervention was used and experienced by students in the writing process. Although no significant quantitative results were found to conclude that the intervention was effective at improving writing outcomes, enhancing writing self-efficacy, nor reducing writing anxiety, qualitative analysis of the focus group and interview transcripts suggested several benefits of the intervention. The use of writing strategy checksheets strengthened the process-oriented writing approach, provided students with clear writing goals, and facilitated systematic self-appraisal and evaluation of their writing. Indirect impact on increased self-efficacy and reduced anxiety is therefore likely. Future studies can consider studying the longitudinal effects of the intervention in both individual and collaborative writing contexts, and possibly adopting an experimental research design involving different groups of students so that the effectiveness of the intervention can be better studied. This study's findings suggest that there is value in incorporating writing strategy checksheets as part of the writing process in future university courses involving academic writing.

Keywords: writing self-efficacy, writing anxiety, writing outcomes, academic writing, self-evaluation, writing strategy checksheet, collaborative writing

Table of Contents

The Effects of Self-Evaluation Writing Strategy Checksheets on Writing Self-Efficacy, Writing Anxiety and Academic Writing Outcomes

Academic writing is a skill needed by all students in higher education. Academic writing describes a range of texts students are expected to be capable of producing, including essays, literature reviews, reports, theses, and dissertations (Ganobcsik-Williams, 2004). Assessment of academic writing is often used in universities as evidence of student learning and as a basis to evaluate the academic achievement of students (Hernández, 2012). Writing skills, particularly in the English language, are therefore critical for students to acquire to meet the academic requirements of their university courses (Ondrusek, 2012), as mastery of academic writing demonstrates students' proficiency in communicating thoughts and ideas logically through well-developed written content (Shahzad et al., 2021). Academic writing is even arguably a requirement for membership and participation in higher education itself (French, 2020).

When students in higher education are unable to execute academic writing successfully, several problems arise. Students may fail assignments, especially in their first year, due to what their lecturers perceive to be poor writing skills, causing students to feel alienated from their studies (French, 2018a). In addition, dysfunctional emotions, such as stress, anxiety, and lack of interest, can surface due to the challenges students face in the academic writing process (Lonka et al., 2014). Higher rates of student dropout are also experienced, especially in master's and doctoral programmes where graduate students who face difficulties related to thesis writing are forced to drop out when they are unable to keep up with their programmes' requirements (Tremblay-Wragg et al., 2021). It is therefore critical that students in higher education are sufficiently supported to help them develop their academic writing mastery and enable them to complete their university trajectories.

However, mastering academic writing in the English language is not a straightforward task for several reasons. First, academic writing is a complex linguistic task, requiring familiarity with not only linguistic features such as academic vocabulary, specific grammatical knowledge and discourse organization skills (Biber et al., 2016; Galloway & Uccelli, 2015), but also non-linguistic elements such as the socially situated practices within different disciplines in an academic community (Yu & Liu, 2021). Students would thus require time to acquire the knowledge and develop the skills they need to perform this highly complex task. Second, university programmes focus much of their instruction and assessment on the final *product* of academic writing – for example, a graded essay or a thesis – rather than on the *process* of language skills development (Seviour, 2015), thereby giving students little time and support to build their academic writing competence. For students to improve as writers, a more process-oriented approach is usually recommended, such as by engaging students in

learning activities that increase their appreciation of the criteria of good writing (Boud & Falchikov, 2006) or by giving students time to receive formative feedback and to reflect on this to improve their writing (Gibbs & Simpson, 2004). Yet, students are often not given the coaching and time needed to develop their writing skills gradually but instead are concerned about immediately meeting the writing outcome requirements of their courses.

Third, students in institutions of higher learning (IHLs) where the language of instruction is in English, which may not be the students' first language (L1), often face problems with writing, making them unable to cope with the literacy expectations of those IHLs (Bacha, 2002). This is also the case in the Netherlands, where the majority of programmes at the master's level are taught in English (Grift et al., 2012), despite most Dutch students having attended pre-university schools where teaching is mainly in Dutch, with English taught as a second language, or L2 (de Bot, 2014). University students for whom English is an L2 in particular struggle with producing academic writing texts in English as they try to meet the evolving demands of their academic contexts while adjusting their personal writing styles to fit academic writing conventions (Altınmakas & Bayyurt, 2019). Academic writing is found to be frustrating for these students as they see themselves as incompetent users of the L2 when compared to the language proficiency that is required for them at this academic level (Hyland, 2002). Fourth, the added pressure caused by assignment deadlines can also limit the time available for students to fully engage in the writing process of brainstorming, planning, organising, drafting, rereading, and rewriting their work, a process which English L2 users especially need to immerse themselves in over time to improve their writing proficiency (Budjalemba & Listyani, 2020). Therefore, it is unsurprising that academic writing in English poses a challenge to university students given the complexity of the skills they are required to execute in a time-bound and unfamiliar setting. Instead, they are saddled with feelings of incompetence and anxiety about their writing ability.

When struggling learners are faced with a complex task that requires persistence and time to overcome the challenges it poses, such as when mastering academic writing, a key is to develop the students' sense of *self-efficacy* (Margolis & McCabe, 2003). Self-efficacy refers to people's beliefs in their ability to perform a task, such as writing a good essay, assignment, or thesis, and is a significant predictor of whether an individual feels he or she is able perform any task successfully (Bandura, 1986). To be successful academic writers, especially as students move from one level of education to another, they need to evolve and have the personal agency to do so (Mitchell et al., 2021). Students' self-efficacy has been found to strongly predict performance, including of writing outcomes in academic settings, because a sense of personal efficacy – or a lack of it – determines the choices they make, the effort they expend to a task, the persistence they exert when faced with

challenges, and the emotions they experience (Pajares, 2003). It is, therefore, helpful to examine how writing self-efficacy can be enhanced in students, so that even students with initially low self-efficacy about their writing competence can be supported to achieve positive writing outcomes.

Success in academic writing can also be impeded by *writing anxiety*, which refers to a general avoidance of writing that might be evaluated (Hassan, 2001) and where writing is accompanied by unpleasant feelings such as nervousness and tension (Cheng, 2004). Feelings of inadequacy over one's language competence can lead to strong feelings of anxiety (Brown, 2008). Anxiety experienced by student writers thus negatively impacts writing performance by triggering unease about writing, reducing the willingness of students to engage in writing and interfering with the writing process (Karlina & Pancoro, 2018). Addressing how writing anxiety impedes students' academic writing development should therefore be of great concern to higher education institutions and more should be done to ensure that academic writing is not a fearful and traumatic experience for students (French, 2018b).

Studies on the effects of self-efficacy and anxiety on academic writing so far have mostly investigated how these individual variables, among others, affect academic writing performance. These studies have emphasised the use of quantitative methods to measure writing self-efficacy and/or writing anxiety to establish a relationship between these measures and writing outcomes. However, there is a lack of studies that focus on how effective specific interventions are at enhancing self-efficacy, lowering anxiety, and improving writing outcomes. In addition, the use of qualitative methods such as interviews to understand how an intervention works in practice to improve the academic writing process is also lacking.

One intervention of particular interest to this author is *self-evaluation*. Accurate and positive *self-evaluation* by students of their own writing progress, using an intervention tool like a *writing strategy checksheet*, has the potential to increase writing self-efficacy as students make connections between their application of writing strategies with successful writing outcomes (Walker, 2003). Self-evaluation, compared to peer or teacher evaluation, has also been found to reduce writing anxiety more effectively as it tends to promote positive rather than negative evaluations (Kara, 2013). Thus, the suggestion is that using writing strategy checksheets to facilitate self-evaluation can be a helpful intervention to increase writing self-efficacy, reduce writing anxiety and improve writing outcomes. Therefore, this study aims to investigate whether using writing strategy checksheets to facilitate self-evaluation is effective as an intervention to influence students' self-efficacy and anxiety towards writing and therefore improve writing outcomes in a university course.

Theoretical Framework

Writing Self-Efficacy

A key ingredient to improving one's chances of success in almost any task is self-efficacy. Self-efficacy refers to a person's confidence in his or her ability to perform required tasks to achieve specific goals (Sanders-Reio et al., 2014). In the context of writing, writing self-efficacy can be defined simply as the belief in one's ability to write (Martinez et al., 2011). More specifically, writing self-efficacy refers to one's beliefs of how well or successfully one can accomplish a writing task, based on self-perceptions of one's own writing skills (Pajares & Valiante, 2001). It is important to note that self-efficacy is a self-perception of one's own ability to execute a set of actions to complete a performance task – not a measurement of the actual skills themselves – and is also specific to certain tasks or situations (Bandura, 1986). Therefore, in this study, writing self-efficacy was examined in terms of the confidence students had in their ability to accomplish success in an academic writing task assigned to them.

Self-efficacy is critical to human learning and performance (Sanders-Reio et al., 2014). According to social cognitive theory, individuals' beliefs about their ability, also known as their self-efficacy, impact the expected outcomes of their actions because an individual with high levels of confidence to succeed in a task is more likely to anticipate successful outcomes (Pajares & Johnson, 1994). This is in line with Bandura's (1977, 1986) self-efficacy theory which posits that *efficacy expectations* – referring to whether someone believes he or she has personal mastery of a skill – and *outcome expectations* come together to influence the *behaviour* of a person to achieve a desired outcome. Students who are confident about their capabilities tend to work harder, persist longer, and make use of more diverse strategies to complete their tasks compared to those who doubt their abilities (Zimmerman, 2011). On the other hand, students who lack self-efficacy are more likely to feel threatened by a challenging task environment and are less likely to persevere in the face of setbacks (Bandura, 1995). Therefore, it is critical to foster high self-efficacy in students as it not only contributes to learners being more confident in achieving successful outcomes in learning tasks such as academic writing, but also makes them more willing to exert the right kind of effort needed to attain success in those tasks, therefore leading to more positive outcomes.

Self-efficacy is influenced by four key sources: mastery experience, based on a person's personal experience of accomplishment or success; vicarious experience, or seeing others perform successfully; social persuasion, such as verbal advice, suggestions, and encouragement from others; and physiological information, such as one's own feelings and emotional states (Bandura, 1977). Therefore, it follows that writing self-efficacy can be influenced by various factors in the process of learning, such as frequent comparisons with peers that can have either a positive or negative effect depending on whether one is a more successful writer or not (Pajares, 2003), or by favouring mastery goal orientation (focusing on learning) over performance orientation (focusing on

performance relative to others) in order to enhance self-efficacy (Brophy, 2005). Hence, suggested interventions to improve the writing self-efficacy of student writers should encourage students to reflect on mastery goals rather than performance-oriented goals, while keeping in mind the emotional states students may experience when engaged in a writing task.

Writing Anxiety

The second key factor this study sought to investigate is the effects of writing anxiety on academic writing outcomes. Daly and Miller (1975) define writing anxiety in individuals – also referred to as 'writing apprehension' (see Al Asmari, 2013; Daud et al., 2016) – as the avoidance of writing and the expectation of negative evaluations of one's written work. Writing anxiety includes both dispositional attitudes that exist over time and across different contexts, and situational attitudes specific to certain tasks (Riffe & Stacks, 1992). Writing anxiety can come about from students' unfamiliarity with using English for communication, the fear of making mistakes, the fear of teacher criticism and peer pressure (Tomlinson & Dat, 2004). Writing anxiety then manifests as nervousness, tension, preoccupation, or procrastination, which hinder the chances of success in a writing task (Martinez et al., 2011).

Writing anxiety can be conceptualised in three dimensions: somatic anxiety, reflected as negative feelings such as stress; cognitive anxiety, reflected in negative expectations of performance; and avoidance behaviour in the form of avoidance of writing (Cheng, 2004). Highly anxious individuals are more likely to have divided attention in processing information compared to non-anxious individuals when performing a task because their cognitive thought processes are distracted by the need to manage their somatic feelings of anxiety, thereby impairing their task performance (MacIntyre, 1995). Additionally, in the process of setting desired outcomes for learning when engaging in academic activities, also known as achievement goals, students with higher writing anxiety tend to display weaker tendencies towards achieving *mastery goals* but instead adopt *performance-avoidance goals*: this means that highly anxious students focus on concealing failure to avoid displaying incompetence rather than adopting a learning orientation geared towards understanding and mastering tasks for increased competence (Pajares & Cheong, 2003). This tendency to avoid writing and to even avoid taking courses to improve their writing can be particularly harmful to the students' ability to improve their writing in the long run, discouraging them from adopting the necessary strategies to improve their writing competence (Limpo, 2018). Thus, writing anxiety hinders the writing performance of students emotionally, cognitively, and behaviourally.

Previous research shows that students with high writing anxiety tend to receive lower grades on essays, writing tests and written exams due to the constant fears of criticism about their

writing decreasing their writing motivation, leading to writing avoidance and subsequently reduced writing performance (Daly, 1985; Lee & Krashen, 1997). Poor writing outcomes in terms of the accuracy and coherence of students' writing were also found in students with high writing anxiety, and this was attributed to the failure of highly anxious students to use prescribed writing strategies effectively during the writing process due to their anxiety (Al Asmari, 2013). Hence, evidence points to a need to reduce the writing anxiety that students experience in order to improve their academic writing outcomes.

Relationship Between Writing Self-Efficacy and Writing Anxiety

The two variables of interest mentioned thus far, writing self-efficacy and writing anxiety, are indisputably closely associated to one another and both have effects on writing outcomes. For example, student writers with high self-efficacy have been found to be less likely to experience writing anxiety and would subsequently do well in their writing (Woodrow, 2011). When approaching a task such as writing, people with high self-efficacy were more likely to confront anxiety-producing situations they might encounter – for example, by taking active steps to learn something new or putting in more effort to overcome a difficult situation – while those with low self-efficacy were more likely to avoid such situations (Pajares, 1997). As a result, high self-efficacy writers were able to reduce their feelings of anxiety towards writing through the actions they took when confronted with challenges in their writing process. A longitudinal study also found that students with high writing self-efficacy reported that they were more in control of their writing, more conscious of writing mechanics and more open to evaluation of their writing, leading to them having less writing anxiety over time (Rechtien & Dizinno, 1998). Therefore, high writing self-efficacy is highly likely to nullify the effects of writing anxiety and predicts positive writing outcomes (Pajares & Valiante, 1997). Conversely, students with low estimates of their own writing ability (akin to having low writing self-efficacy) were found to be more anxious about their writing as they did not believe they had the skills to succeed in a writing task, expecting instead negative outcomes from their writing, which contributes to negative feelings associated with writing (Palmquist & Young, 1992). Additionally, among L2 users, a student's low self-efficacy in using the English language successfully for a writing task forms a significant component of their language-skill-specific anxiety due to a general fear of negative evaluation of their linguistic aptitude (Cheng et al., 1999). It is therefore frequently recommended for student writing support services to focus on building the writing self-efficacy of students so as to reduce the writing anxiety they experience (Huerta et al., 2017).

However, the influence of writing self-efficacy on writing anxiety is not unidirectional; writing anxiety can affect the self-efficacy of a writer as well. High writing anxiety makes students

unwilling to express themselves in writing, lowering their confidence in carrying out writing tasks and the subsequent effort they put into those tasks, thereby limiting their writing self-efficacy and ability to produce positive writing outcomes (Erkan & Saban, 2011). A high level of writing anxiety can also impede the writing process, promoting instead writing avoidance; this then often leads to disappointing results and performance in writing tasks, which in turn contributes to these students' beliefs that they cannot be successful writers and thereby making them have low self-efficacy towards writing (Sabti et al., 2019).

In addition, even as students gain confidence in carrying out writing tasks successfully, writing anxiety itself can prove to be resilient and does not always decrease; this can be attributed to the perceived lack of ability or competence that students view themselves as having (Pajares & Johnson, 1994). Self-efficacy is not only about having the confidence to perform a task successfully but also the perception of one's own abilities, such as one's actual writing competence (Pajares & Johnson, 1994). Therefore, it is important for approaches that seek to increase the self-efficacy of writers focus not only on their feelings of confidence to write, but to also promote an understanding of student writers' actual writing competence so that their self-perceptions of their skills can improve as well. Moreover, there is evidence of students who experience high levels of writing anxiety still being successful language learners despite their anxiety (MacIntyre, 1995), pointing to the possibility of students improving in terms of their writing self-efficacy over time while continuing to experience writing anxiety.

Hence, while the two factors of *writing self-efficacy* and *writing anxiety* are interrelated, the directionality of the relationship cannot be firmly established: higher writing self-efficacy reduces the feelings of anxiety a student has towards writing, but it can also be said that anxiety about writing might reduce the self-efficacy a student has in his or her ability to carry out a writing task. Additionally, writing self-efficacy can evolve over time with students developing a sense of confidence in their writing competence, yet feelings of anxiety and expectations of negative outcomes about their writing can persist. Hence, both factors are related but can also function independently of each other. Therefore, this study investigated the effects of writing self-efficacy and writing anxiety on writing outcomes separately as two distinct variables.

Collaborative Writing as a Moderator of Successful Academic Writing

Writing is often viewed as a process of individual students practising their personal use of the language, but *individual* writing tasks are not the only type of writing task students experience. Instead, teachers, including those in IHLs, would often offer *collaborative* writing tasks to encourage students to engage with a writing partner to talk about their language use and to collaborate in the process of knowledge-shaping and meaning-making mediated through language (Swain, 2000).

Collaborative writing involves pairs or small groups of learners interacting and making decisions together to produce a jointly written text (Fernández Dobao, 2012). Despite its perceived benefit for educators to develop their students into competent academic writers, there are also potential drawbacks to collaborative writing that need to be considered, especially in the interplay with other factors such as collaborative partners' writing self-efficacy and writing anxiety levels.

On the one hand, collaborative writing provides learners with opportunities to regulate each other, reflect on the writing process together, and learn self-regulated learning strategies from one another, thereby increasing their confidence, enhancing their writing self-efficacy, and reducing anxiety (Qiu & Lee, 2020). Writing self-efficacy can also increase in dyads due to positive reinforcement from peer feedback about one's writing (van Blankenstein et al., 2019). Moreover, the process of collaborative writing with a partner helps to reduce writing anxiety as writers feel more reassured when sharing potential writing difficulties they experience with their peers (Jahin, 2012). Collaborative writing also improves writing outcomes as feedback on students' writing from a writing partner helps them to address mistakes that they may otherwise be unaware of (Jahin, 2012). Additionally, writing in pairs tends to produce longer and more accurate texts than writing individually because of the increased likelihood of discussion in language-related episodes and examination of the ways the writing can be improved (Fernández Dobao, 2014).

Besides the presence of a collaborative writing partner, other factors can affect the writing experiences of members in a dyad and the effectiveness of the collaborative writing itself. These include factors such as the learners' individual language proficiencies, their attitudes toward collaboration, the design of the task, and the nature of the interactions between learners (Storch, 2019). The quality of collaboration within a group can be assessed based on two constructs: equality, which refers to the comparative contribution to and control over the task each member has, and mutuality, which refers to the extent members provide mutual support and interact reciprocally with one another (Zhang & Chen, 2022). Higher quality of collaboration between members typically lead to better outcomes in learning tasks (Zhang, 2019). However, it is difficult to predict how factors such as each member's writing self-efficacy or writing anxiety will affect how successfully members of a dyad will collaborate, and how similarities or differences in terms of these factors will affect the writing outcomes when writing is done collaboratively. Much of the research into collaborative writing thus far focuses on the nature of the interactions between members of a dyad. No study, to the best of this author's knowledge, has looked into how varying characteristics within a dyad, such as members with different writing self-efficacy or writing anxiety levels, affect collaborative writing outcomes. This study therefore aimed to contribute to that knowledge base.

It is natural for student-formed dyads in a given class to be varied in their compositions if they are formed with limited prior knowledge of the characteristics of each student, and such a variation was also expected in this study. Previous studies have found inconsistent results in terms of how *matched dyads* – referring to partners within a dyad who share similar characteristics – compared to *mixed* or *unmatched dyads* with different characteristics. For example, in the context of language learning, matched dyads in terms of language proficiency were found to be able to collaborate more effectively as both members shared similar knowledge sets or were equally comfortable in a shared state of knowing (or not knowing) as much as their partner (Walls, 2018). On the other hand, a study in an L2 classroom found that the presence of at least one language-proficient partner in a dyad – be it in a high-high or high-low proficiency pairing – is a more pivotal factor in determining if a dyad is successful in collaborative language tasks because the more proficient member in a dyad is often able to direct the attention of the less proficient member to the vital linguistic competencies needed for a task (Leeser, 2004). Again, these previous studies have looked into how *language proficiency* differences of dyad members affect language task outcomes, but no study as yet have tried to examine how varying *self-efficacy* and *anxiety* levels of dyad members will affect the collaborative writing experience and academic writing outcomes for students, which the current study hoped to explore.

Strategies for Improving Writing Self-Efficacy and Reducing Writing Anxiety

So what options are there to support the academic writing process, especially in terms of influencing students' writing self-efficacy and writing anxiety? As mentioned earlier, Bandura's (1977) theory on self-efficacy provides a good starting point to investigating ways to enhance writing self-efficacy; he posits that four sources – mastery experience, vicarious experience, social persuasion and emotional states – can affect a person's sense of personal self-efficacy at performing a task. It therefore follows that student writers can have their writing self-efficacy enhanced through strategies that specifically target each of these sources of self-efficacy: to provide learners with *mastery experience*, they can, for example, be given opportunities to experience success in smaller writing tasks that will contribute to their belief that similar future writing tasks can be completed successfully as well; to promote *vicarious experience*, writing models or exemplars from comparable students can be offered to learners for their personal study on how others have successfully completed a writing task; *social persuasion* can be encouraged through feedback received by learners on their writing from various sources such as their peers and teachers; and finally, *emotional states* conducive to raising writing self-efficacy can be fostered through measures that can mitigate the emotional stress that can come from writing (Mascle, 2013). One such study that utilised social persuasion and emotional state management through cognitive behavioural therapy

and strategy instruction with a writing coach as an intervention had found positive effects on the writing self-efficacy and quantity of writing produced by middle school students (Daniels et al., 2020).

Besides employing ways to increase the self-efficacy of student writers, several strategies are also used in classrooms to manage students' writing anxiety. These include requiring students to plan their own writing outline or providing a recommended outline to students before they start on a writing assignment, providing students with supporting references to help them gain a better understanding of an assignment, encouraging students to discuss writing problems with peers or the course instructor, and actively pausing or taking breaks during the writing process to lessen feelings of anxiety (Jawas, 2019). Another method is to change anxious students' largely negative perceptions towards feedback and error corrections, focusing instead on reducing anxiety by creating the positive view that having mistakes corrected when being evaluated is simply part of the learning process and is essential to improving one's writing abilities (Qashoa, 2014). Previous studies such as these tended to investigate in broad terms how various intervention strategies might be helpful for students to manage writing anxiety, but this author has yet to find specifically a study that looked deeply at how one intervention, writing strategy checksheets that promote self-evaluation, affect writing self-efficacy and writing anxiety levels.

Using Writing Strategy Checksheets to Promote Self-Evaluation

Self-evaluation has long been used in education to improve learning outcomes because it helps to focus students' attention on the specific learning objectives of any learning assignment and enhances student motivation by encouraging them to commit to their learning goals (Ross et al., 1999). Positive self-evaluations by students on not only their ability, but also their progress, against the goals they had set can make students feel that they are learning and are that they are capable of improvement, thereby enhancing self-efficacy (Schunk, 1990; Schunk, 2003). Positive self-evaluations have also been found to reduce writing anxiety by providing encouragement to students so that positive emotions towards writing are created in learners (Wang & Zeng, 2020).

Because of these reasons, the approach to use writing strategy checksheets to facilitate self-evaluation (Walker, 2003) was deemed to be a suitable intervention. Writing self-evaluation by using a checksheet can help students to develop a more systematic process of evaluating their actual writing performance rather than basing the perceptions of their writing abilities on pre-existing beliefs (Graham et al., 1998). The process writing approach is a widely adopted approach that encourages writers to engage in several stages of writing, including pre-writing, drafting, revising at the whole-text, paragraph and sentence levels, proofreading and publishing (Sun & Feng, 2009). Hence, offering students a writing checksheet that promotes self-appraisal of the different parts of

their writing systematically can help students to evaluate if they are strategically implementing their pre-existing knowledge and skills to influence their writing; this in turn increases students' self-efficacy because the checksheet makes the perception of their writing competence more accurate and specific to the task requirements (Walker, 2003).

Besides offering students a checksheet to evaluate writing that they have already completed, one stage of writing that is at times overlooked or not given enough attention is the pre-writing stage. This can be detrimental to the writing process because goal setting at the pre-writing stage has been found to be essential to overcoming academic procrastination and instead promoting writing progress (Pravita & Kuswandono, 2022) as goal setting supports the self-regulation of students for what they can realistically achieve within a given period of an assignment (Abadikhah et al., 2018). Moreover, taking time to reflect on one's personal writing goals before writing can help students to adopt a more proactive approach to regulating their writing outcomes (Mitchell et al., 2019). Thus, a carefully designed writing strategy checksheet that incorporates elements of both self-reflection *before* starting to write (pre-writing) and self-evaluation *after* some writing has been completed may contribute to heightened self-efficacy and decreased feelings of anxiety in students.

There is a limited number of studies looking into the effectiveness of writing strategy checksheets or similar writing checklists specifically for academic writing among university students. Some studies have found that the use of writing checksheets do positively impact writing quality by providing prompts for students to think about various aspects of their writing, such as their organisation, grammar and mechanics (Gorjian, 2017; Javaherbakhsh, 2010; Nelson et al., 2012). However, these studies have primarily focused on studying the direct impact self-evaluation using writing checksheets have on writing quality, and not how such an intervention influences variables like writing self-efficacy and writing anxiety in students, which are themselves important factors contributing to positive writing outcomes. This study therefore aimed to investigate how using writing strategy checksheets for self-evaluation might influence students' self-efficacy and anxiety towards writing, and hopefully lead to successful academic writing.

Aims of Current Study

Research Questions and Hypotheses

This study seeks to answer the main research question: How does the use of an intervention, a writing strategy checksheet that facilitates self-evaluation, affect the academic writing experience of students in a pre-master's research course at a university in the Netherlands? The effects of writing self-efficacy and writing anxiety on writing outcomes in the context of collaborative writing in dyads were of particular interest. This study therefore aimed to examine how the use of writing strategy checksheets would affect students' writing self-efficacy, writing anxiety and consequently

their writing outcomes and overall writing experience when working collaboratively on a writing assignment. Thus, the following sub-research questions (RQ) were formulated:

Effect of writing self-efficacy and writing anxiety on writing outcomes:

RQ1: How does writing self-efficacy affect the writing outcomes of students in a writing assignment?

RQ2: How does writing anxiety affect the writing outcomes of students in a writing assignment?

Based on the literature review, it is hypothesised that there is a positive relationship between writing self-efficacy and writing outcomes (RQ1), and a negative relationship between writing anxiety and writing outcomes (RQ2).

Effect of writing strategy checksheets on writing self-efficacy and writing anxiety

RQ3: To what extent does the use of writing strategy checksheets affect writing self-efficacy of students?

RQ4: To what extent does the use of writing strategy checksheets affect writing anxiety in students?

Given that the intervention is meant to help students, and based on literature review, it is hypothesised that the use of writing strategy checksheets will improve writing self-efficacy (RQ3) and reduce writing anxiety (RQ4).

RQ5: How are writing strategy checksheets used by students in practice as an intervention in their writing process?

RQ6: How do students experience their use of writing strategy checksheets as an intervention to increase their writing self-efficacy?

RQ7: How do students experience their use of writing strategy checksheets as an intervention to reduce their writing anxiety?

These qualitative research questions aimed to find out from participants how they experienced their use of the writing strategy checksheet and how they perceived the checksheet as having (or not having) an effect on their writing self-efficacy and/or writing anxiety.

Effect of varying levels of writing self-efficacy and writing anxiety within and across dyads on the collaborative writing experience and writing outcomes

RQ8: Are there differences in the writing outcomes of students in a writing assignment based on varying levels of writing self-efficacy within and across dyads?

RQ9: Are there differences in the writing outcomes of students in a writing assignment based on varying levels of writing anxiety within and across dyads?

Given the conflicting and limited literature found in this area, for the current study, it was hypothesised that dyads with larger differences in terms of writing self-efficacy between members would have worse writing outcomes than dyads with members with more similar writing self-efficacy (RQ8). In addition, dyads with larger differences in terms of writing anxiety between members would have worse writing outcomes than dyads with members with more similar writing anxiety (RQ9). These hypotheses were based on the context of a relatively short timeline of less than three weeks available to participants to form their dyads and to complete the writing assignment. It was therefore predicted that unmatched dyads with members with more dissimilar writing characteristics would experience more difficulty collaborating effectively to produce quality writing outcomes, compared to more similar, matched dyads, as found in other studies (see Walls, 2018).

RQ10: How does the composition of dyads affect the experience students have when writing collaboratively on a writing assignment?

In line with the earlier hypotheses, it was predicted that members in a dyad with larger differences in terms of writing self-efficacy and writing anxiety compared to their dyad partner would be more likely to report negative experiences with collaborative writing compared to dyads with members of more similar levels of writing self-efficacy and writing anxiety.

Scientific and Practical Relevance

This study expands on existing research into the relationship between writing self-efficacy, writing anxiety and writing outcomes. However, the contexts of these previous studies vary greatly, for example, dealing only with middle school students, or only with learners of English as a second language or foreign language. Given the immediate challenges that students enrolled in a pre-master's course where the language of instruction is English might face, and when English might not be a student's first language, it was deemed worthwhile to examine how factors like self-efficacy and anxiety towards writing could derail the progress of students in mastering the academic writing competence required to succeed in such courses at a university. In addition, there is also a lack of research, especially qualitative, investigating how effective specific interventions, such as promoting self-evaluation using the writing strategy checksheet, could be at enhancing self-efficacy and alleviating anxiety towards academic writing. Hence, by adopting a mixed methods approach, this study could contribute to a richer understanding of how writing self-efficacy, writing anxiety and academic writing outcomes and experiences of students are affected when writing strategy checksheets are used as an intervention. Finally, previous studies have mostly focused on the effects of writing self-efficacy and writing anxiety on writing that is done *individually*. In contrast, the context of the current study involved academic writing for an assignment done *collaboratively*,

therefore allowing for the examination of how variables such as writing self-efficacy and writing anxiety affect the writing outcomes and writing experiences of students working collaboratively.

For practitioners, this study is helpful to uncover challenges that students who must produce academic writing in the initial stages of their university trajectory are facing. This could provide insight to educators on how self-evaluation might be used as an intervention to alleviate issues associated with low writing self-efficacy or high writing anxiety among students and to lay the groundwork for how writing strategy checksheets can be implemented to serve as a helpful writing support structure for such students.

Method

Research Design

To investigate the relationship between writing self-efficacy, writing anxiety and writing outcomes when writing strategy checksheets that promote self-evaluation were implemented as an intervention, a mixed methods approach to collect both quantitative and qualitative data was used. A single group pre-post research design was adopted in the context of an in-person pre-master's course in a university in the Netherlands. Quantitative data about participants' writing self-efficacy, writing anxiety and writing outcomes was analysed to find out whether the intervention had an effect on the self-efficacy and anxiety levels of writers, and on how far writing self-efficacy and writing anxiety levels predicted writing outcomes. Qualitative data provided insight into the experience participants had engaging in self-evaluation using the writing strategy checksheet, and also insight into how varying levels of writing self-efficacy and writing anxiety within a dyad affected their overall collaborative writing experience.

As the grades derived from the writing assignment in the course did have an impact on the academic progress of students, all participants were offered access to the same intervention, the writing strategy checksheet, so as not to deny any student from receiving its potential benefits. There was no control group in this study that did not get access to the intervention.

Context of Current Study

In the university course wherein this study was conducted, writing of three out of five assignments, including the assignment of interest of this study, had been designed to be done collaboratively in dyads. Prior to this study, existing support in the following forms were already implemented in the course to scaffold the students' academic writing process: a process-writing approach where students wrote a draft assignment first before submitting a final assignment, written and verbal feedback given by course instructors on the written drafts, peer feedback that arose from having most assignments done collaboratively in dyads, as well as supporting resources like recommended writing outlines and readings that were shared with all students.

To find out more specifically the kind of support that students in this course might need, a preliminary investigation was conducted with a convenience sampling of students ($N = 6$) from the previous run of the course a year earlier in 2022. The primary aim of this preliminary investigation was to inform the researcher on the specific writing challenges a student in this course might typically encounter and to tailor the intervention as best as possible to meet the needs of the course participants. A digital questionnaire was administered, inviting these students to share the difficulties they faced in writing for this course, and how they managed these writing challenges. This preliminary investigation revealed the following strategies (Table 1) which students either adopted or suggested could be done to improve the academic writing process in the course.

Table 1

Coding of Strategies and Suggestions to Cope with Writing Challenges in Previous Run of the Course in 2022 (N = 6)

Identified strategies and suggestions to cope with writing challenges in the course	Sample quote from respondents ($N = 6$)
Clarifying course objectives/expectations with instructors	"Make it more clear from the beginning that we basically had to hand in an entire research paper in small parts." (R1)
	"Always check the rubric and feel free to send emails to teachers. They are nice and always give suggestions back." (R4)
Looking for writing examples/models	"I am usually not worried about my writing skills, but I do search for examples in other academic papers." (R1)
	"To read more articles and try to analyse different parts of them to understand how to create their own article." (R2)
	"…search for examples on the internet." (R3)
Reviewing learning materials	"I try to spend more time to figure out as much as I can and watch the teaching videos repeatedly." (R2)
	"Improve the quality of minilectures provided... The content is perfect, but the overall quality… is something you start struggling with." (R6)
Collaborating with writing partner and/or coursemates	"I discuss my ideas with some peers to become clearer about them." (R2)
	"It helps me to ask someone to read it, but I feel more comfortable with someone I trust that would give me constructive feedback and not just criticise my work" (R3)
	"I usually talk with other students when feeling anxiety." (R4)
Taking a break	"I also tend to go out for a short walk when I face writer's block." (R3)
Reflecting individually on writing goals	"I tried to clarify for myself the purpose, why I was doing this. Because, in my belief, all procrastination, anxiety, and even fear to start is just the top of the iceberg. The real reason for this is unclear purposes and why I should do this." (R6)

Note. Full set of questions and responses from all respondents is found in Appendix A. 'R' in R1 to R6 refers to 'Respondent'.

This initial analysis of strategies already adopted by some student writers to overcome writing challenges suggests that they often turn to other resources like course instructors, peers and learning materials to help them increase their feelings of self-efficacy or reduce their anxiety about writing. Together with the earlier literature review conducted, the findings from this preliminary investigation suggest that more can be done to examine what students themselves can do on their own to be more self-reflective and self-evaluative to support their personal academic writing process. This lends support to this study's interest in investigating how a self-evaluation tool like the writing strategy checksheet can be used independently by student writers.

In practice, self-evaluation of one's own writing is already being done to a certain extent in this course, but it has not been systematically integrated into the writing process of the course. Elements of self-evaluation like acting on feedback given by a writing partner or by comparing one's current writing to the assessment criteria are present, but other elements, like focusing a student writer's attention on the progress he or she has made towards specific learning goals or reflecting on one's strengths and areas for improvement at different stages of writing, have yet to be structured and facilitated in the course. Hence, one of the main aims of the intervention used for the current study, the writing strategy checksheet, was to enable students to engage in self-evaluation of their own writing so that they have a stronger sense of self-efficacy and less anxiety about academic writing.

Participants

This study initially started with 12 participants (66.7% female) from a total of 16 pre-master's students enrolled in a pre-master's course offered at the University of Twente that began in April 2023; this represented an initial participation rate of 75.0%. The course was a mandatory course for pre-master's students to learn the process of research in education and training contexts and was assessed through written assignments. All participants provided baseline quantitative data of their writing self-efficacy and writing anxiety levels at the start of the course.

Out of the initial 12 participants, six participants did not complete the required usages of the intervention and the questionnaires to assess their levels of writing self-efficacy and writing anxiety by the end of the study, accounting for a non-completion rate of 50.0%. The reason given by participants for non-completion was mainly a lack of time to complete the study requirements due to academic commitments posed by the pre-master's programme, and other personal commitments.

Among the six participants (50.0% female) who did complete this study's requirements from start to finish, ages ranged from 21 to 36 years ($M = 27.67$, $SD = 6.68$). The majority (66.7%) reported their English proficiency as a second language, with 33.3% reporting English as a first language.

To examine how the intervention (the writing strategy checksheet) was used by participants in practice, six participants were invited to a focus group discussion after the writing assignment being studied had been completed. Due to personal circumstances, three participants either declined or were unable to take part in the focus group discussion. One participant was unable to attend the focus group discussion and had to be interviewed separately. As a result, a focus group discussion was conducted with two participants (Student A and Student G) and an interview with one participant (Student B).

Instruments

Intervention: Writing Strategy Checksheet

The first iteration of the writing strategy checksheet, also known as the academic writing checksheet, took inspiration from a story writing checksheet proposed by Walker (2003), which takes the form of a checklist that students can use in self-evaluation to identify how their knowledge of story parts (for example, introducing a problem; actions leading to a resolution) have affected the student writers' implementation of those parts strategically in their writing (i.e., whether the students have implemented a part well or whether it was included but still needs work). The use of such a checklist has been found to increase students' metacognitive knowledge, their self-efficacy and the accuracy of their perception of their own writing competence in line with specific writing requirements (Walker, 2003). Therefore, the writing strategy checksheet used in the current study (full version in Appendix B) incorporated a checklist which participants could use to appraise the component parts of their own academic writing.

Existing checksheets or checklists found on websites of university writing centres often included prompts to student writers guided by the process-writing approach, to ensure that writers have addressed and included the necessary components of an academic writing paper, starting from a good understanding of the subject, audience and purpose of the writing assignment, down to the process-oriented writing components like organisation, coherence of the whole text, cohesion of paragraphs and sentences, proofreading, editing and proper citation of references (see, for example, Academic Resource Center, Loyola Marymount University, 2022; The Writing Center, George Mason University, n.d.; The Writing Center, University of North Carolina at Chapel Hill, n.d.). Thus, the academic writing checksheet created specifically for this study included academic writing elements in a checklist that writers could use to self-evaluate their writing based on a process-oriented writing approach.

As had previously been found in the literature review, the pre-writing stage of process writing is often overlooked, and neglecting this stage can have detrimental effects on the progress of writing. Hence, the academic writing checksheet for this study was designed consisting of two parts

to give emphasis to both the pre-writing and the after writing stages. Part one contained items that achieved two main purposes: first, items that were important to clarify for writers the assignment task itself; and second, items that encouraged writers to take stock of their perceptions of writing at the start and to set goals for what they would hope to achieve at the end of a writing assignment. Table 2 presents an overview of the items and their purpose in part one of the checksheet that focuses on the pre-writing stage.

Table 2

Part One of the Academic Writing Checksheet (Pre-Writing Stage)

Item	Purpose
What is the main goal of your paper? What do you want to convey in your paper? Who is the (imagined) audience of your paper? Why is your paper important to your readers?	To clarify for writers the assignment task itself
How do you feel about academic writing in English? Do you find it easy or difficult, and why? What are your strengths with regard to academic writing (that you are aware of)? What concerns do you have about writing an academic paper in English, and how would you seek to address those concerns before starting to write? What do you hope to learn/gain/improve from this writing assignment?	To encourage writers to take stock of their perceptions of writing at the start and set goals for what they would hope to achieve at the end

Part two of the academic writing checksheet on the other hand contains items that are more typically found in existing writing checksheets, mainly a checklist of descriptors (Table 3) that student writers could use to self-evaluate the product of their writing at any stage of the writing process (for example, a draft or the final product). To encourage users of the writing strategy checksheet to view the process of self-evaluation as an iterative process that focuses on not just the writing product, but also the development of the writer's skills over time in relation to the writing assignment and the goals that he or she had set out at the beginning, two additional items were included (also Table 3).

Table 3

Part Two of the Academic Writing Checksheet (During/After Writing)

Item	Purpose
Evaluate your writing product using the descriptors below. Consolidate your ideas on what you have done well, and what areas need improvement. To be rated as "well done", "included but needs some improvement" or "not done" (non-exhaustive list; full list in Appendix B): - My draft/paper contains all the necessary sections. - My paper is written in a formal tone that is appropriate for an academic paper. - My writing is coherent across different paragraphs/sections (there are clear links between paragraphs/sections). - I have formatted my paper according to the APA 7 Style Guide. - I have proofread and edited my paper for grammar, spelling and punctuation mistakes. Based on your self-evaluation above, summarise what you have done well in your writing, and which areas need to or can be improved.	To engage student writers in self-evaluation of their writing using a predetermined checklist
Compared to earlier drafts / when I first started on this writing assignment, I feel my writing has improved in terms of… For future drafts/writing assignments, I would like to improve on…	To encourage students to engage in self-evaluation in order to review the development of writing skills over time

The academic writing checksheet was shared with all course participants as a printed document, as an editable Microsoft Word document, and as a fillable form on Google Forms. The items contained in all versions of the academic writing checksheet were identical. Study participants were given free choice as to which version of the academic writing checksheet they wished to use.

Writing Self-Efficacy Questionnaire

Throughout the study, participants' levels of writing self-efficacy were measured using the Post-Secondary Writerly Self-Efficacy Scale, or PSWSES, developed by Schmidt and Alexander (2012). The PSWSES utilises 6-point Likert scales, with 1 representing strong disagreement and 6 representing strong agreement, across 20 items to quantify writing self-efficacy. The sum of the scores, which can range from 20 to 120, thus form an overall score for the construct of 'writing self-efficacy'.

This instrument was deemed as appropriate for this study as it had been designed specifically to assess university students' writing process knowledge and the management of their personal writing processes (Schmidt & Alexander, 2012). Example items include: "I can articulate my strengths and challenges as a writer", "I can maintain a sense of who my audience is as I am writing a paper", and "I can write a paper without feeling physical discomfort". The full set of items in the

PSWSES that was administered to participants is found in Appendix C. In the original study, construct validity was established by a panel of tutors from a writing centre, and reliability for the scale was established to be high with α = .93 showing high internal consistency and reliability across all items in the questionnaire (Schmidt & Alexander, 2012). Using data from our study, the writing self-efficacy (PSWSES) questionnaire was found to have high internal consistency, with Cronbach's α values above .85 at two out of three instances the instrument was applied: before writing started and after draft writing was completed. However, when the instrument was used after the final written assignment was completed, the Cronbach's α value was lower at .59 (Table 4).

Table 4

Reliability Statistics of Writing Self-Efficacy Questionnaire Used

		Cronbach's alpha
	N of respondents	Writing self-efficacy questionnaire (*N* of items = 20)
Before writing started	12	.87
After draft writing completed	9	.90
After final writing completed	6	.59

In this study, the PSWSES was administered as a digital questionnaire via the web-based survey platform Qualtrics. Participants completed the instrument on their digital devices like laptops or mobile phones.

Writing Anxiety Questionnaire

Writing anxiety in participants was assessed using the 26-item Writing Apprehension Scale (WAS) developed by Daly and Miller (1975) which utilises 5-point Likert scales to quantify writing anxiety as an interval variable, with 1 representing strong disagreement, 3 representing neither agreement nor disagreement, and 5 representing strong agreement. Responses to the 26 items were then summed up to obtain an overall score ranging from 26 to 130, with higher scores representing higher levels of anxiety towards writing. Example items include: "I'm nervous about writing", "I expect to do poorly in writing classes even before I enter them", and "I am afraid of writing papers when I know they will be evaluated". The full set of items in the WAS that was administered to participants is found in Appendix D.

Reliability for the scale has consistently been high, with α = .94 reported in the original study (Daly & Miller, 1975) and Cronbach's α of more than .90 reported in subsequent studies (see Bline et al., 2001; Onwuegbuzie & Collins, 2001). This suggests that the instrument is highly consistent in measuring the construct of writing anxiety in earlier studies. Using data from our study, the writing

anxiety questionnaire was found to also be highly consistent, with Cronbach's α values above .90 at all three occasions this instrument was administered to participants (Table 5).

Table 5

Reliability Statistics of Writing Anxiety Questionnaires Used

		Cronbach's alpha
	N of respondents	Writing anxiety questionnaire (*N* of items = 26)
Before writing started	12	.96
After draft writing completed	9	.94
After final writing completed	6	.97

Similar to the PSWSES, the WAS was also administered as a digital questionnaire via the web-based survey platform Qualtrics. Participants completed the instrument on their personal digital devices.

Operationalizing Writing Outcomes

Writing outcomes for the purpose of answering the research questions in this study were operationalized based on two indicators. The first indicator was the grades students received for their writing assignment. Each assignment was graded by course instructors using rubrics which reflect the quality of the written work. Possible grades for a writing assignment range from 0 to 10, with a higher score representing better writing outcomes. Grades are based on the assessment of the assignment by course instructors, who are the professors that deliver the course at the university, based on a rubric that considers how well the research problem is defined, the connections made to concepts of interest, the quality of argumentation leading to clear research questions, the structure and coherence of the writing, and adherence to the American Psychological Association (APA) format for academic papers (see Appendix E for the full rubric).

The second indicator of writing outcomes was the overall contribution of each student writer to the outcomes of their writing; that is, how much a student wrote when writing collaboratively in dyads with a partner to produce a writing assignment. This was done by analysing the collaborative writing performed in dyads on Google Docs using the data visualisation tools AuthorViz and DocuViz which have been found to be helpful to analyse the collaborations between student writers in their own internal documents (Wang, 2016) by quantifying the contributions made by each writer to a shared file (Krishnan et al., 2018). It is important to note, however, that overall contribution towards a writing assignment is not a sure indicator of writing quality; nevertheless, text length does serve as a reliable proxy for overall writing proficiency, since a well-

written longer composition would require the use and coordination of a variety of writing skills compared to shorter contributions (Morphy & Graham, 2012).

Focus Group Discussion and Interview

A focus group discussion (FGD) was arranged to be conducted after the intervention had been administered up to the full completion of the writing assignment. The purpose of the FGD was to explore how the writing strategy checksheet was used by students in practice, and how it was perceived by students to have affected their writing self-efficacy and writing anxiety. The FGD also sought to examine if varying levels of writing self-efficacy and writing anxiety experienced by participants in a dyad might affect the collaborative writing experience. Due to personal circumstances, one participant was unable to participate in the FGD; instead, the participant was interviewed separately three days later using the same set of questions used in the FGD.

Both the FGD and interview took the form of a semi-structured interview with the researcher posing a fixed set of seven open-ended questions (Appendix F) to participants but with the possibility of the researcher asking additional questions based on the responses of participants. These questions focused on the participants' experiences as users of the writing strategy checksheet, with questions on how the writing strategy checksheet was used and their feelings when using the writing strategy checksheet. Example questions include: "Did you like the experience of using the writing strategy checksheet? Why or why not?" and "How did you feel when you had to evaluate the strengths and weaknesses of your writing?" Participants were also asked to describe how using the checksheet had affected their sense of writing self-efficacy and writing anxiety. An example of such a question is: "Did self-evaluation using the writing strategy checksheet affect your sense of writing self-efficacy in any way?"

After both the FGD and the interview, they were transcribed verbatim using the Amberscript speech recognition software that converts audio files into accurate text transcripts. The researcher then listened to the audio recordings again and edited the software-generated transcripts manually to increase the accuracy of the contents of the transcripts.

A coding scheme was not developed prior to qualitative analysis of the transcripts; instead, inductive coding was used to allow themes to emerge from the transcripts as the data was reviewed. The inductive coding approach was taken as it allowed more flexibility to categorise the diverse insights that participants might share about their experiences using the intervention and their feelings throughout the duration of the academic writing process of the assignment. Transcripts of the FGD and interview were first coded by the researcher using open coding to surface different themes (Moghaddam, 2006) related to how the checksheet was used as an intervention, and more specifically in terms of how the writing strategy checksheet was perceived by participants to have

affected their writing self-efficacy and writing anxiety. This was followed by axial coding to identify related ideas from open coding and to narrow the themes identified in open coding (Moghaddam, 2006).

Quantitative Data Analysis

Quantitative data from questionnaires and other sources like writing contributions of participants obtained from every dyad's Google Docs were first entered into SPSS Version 28. SPSS was also the software used for data analysis. For statistical tests to be considered significant, a critical value of $p < .05$ needed to be met.

To determine whether variables like writing self-efficacy and writing anxiety predict writing outcomes of students (RQ1 and RQ2), simple linear regression was performed. Given the small sample size, Bayesian linear regression indicators were also considered.

To find out if using the writing strategy checksheet as an intervention *after* writing changes the participants' writing self-efficacy and writing anxiety levels compared to *before* they started writing (RQ3 and RQ4), paired samples *t*-tests were carried out. To increase the possibility of finding a significant result, a non-parametric alternative, the Wilcoxon signed-rank test, was also applied given the small sample size of the study (Blair & Higgins, 1985).

To find out if differences in writing self-efficacy and writing anxiety between members of a dyad affected the writing outcomes of each dyad (RQ8 and RQ9), a Pearson correlation analysis was conducted to identify if there was any correlation between a dyad's composition and its eventual writing grade.

Procedure

Ethical Approval

Prior to the commencement of the study, ethical approval (request number 230448) was successfully obtained from the ethics committee of the University of Twente as human participants were to be involved in the study.

Recruitment of Participants

At the beginning of the course, all students enrolled were invited to join the study as participants through a short presentation by the researcher on the broad aims of the study and an accompanying information sheet (Appendix G) to provide details. Informed consent was obtained by requiring participants to give their explicit consent to participate through a digital acknowledgement (see Appendix H). Participants were briefed that participation in the study was voluntary and that they may drop out at any time without having to provide a reason. All participants were also required to use their respective student identification numbers when providing data that needed to

be monitored over time. Confidentiality of participants was assured, and identities of participants were pseudonymised wherever necessary.

Before Writing Started

Before students started work on their writing assignment, all study participants completed the pre-intervention digital questionnaires to assess their initial levels of writing self-efficacy and writing anxiety. The completion of these questionnaires took approximately 10 minutes.

Throughout the entire course, students were involved in a total of five graded assignments. The first assignment was not a conventional writing assignment but focused instead on the creation of references aligned with the APA format. The second assignment ("Assignment 2") was the key assignment of interest of this study. Assignment 2 required students to collaborate in dyads to write the introduction to a scientific paper. Before starting to write, participants were asked to use part one – the pre-writing stage – of the writing strategy checksheet to set goals for their writing. Participants were given the freedom to use part one of the checksheet independently at their own time without guidance from the researcher. Completing part one of the checksheet required approximately 15 minutes. In addition, all study participants were required to write collaboratively on Google Docs with the documents shared with the researcher so that the writing outcomes could be analysed.

After Draft Writing was Completed

After the draft of Assignment 2 had been completed by all participants and submitted to course instructors for feedback, copies of the collaborative writing done on Google Docs were downloaded by the researcher for analysis. Study participants were also required to complete a self-evaluation of their draft using part two of the writing strategy checksheet, and to complete the questionnaires to evaluate their levels of writing self-efficacy and writing anxiety after the first round of intervention using the writing strategy checksheet to evaluate their drafts.

After Final Writing was Completed

Once again, after the completion of the final Assignment 2 by all participants and after it had been submitted to course instructors for grading, copies of the collaborative writing done on Google Docs were downloaded by the researcher for analysis. Study participants were also required to complete self-evaluation using the writing strategy checksheet to evaluate their final writing product, still using part two of the checksheet, and to complete the questionnaires to evaluate their levels of writing self-efficacy and writing anxiety at the end of the assignment after using the intervention. Completed writing strategy checksheets were also collected for analysis of the participants' responses. Finally, after the writing assignments were graded by the course instructors, the writing outcomes in the form of grades for Assignment 2 were obtained for analysis.

Follow-Up Focus Group Discussion and Interview

Finally, to shed light on how helpful the writing strategy checksheets were as an intervention to influence writing self-efficacy and writing anxiety in participants, a focus group discussion (FGD) was conducted with two participants approximately two and a half weeks after the submission of the final product of Assignment 2. A separate interview was conducted with one participant three days after the FGD. The FGD took approximately 20 minutes to complete, while the interview lasted approximately 12 minutes. Both the FGD and interview were conducted by one researcher, audio recorded and transcribed verbatim.

Results

To reiterate, this study set out to investigate how the use of an intervention, a writing strategy checksheet that facilitates self-evaluation, affects the academic writing experience of students in a pre-master's course at a university. The variables of interest include writing self-efficacy, writing anxiety, writing outcomes and the overall writing experience of participants. The research questions (RQs) were categorizable into the following three main areas:

A) *Effect of writing self-efficacy and writing anxiety on writing outcomes (RQ1, RQ2):*

These questions were investigated using quantitative data and by analysing the collaborative writing outcomes of dyads on Google Docs to establish whether there were relationships between writing self-efficacy, writing anxiety and writing outcomes of students in a writing assignment.

B) *Effect of writing strategy checksheets on writing self-efficacy and writing anxiety (RQ3 to RQ7)*

RQ3 and RQ4 were investigated using quantitative data analysis to find out whether the use of writing strategy checksheets over time affected the writing self-efficacy and/or writing anxiety of students. RQ5 was investigated using qualitative analysis of the writing strategy checksheets used by students and through the focus group discussion and interview with selected participants. RQ6 and RQ7 were investigated based on the focus group discussion and interview conducted with selected participants to find out whether students experienced a change in their writing self-efficacy and/or writing anxiety when they used the writing strategy checksheet.

C) *Effect of varying levels of writing self-efficacy and writing anxiety within and across dyads on the collaborative writing experience and writing outcomes (RQ8 to RQ10)*

RQ8, RQ9 and RQ10 were investigated using both quantitative information about participant characteristics within and across dyads and their writing outcomes, and through the focus group discussion and interview conducted with selected participants to find out whether varying levels of writing self-efficacy and writing anxiety within and across dyads affected the collaborative writing experience of students and their writing outcomes in any way.

Descriptive Statistics

12 participants initially consented to take part in the study, with writing self-efficacy (N = 12, M = 86.08, SD = 11.45) and writing anxiety (N = 12, M = 63.00, SD = 20.94) values for all participants successfully obtained at the pre-writing stage. These 12 participants formed five full dyads, with the two remaining participants being part of dyads in which their partners did not consent to take part in the study. Hence, data derivable from the collaborative writing on Google Docs of only five dyads were included in this study.

Writing outcomes as a construct was operationalized as two possible but separate indicators: writing grades and writing contribution. Writing grades were the grades obtained by each participant after the final version of their written assignment had been assessed (N = 12, M = 6.41, SD = 0.17). It should be noted that both members of each dyad received the same grade for the shared piece of writing they submitted. Writing contribution was derived from analysis of the writing output in Google Docs produced by the ten students in the five dyads that were observed for this study. The contributions of each participant to both the draft and the final collaborative writing assignments were considered, with the sum contribution of participants, counted by the total number of characters contributed by each participant to both the draft and final combined (N = 10, M = 10,485.40, SD = 4,004.20), being used in subsequent quantitative analyses.

Assumption Testing of Quantitative Data

Before proceeding with other statistical procedures, tests of normality of both writing self-efficacy and writing anxiety of participants on all occasions (before writing started, after draft writing was completed, and after final writing was completed) found no evidence of non-normality given p-values of > 0.05 in all Shapiro-Wilk tests (Table 6). A visual inspection of the histograms created from the data also did not suggest that normality assumptions had been violated.

Table 6

Shapiro-Wilk Test Outcomes to Test for Normality of Writing Self-Efficacy and Writing Anxiety Data Collected Over Time

		Shapiro-Wilk significance value	
	N of cases	Writing self-efficacy	Writing anxiety
Before writing started	12	.95	.45
After draft writing completed	9	.91	.76
After final writing completed	6	.56	.09

Tests of normality using writing outcomes data, as well as visual inspection of histograms of the data, also did not find any evidence of non-normality. For writing grades and writing contribution, p-values of .50 and .37 respectively were obtained on the Shapiro-Wilk test.

Effect of Writing Self-Efficacy and Writing Anxiety on Writing Outcomes

To find out if writing self-efficacy and writing anxiety predicted for the writing outcomes of students (RQ1 and RQ2), the mean writing self-efficacy and writing anxiety values of all participants were first calculated, depending on the number of occasions when they had completed the relevant questionnaires (either one, two or three times). Then, the relationship between writing self-efficacy and writing grades for Assignment 2, and the relationship between writing anxiety and writing grades of Assignment 2, were separately examined using simple linear regression models.

There was found to be no significant relationship between an individual student's mean writing self-efficacy and his or her writing grade, with β = -.32, R^2 = .10, t = -1.06, p = .315. Similarly, a simple linear regression of individual students' mean writing anxiety and their writing grades found no significant relationship, with β = .34, R^2 = .12, t = 1.14, p = .280.

Alternatively, because assignments were written collaboratively in dyads and both members of a dyad received the same assignment grade regardless of their individual writing self-efficacy or writing anxiety levels, it was also possible to investigate if the mean writing self-efficacy and mean writing anxiety scores of the two students in each dyad predicted the writing outcomes of a dyad. The outcomes of simple linear regression analyses with dyads instead of individual students as the unit of analysis found no significant relationship between a dyad's mean writing self-efficacy and writing grade (β = -0.60, R^2 = .36, t = -1.29, p = .289) nor between a dyad's mean writing anxiety and writing grade (β = 0.62, R^2 = .38, t = 1.36, p = .268). Thus, based on simple linear regression, it cannot be said that either writing self-efficacy or writing anxiety is a significant predictor of writing grades of students in a writing assignment.

Because of the small sample sizes when using either students (N = 12) or dyads (N = 5) as units of analysis, Bayesian regression indicators were also considered. Bayesian regression analyses assuming standard reference priors were thus conducted. When examining the relationship between students' mean writing self-efficacy and individual writing grades, a Bayes factor of 0.36 was found. This suggests that the study data provided weak evidence in favour of the hypothesis that writing self-efficacy predicts writing grades. The posterior mean estimate for the regression coefficient was -0.006, which was within the 95% credible interval of (-0.018, 0.006). When the unit of analysis was changed to dyads, a Bayes factor of 0.60 was found, suggesting that the data provided weak evidence in favour of the hypothesis that a dyad's mean writing self-efficacy predicts the dyad's grades. The posterior mean estimate was -0.013, within the 95% credible interval of (-0.044, 0.019).

Similarly, when examining the relationship between students' mean writing anxiety and individual writing grades, a Bayes factor of 0.39 was found. This suggests that the study data provided weak evidence in favour of the hypothesis that writing self-anxiety predicts writing grades.

The posterior mean estimate for the regression coefficient was 0.003, which was within the 95% credible interval of (-0.003, 0.009). When the unit of analysis was changed to dyads, a Bayes factor of 0.64 was found, suggesting again that the data provided weak evidence in favour of the hypothesis that a dyad's mean writing self-anxiety predicts the dyad's grades. The posterior mean estimate was 0.01, within the 95% credible interval of (-0.013, 0.033). Therefore, Bayesian indicators based on the data collected found only anecdotal and limited evidence that either writing self-efficacy or writing anxiety predicts the students' writing grades.

Other than writing grades, the writing contribution, operationalized as the number of characters a participant contributed to a collaborative writing assignment, forms another measure of writing outcomes. To determine whether writing self-efficacy and writing anxiety predicted for writing outcomes in the form of writing contribution, simple linear regression was performed to test the relationship of writing self-efficacy and writing anxiety respectively to writing contribution.

The writing contribution, quantified in terms of the number of characters each participant contributed to both the draft and the final writing assignment, was first summed up to establish a total writing contribution value. For writing self-efficacy, it was found that higher writing self-efficacy did predict for higher writing contribution at a statistically significant level (β = 0.66, R^2 = .44, t = 2.51, p = .037). This suggests a significant positive relationship (Figure 1) between writing self-efficacy and writing contribution, and that writing self-efficacy accounts for 44% of the variance in writing contribution of a student.

Figure 1

Total Writing Contribution of Each Participant by Mean Writing Self-Efficacy Score (N = 10)
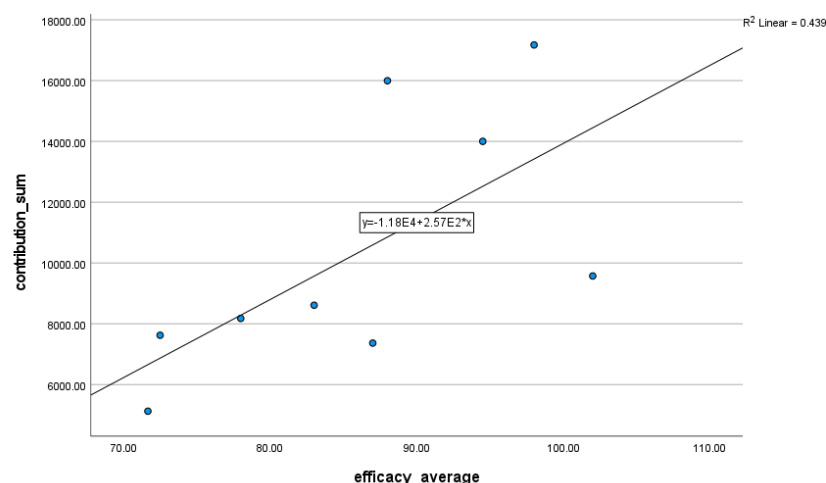
For writing anxiety, it was found that high writing anxiety did predict for lower writing contribution at a statistically significant level (β = -0.67, R^2 = .45, t = -2.54, p = .035). This suggests a significant negative relationship (Figure 2) between writing anxiety and writing contribution, and that writing anxiety accounts for 45% of the variance in writing contribution.

Figure 2

Total Writing Contribution of Each Participant by Average Writing Anxiety Score (N = 10)
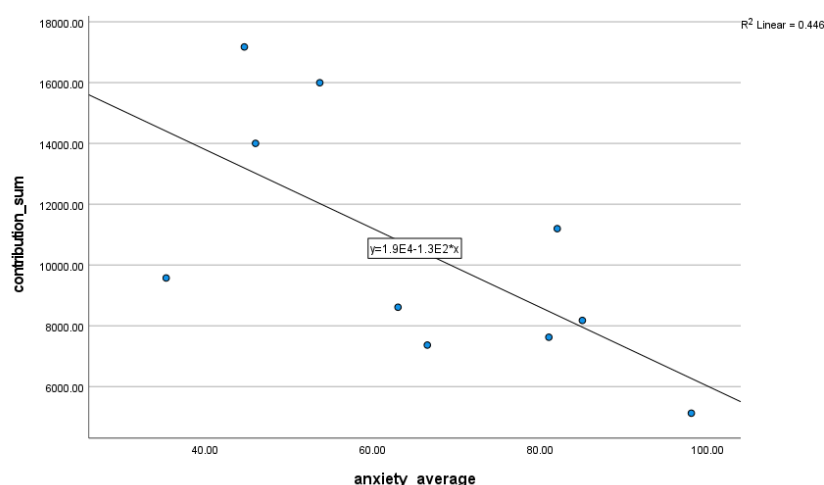
Effect of Writing Strategy Checksheets on Writing Self-Efficacy and Writing Anxiety

A primary focus of this study was to find out if using the writing strategy checksheet as an intervention throughout the writing process could improve participants' writing self-efficacy and reduce their writing anxiety levels (RQ3 and RQ4). This could first be observed by looking at the time trend data of how participants' mean writing self-efficacy and writing anxiety values changed over three points of time in the study: before writing started, after draft writing was completed, and after final writing was completed (Table 7).

Table 7

Comparison of Differences in Mean Writing Self-Efficacy and Writing Anxiety Levels Before Writing Started to After Draft Writing Completed to After Final Writing Completed

	N of paired cases	Before writing started	After draft writing completed	After final writing completed	Difference (after minus before)
Mean writing self-efficacy of participants	9	87.11	87.78	–	+0.67
	6	–	89.67	91.33	+1.67
	6	88.00	–	91.33	+3.33
Mean writing anxiety of participants	9	61.33	62.56	–	+1.22
	6	–	61.00	61.67	+0.67
	6	60.33	–	61.67	+1.33

Note. Data consider only cases where it was possible to pair writing self-efficacy and writing anxiety values of a participant at a later stage of the study to an earlier stage. Participants with missing data that made such comparisons impossible were excluded.

The general trend observed was that writing self-efficacy increased over time as more writing was completed and more use of the intervention occurred. However, writing anxiety also

appeared to increase over time, with higher writing anxiety measured in participants after completing writing and after use of the intervention occurred compared to before they started writing and using the intervention.

Paired samples *t*-tests were performed to see if there are statistically significant differences between the sample means across time. For writing self-efficacy, the mean difference after final writing, after draft writing and before writing started were found not to be statistically significant: $t(5) = 0.39$, $p = .712$ between final writing and draft writing, $t(5) = 1.08$, $p = .329$ between final writing and before writing, and $t(8) = 0.20$, $p = .850$ between draft writing and before writing. For writing anxiety, the mean difference after final writing, after draft writing and before writing started were also found not to be statistically significant: $t(5) = 0.22$, $p = .832$ between final writing and draft writing, $t(5) = 0.34$, $p = .750$ between final writing and before writing, and $t(8) = 0.53$, $p = .609$ between draft writing and before writing. Hence, these results suggest that there were no statistically significant differences in the levels of writing self-efficacy and writing anxiety of participants over time.

Because of the small sample sizes in all cases at different points in time ($N = 9$ or $N = 6$), a non-parametric test might be preferred. The Wilcoxon signed-rank Test could be used in place of the paired samples *t*-test to compare the writing self-efficacy and writing anxiety levels of each participant after the final writing was completed to before writing started ($N = 6$). For writing self-efficacy, the Wilcoxon signed-rank test indicated that the writing self-efficacy of participants after final writing was completed (mean rank = 3.50) was not different from the writing self-efficacy before writing started (mean rank = 3.50), $Z = -0.74$, $p = .462$. For writing anxiety, the Wilcoxon signed-rank test indicated that the writing anxiety of participants after final writing was completed (mean rank = 3.00) was not significantly higher than the writing anxiety before writing started (mean rank = 4.50), $Z = -0.32$, $p = .752$. Hence, no significant differences were found between the writing self-efficacy and writing anxiety levels of participants after the writing strategy checksheet intervention was used after writing was completed compared to before writing started.

Effect of Varying Levels of Writing Self-Efficacy and Writing Anxiety Within and Across Dyads on Writing Outcomes

This study also sought to examine how varying levels of writing self-efficacy and writing anxiety within dyads – that is, between the two members of each dyad – may affect the writing outcomes of that dyad when compared to other dyads with more similar compositions in terms of the characteristics of their members (RQ8 and RQ9). As dyads were formed based on the course participants' own preferences and not based on known initial writing self-efficacy and writing anxiety levels of participants, only these organically formed dyads were studied.

Five dyads in total had both members consenting to be participants of the study. The characteristics of these five dyads, including the individual mean writing self-efficacy and mean writing anxiety levels of each member, the difference in writing self-efficacy and writing anxiety between members of each dyad, and the writing outcomes in terms of writing grades of each dyad are presented in Table 8. In addition, each participant was categorised as having either low, moderate or high writing self-efficacy and writing anxiety based on how far each participant's individual mean writing self-efficacy and writing anxiety values differed from the mean writing self-efficacy (M = 86.75, SD = 9.35) and mean writing anxiety (M = 63.63, SD = 19.17) of all 12 participants in the study.

Table 8

Characteristics of Each Dyad's Composition in Terms of Writing Self-Efficacy and Writing Anxiety Differences and Writing Grades

Dyad No.	Mean writing self-efficacy of each dyad member	Difference in mean writing self-efficacy	Mean writing anxiety of each dyad member	Difference in mean writing anxiety	Writing grade
Dyad A	Student E: 72.50 (low)	14.50	Student E: 81.00 (high)	14.50	6.48
	Student I: 87.00 (moderate)		Student I: 66.50 (moderate)		
Dyad B	Student C: 83.00 (moderate)	11.50	Student C: 63.00 (moderate)	17.00	6.35
	Student D: 94.50 (high)		Student D: 46.00 (low)		
Dyad C	Student B: 71.67 (low)	16.33	Student B: 98.00 (high)	44.33	6.55
	Student F: 88.00 (moderate)		Student F: 53.67 (low)		
Dyad D	Student G: 98.00 (high)	20.00	Student G: 44.67 (low)	40.33	6.65
	Student H: 78.00 (low)		Student H: 85.00 (high)		
Dyad E	Student J: 102.00 (high)	11.00	Student J: 35.33 (low)	46.67	6.28
	Student K: 91.00 (moderate)		Student K: 82.00 (high)		

Based on writing self-efficacy values, Dyad D had the greatest difference (difference = 20.00) between its members, with Student G categorised clearly as having high writing self-efficacy and Student H having low writing self-efficacy. Dyads B and E had smaller differences in terms of writing self-efficacy between their members (difference $\leq$ 11.50). As for writing anxiety, Dyads C, D and E have a high difference between the writing anxiety values of its members (difference > 40), whereas Dyads A and B had comparatively much closer values in terms of their writing anxiety (difference < 20).

To find out if differences in writing self-efficacy and writing anxiety between members of a dyad affect the writing outcomes of each dyad (in terms of their writing grade), a Pearson correlation analysis was conducted. When looking at the differences in the mean writing self-efficacy

of members of a dyad, the results revealed a statistically significant positive relationship between the calculated difference in mean writing self-efficacy of dyad members and the writing grades of a dyad (N = 5, r = .98, p = .003). This suggests that the larger the difference in writing self-efficacy between the two members of a dyad, the higher a dyad's writing grade will be. However, there was no significant relationship found between the calculated difference in mean writing anxiety between dyad members and the dyad's writing grades (N = 5, r = .27, p = .663).

Qualitative Results Analysis

Analysis of Writing Strategy Checksheets

To address how writing strategy checksheets were used by students in practice as an intervention in their writing process (RQ5), the products of their self-evaluation at both the pre-writing and after writing stages were analysed. The responses participants (N = 10) gave to the prompts contained in the writing strategy checksheets were coded thematically in terms of what the writing strategy checksheets managed to elicit from the users. As our research question involved finding out how the checksheet served as an intervention to support participants in their academic writing process, responses in the checksheets were coded in terms of the various writing processes that the writing strategy checksheet enabled participants to acknowledge. Table 9 highlights the key themes that emerged from the responses given by participants in their writing strategy checksheets.

Table 9

Coding of Writing Strategy Checksheet Responses and Its Use in Practice

Writing processes identified by participants in the writing strategy checksheet	Sample evidence
Pre-writing	
Recognising time and resources needed for successful academic writing	▪ I think it (academic writing) takes a lot of time, but with the right resources and motivation it is very much doable. ▪ Unsure of commonly used databases for sources. I can read through related research papers and look at the sources/databases used.
Acknowledging difficulties with academic writing	▪ It is sometimes difficult to be precise in language and to paraphrase a sentence. ▪ Might have insufficient knowledge of vocabulary for good word use.
Setting clear writing goals	▪ *(Why is your paper important?)* Because it provides insight into how HRD can be better facilitated at their organization. ▪ To gain experience in anwriting for educational research, different from my technical background

Writing processes identified by participants in the writing strategy checksheet	Sample evidence
Acknowledging personal strengths	▪ *(How do you feel about academic writing in English?)* Quite easy, I wrote my bachelor thesis in English and that went quite well. Most of my bachelor was in English as well, so I had a lot of practice.
After writing	
Recognising strengths of one's writing	▪ In comparison with the draft, my writing improved significantly. I could manage to relate all my paragraphs and make cohesion and coherence in my writing. ▪ We also used references a lot to prove out theories and hypothesis. ▪ I have tried to read and apply many sources. And I have re-read these parts several times to spot mistakes in spelling or coherency.
Recognising problems with one's writing	▪ I need to improve my APA knowledge and my insecurities about them. ▪ Especially the APA need some improvements and a clear hypothesis is missing. ▪ To incorporate more academic language and structure in my sentences and connect my ideas more cohesively. ▪ Completing in time to proofread.

From the qualitative analysis, the two parts of the writing strategy checksheet appear to have usefulness to student writers as a means to engage in the process writing approach more thoroughly, giving emphasis to both the pre-writing stage and the self-evaluation of both the strengths and weaknesses of their writing at the after writing stage.

Analysis of Focus Group Discussion and Interview

In order to find out how the writing strategy checksheets were used by participants as an intervention (RQ5), how their experience of using writing strategy checksheets affected their writing self-efficacy and writing anxiety (RQ6 and RQ7), and how collaborative writing affected the writing experience of students (RQ10), coding of the focus group discussion (FGD) and interview conducted with selected participants (N = 3) was performed. Full transcripts of the FGD and interview are in Appendix I and Appendix J respectively. The three participants who were involved in the FGD and interview had the following characteristics:

- Student A (FGD), moderate writing self-efficacy (M = 87.33), low writing anxiety (M = 52.33)

- Student B (interview), low writing self-efficacy (M = 71.67), high writing anxiety (M = 98.00)
- Student G (FGD), high writing self-efficacy (M = 98.00), low writing anxiety (M = 44.67)

As open coding was performed on the transcripts, a coding scheme that covered the main outcomes of the FGD and interview relevant to the research questions was eventually created, highlighting the main themes related to the participants' use of the writing strategy checksheets that arose from the FGD and interview (Table 10).

Table 10

Focus Group Discussion and Interview Coding

	Description	Sample quote
How writing strategy checksheet was used		
Pre-writing for task focus and clarity	The checksheet was used by participant to refine understanding of task and the aims for writing	Like, so that was, um, I think it's nice to have that ability to, to think about those things before you start writing because it gives you a bigger idea of the whole, uh, writing itself, you know, like you get a better, uh, a fuller overview of your whole paper.
Pre-writing to generate ideas	The checksheet was used by participant to generate ideas prior to writing	Yeah, I basically used it to just compile thoughts really quickly. I'm not really one to like do a lot of pre-writing and I never have been. But it was good to kind of think through as I was reading the question, like where this would apply and then just get that down.
Reflecting on the writing process	The checksheet was used to reflect on the writing process	Doing the checklist after was just a good way to self-analyse where I was putting effort into versus oh yeah, did I even actually look at different vocabulary or was I just writing as I normally write? So it gave me an opportunity to reflect on 'had I put enough effort towards these different areas' in a more simplified format.
Reflecting on the writing product	The checksheet was used to reflect on the quality of the writing produced	Um, by having the self-evaluation, you know, better what you can improve. And I think if you know what your strong and weak points are, you are better in writing better in the end.

	Description	Sample quote
Experience using the writing strategy checksheet		
Positive experience	Using the checksheet viewed positively by participant	I think self-evaluation is important for growth, so I like it. I think it's good.
Negative experience	Using the checksheet viewed negatively by participant (e.g., seen as not useful)	I'm going to be frank that I don't generally use these tools because it feels like doing the work twice.
Effect on writing self-efficacy		
Positive effect	Using the checksheet increased writing self-efficacy of participant	Like I think it actually made it more, uh, you know, it gave me more confidence to actually continue on writing with knowing the things that I can improve, like point by point in general.
Negative or no effect	Using the checksheet lowered or had no effect on writing self-efficacy of participant	None found in the transcript.
Effect on writing anxiety		
Positive effect	Using the checksheet lowered writing anxiety of participant	Yeah, because I think as with all the most types of anxiety, it's going way worse in your head than it actually is. So just like using it and seeing, okay, it's not that bad. That was nice.
Negative or no effect	Using the checksheet increased or had no effect on writing anxiety of participant	However, I did find it sometimes confronting towards myself because I finished an English bachelor degree, so I know my English isn't bad, but still I'm a bit insecure about it… Just listing it for myself was like, okay, kind of scared, but it was fine.
Effect of collaborative writing		
Positive effect	Writing collaboratively viewed positively by participant (e.g., increases writing self-efficacy)	But I yeah, I think having somebody else look at the words you're producing and identify, 'Is this communicating what we want it to?' is very hard to do independently because you wrote it that way because you thought it did communicate, so.

	Description	Sample quote
Negative or no effect	Writing collaboratively viewed negatively by participant (e.g., increases writing anxiety)	Sometimes it was negative because the person is like really good. So he knows all that stuff. And it was like, "Oh, so your work is less or a bit?" Yeah. How do you say it? Like, not. Yeah, not as good. Um, so that kind of makes me more insecure.

Participants appeared to have a largely positive experience using the writing strategy checksheet, especially to guide their academic writing process. The writing strategy checksheets were found helpful by students "to just compile thoughts really quickly" (Student A), to give "a fuller overview of your whole paper instead of working through it from start to finish and like adding on" (Student G) and a "good way to self-analyse where I was putting effort into" (Student A). Hence, there was qualitative evidence to suggest that participants were able to use the writing strategy checksheet to support their writing process both before and after writing.

There was also strong evidence to suggest that using writing strategy checksheets have a positive impact on writing self-efficacy by helping students reflect on their writing, identify strengths and weaknesses, and gain confidence in their writing abilities. For example, Student G said, "[the writing strategy checksheet] gave me more confidence to actually continue on writing with knowing the things that I can improve, like point by point in general", while Student B said that "checking [the writing strategy checksheet] made me realise that most of the time it's already okay and not like below average". These quotes point to the possibility that a checklist for students to self-evaluate their writing against a set of criteria for good writing can foster in them a sense of confidence and self-efficacy towards writing.

However, the effect of the writing strategy checksheet on anxiety is more polarised, with Student B mentioning: "as with most types of anxiety, it's going way worse in your head than it actually is. So just like using it (the writing strategy checksheet) and seeing, okay, it's not that bad. That was nice." Conversely, the same student (Student B) found using the writing strategy checksheet "sometimes confronting" and that thinking about weaknesses in her writing made her feel "kind of scared". Therefore, there appears to be possible negative effects on writing anxiety when some participants used the writing strategy checksheet.

Finally, comments made by participants about their experience collaborating on a writing assignment with their dyad partners were largely positive, though there were some negative feelings raised by Student B, who was identified as having high writing anxiety. On the one hand, Student A mentioned how "it's nice to have somebody who is willing to thought partner on things that you're

confused on or listen when you're trying to work through things independently", and Student G stated how it was "really nice to have [a partner who] has some strong points so that we can complement each other well there". This suggests the benefit of having a collaborative partner to support one another in the writing process. However, Student B highlighted how collaborating with a writing partner can also be something that "makes me more insecure" especially when she views her writing partner as being "really good" and "he knows all that stuff". Therefore, this hints at a possible negative effect of collaborative writing on a student's writing anxiety, especially when partners are mismatched in terms of their sense of writing self-efficacy or writing proficiency.

Discussion

This study sought to examine the impact of the writing strategy checksheet for self-evaluation as an intervention on the academic writing experience of students in a pre-master's course. Research questions intended to investigate the effects of writing self-efficacy and writing anxiety on the writing outcomes of students in a writing assignment, and the extent to which the writing strategy checksheet could be a useful intervention tool to increase writing self-efficacy and/or reduce writing anxiety. Because writing in the context of the assignment studied was done collaboratively, of interest was also how differences in writing self-efficacy and writing anxiety within dyads affected the writing experiences of students.

Effects of Writing Self-Efficacy and Writing Anxiety on Writing Outcomes

As previously mentioned, writing outcomes in this study were operationalized in two ways. The first was in terms of the writing grade obtained by each dyad for their writing assignment, which is a numerical grade assigned by course instructors based on an assessment rubric for the assignment. The second was the writing output of each participant, measured by the total contribution of each member, in terms of the number of characters contributed, to the draft and final versions of each dyad's writing assignment.

This study did not find any significant relationship between the writing self-efficacy and writing anxiety of an individual student with his or her own eventual grade for the assignment, neither was any significant relationship found when dyads were taken as the units of analysis and the mean writing self-efficacy and writing anxiety values of both members of each dyad were analysed for their relationship with each dyad's eventual writing assignment grade. This result fails to support the hypotheses that were made about high writing self-efficacy and low writing anxiety having a positive impact on writing grades. The result is also contrary to previous studies which found that higher writing self-efficacy would produce better academic writing grades (Bruning et al., 2013; Pajares & Johnson, 1994) and that writing anxiety would have a negative relationship with writing grades (Kim, 2006; Sanders-Reio et al., 2014).

However, this result is similar to other studies that did not always find significant relationships between writing self-efficacy and writing outcomes (Hashemnejad et al., 2014; Zumbrunn et al., 2020) nor between writing anxiety and writing outcomes (Sun & Fan, 2022) .The result found in this study can partly be explained by the fact that good writing quality is not shaped solely by a student having high writing self-efficacy or low writing anxiety. Instead, writing quality is also determined by other influences such as supportive instructional practices (Lam & Law, 2007) or students' personal beliefs that writing can be incrementally developed through effort and practice (White & Bruning, 2005). In the context of this study, there were various other events that were happening concurrently as participants engaged in writing for the assignment; they were at the same time receiving instruction in the course itself on how to improve their writing quality and also received written feedback from course instructors on their drafts. These could arguably have contributed to changing students' self-efficacy in either direction depending on how students responded to the teaching instruction in the course, or their writing anxiety levels might have even increased because of negative teacher feedback received on their drafts. For example, Student G (high writing self-efficacy, low writing anxiety) mentioned: *"Because I remember when I was writing it (the assignment), I believe that was just after we got the feedback on the draft or something. And I was, I think maybe also in my answers on the online survey, is that my confidence in my writing maybe has gone down a bit because… this is a very different writing than what I did in my bachelor's thesis. So, I felt like, well, I'm probably pretty sure I can do this well. And then we got a lot of feedback about things that I usually am quite confident in."* This points to the possibility that the feedback received from course instructors on the draft did have some influence on the self-efficacy of even higher efficacy students. This is in line with the self-efficacy theory which suggests that personal experience of what can be perceived as 'failure' can be a source of negative mastery experience, thus affecting writing self-efficacy negatively (Bandura, 1977; Pajares, 2003). Therefore, the effects of other instructional support and how students personally responded to feedback cannot be understated and would have had a bearing on students' writing self-efficacy, writing anxiety and the writing outcomes. Of course, this does not discount the fact that despite these other variables, like ongoing instruction and additional feedback from other sources, existing concurrently, the effects of writing self-efficacy and writing anxiety on writing outcomes should still theoretically be observable. More research is therefore needed, possibly to isolate and study the effects specifically of writing self-efficacy and writing anxiety on writing outcomes by controlling for other factors, notably the teacher feedback received from course instructors just one or two days after draft writing was committed, that were especially salient in this study and could have impacted the self-efficacy and anxiety levels of participants in significant ways.

In addition, what might have obfuscated the impact of writing self-efficacy and anxiety on writing performance particularly in this study is the collaborative nature of the assignment: when writing in pairs, an individual student's low writing self-efficacy or high writing anxiety may not affect the final writing outcome as significantly compared to if the writing assignment was an individual assignment. When working collaboratively in dyads, a collaborative approach could enhance students' regulation of their writing process, regardless of their personal self-efficacy or anxiety traits, and that they are able to discuss issues with their partner to make effective decisions about how to improve the quality of their written work; this is in line with what was found in a study by Rahimi and Fathi (2022) when looking at the effects of wiki-mediated collaborative writing on writing performance. This was also evident in quotes from participants who cited how collaborative writing did effectively circumvent their personal lack of writing self-efficacy or writing anxiety issues. For example, Student A (moderate writing self-efficacy) reported the following about collaborative writing: *"I think having somebody else look at the words you're producing and identify, 'Is this communicating what we want it to?' is very hard to do independently because you wrote it that way because you thought it did communicate"*, and Student B (high writing anxiety) said: *"Um, but I really like the collaboration because if you have a question or anything, you can still ask and you can talk about it. So that was the positive side."* This suggests that even if a student writer is not fully confident about the work he or she has done and might have anxiety about it, having a partner to work with in a dyad can help students to take concrete steps to clarify their doubts and make improvements to the quality of their written work. Hence, this could partly explain why no significant relationship was found between writing self-efficacy or writing anxiety with writing outcomes. In order to find a possible significant relationship, future studies would need to look at individual assignments and the effects of the variables of interest on individual writing performance, rather than looking at writing done collaboratively.

It is worth mentioning that the results of this study did find a significant positive relationship between writing self-efficacy and the overall writing contribution a student made to the draft and final writing assignment, and a significant negative relationship between writing anxiety and the overall writing contribution made by a student. This is in line with findings made about how student writers with higher self-efficacy tend to be able to produce lengthier writing (Sun et al., 2022), and student writers with high writing anxiety tend to experience what is known as blocking during writing, resulting in shorter writing (Al-Shboul & Huwari, 2015). However, even though the relationships between writing self-efficacy, writing anxiety and writing contributions were found to be statistically significant, it has been found that the length of writing is, at best, only a small contributor to the variance seen in writing quality (Olinghouse & Leaird, 2009) despite the argument

that more writing skill is required to coordinate longer texts (Morphy & Graham, 2012). This is even more so in the context of academic writing, wherein conciseness and staying on track is seen as traits of 'good' writing whereas digressions are seen as undermining the communicative function of the academic writing text (Golebiowski, 2018). In the case of the assignment of interest in our study, a word limit of 1,500 words was imposed, and this might have contributed to the finding that students with higher self-efficacy ended up contributing more to their dyad's writing because students with greater confidence in their writing ability were more likely to have taken the lead in writing more of the assignment due to the careful control of the language that was needed to deliver concise yet effective writing within the stipulated word limit. Hence, given the need to produce concise academic writing, we should be cautious in putting too much weight on writing contribution and the length of writing as an indicator of true writing quality and positive writing outcomes in the academic writing context.

Usefulness of the Writing Strategy Checksheet

Quantitatively, there were no significant changes found in both the writing self-efficacy and writing anxiety levels of individual participants over time. Even though study participants had made use of the writing strategy checksheet a total of three times: once before they started writing, and twice more – once after draft writing was completed and again after final writing was completed – when measurements of both writing self-efficacy and writing anxiety were taken after the writing strategy checksheets were used, statistical analyses did not find any significant changes in the writing self-efficacy and writing anxiety levels.

This contradicts our hypotheses about the effectiveness of self-evaluation using the writing strategy checksheet as a means to increase writing self-efficacy and decrease writing anxiety. This also contradicts our initial literature review and other studies that have recommended the use of self-evaluation tools such as strategy checklists and process portfolios as effective ways to increase self-efficacy and decrease anxiety towards writing (see Nicolaidou, 2012; Walker, 2003; Wang & Zeng, 2020). Instead, this study is more aligned with other studies which have found that the fear of negative evaluations and concerns about meeting language proficiency standards when self-evaluation is conducted can contribute to more writing anxiety, especially among L2 learners (Cheng, 2002), like most of our participants. Based on our study's FGD and interview, we also found some suggestion of a self-evaluation intervention tool like the writing strategy checksheet not being very helpful for reducing writing anxiety, but instead might contribute to it. For example, Student A (low writing anxiety) said: *"I'm going to be frank that I don't generally use these tools because it feels like doing the work twice. And I honestly… I liked the 'after' process more than I liked the pre-writing just because the pre-writing felt kind of rushed for time anyway for our team."* This suggests that the

process of using the writing strategy checksheet, at least in the context of this specific study where time to complete the draft and final written assignments was rather short (under three weeks from start to finish), might be more anxiety-inducing because it felt repetitive and rushed. This time pressure to complete the writing assignment might have also contributed to participants having little time for meaningful reflection and self-evaluation using the writing strategy checksheet, therefore limiting the potential positive impact the checksheet could have had on participants' self-efficacy and anxiety levels. Student G (high writing self-efficacy, low writing anxiety) also commented that when comparing the feedback received from the course instructors on his dyad's draft to his own self-evaluation using the checksheet: *"I think maybe also in the self-evaluation, it just had me thinking like, okay, what was the feedback that I got again? And then, well, it needs a lot of improvement still."* This hints at the possibility that self-evaluation using the checksheet might only confirm the negative evaluations of their written work, thereby affecting writing confidence and self-efficacy, and possibly induce some anxiety in students about their writing.

Another possible explanation for why no significant changes in writing self-efficacy and writing anxiety were detected in participants over time despite their use of the writing strategy checksheets is that *preventing* a significant drop in self-efficacy or a significant increase in writing anxiety, instead keeping these variables relatively stable, is precisely the positive outcome of having the writing strategy checksheet as an intervention in the course. The course wherein this study was conducted is arguably intense, given that it is a mandatory course on writing a research paper in education and training contexts which all prospective master's students of the programme need to clear to proceed to the master's programme proper, and requires student to engage in very frequent academic writing over five assignments. High expectations for writing in university courses are likely to contribute to increased writing anxiety (Martinez et al., 2011), while any failure that is experienced can pose a significant hit to a student's sense of self-efficacy (Sabti et al., 2019). Hence, despite the absence of significant changes found in the writing self-efficacy and writing anxiety of participants in our study over time, the lack of significant *detrimental* changes in such an intense course can possibly be chalked up as a benefit arising from the use of the writing strategy checksheet.

It is worth noting that the quantitative analyses carried out to establish if there was or was not significant changes in writing self-efficacy and writing anxiety levels of participants over time were based on the PSWSES and WAS questionnaires completed by participants at three stages of the writing process. The internal consistency of both questionnaires was found to be high, with Cronbach's α values above .85 in almost all instances except one: when the PSWSES, also known as the writing self-efficacy questionnaire, was administered after the final written assignment was

completed (Cronbach's α = .59). This casts doubt on the internal consistency of the items in the PSWSES. This might be possible because the items in the PSWSES are not measuring a single construct; instead, writing self-efficacy is a multidimensional construct, as suggested by Schmidt and Alexander (2012), made up of factors such as writing process knowledge (i.e., having the ability to read, plan and revise like a writer) physical reaction (i.e., having the intrapersonal traits engendered by the physical act of writing), and time and effort (i.e., having the motivation to develop writing skills). The low Cronbach's α value when the PSWSES was administered the third time after final writing was completed might be attributed to how the participants might have developed in certain dimensions of writing self-efficacy over the course of the writing assignment but not in others, therefore leading to lower internal consistency in their responses to the writing self-efficacy survey. Deeper exploration of writing self-efficacy as a multidimensional construct is thus required.

Nevertheless, qualitative evidence points to the writing strategy checksheets not being completely unhelpful to improving the academic writing process. First, analysis of the responses given by participants to the prompts in the writing strategy checksheet finds the checksheet being helpful in providing writers with a structured, process-oriented approach to writing that includes setting clear goals for writing at the beginning and evaluating the strengths and weaknesses of one's writing product and one's writing skills. In particular, the pre-writing phase was seen as a novel strength of the writing strategy checksheet, with Student G stating: *"I don't usually do much preparation for writing, so this was new for me… I think it's nice to have that ability to think about those things before you start writing because it gives you a bigger idea of the whole writing itself… like you get a better, fuller overview of your whole paper."*

More specifically to writing self-efficacy, the process of self-evaluation using the checksheet can have the benefit of giving student writers a greater sense of confidence and control by making explicit and clear what their areas of strengths and weaknesses in writing are. By comparing their own writing to a set of standards contained in the checksheet, writers gain clarity of what they have done well and what still needs to be improved, similar to what has been found in other studies (Walker, 2003; Wang & Zeng, 2020). Student A (moderate writing self-efficacy) said: *"I think the evaluation process gave a critical lens to self-efficacy that generally… you have a blank. Like I either think I did well or I did not do well. But this gave a critical lens to the different pieces of self-efficacy and like the strengths or again in my case, like things that I hadn't previously thought of as a need for improvement."* Student G (high writing self-efficacy) concurred in saying: *"And I think that's very nice because… these are points in general in writing that I want to improve what I'm doing."* Student B (low writing self-efficacy) even credited the use of the checksheet for making clear to her what she could improve on when saying: *"Because I think in my weaknesses, I think there are a lot of*

opportunities to work on still… because I think most of the things you can still work or learn with writing and I think I after this sheet, I looked at the APA rules once more just to check it if I did it correctly, or at least as I think I did." These findings seem to clearly suggest that although changes to the participants' writing self-efficacy or anxiety levels due to the use of the writing strategy checksheet intervention may not be discernible in the quantitative analysis, the checksheets do seem to benefit users by making clear to them areas of their writing they can improve on, thereby theoretically enhancing their self-efficacy. This is also in line with other studies (Chelvan et al., 2021; Garofalo, 2013) which have found that checksheets do benefit students by providing them with the much-needed structure to facilitate the writing revision process and getting students to independently take the extra step to self-reflect and improve on their writing.

Effects of Varying Levels of Writing Self-Efficacy and Writing Anxiety on Writing Outcomes in the Context of Collaborative Writing

An interesting finding from the quantitative data analysis with dyads as the unit of analysis was that the larger the difference in writing self-efficacy between two members of a dyad, the higher the dyad's writing grade was. This ran counter to our original hypothesis that dyads with members that were more similar to each other, including in terms of writing self-efficacy, would be able to produce better writing outcomes (Walls, 2018). This was an area of study that is notably lacking in current literature, especially in the context of collaborative academic writing. However, further examination of literature found that learning does not occur necessarily more or less in either matched or mixed dyads; instead, the nature of collaboration would vary depending on the context of the learners and the task they are collaborating on (Henshaw, 2013). In general, collaborative writing is found to be helpful, especially for struggling writers, as it allows them to co-construct texts and meanings with a partner, negotiate ideas on what should and should not be in a text, and share the responsibility for the text they are collaboratively writing (Sturm, 2016). Hence, in this study, it can be posited that students with lower writing self-efficacy than their partner might be benefitting from the discussions that they have when collaborating with a higher self-efficacy partner, and that the difference in confidence levels to perform the writing task might have led to more fruitful conversations between dyadic partners who are dissimilar in writing efficacy. This is similar to what Leeser (2004) found when studying dyads with different pairings in terms of language proficiency, where the presence of a high proficiency member in a dyad helps to raise the quality of the collaborative task outcomes even when the other member has lower proficiency.

This supposition is apparent in what Student B (low writing self-efficacy, high writing anxiety) said about her experience working with her dyad partner, Student F, who is characterised as having moderate writing self-efficacy and low writing anxiety. Student B said: *"I really like to give*

feedback on each other because I think classmates can look at things differently and give you new insights. So I always let my work [be] checked by other people because I think that's most of the time really nice and I can learn from that." This highlights the first point on how students with low writing self-efficacy or high writing anxiety can benefit from collaboration in a mismatched dyad. On the flip side, Student G (high writing self-efficacy, low writing anxiety) who was paired with Student H (low writing self-efficacy, high writing anxiety) also had good things to say about the collaborative writing experience, stating: *"I have some strong points in what I'm good at in writing and what I'm good at in working on the research that we have to do. And then she has some strong points so that we can complement each other well there."* Thus, even though one might expect mismatched dyads in terms of writing self-efficacy or writing anxiety to not work well together, what is more important in the academic writing process is for collaboration to be fruitful and for students in a dyad to know how to leverage each other as resources to develop their own personal writing skills. Patterns of dyadic interactions have been found to be far more critical in determining the quality of collaboration and ultimately the outcomes of the collaboration in language tasks (Jang & Cheung, 2020; Storch, 2008). For example, simply having a highly proficient or efficacious student in a dyad does not necessarily lead to positive outcomes; instead, there is the chance of a proficient dyad member displaying dominant/expert characteristics, having a need to control the task and having poor perception of their partner's writing skills, thereby causing a negative impact on collaborative writing (Jang & Cheung, 2020). Therefore, in cases where collaborative writing is going to be a key feature of the learning process, it might be of pedagogical importance for teachers to demonstrate to learners how to collaborate effectively before they get started on their joint collaborative tasks.

Theoretical and Practical Implications

In summary, this study adds to existing research into the relationship between writing self-efficacy, writing anxiety and writing outcomes, especially in the context of a heterogenous group of students enrolled in a pre-master's course where the language of instruction, English, is the first language of some but certainly not all students. The challenges for students transiting to a more demanding academic programme at the master's level, especially when required to use a language for academic writing that L2 learners may not be so familiar with, is an area is not yet well-studied. Studies that have looked into the challenges English as L2 users face when transitioning to using English for academic writing have found that they struggle with adapting to the genre conventions of academic writing in English and found limited access to writing resources and guidance to aid their writing skills development (Ortega, 2009). The current study therefore contributes a little to the awareness of and knowledge about these students who may indeed be struggling with academic writing because of their low self-efficacy or high anxiety towards writing in English. This study also

takes a closer look at how a specific intervention – the writing strategy checksheet – intersects with other important variables that contribute to successful academic writing outcomes, specifically self-efficacy and anxiety towards writing. Previous studies in this area have suggested that further examination of the various factors that might influence the relationship between an intervention and the eventual student outcomes should be conducted (Chung et al., 2021; Zumbrunn et al., 2020). Although this study did not find significant quantitative results to confirm the efficacy of the intervention, this study's qualitative approach did contribute to a richer understanding of how writing self-efficacy and writing anxiety mechanisms affect the academic writing experiences of students, thus inviting further exploration into how writing interventions can be studied to see how they can better support low self-efficacy, high anxiety student writers in their academic writing development.

This study brings up practical implications for practitioners in education involved in teaching and supporting students in pre-master's courses. Writing in English is certainly not an easy task for students, especially L2 students, and academic writing itself can be an entirely new genre that prospective master's students have to quickly learn in order to successfully graduate from the pre-master's course. By highlighting the academic writing challenges students like these face in their university trajectory, this study raises awareness about the difficulties faced by this specific student population and encourages practitioners to consider strategies that can be incorporated into the academic writing process to better meet students' needs. The findings of this study also contribute to the call for more support to be given to students who might be struggling with the academic writing process because of issues like low writing self-efficacy and high writing anxiety and offers self-evaluation, and maybe even collaboration, as two starting points out of many other possible interventions that can be carried out to make academic writing in English a more manageable experience for low self-efficacy, high-anxiety student writers. For example, several studies have already started to look at how interventions to improve self-efficacy can have an impact on reducing writing anxiety and improve student writing. It is recommended in literature that for such interventions to be effective, they need to be regularly incorporated into a student's normal coursework and be perceived by students to be done in safe, low risk writing environments (Stewart et al., 2015; van Dinther et al., 2011). Interventions found to be effective for anxiety in particular tend to either facilitate the reappraisal of anxiety-inducing situations in a more positive light, such as an exciting challenge to overcome rather than a threat, or by encouraging students to express their worried thoughts so as to reduce the impact of such thoughts on working memory (Ganley et al., 2021, Park et al., 2014). To address writing anxiety, mindfulness-based interventions such as breathing exercises can even be taught to students to help them manage anxiety and stress

associated with writing tasks, leading to improved writing performance (Britt et al., 2018). Hence, the writing strategy checksheet that promotes self-evaluation regularly does appear to be one element in a more comprehensive framework of writing support structures that can encourage writers to view writing skills development as an opportunity for growth and to encourage positive, evidence-based appraisals of their own writing.

Limitations

A first and obvious limitation of this study is the small sample size. The study involved initially 12 participants, with only six completing the entire study. Hence, all quantitative analyses conducted from the data collected, be they parametric or non-parametric alternatives, do lack statistical power. Low statistical power reduces the chances of detecting a true effect while at the same time reducing the likelihood that a result found to be statistically significant in this study is a true effect (Button et al., 2013).

Related to the problem of a small sample size is the bias created by non-completion or dropouts of the study. As mentioned, six out of the initial 12 participants failed to complete the full requirements of the study, that is to complete the use of the intervention the required number of times and to provide measurements of their writing self-efficacy and writing anxiety at the appropriate intervals. If we were to take a closer look at the characteristics of the participants who completed the study compared to those who did not, it was found that out of four participants who would be categorised as having high writing anxiety, two failed to complete the full requirements of the study to the end. Out of three participants who are categorised as having low writing self-efficacy, two failed to meet the complete study requirements. In contrast, four out of six participants with low writing anxiety completed the study, and two out of three with high self-efficacy did the same. This suggests that the student writers for whom an intervention like the writing strategy checksheet was designed to help enhance their low sense of self-efficacy and reduce their high anxiety might be the ones who were not successfully using the intervention and studied to completion in this study. Instead, most of these students who experience high writing anxiety might be showcasing classic avoidance behaviours (Rezaei & Jafari, 2014), choosing to not engage in self-evaluation of their writing and choosing to not complete the intervention and the study.

Another issue is the limitations of the research design due to ethical constraints posed by research on human subjects. Ideally, the effectiveness of an intervention like a writing strategy checksheet should be studied in an experimental research design, in which participants are randomly assigned to separate test and control groups, with one group receiving the intervention and the other does not. An experimental approach would have stronger power to establish if differences in writing self-efficacy or writing anxiety levels can be attributed to the intervention.

However, in the context of the sample of participants we worked with in the course that was the focus of this study, it would not have been feasible nor ethical to exclude students from receiving the potentially beneficial intervention especially since the course is a mandatory course for these pre-master's students at the university and the assignment outcomes would contribute to the students' overall success or failure in the course. Hence, the decision was made not to adopt an experimental research design. However, given time beyond the scope of this study, it is possible for other researchers to use a delayed interventions with multiple groups design instead, where different groups of participants are provided access to the intervention at different points in time. For example, in such a design, one group doing a course at an earlier time can initially serve as a control group and not receiving the intervention while another group doing a similar course at the same time can serve as the experimental group. The roles of control and experimental groups can then be reversed for the next round of courses. This way, it is possible to study the effects of an intervention (or the lack of it) on the same group of students but at different points in time, without having to deal with fairness issues if using a two-group experimental design within the confines of a single graded course.

A final issue concerns the validity and accuracy of 'writing contribution' as a variable and proxy indicator of writing outcomes in this study. Even though writing self-efficacy and writing anxiety were found to have statistically significant relationships with the total writing contributions of each participant, the limitations on how 'writing contribution' was derived should be discussed. For this study, writing contribution was calculated based on character contributions in the Google Docs shared by dyads with the researcher, and that were analysed only at two points of the study: at the end of the draft writing phase and the final assignment writing phase. However, how collaborative writing was carried out throughout the writing process was not monitored. Hence, there is the possibility of writing processes and writing outcomes not being accurately captured in the Google Docs, for example, the possibility of students writing parts of the assignment while sitting together in person or online, or that writing was done by one student on another platform (such as via email) and copied and pasted into the Google Docs later by another student. Hence, the validity of the writing contribution outcomes derived from solely from analysis of the Google Docs after writing is at least questionable, unless stricter control or monitoring of how collaborative writing is carried out by dyads is imposed in future similar studies.

Conclusion and Recommendations

In conclusion, this study began with the intent to examine how writing strategy checksheets as an intervention can help to keep in check the detrimental effects low writing self-efficacy and high writing anxiety can have on students producing successful academic writing outcomes. Though the

study did not find statistically significant results to conclude that the intervention is effective in producing better writing outcomes, improving writing self-efficacy or reducing writing anxiety, it did find qualitative evidence to suggest that writing strategy checksheets do have their benefits in terms of strengthening the process-oriented writing approach, giving student writers a clearer understanding of their writing goals, and providing a checklist that allows them to appraise their writing in a systematic manner and evaluate for themselves what areas they have done well in and what they can improve. This, indirectly, is highly likely to contribute to feelings of self-efficacy about their writing and to some extent lower writing anxiety when writers evaluate their writing to be not as bad as what they had originally thought based on non-evidential beliefs they had about their writing.

Given the growing evidence, including from this study, that self-evaluation tools like a writing strategy checksheet do contribute to a student's sense of writing self-efficacy and possibly writing anxiety, it is worthwhile for future studies to examine the longitudinal effects of such interventions on students' academic writing. The application of the writing strategy checksheet as an intervention in this study was limited to a duration of under three weeks, with only three applications of the checksheet required, amounting to no more than 45 minutes per student. More frequent and sustained applications of the intervention, and its effects on student writing outcomes, over time should be studied. This is especially crucial given findings that indicate the possibility of writing anxiety actually increasing as students progress in their university trajectory as the perception of higher levels of writing competence being required at higher levels of their study is strengthened over time (Cheng, 2002).

This study was also conducted by looking at the effects of the intervention in a collaborative writing context, which brings with it other interactions within dyads that may obscure certain relationships between the writing strategy checksheet's use as a personal intervention, the writing self-efficacy and writing anxiety of dyad members, and the actual writing outcome which is ultimately a joint product of two writers in a dyad who would have had their own journey of struggle and growth in academic writing. Future studies would do well to define the scope of the research in precise ways such that that more conclusive findings on how the writing strategy checksheet influences academic writing, be it when writing is done either individually or in collaborative dyads.

To improve this study, a larger sample size is needed (at least $N \geq 40$) to enhance the statistical power of the study and increase the chances of finding true effects. Given that the pool of participants in this study's course is small to begin with (usually fewer than 20 each year), future researchers can consider involving students from similar pre-master's courses in other study courses in which academic writing is a major task students will undertake, or even to other universities. This

would also help to increase the generalizability of findings beyond just the specific course examined in this study. Of course, when expanding the study to include a larger sample that may include students from different courses and academic disciplines, differences in terms of participants' mean levels of writing self-efficacy and writing anxiety across different disciplines will need to be accounted for; differences in terms of how much writing is required in a particular discipline, the average language aptitude of students in a course and the motivation levels of students can vary significantly from one course to another (Raoofi et al., 2017). Hence, it is important that future studies remain open to findings about the effectiveness of any intervention as they can vary depending on the sample.

To offset the bias that might have been created by non-completion or dropouts, strategies would need to be implemented to encourage participant engagement in the study. Instructions can be made clearer for participants, and the process of self-evaluation using the writing strategy checksheet may even be structured into the existing lesson organisation of the course such that study participants can complete their use of the intervention and the questionnaires to assess their writing self-efficacy and anxiety levels within structured classroom instructional time rather than independently at their own time, which is harder to control. Some suggestions from literature to decrease the risk of dropout, especially in longitudinal studies, include adapting to participants' preferred modes of communication, reducing response burden as much as possible for participants by using short and well-designed data collection instruments, making the respondent experience as nice and enjoyable as possible through positive feedback to participants at each point of contact, and offering suitable incentives that fit the profile of the participants (de Leeuw & Lugtig, 2005). Another method to account for non-completion but likely to only be possible with a large enough sample size is to use statistical weights to account for missing data and therefore reduce the sampling bias that arises from non-participation and dropout (Höfler et al., 2005).

Finally, though an experimental design is seen as not ideal in the current context, future research can consider experimental designs where students in different courses are subjected to either the test or control conditions. The ethical issues associated with some students receiving potentially beneficial interventions while others do not are mitigated as all students within a single study course would be participating wholly in either a test or control condition, meaning that they would all have either received the intervention or not. This means that there would not be unfair impact on the performance of the students that may arise from the use or non-use of the intervention in any particular course, as all students would have been subjected to the same conditions. Research designs such as a delayed intervention with multiple groups certainly require greater time and effort to coordinate, and this is an area worth looking at in future studies.

Academic writing is a critical skill for any student to master to attain success in higher education. However, the complexity of the task, compounded by time constraints faced by students in their academic trajectory and the possible lack of support offered to students who have 'invisible' issues like low self-efficacy and high anxiety towards writing, makes their journey to become a proficient academic writer difficult. This study aimed to offer insight into the use of writing strategy checksheets for self-evaluation as a way to boost students' self-efficacy and alleviate writing anxiety. By investing in solutions to address potential barriers to writing and to cognitively reframe negative outlooks on academic writing held by students to more constructive perceptions, there is hope to transform academic writing from a threatening, anxiety-inducing challenge into an opportunity for growth and for students to taste academic success.

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Appendix A

Responses From Participants of Previous Run of the Course in 2022 on their Academic Writing Challenges

Question 1	Describe the biggest challenge(s) you faced when writing the assignments in this course. You can consider if you faced any of the following challenges: low confidence in language ability; inability to work well with others; anxiety about writing; procrastination; unclear expectations of the assignments; etc.

- It was the first time I wrote a research-report and conducted the analyses in R. In the beginning it was hard to understand what the objective of the course was and I fully comprehend our writing assignments
- unclear expectations of the assignments in the first and second part of the course
- Procrastination is the biggest challenge for me that is because I try to 'perfect' my writing so I spend a lot of time reading the sentences over and over again rather than writing more and then editing

   I also struggling with balancing my academic tone. I am still trying to figure out a balance between my critique and simply reporting facts
- Inability to work with others and unclear expectation of the assignments
- Writing the introduction before having a feeling for the variables and truly understanding them and the methods
- As an international student, it was hard to implement the APA (for example for tables, it is not clear from the guides at all), and use high-level academic words just for using them. The workload of the course also was sometimes challenging.

Question 2	When you feel (even slightly) anxious about writing for the assignments, what do you do to overcome that anxiety? You can think about different stages of the writing process (for example, what you do to motivate yourself to get started; what you do to sustain your writing momentum).

- I am usually not worried about my writing skills, but I do search for examples in other academic papers
- I try to spend more time to figure out as much as I can and watch the teaching videos repeatedly. Secondly, I discuss my ideas with some peers to become more clear about them. Then I start writing what is possible for me and then improve it little by little during the stage of editing.
- "It helps me to ask someone to read it, but I feel more comfortable with someone I trust that would give me constructive feedback and not just criticize my work.

   I also tend to go out for a short walk when I face writer's block or search for examples on the internet (can be time consuming though as there is a lot of information online and not all sources can be trusted)"
- I usually talk with other students when feeling anxiety.
- I wait as long as possible but when I get really anxious I just start so regain a feeling of control.
- I tried to clarify for myself the purpose, why I was doing this. Because, in my belief, all procrastination, anxiety, and even fear to start is just the top of the iceberg. The real reason for this is unclear purposes and why I should do this.

Question 3	Having completed this course, what do you suggest can be done for, or provided to, future students to improve their experience of writing for the assignments in this course, and/or to support their academic writing process?

- Make it more clear from the beginning that we basically had to hand in an entire research paper in small parts. This connection was not clear in the beginning and therefore made it harder to understand the aim of each individual part
- To read more articles and try to analyze different parts of them to understand how to create their own article.
- It was tricky sticking to very specific variables and research topic. I think it would be nice to have general topics in which we have more freedom to choose variables (with guidance to not make it as difficult as a real thesis)
- Always check the rubric and feel free to send emails to teachers. They are nice and always give suggestions back
- Like I mentioned earlier this was by biggest challenge: Writing the introduction before having a feeling for the variables and truly understanding them and the methods.
  So perhaps writing the introduction after the first session about quantitative data could be helpful.
- improve the quality of minilectures provided on Canvas. The content is perfect, but the overall quality (the sound, the presentation quality, the video quality) is something you start struggling with. I sometimes rewatch more than 3 times because of the monotonic voice.
  the offline lectures could be split up into two or more. It is impossible to be focused in the lecture, which longs more than 3 hours! The topics of the lectures were excellent and content as well, but because of exhaustedness, I lose my focus and motivation for work after the second hour.

Appendix B

Academic Writing Strategy Checksheet

Part 1: Pre-Writing Stage

What is the **main goal** of your paper? What do you want to convey in your paper?

Who is the (imagined) **audience** of your paper?

Why is your paper **important** to your readers?

How do you feel about **academic writing in English**? Do you find it **easy** or **difficult**, and why?

What are your **strengths** with regard to academic writing (that you are aware of)?

What **concerns** do you have about writing an academic paper in English, and how would you seek to **address** those concerns before starting to write?

Concerns I have about writing an academic paper in English	How I would address these concerns before writing

What do you **hope to learn/gain/improve** from this writing assignment?

Part 2: During/After Writing (this checksheet can be used multiple times as needed during the writing process)

Instructions: Evaluate your writing product using the descriptors below. Consolidate your ideas on what you have done well, and what areas need improvement.

Self-Evaluation	Well done	Included but needs some improvement	Not done	Additional comments
My draft/paper contains **all** the necessary sections (e.g. Problem Statement, Theoretical Framework, Research Questions).				
I have described the **problem** clearly and explained the **relevance** of the study to address the problem.				
I have demonstrated understanding of relevant **theories** and **concepts** to the study in the theoretical framework.				
I have stated my **research question(s) and hypotheses** clearly.				
My paper is written in a formal **tone** that is appropriate for an academic paper.				
I have used appropriate **vocabulary** and **sentence structures** for academic writing.				
My writing in each individual paragraph is **cohesive** (ideas are structured logically using topic sentences followed by supporting sentences).				
My writing is **coherent** across different paragraphs/sections (there are clear links between paragraphs/sections).				
I have added **citations** whenever I refer to someone else's work.				

Self-Evaluation	Well done	Included but needs some improvement	Not done	Additional comments
All the works I have cited are listed in the **references**.				
I have **formatted** my paper according to the APA 7 **Style Guide**.				
I have **proofread** and **edited** my paper for grammar, spelling and punctuation mistakes.				

Based on your self-evaluation above, **summarise** what you have done well in your writing, and which areas need to or can be improved.

Compared to earlier drafts / when I first started on this writing assignment, I feel my writing has **improved** in terms of…

For **future** drafts / writing assignments, I would like to improve on…

Identify an area(s) of writing that you would like to continue to work on

Appendix C

Post-Secondary Writerly Self-Efficacy Scale (PSWSES; Schmidt & Alexander, 2012)

"Writing" here refers to writing in the English language.

Rate how far you disagree or agree with the following statements (1 = strongly disagree, 6 = strongly agree).

1. I can identify incomplete sentences or fragments.

2. I can invest a great deal of effort and time in writing a paper when I know the paper will earn a grade.

3. I can articulate my strengths and challenges as a writer.

4. I can find and incorporate appropriate evidence to support important points in my papers.

5. I can be recognised by others as a strong writer.

6. When I read a rough draft, I can identify gaps when they are present in the paper.

7. I can maintain a sense of who my audience is as I am writing a paper.

8. I can write a paper without feeling physical discomfort (e.g. headaches, stomach aches, backaches, insomnia, muscle tension, nausea and/or crying).

9. When I read drafts written by classmates, I can provide them with valuable feedback.

10. When I have a pressing deadline for a paper, I can manage my time efficiently.

11. I can attribute my success on writing projects to my writing abilities more than to luck or external forces.

12. When a student who is similar to me receives praise and/or a good grade on a paper, I know I can write a paper worthy of praise and/or a good grade.

13. Once I have completed a draft, I can eliminate both small and large sections that are no longer necessary.

14. I can write a paper without experiencing overwhelming feelings of fear or distress.

15. When writing papers for different courses (for example, Biology, English and Philosophy classes), I can adjust my writing to meet the expectations of each discipline.

16. I can map out the structure and main sections of an essay before writing the first draft.

17. I can find ways to concentrate when I am writing, even when there are many distractions around me.

18. I can find and correct my grammatical errors.

19. I can invest a great deal of effort and time in writing a paper when I know the paper will not be graded.

20. When I work with a writing tutor, I can learn new strategies that promote my development and success as a writer.

Appendix D

Writing Apprehension Scale (WAS; Daly & Miller, 1975)

"Writing" here refers to writing in the English language.

Rate how far you disagree or agree with the following statements (1 = strongly disagree, 5 = strongly agree).

1. I'm nervous about writing.

2. People seem to enjoy what I write. (reverse)

3. I like to have my friends read what I have written. (reverse)

4. I expect to do poorly in writing classes even before I enter them.

5. I don't think I write as well as most other people.

6. It's easy for me to write well on writing projects. (reverse)

7. I feel confident in my ability to clearly express my ideas in writing. (reverse)

8. I would enjoy submitting my writing to a professional journal for evaluation and publication. (reverse)

9. I have no fear of my writing being evaluated. (reverse)

10. Writing is a lot of fun. (reverse)

11. I look forward to writing down my ideas. (reverse)

12. I don't like my writing projects to be evaluated.

13. When I hand in a writing project, I know I'm going to do poorly.

14. I avoid writing.

15. I like to write my ideas down. (reverse)

16. I never seem to be able to clearly write down my ideas.

17. Expressing ideas through writing seems to be a waste of time.

18. I have a terrible time organising my ideas in a writing course.

19. I enjoy writing. (reverse)

20. I like seeing my thoughts on paper. (reverse)

21. Handing in a writing project makes me feel good. (reverse)

22. I am afraid of writing papers when I know they will be evaluated.

23. My mind seems to go blank when I start to work on a writing project.

24. Discussing my writing with others is an enjoyable experience. (reverse)

25. I'm no good at writing.

26. Taking a writing course is a very frightening experience.

Appendix E

Assessment Rubric of the Writing Assignment

	1-4	5-6	7-8	9-10	Weight
Problem definition	Poor or incomplete analysis of topic and field. Written work does not adequately describe the significance or scope of the problem. No references are made to the recent developments of professional learning in healthcare.	Topic is introduced, but the author does not clearly distinguish what has and has not been studied before, nor are research goals clearly stated. Recent developments on professional learning in health care are only discussed on a very general level.	The overall problem, challenge, goal, or topic of the paper is described clearly. General developments on professional learning in healthcare are described, making adequate use of scientific literature.	The author introduces the topic, critically examines the state of the field, and states the purposes of the study. It is well-described how the study contributes to current literature on professional learning in health care.	20%
Theoretical Framework	There are conceptual flaws in the theoretical framework and definitions of key concepts are missing. Insufficient or minimal scientific discussion of relevant concepts. Insufficient use of provided literature to frame the proposed research question. Scientific terminology is not used or used inadequately.	Basic definitions of the key concepts and existing theories are given. However, the choice of the definitions and theories does not match the topic very well and/or they are described in a fragmented way. Resources are used superficially or poorly match the points being argued. The author uses scientific terminology but does not always make appropriate choices in terms that are used.	The author provides a definition of each concept and relates the concepts to SDL, though those definitions and relations could be explained more fully. The author used available literature, relevant to the context of the study. The scope and significance of the problem are reflected adequately in the literature analysis; author uses scientific terminology.	The author provides a clear definition of each concept and relates the concepts clearly to SDL. Moreover, the author thoroughly describes the scope, significance, and conceptual basis of the problem; uses scientific terminology appropriately. Literature is used optimally and is analysed meticulously.	35%
Research question & Hypotheses	Logical argumentation is missing. Research questions and hypotheses are missing, formulated in a non-transparent way or do not follow from the previously described literature.	Logical argumentation is present but needs improvement. States how the cited literature contributes to or justifies posing the research questions and hypotheses in an incomplete or superficial way. The research question and hypotheses are lacking a clear structure or wording needs to be clearer.	Logical argumentation is appropriate. Research questions and hypotheses are clearly stated. The author provides links to previously described literature, but the provided argumentation could be strengthened.	The argumentation is excellent. Author uses the cited literature to justify the proposed research as a logical next step. Research questions and hypotheses are clearly stated and contain a clear direction of what is expected (e.g., positive, negative effect, X higher than X).	20%

Structure & writing	The section lacks direction, with subtopics appearing disjointed. The section has no organization, with no logical sequencing or structure. No tables or figures are used when needed or they are used in a non-clarifying way. It is hard to know what the writer is trying to express. There are misspelled words, incorrect grammar, and improper punctuation. Writing pitfalls are present (meta-communication; incorrect tense; passive writing etc) Writing errors make comprehension almost impossible.	The section has weak organization, ineffective transitions and do not flow from point to point. Not all paragraphs follow in a natural or logical order. Transitions between paragraphs or sections are often lacking. Tables or figures (if applicable) are used but their place within the flow of information is unclear. Frequent spelling errors are made or incorrect grammar is used. Writing style is vague or unfocused and therefore is the meaning often hidden. Paragraphs often lack a clear structure and are therefore not focused on one message.	There is a basic flow from one section to the next, paragraphs are in a logical order, although transitions between paragraphs or sections are not always clear. The use of tables and figures (if applicable) can be improved by making them more concise and insightful. Writing is generally clear, but unnecessary words are often used. Meaning is sometimes hidden. Paragraphs have a good focus, but the sentence structure is often too unorganized. Minor spelling and grammar errors are made.	The section is written with a coherent, clear structure that supports the review. Transitions tie sections as well as adjacent paragraphs together. Tables and figures (if applicable) are used and referred to in an appropriate way. Writing is clear, effective and insightful. Paragraphs are well structured and have a good focus. Free of spelling or grammar mistakes. Smooth flow and effective transitions.	15%
Use of APA	Does not use APA format in citations, in-text statistical abbreviations, tables, and reference list. Citations for statements included in the text were not present, or references which were included were not found in the text. Style and format standards are not applied. Sources are plagiarized (*see note). Tables lack APA format (e.g., vertical lines, no italicized statistical abbreviations, wrong/missing information).	APA is used in an incomplete way. Inconsistent style and format. Lacks precision in use of quotations and citation of sources. Citations in the body of the paper at several points do not correspond with the reference list.	Uses APA format with minor violations. Citations within the body of the paper and a corresponding reference list were presented. Some formatting problems exist, or components are missing. Few errors of style and format. Most sources are documented correctly.	Uses APA format accurately and consistently in citations, in-text statistical abbreviations, tables, and reference list. All required citations were included in the paper. References matched the citations as well as the APA format. Style and format standards are consistently applied throughout the paper. Tables are in perfect APA format (e.g., only horizontal lines, italicized statistical abbreviations, all appropriate information present).	10%

Appendix F

Focus Group Discussion and Interview Introduction and Questions

Introduction:

Let me begin with some background. This study seeks to investigate the effects of using writing strategy checksheets on students' experience with academic writing. Feelings of anxiety about writing, and a lack of efficacy towards writing, can hinder academic writing. Therefore, a writing strategy checksheet was designed with the belief that engaging students in self-evaluation using a checksheet can improve writing outcomes.

Writing strategy checksheets are self-assessment tools used by writers to evaluate their own work and to guide them in the writing process. Such checksheets often contain checklists and question prompts to help writers produce better quality writing. The checksheet you have used was customized to fit the specific writing task of assignment 2 in this course.

You also completed writing perception surveys which were questionnaires to assess your levels of writing anxiety and writing self-efficacy before writing, and after using the writing strategy checksheets.

Let us begin with the first question.

Question 1: Recall what you did with the writing strategy checksheets. Briefly describe how you used the writing strategy checksheet or what you remember using the writing strategy checksheet for.

Question 2: Did you *like* the experience of using the writing strategy checksheet? Why (not)?

Question 3: How did you feel when you had to evaluate the strengths and weaknesses of your writing?

Question 4: Writing anxiety refers to the avoidance of writing and the expectation of negative evaluations of one's writing. Did self-evaluation using the writing strategy checksheet affect your sense of writing anxiety in any way? Why (not)?

Question 5: Writing self-efficacy refers to a person's belief or confidence in performing a writing task successfully. Did self-evaluation using the writing strategy checksheet affect your sense of self-efficacy in any way? Why (not)?

Question 6: How did writing collaboratively in dyads with a writing partner affect your writing experience?

Question 7: Do you have any other comments or suggestions to improve the design of the self-evaluation checksheets to improve the academic writing experience for students?

Appendix G

Information Sheet for Participants

Master's Thesis Project: The Effects of Self-Evaluation Writing Strategy Checksheets on Writing Self-Efficacy, Writing Anxiety and Academic Writing Outcomes

Thank you for your interest in participating in this research study. Before we start, we would like to give you some background information about the study. We will then ask you to give your consent for participation and for the use of your personal data.

Purpose of the Research

Academic writing is a key feature of higher education but not all students find academic writing easy. Factors such as low writing self-efficacy and high writing anxiety hinder students' ability to produce positive writing outcomes. This study seeks to investigate if an intervention, using *writing strategy checksheets to facilitate self-evaluation*, can improve the academic writing experience for students.

Components of the Research

We will begin by collecting data from you through a *digital questionnaire*. This questionnaire includes questions to assess your perceptions of writing in the English language. This should take about 10 minutes and can be done using a smartphone, laptop, computer, tablet, or any other device with an internet connection.

In this course, you will be working on a total of five assignments. Assignment 2 is a group assignment written in pairs (dyads), where students will write the introduction to a scientific paper. Part of this study involves qualitatively looking at the writing outcomes produced by each pair. Therefore, it is mandatory for students to write Assignment 2 collaboratively on *Google Docs*. Please set up a Google Docs document with both members of your dyad, and the researcher, as "Editors". Instructions (if you need them) on how to set up a Google Docs document to allow for this can be found here: https://bit.ly/Gdocsguide

> *Note: Be assured that the instructors of this course will NOT be grading assignments based on what is observable via Google Docs. Students are still required to download their draft/final assignment as a Word document from Google Docs for submission to Canvas (refer to Canvas for submission details of both the draft and final assignment, as required).*

For this study, students are also required to use an intervention, *writing strategy checksheets*, during the writing process. The writing strategy checksheets consists of two parts:

- Part 1: Pre-writing stage
    - For this study, participants are required to use the checksheet and answer the self-evaluation questions in Part 1 **BEFORE** they start work on writing Assignment 2.
    - This should take approximately 10 minutes.
- Part 2: During/After writing
    - Participants are required to use the checksheet in Part 2 to self-evaluate the product of their writing, and to answer the questions in Part 2, after they have completed a draft or a final version of the assignment.
    - For this study, we require all participants to complete Part 2 of the checksheet **TWICE**: once after completing the draft Assignment 2, and once again after completing the final Assignment 2.
    - This should take approximately 10 minutes each time.

A hard copy of the writing strategy checksheet is appended to this information sheet. Feel free to make additional copies, if needed.

Online versions of the writing strategy checksheets are available here:

- Writing Strategy Checksheet as an online form: https://bit.ly/WSConline
  - Both Parts 1 and 2 of the checksheet use the same link. Simply indicate which stage of writing you are.
- Writing Strategy Checksheet as a downloadable MS Word file: https://bit.ly/writingchecksheet

In this study, we request completed copies of the writing strategy checksheets be submitted to the researcher for further qualitative study. If you use the online form version of the writing strategy checksheet, your responses will automatically be sent to the researcher. If you prefer to use the downloadable version of the writing strategy checksheet or a printed hard copy of the checksheet, please email a copy of the completed parts of the checksheet to the researcher (see contact details at the end of the information sheet).

You will also be requested to complete a digital questionnaire to assess your perceptions of writing at two additional occasions: once after self-evaluating and submitting the draft Assignment 2, and again after self-evaluating and submitting the final Assignment 2. This should take about 10 minutes each time.

As we are also interested in studying the experience participants have when using the writing strategy checksheets, some of you will be invited to take part in a *focus group discussion* to share your thoughts and experiences in writing Assignment 2. We expect the focus group discussion to take about 45 minutes. Selected participants will be contacted via email. If contacted, we hope you would be able to generously spare us some time to provide your insights.

Benefits and Risks of Participation

The use of writing strategy checksheets that facilitate self-evaluation may be helpful to students, especially those with low writing self-efficacy and/or high writing anxiety. Self-evaluation has long been used in education to improve learning outcomes because it helps to focus student attention on learning objectives and actual performance. Self-evaluation using a checksheet may help students develop a more systematic process of evaluating their writing, thereby increasing their self-efficacy towards academic writing. The act of self-evaluation before and after writing may also reduce writing anxiety and lead to improved writing outcomes.

We believe there are no known risks associated with participation in this research study. This research project has been reviewed and approved by the BMS Ethics Committee of the domain Humanities & Social Sciences on 30 March 2023.

Procedure for Withdrawal from the Study

It is up to you whether you decide to take part in the study. Note that you can stop filling in the questionnaire at any time by simply closing it. If you decide not to take part in the study, or to stop at some point, this will have no consequences and you do not need to provide a reason.

How Personal Information is Collected and Processed

Your personal data will be carefully and confidentially processed in accordance with the requirements of the General Data Protection Regulations (GDPR) and any other standing regulations.

In this study, personal information including student numbers and email addresses will be collected at the point of filling up digital questionnaires and when collecting research artefacts including collaborative writing done on Google Docs and completed writing strategy checksheets. After such data is collected, it will be pseudonymised. This means that any results presented will contain only pseudonyms and will not be able to be used to identify you as an individual.

Retention Period for Research Data

Research data that is published in the graduation report (master's thesis) will be archived in the University of Twente Student Theses which is publicly available.

Any other research data collected during this study that is not included in the graduation report (master's thesis) will be destroyed immediately after the completion of the final project.

Contact Details

If you have any questions about the research study, please contact the researcher, Muhammad Fadzli Bin Abdul Hamid (Fadzli) via email.

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Secretary of the Ethics Committee/domain Humanities & Social Sciences of the Faculty of Behavioural, Management and Social Sciences at the University of Twente via email.

Appendix H

Consent for Participation in the Study

You are being invited to participate in a research study titled "The Effects of Self-Evaluation Writing Strategy Checksheets on Writing Self-Efficacy, Writing Anxiety and Academic Writing Outcomes". This study is part of a master's thesis final project carried out by Muhammad Fadzli Bin Abdul Hamid from the Faculty of Behavioural, Management and Social Sciences at the University of Twente.

The purpose of this study is to examine the effects of checksheets that facilitate self-evaluation on writing anxiety, writing self-efficacy and academic writing. The study is conducted within the duration of this pre-master's course.

This survey will take you approximately 10 minutes to complete. The data will be used to study the effects of using self-evaluation checksheets to improve the academic writing experience of students.

Before you start the survey, we will ask you to give your consent for participation in the study and for the use of your personal data. Your participation in this study is entirely voluntary, and you can withdraw at any time.

We believe there are no known risks associated with this research study; however, as with any online-related activity, the risk of a breach is always possible. To the best of our ability, your answers in this study will remain confidential. We will minimise any risks by safely storing data collected on cloud services protected by a UT account.

For further information, you may contact Fadzli via email.

Q1: I have read and understood the study information dated DD/MM/YYYY. I have been able to ask questions about the study and my questions have been answered to my satisfaction. (Yes / No)

Q2: I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason. (Yes / No)

Q3: I understand that taking part in the study involves completing questionnaires, using an intervention tool recommended by the researcher, working on one of the assignments for the course on Google Docs, and possible involvement in an audio-recorded focus group which will be transcribed, after which the recording will be destroyed. (Yes / No)

Q4: I understand that information I provide will be used for the preparation of a master's thesis that meets the requirements of the Final Project of the Educational Science and Technology (EST) programme at the University of Twente. (Yes / No)

Q5: I understand that personal information collected about me that can identify me, such as my student number and email address, will not be shared beyond the study team. (Yes / No)

Q6: I understand that personally identifiable data (such as student numbers) collected about me will be de-identified at the earliest stage of the research as possible through pseudonymization (for example, data collected from a single student across multiple sources such as in questionnaires, in observations on Google Docs, or in focus group interviews will only be identified as data from Student A). (Yes / No)

Q7: I give permission for the data that I provide to be archived in the University of Twente Student Theses so it can be used for future research and learning. The data will be absent of any personal identifiers, and all identities will be pseudonymized. (Yes / No)

Appendix I

Transcript of Focus Group Discussion

00:00:01

Researcher: Okay, so the recording has started. Okay. Thank you for being here. Yep. Let me begin with just some background. This study seeks to investigate the effects of using writing strategy checksheets on students' experience with academic writing, feelings of anxiety about writing and a lack of efficacy towards writing can hinder academic writing. Therefore, a writing strategy checksheet was designed with the belief that engaging students in self-evaluation using a checksheet can improve writing outcomes. Writing strategy checksheets are self-assessment tools used by writers to evaluate their own work and to guide them in the writing process. Such checksheets often contain checklists and question prompts to help writers produce better quality writing. The checksheet that you have used was customised to fit the specific writing task of assignment 2, the Introduction, in this course. You have also completed writing perception surveys, which were questionnaires to assess your levels of writing anxiety and writing self-efficacy before writing and after using the writing strategy checksheets. So let's begin with the first question. Right. So this is quite an open question. Just recall what you did with the writing strategy checksheets. Maybe can you just briefly describe how you used the writing strategy checksheet or what you remember using the writing strategy checksheet for?

00:01:23

Student A: Yeah, I basically used it to just compile thoughts really quickly. I'm not really one to like do a lot of pre-writing and I never have been. But it was good to kind of think through as I was reading the question, like where this would apply and then just get that down. Okay. Yeah.

00:01:48

Student G: Yeah, same for me, I don't usually do much preparation for writing, so this was new for me. Um, it was also something that was kind of, uh, a question as simple as "what is the main goal of your paper" is usually something you kind of just think of when you're writing your introduction. Like, okay, yeah, wait, what was like the, what was the full goal again, especially for an assignment like this, because you don't make the research yourself, right? Like, so that was, um, I think it's nice to have that ability to, to think about those things before you start writing because it gives you a bigger idea of the whole, uh, writing itself, you know, like you get a better, uh, a fuller overview of your whole paper instead of working through it from start to finish and like adding on, um, because you forgot some of the, the, the part, like especially like, I think especially like the audience and the main goal is very important to be mindful of.

00:02:49

Researcher: Yeah. So I think both of you mentioned maybe more about the Pre-writing part, but I think there was also a part about like after you...

00:02:56

Student G: After the...

00:02:57

Researcher: ...after you finished writing and then you were asked to evaluate and maybe answer some questions. Do you have anything to add about the… your, like how you used it after you have finished writing? Like, what do you use the checksheet for? Yeah.

00:03:13

Student G: Um, just, just for my recollection, I believe this one was because we did also the online one. Right? But this one was, uh, after we wrote the draft or after the full one?

00:03:29

Researcher: There were two occasions. I'm not sure whether you have you did it for both, but it's fine. You can just recall your experience after. Yeah.

00:03:37

Student G: Because I remember when I was, uh, writing it, I believe that was just after we got the feedback on the draft or something. And I was, I think maybe also in my answers on the online survey is that my, my confidence in my writing maybe has gone down a bit because it was this is a very different writing than what I did in my bachelor's thesis. So I was I felt like, well, I'm probably pretty sure I can do this well. And then we got a lot of feedback about things that I usually am quite confident in. So I think maybe also in the self-evaluation, it just had me thinking like, okay, what was the feedback that I got again? And then, uh, well, it needs a lot of improvement still.

00:04:16

Student A: Yeah. And then for me it was more so of because this is my native language, I consider myself a good writer. I've seen this type of writing before. It's just the amount of time and effort I put into it. More so and so. Doing the checklist after was just a good way to self-analyse where I was putting effort into versus oh yeah, did I even actually look at different vocabulary or was I just writing as I normally write? So it gave me an opportunity to reflect on 'had I put enough effort towards these different areas' in a more simplified format.

00:05:00

Researcher: All right. Thank you. Okay. Next question. Did you like the experience of using the writing strategy checksheet? Why or why not?

00:05:10

Student A: I'm going to be frank that I don't generally use these tools because it feels like doing the work twice. And I honestly, I really I liked the 'after' process more than I liked the pre-writing just because the pre-writing felt kind of rushed for time anyway for our team. But I liked the ability to critically look at very small pieces of how the writing process comes together. So I think it's a little bit of both.

00:05:46

Researcher: Okay. Yeah.

00:05:48

Student G: Yeah. I, I think that, um, you know, we got, uh, a checklist for all of the parts that we wrote, like for the introduction. And basically all of these things come back in the checklist in very short, like specific points. But this is more of a general overview for those points which is applicable to everything you write instead of just the single assignment that you're doing. So in that regard, I do think it's I agree that it is like I also like the evaluation part more. Um, might also be because I haven't had much, like this is the first time I actually worked with like a pre-writing part. So maybe if you do it more often you get more used to how you can actually use it in your work as well. Yeah. Um, but I think it's really nice because it's, uh, where you have for your general assignments or rubric specific to the assignment. This is really more like a rubric. And have I worked and thought about these points in general in writing and I think that's really useful.

00:06:49

Researcher: Okay. Yeah.

00:06:51

Researcher: All right, then we'll. Next question. How did you feel when you had to evaluate the strengths and weaknesses of your own writing?

00:07:00

Student A: I'm very comfortable with it. I think self-evaluation is important for growth, so I like it. I think it's good.

00:07:08

Researcher: Did you feel that it was kind of useless in that sense because you already had that sense of confidence and would you say that, making you sit through a self-evaluation process?

00:07:20

Student A: No, I mean, I think it was useful in the sense of even if you are confident, it doesn't mean that you've broken down. Like either you're not confident and then you find the skills to work on or you are confident and you see that these are the areas that you feel best at. And then it's a confidence booster, I guess.

00:07:38

Student A: Yeah, it's nice.

00:07:40

Student G: Yeah. Um. I also I think that it's. Because we got like feedback as well. It made me think a lot about my writing itself, like just in general, especially because, uh, so I moved from faculty EMCS to now then BMS. This is a BMS study and the writing just there's a big difference in the way that things are done and that, that it's tackled and you can really notice that. Um, so I think it also, um, more so put into perspective what I um, what I want to improve and what I have to pay more attention to. And in terms of how I felt during writing it, I think, I don't think I really had a strong feeling about it. Um, but it was more so just a good experience to have because it put those things into, you know, into clearer goals and things that I'm thinking, okay, so this is actually something that I did well, but this is there, but it really needs improvement. So yeah.

00:08:49

Researcher: Nice. All right. Okay. Um, so writing anxiety refers to the avoidance of writing and the expectation of negative evaluations of one's writing. So maybe, like, the feedback that you've mentioned is part of that. So did self-evaluation using the checksheet affect your sense of anxiety, writing anxiety in any way? Like did it help or no difference?

00:09:15

Student A: No difference for me, Yeah.

00:09:19

Student G: I think it's as I said, it's different from the evaluation that you get from your, uh, from the teacher. Uh, this is more general instead of specific. And I think that's very nice because it puts the specific feedback that you got and you can put it more into, well, these are points in general in writing that I want to improve what I'm doing. Well, um.

00:09:44

Researcher: So just coming back to the point on anxiety, so while using this right, so ignore the feedback. While using this (the checksheet), do you feel more anxious, less anxious?

00:09:55

Student G: When I was doing the evaluation part?

00:09:57

Researcher: When you are doing using this to do your own evaluation. Yeah.

00:10:02

Student G: Um. I don't think there was a big difference in that. But there might also be because I'm I

don't really think that I experience writing anxiety at least. Yeah so it didn't really give a big difference I think in writing anxiety per se.

00:10:22
Researcher: So it did not change your feeling towards writing, like while doing.

00:10:26
Student G: Towards writing...?

00:10:28
Researcher: Like because, the term anxiety again, as I mentioned, was like feeling of like wanting to avoid writing or having this fear of like negative feedback about your writing. So when you are kind of like forced to evaluate your own writing, did you get those feelings or.

00:10:46
Student G: No, no, no. Like I think it actually made it more, uh, you know, it gave me more confidence to actually continue on writing with knowing the things that I can improve, like point by point in general. So yeah, yeah.

00:11:02
Researcher: Okay. That's nice. Yeah. Yeah.

00:11:05
Researcher: Okay. All right, then. The next aspect that I was looking at is the writing self-efficacy. So self-efficacy refers to a person's belief or confidence in performing a writing task successfully. So again, did self-evaluation using the checksheet affect your sense of self-efficacy, meaning your belief or confidence that you're able to write well. So did using this change it in any way?

00:11:33
Student G: I think it's kind of the same. Um, by having the self-evaluation, you know, better what you can improve. And I think if you know what you're strong and weak points are, you are better in writing better in the end. Yes I do. I think it improves it.

00:11:48
Researcher: Yeah. Okay. Yeah, that's good.

00:11:50
Student A: I would agree. Yeah. I think the evaluation process gave a critical lens to self-efficacy that generally if you're just like, oh, I submitted it, you have a blank. Like I either think I did well or I did not do well. But this gave a critical lens to the different pieces of self-efficacy and like the strengths or again in my case, like things that I hadn't previously thought of as a need for improvement. So that's just an added benefit so that next time I am focusing on that more.

00:12:23
Researcher: Yeah.

00:12:24
Researcher: Okay. Nice. All right. The next question will take you a little bit away from the main focus of the study, but it's very important. How did writing collaboratively in pairs in dyads with a writing partner affect your writing experience?

00:12:40
Student G: Is this just for that first like, assignment?

00:12:43
Researcher: Yeah just for the first assignment? Yeah.

00:12:47

Researcher: Or you can also speak in more, in general, how does having to write with someone else affect your own writing experience? Yeah.

00:12:57

Student A: I mean, my partner is very honest and so it's nice to have somebody who is willing to thought partner on things that you're confused on or listen when you're trying to work through things independently. You go in a circle because I thought this, because I thought this because I got this versus with within a dyad, you have somebody whose own mind might be at a different point and is able to communicate that to you. So you kind of break out of the cycle of having confusion, right? If you are confused on anything. So I really appreciated it. And she's a great human. So it was just like nice to work with somebody who's really nice. So that may have just been like a one-off thing. But I yeah, I think having somebody else look at the words you're producing and identify, 'Is this communicating what we want it to?' is very hard to do independently because you wrote it that way because you thought it did communicate, so.

00:14:00

Student G: So yeah, I think for me, I I'm also very happy with my partner. We work together in the last module as well. Actually, our dyads, we sit, we sat together for both of the assignments as well to discuss with the two dyads our work together because it is really nice to have, you know, I have some strong points in what I'm good at in writing and what I'm good at in working on the research that we have to do. And then she has some strong points so that we can complement each other well there. Um, and there is of course the part of, although I noticed it less so with this specific, uh, maybe we write quite similarly, but usually when you write with a group or with someone, you kind of notice that there's two people writing, you know, in reading it. But I feel like that was not that much here, but that might just be because our writing styles are similar. Yeah. Yeah. I'm not sure how you actually experience that.

00:14:56

Student A: Yeah, I mean, write it all, read it all through, make minor changes. It's also APA7 is so by the book that the amount of diversity that comes from languages in these like if it conveys it, it's fine by me. Yeah

00:15:16

Researcher: Okay so I hear that both of you worked quite well with your partners and the familiarity perhaps, and I guess also...

00:15:26

Student A: Well, not for. Yeah, I mean, we talked a little bit, but I think just the ability to pick your own partner. Probably. I think. But we're probably both pretty 'easy to get along with' people. And I have worked in writing groups before where that was not the case. And so that piece doesn't really come into play when you're the person selecting who you're working with because you assumedly have some form of a causality to be with them.

00:15:59

Student G: Well it was also really nice is that with this I, you know, I think we all had some bad group partners every once in a while, but I'm very just with my partner, it's, you can, you know, I can write something and then be like, okay, the last few parts have to be done and then it has to be handed in. But you can just completely trust the other person to do it. And you know, it's going to be fine. And I think that's also part of you can select who it is. And we have just great classmates, I think. And then.

00:16:25

Student A: Yeah, I would agree.

00:16:25

Researcher: All right. Okay, then, uh, last question. Do you have any other comments or suggestions to improve the design of the self-evaluation checksheets to improve the academic writing experience for students?

00:16:42

Student A: Um, wait. Both of them?

00:16:46

Researcher: Um, so this is the first page on the pre-writing part and the next pages.

00:16:49

Student A: So either of them?

00:16:50

Researcher: Yep. You can.

00:16:51

Student A: Okay. Um, I think just because I'm someone who is quite visual, it may be nice to have the checksheet have components of like main goal is slightly larger, imagined audience is much smaller. What is important like having kind of a systemic way to see how much importance each of these takes up and whether or not they're in the correct order. It seems like they're basically in the correct order. But if there was a way to better visualise like what applies to each piece. So it seems like audience may connect to this, who is important. You know, just because I'm a more visual person. And then the checklist I thought was really good, but same thing. There might be there might be opportunities for putting like icons or something on it to help visualise. But when it comes to self-evaluation, I mean, like you already know, it's your own mind. So assumedly you are coming from something that isn't doesn't need to be super well explained.

00:18:13

Researcher: Okay. So I hear that maybe the design of it can be enhanced, but largely with the content, I guess you agree with the questions, but maybe like you said, maybe the organisation or the design of it can...

00:18:25

Student A: Yeah. With, with the questions themselves. I think with what you are trying to get at, I think it covers a lot of the areas that is less intuitive to people and I think that that's a strength within it. Yeah

00:18:47

Student G: Yeah, for me, the self-evaluation seems really nice and I think it's good in the way that it is for the pre-writing stage. I think just the application itself can be more, uh, suitable for like the time when the, the students make it. So, for example, I think it would have been very, uh, valuable if me and my partner would have both filled it in like right after the lecture and then compared it what we wrote. Because that can also, you know, you just had the same lecture in planning explaining your assignment, but then you get different ideas on what you want to write. And then, um, so I think that maybe in that regard there might be a bit of, you know, just the, the usage, when do you use it and in what way? But that's my only point there, uh, for how you can use it.

00:19:40

Student A: That's a very nice suggestion. Yeah.

00:19:43

Researcher: Okay. Anything else you'd like to add?

00:19:46
Student G: No, not for me, thank you.

00:19:49
Researcher: Very good.

00:19:49
Student G: Thank you.

00:19:50
Student A: Yeah, absolutely. Yeah.

Appendix J

Transcript of Interview

00:00:02

Researcher: Okay. All right. Yep. Thank you for being here. Let me begin with some background. So this study seeks to investigate the effects of using writing strategy checksheets on students experience with academic writing. Feelings of anxiety about writing and a lack of efficacy towards writing can hinder academic writing. Therefore, a writing strategy checksheet was designed with the belief that engaging students in self-evaluation using a checksheet can improve writing outcomes. Writing strategy checksheets are self-assessment tools used by writers to evaluate their own work and to guide them in the writing process. Such checksheets often contain checklists and question prompts to help writers produce better quality writing. The checksheet you have used was customised to fit the specific writing task of assignment 2, the Introduction, in this course. You also completed writing perception surveys, which were questionnaires to assess your levels of writing anxiety and writing self-efficacy before writing and after using the writing strategy checksheets. So let's begin with the first question.

00:01:05

Researcher: Right. So recall what you did with the writing strategy checksheets. Can you briefly describe how you use the writing strategy checksheet or what you remember using the writing strategy checksheets for?

00:01:18

Student B: For sure. After we completed the assignment, we used the sheet to look over our paper once again. Um, after, because we first have to, um, did all the answer about yourself: how were you feeling and that kind of stuff. With the reflection, you kind of look at your strengths and your weaknesses. And for me, I have a lot of anxiety towards writing. I think writing is really scary. Um, so I used it to just check it for a bit. And I'm with a partner who's really confident in his writing, so that's kind of good for reflection from my side because we both did it (i.e. used the checksheet). Um, we didn't discuss it, but yeah, still, um, yes, I think that was it.

00:01:58

Researcher: Okay.

00:01:59

Researcher: All right. So next question. Did you like the experience of using the writing strategy checksheet? Why or why not?

00:02:07

Student B: I did like it. However, I did find it sometimes confronting, um, confronting towards myself because. I finished an English bachelor degree, so I know my English isn't bad, but still I'm a bit insecure about it. So thinking about it, where's your weaknesses? And think about, Well, I'm not that good at APA. Just listing it for myself was like, okay, kind of scared, but it was fine. And it was also nice to maybe realise, okay, I'm not that bad because I'm also good at certain stuff which I needed to list and need to look at the introduction. Okay. What was good or what was something I did that I didn't expect to go that far or that good. So that was kind of positive. Um, for the rest, yeah, I think that's overall the feeling I have.

00:02:58

Researcher: Okay.

00:02:58

Researcher: So maybe just to rephrase it a little bit. So you did not like it to some extent because it made you feel a little bit anxious of having to confront, like you said, your writing, but at the same

time you like the part where you get to like kind of like review the different parts of your introduction, you know, weigh and see whether it's done well or not.

00:03:21
Student B: Yeah, because I think as with all the most types of anxiety, it's going way worse in your head than it actually is. So just like using it and seeing, okay, it's not that bad. That was nice.

00:03:31
Researcher: Yeah. Okay. That's nice to hear. Okay. So this is, I guess, somewhat related. How did you feel when you had to evaluate the strengths and weaknesses of your writing?

00:03:42
Student B: Um, I think it was good because I think I'm pretty good at self-reflection. So I like the exercise itself, but still, like knowing your insecurity is not nice to list that kind of stuff because that's kind of sad. Um, but it also gave me the opportunity to think about for me, it was APA, uh, to use it for, to do so, make an action point out of it. So kind of make me proactive as well.

00:04:08
Researcher: Okay.

00:04:09
Researcher: Would you like to elaborate on that last point a little bit? What do you mean by proactive?

00:04:14
Student B: Um, because I think in my weaknesses, I think there are a lot of opportunities to work on still. Um, because I think most of the things you can still work or learn with writing and I think I after this sheet, I looked at the APA rules once more just to check it if I did it correctly, or at least as I think I did. Okay.

00:04:36
Researcher: So you found a checksheet in that sense somewhat useful to...?

00:04:39
Student B: Stimulating? Yeah.

00:04:40
Researcher: Stimulating... to see like, this is an area that maybe I could have done better. And then you on your own then went to look at the APA again.

00:04:48
Student B: Yeah, indeed.

00:04:50
Researcher: Yeah. Okay. All right, next question. So writing anxiety refers to the avoidance of writing and the expectation of negative evaluations of one's own writing. So the self-evaluation using the writing strategy checksheet affect your sense of writing anxiety in any way?

00:05:10
Student B: Um, maybe unconsciously. Consciously? I don't think so. Um, because as you mentioned with, um, the anxiety part about extending the work, so you'd be like, I don't want to do it now, but later. I still have that a lot because I'm really scared to start. Mostly when you start is fine. Yeah. Um, but I don't think that's necessarily changed it.

00:05:35
Researcher: Okay. So you don't think that there are like after you did the checksheet, it did not increase your anxiety or decrease it in any way because as you said. Your anxiety is still there, like it doesn't really like you still maybe procrastinate, like you said, writing.

00:05:51
Student B: Yeah.

00:05:51
Researcher: Okay. So. But it did not make you feel more anxious after doing this?

00:05:55
Student B: No, I did not. No.

00:05:56
Researcher: Okay. So maybe like, no change in that sense. Yeah. Okay. Right. Then we'll move on to writing self-efficacy. So writing self-efficacy refers to a person's belief or confidence in performing a writing task successfully. So did self-evaluation using the writing strategy checksheet affect your sense of self-efficacy in any way?

00:06:18
Student B: I think so, yeah, because as I mentioned, I think I could be a bit more confident about my work because sometimes I skill myself, like at a level 3 or 4. Well, it might already be a six, so because I'm kind of hard on myself, like checking it. Yeah, I think your... writing is pretty strict. Most forward points and sometimes I don't know how to get the ideas in my head on paper. So that's kind of hard. But checking it made me realise that most of the time it's already okay and not like below average.

00:06:52
Researcher: Okay, so in that sense you actually feel more confident?

00:06:54
Student B: Yes.

00:06:56
Researcher: Yeah. Okay. Right. The next question is not directly related to my research question, but it is also an interesting angle that I want to look at. So how did writing collaboratively, like with a partner in a dyad affect your writing experience?

00:07:14
Student B: I think both negatively and positively. I really like to give feedback on each other because I think classmates can look at things differently and give you new insights. So I always let my work checked by other people because I think that's most of the time really nice and I can learn from that, instead of like, this is the list that you should include. I'm not sure always if I for me, if I have included it, maybe my perception, but I'm not sure if others have it. So that's why I like it. Sometimes it was negative because the person is like really good. So he knows all that stuff. And it was like, "Oh, so your work is less or a bit?" Yeah. How do you say it? Like, not. Yeah, not as good. Um, so that kind of makes me more insecure. Yeah. Uh, because he was really good at it. And I also felt like, okay, I'm going to disappoint him with my work or. And when you work on your own, you don't have that, so you don't need to rely on other people. Okay. Um, but I really like the collaboration because if you have a question or anything, you can still ask and you can talk about it. So that was the positive side.

00:08:23
Researcher: Okay. All right. Then the last question. Do you have any other comments or suggestions on how to improve the design of the self-evaluation checksheets so as to improve the academic writing experience for students?

00:08:39
Student B: Um. (goes to examine the printed copy of the checksheet)

00:08:44

Researcher: It can be in any aspect in terms of content, design. Anything that you can think of that might make this more helpful or accessible or user-friendly for.

00:09:00

Student B: Personally thought it was already pretty clear.

00:09:10

Researcher: Okay. Um...

00:09:15

Student B: No. For now, I do not know.

00:09:17

Researcher: Okay, maybe I'll pick up on a point that was mentioned in, I had an earlier group on Monday, so some of them mentioned that the questions may feel a little bit like repetitive or doing double work because for some people they may already like do some kind of like proofreading or editing of their papers against a rubric, let's say, when they are finished with a paper. So for yourself, do you find that was an issue with the checksheet or...

00:09:50

Student B: I also checked the rubric afterwards, but I don't think the rubric says like main goal and audience and importance. Um, and I also really depends if you use it for which assignments I think. Um, because not all questions are as important in each assignments. Um. Yeah. And what I personally find hard is I can sometimes read a sentence and believe, Oh, that's so clear to me. And when other people read it, yeah, it might not be so clear. So sometimes there were questions like, I have demonstrated understanding or I've described the problem clearly. I think that's hard for me, for myself to decide, okay, because I might think that, but that doesn't mean it is. So I have then said 'well done' while others maybe said otherwise, but I'm not sure how you could change that because I just think that's part of the self-checking sheet. Right? You can check it yourself. Yeah. So no.

00:10:50

Researcher: Yeah. Okay. So I mean, just, the intent is for self-evaluation to using this to maybe help you feel less anxious about your work or have more confidence in your work. But I think maybe just to pick up on the point you mentioned earlier when you were talking about having a partner as well. Do you think discussing the outcomes of like if you have done your self-evaluation, do you think after that to have a conversation with your partner about how you evaluated your writing, do you think that might be helpful or would you prefer still just doing an evaluation of your own writing and your own work?

00:11:26

Student B: No, I like the collaboration part because, uh, we got our first, um, grade back and we also looked at it with the rubrics like, okay, we could have included this more or we could have added it because I think personally, talking together makes me learn more with the interaction. And I think you also have a really bias on yourself with filling these kind of stuff in. But I think it's still good for reflection, but I think the different perception is nice.

00:11:54

Researcher: Okay. All right. Anything else that you like to add?

00:11:58

Student B: Um. No, I think that's it.

00:12:00

Researcher: Okay. All right. Thank you very much.

00:12:02
Student B: You're very welcome.