

University Students' Plagiarism Behaviours in Writing Instruction: A Systematic Review

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Abstract—The literature indicates that students' understanding of plagiarism and academic writing skills impact their plagiarism behaviour. However, there has yet to be a review that explores the methods, supporting tools, and content of writing instruction that can effectively reduce plagiarism behaviour at the university level. Therefore, this systematic review aims to present academic writing instruction that can prevent plagiarism behaviour. The review data was derived from four different databases, EBSCO, Wiley, Proquest, and JSTOR, published from 2010 to 2022. The Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) standards were used to ensure that the review was systematically carried out. Based on the 22 articles reviewed, tutorial methods and workshops were most used to provide knowledge on plagiarism, followed by writing skills content, and guided writing practice. Writing skills content comprised word choice, grammar, citation, paraphrasing, and referencing concerning plagiarism prevention. This study also found that Rubrics and Turnitin applications were widely used as supporting tools for plagiarism checking and as feedback for the students. Implementing writing instruction coupled with plagiarism education and feedback can change students' plagiarism behaviour and improve their confidence in academic writing.

Index Terms—writing instruction, plagiarism, universities

I. INTRODUCTION

Plagiarism is reprehensible conduct that students may engage in, reflecting a breach of academic integrity (Bretag et al., 2019). Several types of plagiarism that often occur include (1) incorporating quotations in the text that are not listed in the bibliography, (2) writing a paper by copying the framework from another source without attribution, (3) allowing someone else to revise a paper extensively, and (4) recycling one's previous work without proper citation (Wangaard, 2016). Efforts that have been made to minimize plagiarism behaviour include promoting academic integrity, conducting writing instruction using various methods, and utilizing anti-plagiarism tools. However, despite these efforts, the prevalence of plagiarism among students continues to persist (Gureyev & Mazov, 2022). Therefore, this kind of academic breach is of paramount importance to examine.

Several studies have shown that some individuals continuously commit plagiarism despite understanding the concepts of academic writing ethics and academic integrity (Awasthi, 2019). The ease of accessing the internet and the lack of ethical maturity can trigger plagiarism behaviour (Bretag, 2016). Students can easily copy, include, and claim the work of others that already exist. Plagiarism can also be attributed to cultural, environmental, and time constraints, limited language proficiency, and inadequate writing skills (Liu & Wu, 2020). Furthermore, it is suggested that the lack of academic writing skills is the primary cause of committing plagiarism (Guraya & Guraya, 2017; Stander, 2020). Therefore, a comprehensive study is needed to explore prevention efforts to address plagiarism behaviour in academic writing.

Implementing academic writing instruction and teaching plagiarism to students significantly improves their knowledge, skills, attitudes, and positive behaviour in academic writing (Awasthi, 2019). Another contributing variable to plagiarism behaviour is the content of the academic writing instruction. Students with good academic writing skills have confidence in their writing ability, which affects their attitudes and plagiarism behaviour (Fazilatfar et al., 2018). The ability to paraphrase and cite sources is necessary to enhance students' academic writing skills and integrity (Stephens & Wangaard, 2016). In addition to content, using plagiarism prevention tools can aid in reducing instances of plagiarism and improving the quality of academic work. Thus, it is imperative to examine appropriate writing pedagogy to prevent plagiarism.

A comprehensive review of academic writing instruction at the university level in preventing plagiarism remains sparse despite numerous studies on this topic. A review is crucial as it thoroughly overviews existing research findings. Previous reviews have discussed plagiarism prevention and reduction by raising nursing students' awareness of plagiarism, but they did not specifically focus on academic writing. Therefore, there is a need for a review that specifically examines the effectiveness of academic writing instruction in preventing plagiarism at the university level (Lynch et al., 2017). Another review has addressed pedagogical interventions but only focused on using sources/references, with results that have not significantly reduced plagiarism (Pecorari & Petrić, 2014). Based on this, this paper presents a literature synthesis on methods, writing content, supporting tools, and changes in plagiarism

behaviour after participating in academic writing learning. This study aims to fill the gap in academic writing learning by preventing plagiarism behaviour that can be applied at the university level.

II. METHOD

A. *Study Design*

This review presents a synthesis through a systematic review of the primary literature examining academic writing instruction in preventing plagiarism. This review follows the PRISMA guidelines developed by Page et al. (2021) to select appropriate studies and improve the quality of systematic reviews. Study selection criteria passed through four phases: identification, screening, eligibility, and inclusion. The systematic review asked critical questions (Alexander, 2020). The research questions for this review were:

What methods, content, and supporting tools can be used in academic writing instruction to prevent plagiarism behaviour among students? What students' plagiarism behaviour changes after academic writing instructions are provided?

This review was registered on the Open Science Framework on March 18, 2023 (DOI: <https://doi.org/10.17605/OSF.IO/WKUZE>).

B. *Criteria of Study*

This review covers an overview of academic writing instruction to prevent and reduce plagiarism among university students. The scope of the review is limited to English-language literature to minimize the risk of the researcher's misinterpretation of the studies reviewed. The researcher has limited proficiency in languages other than English, and including articles in languages other than English may lead to errors in the review process. Studies were excluded if they were reference books, book reviews, or critical discussion papers. It is because reference books often use outdated sources of information, whereas this review aims to present the latest information. However, articles from Handbooks that met the study criteria were still included.

C. *The Search and Selection Strategies*

The systematic literature search was performed using various databases, including EBSCO, Wiley, PROQUEST, and JSTOR, covering January 1, 2010, to December 31, 2022. The selection of these databases and timeframe was intended to provide educators with evidence-based and up-to-date information for selecting effective academic writing pedagogies at the university level. Since adopting anti-plagiarism tools has been widespread since 2010 (Mozgovoy et al., 2010), investigating methods and tools obtained is more adaptable. The search for articles was conducted using the keywords "university OR college" AND "writing skills OR writing ability OR writing development OR writing improvement" AND "plagiarism OR academic integrity OR patchwriting". A total of 481 references were found and published from 2010 to 2022. Duplicate articles from the search results were subsequently removed.

In selecting the studies, the researcher was assisted by two independent reviewers (MY and Hs). Before carrying out their tasks, both reviewers were given the same understanding of the study criteria. Then, the inter-rater reliability was measured to assess the consistency between the reviewers' abilities. The obtained result was 0.93, indicating that the reviewers' perceptions were the same. The next step involved screening the titles and abstracts of the identified articles from the databases to determine their relevance to the study. The full texts of the relevant articles were then retrieved for inclusion assessment. Any discrepancies between the two reviewers were resolved through a consensus process involving the author and the two independent reviewers in a discussion forum.

D. *Extraction and Data Analysis*

In this review, a data extraction tool was designed to guide the information retrieval from the notes following the review objectives. The data extracted from each included study included: author(s), year, country, study design, research objective, academic writing pedagogy, plagiarism checking tools, writing content taught, changes in plagiarism behaviour after implementing the writing pedagogy, and other impacts resulting from each study. The next step involved data analysis using thematic analysis based on the methods, content, and tools used in academic writing pedagogy to reduce student plagiarism behaviour.

III. RESULT

A. *Characteristics of the Studies*

Out of the 481 studies that were identified, 22 articles met the criteria. The results of the study selection can be seen in Figure 1.

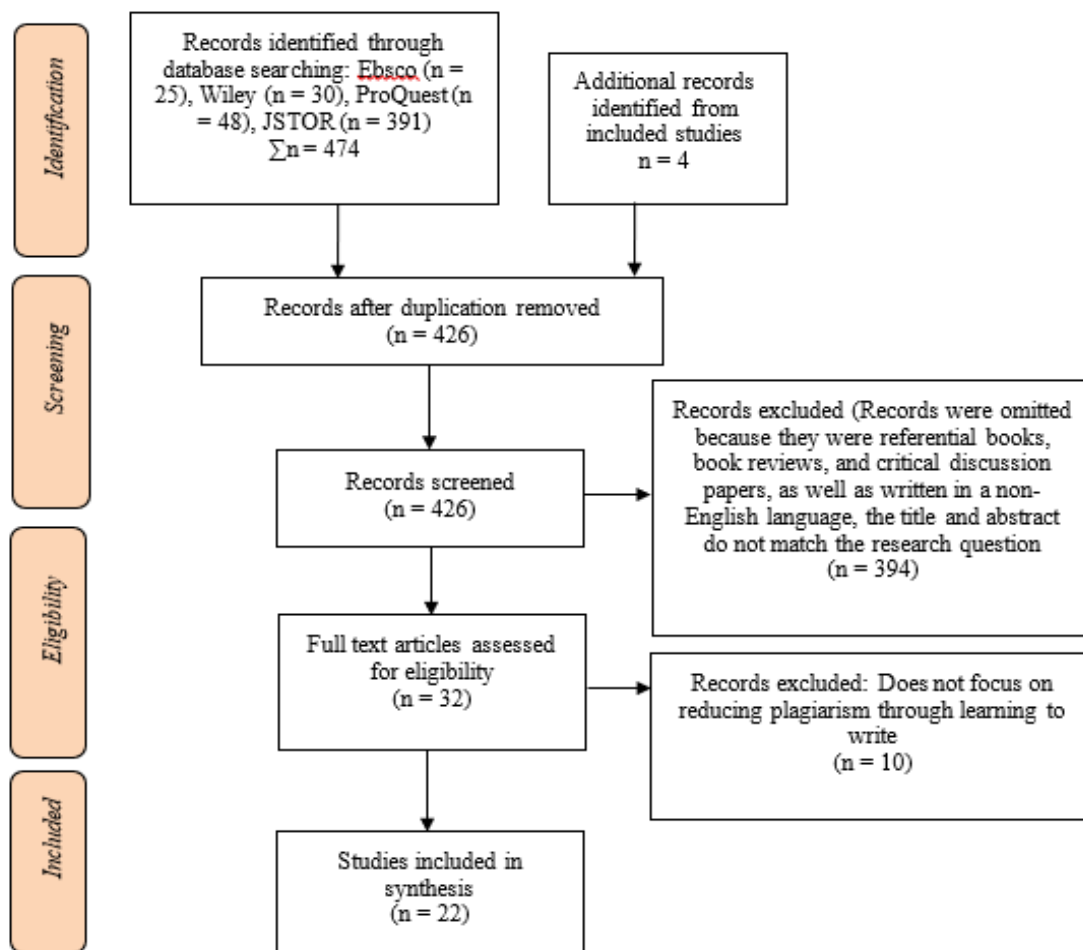


Figure 1. PRISMA Flow Diagram

The analyzed studies were conducted with various research designs from different countries. The characteristics of the studies can be seen in Table 1.

TABLE 1
STUDY CHARACTERISTICS

No.	Author, Year, Country	Design	Sample	Number of sessions
1.	Elander (2010) UK	An instructional intervention	364 psychology students at three post-1992 universities in London	Not explain
2.	Holt (2012) USA	Experiment with a control group design	148 students, in 2010 (n=94) and in 2011 (n=54).	Not explain
3.	Owens and White (2013) Australia	Prospective cohort	14338 undergraduate students	The number of sessions is not explained, but learning outcomes are evaluated every semester.
4.	Teh and Paull (2013) Australia	Descriptive papers	-	-
5.	Larsson and Hansson (2013) Sweden		169 students	2 stages
6.	Burgess-Proctor et al. (2014) USA	Descriptive	Undergraduate students of sociology	Each session lasts 40 minutes.
7.	Colton and Surasinghe (2014) USA	Descriptive	38 undergraduate students of biology divided into two sessions	Lessons are conducted twice a week, and the meeting lasts 1.5 hours.
8.	Chew et al. (2015) UK	Cross-disciplinary group	128 people filling out the online questionnaire 10 students and 7 lecturers were interviewed	
9.	Dalal (2015) USA		26 students are attending information systems courses.	Not explain

10.	Divan et al. (2015) UK	Experiment cohort	90 magister students of biological sciences consisting of 30 UK students and 60 international students	Not explain
11.	Odom and Helfers (2016) USA	The grounded theory approach contains qualitative and quantitative	38 students of criminal justice	Not explain
12.	Carnero et al. (2017) Peru	Case study	Magister students in Peru.	Learning is carried out in six sessions, with each session lasting 1.5 hours
13.	Watson (2017) USA	Descriptive	-	Not explain
14.	Liu et al. (2018) Taiwan	Mixed method	14 undergraduate EFL students (11 female and 3 male) with intermediate English language proficiency	Meetings are held weekly, and each session lasts 50 minutes
15.	Rathore et al. (2018) Palestine	Cross-sectional	80 consisting of 38 males and 42 females (the average of age: 26.2 years)	Learning is carried out in 4 workshop sessions, with each session lasting 40 minutes
16.	El Tantawi et al. (2018) Saudi Arabia	Quasi-experiment pre-test-post-test	Participants were 92 first-year students of dental science in two different classes (47 males and 45 females) with an average of age: 20 years.	Not explain
17.	Dayyeh and Skakiyya (2018) Palestine	Survey	727 undergraduate students consisting of 80.6% female and 19.4% male	Not explain
18.	Wrigley (2019) UK	Phenomenological research	Students in academic writing classes	Not explain
19.	Yang et al. (2019) USA	Quasi-experiment with a control group	185 undergraduate students of biological science divided into the control group (n = 91) and the intervention group (n = 94)	Not explain
20.	Perkins et al. (2020) Vietnam	Quasi-experiment with a control group	Not explain	Not explain
21.	Du (2020) China	Quasi-experiment without a control group	33 graduated students	The course is conducted over 3 sessions in 3 consecutive weeks. Each session lasts two hours per week
22.	Vaccino-Salvadore and Hall Buck (2021) Saudi Arabia		A total of 18 international students	Not explain

B. Writing Learning Methods

The reviewed studies (n=22) revealed that various methods were utilized in teaching writing to prevent and reduce plagiarism (see Table 2).

TABLE 2
WRITING LEARNING METHODS, TOOLS USED, AND THE RESULT OF INTERVENTION

No.	Author	Procedure	Learning content	Supporting tools	Result
Tutorial					
1.	Owens and White (2013)	Semester 1 students write an essay on a topic while semester 2 students write a simple research report The assignment was then checked using WCopyfind, students who copied a lot were sent emails about their plagiarism behavior.	Plagiarism and paraphrase	WCOPYfind and peer feedback	There has been a decrease in plagiarism cases from 109 to no plagiarism cases
2.	Chew et al. (2015)	Students are given an initial understanding of the use of Turnitin and then assigned to write an essay	Use Turnitin	Turnitin and lecturer feedback	It shows students to be independent and have much better paraphrasing skills
3.	Wrigley (2019)	Students are given the task of writing essays using a laptop or handwriting	Basic rules of writing	Not explain	Students in writing papers produce better and more original writing by handwriting than using google translate or web-based paraphrasing software.
4.	Colton and	Students in groups develop proposals and	Basic rules of writing	Friends and	Students find it very

	Surasinghe (2014)	then present them and give feedback		lecture feedback	helpful to avoid plagiarism with group tutorial programs accompanied by a peer-review process.
5.	Odom and Helpers (2016)	Students write systematic essays according to the sources that have been distributed by the lecturer	Academic integrity and detecting plagiarism, discussing grammar/mechanics, academic diction, APA citation style, citing and writing references	Friends feedback	Students can improve grammar skills, diction selection, paraphrasing, and quotations. Students' confidence in writing without plagiarism also increases
6.	Buargess-Proctor et al. (2014)	Students follow online tutorials regarding plagiarism material and how to avoid it. After that, students took part in library orientation and writing workshops	Plagiarism, Paraphrase, quote, reference writing, mencari sumber yang relevan	Not explain	Students can complete assignments without plagiarism and their self-confidence increases in writing without plagiarism
7.	Liu et al. (2018)	Blending face-to-face and online	Paraphrase, quote, reference writing	Turnitin	Students can paraphrase and feel confidence by changing grammar and using synonyms, citing, and writing references
Workshop					
1.	Watson (2017)	Adaptation of the Citation Project program. Students are taught about plagiarism and how to avoid it and then analyze their own writing	Using proper references, how to integrate sources into writing, how best to acknowledge and cite sources, syntax, paraphrasing, patchwriting	Not explain	Students are aware of patchwriting and how to quote correctly so that students can avoid plagiarism
2.	Rathore et al. (2018)	Learning to write includes scientific writing errors, ethical and non-ethical writing criteria, plagiarism and how to detect and avoid plagiarism	Basic rules of writing	Not explain	There is an increase in positive attitudes towards plagiarism
Tutorial and workshop					
1.	Divan et al. (2015)	The habit of writing according to campus rules and writing literature reviews from various sources	Search and find high-quality scientific literature, writing references, use of reference managers, and plagiarism	Turnitin	The number of plagiarism cases decreased and student confidence increases in using accurate references, not plagiarizing, writing critically and synthesizing material from different sources
2.	Larsson and Hansson (2013)	Preventive learning on the prevention and prevention of plagiarism in academic writing	Plagiarism policy and academic writing	Turnitin	Educational activities repeatedly raise awareness of the problem of plagiarism.
Reflective writing course					
1.	Dalal (2015)	Students identified as having committed plagiarism were invited to have a dialogue and reflect on the essay	Paraphrase	Turnitin	The remaining 1 out of 26 students copied the textbook while the other students had Turnitin results <10%
2.	Vaccino-Salvadore and Hall Buck (2021)	Focuses on introducing critical writing and literacy skills	Plagiarism, how to find reference sources, using APA citations, writing references	Not explain	Perceptions of plagiarism changed in terms of having ideas, having language, and having time that could be planned for the research process.
3.	Yang et al. (2019)	Students in the essay writing intervention group were then asked to analyze the plagiarism they had done. After that, students learn to write using their own voice	Paraphrase	Not explain	The decrease in plagiarism cases in the intervention group was 0.67 cases per report, while in the control group, it was 1.31 times plagiarism cases.

4.	Dayyeh and Skakiyya (2018)	Educate students about plagiarism and equip them with basic writing skills	Summarize, paraphrase, quote, and cite	Not explain	Not explain
5.	Elander (2010)	Changing students' attitudes about themselves as scholar writers. Writing practice is accompanied by giving examples of work to help students illustrate the general rules of plagiarism	Authorship and knowledge avoid plagiarism	Not explain	The intervention led to significantly increased confidence in writing, understanding of authorship, and knowledge to avoid plagiarism
Games					
1.	El Tantawi et al. (2018)	Students in groups collect the most points by writing essays	Basic rules of writing	Turnitin	The percentage of plagiarism decreased marked by the ability to detect and avoid plagiarism and use quotes and references.
Methods of training and mentoring					
1.	Carnero et al. (2017)	Students teach every part of scientific work and are always evaluated without tolerance for plagiarism.	Basic rules of writing	iThenticate	Students are protected from plagiarism and cheating
2.	Teh and Paull (2013)	Students are given education about plagiarism and how to avoid it. After that, they were given writing assignments and gave feedback to each other	Plagiarism and Paraphrase	Friends feedback	Not explain
3.	Du (2020)	Students are taught plagiarism knowledge and skills in making source references in the form of paraphrasing and summarizing	Plagiarism, paraphrasing, summarizing, writing references	Discussion with lecturers	The students indicated that they had improved their ability to recognize textual authorship that required references, verbatim copying by students decreased, and extensive copying of source texts increased
Writing basics course					
1.	Perkins et al. (2020)	Students write essays according to the question items. Fraud committed by students is dealt with in stages starting from the faculty to the university	Plagiarism, paraphrasing, grammatical quality, lexical, paragraphing skills, coherence, vocabulary, paraphrasing, reference writing, and critical thinking.	Turnitin	The intervention showed a 37.01% reduction in detected plagiarism cases
2.	Holt (2012)	Students are guided on how to quote and paraphrase	Paraphrase, quote, reference writing	Turnitin	Students can complete assignments without plagiarism accompanied by increased understanding and awareness of plagiarism

The tutorial was the most used method in preventing and reducing plagiarism. The tutorial method included individual, group, and online tutorials. Individual tutorials were conducted in 3 studies (Chew et al., 2015; Owens & White, 2013; Wrigley, 2019). In Owens' (2013) study, the individual tutorial method began with educating students on plagiarism policies before providing writing exercises. Writing exercises were accompanied by feedback and peer review. Chew et al. (2015) conducted a study in which students were trained to write essays independently, beginning with training in using and interpreting Turnitin's plagiarism detection software. Efforts to reduce plagiarism in student writing relied on improvement from reading Turnitin's results. In contrast, individual tutorial compared student plagiarism behaviour in essay writing between using a laptop and writing by hand (Wrigley, 2019).

Group tutorials were conducted in 2 studies (Colton & Suringhe, 2014; Odom & Helfers, 2016). The study by Colton and Suringhe (2014) discussed group-based tutorials on research proposal writing for students based on their expertise. A collaborative tutorial by Odom (2016), applying the plagiarism prevention method in writing papers by students involves the steps of paraphrasing the given sources by the tutor. In addition, two studies have combined online tutorials and writing workshops. Burgess-Proctor et al. (2014) provided knowledge and ways to avoid plagiarism through an online tutorial. Another study oriented EFL students through online and face-to-face tutorials in recognizing and preventing plagiarism (Liu et al., 2018).

The workshop conducted by Watson (2017) utilized an application that adopted the Citation Project (CP) program. The workshop did not focus on penalizing plagiarism but on orienting students to recognize and understand their mistakes. In contrast, Rathore's (2018) research focused on a four-hour workshop, which included explanations of scientific writing topics and errors, ethical policies, and guidelines for avoiding plagiarism. The focus of this workshop was on knowledge rather than practical application.

Divan's (2015) study aimed to address unintentional plagiarism among international students through a two-stage writing course and workshop. During the workshop, the focus of the feedback provided by instructors was on errors in referencing format, inadequate citation, and the need for further paraphrasing. In contrast, Larsson and Hansson's (2013) workshop was assisted by the SciPro application to reduce plagiarism. The focus of this workshop was on the prevention and detection of plagiarism in academic writing.

The method for preventing plagiarism through reflective writing courses, as implemented by Dalal (2015), combines two practices: reflective dialogue to build awareness of plagiarism and reflective dialogue toward student essays. The writing course with reflective practice, conducted by Vaccino-Salvadore and Hall Buck (2021), aims to introduce critical writing and literacy skills. The course commences with a discussion on plagiarism before students practice writing simple essays. The course emphasizes the method of searching for reference sources, using APA citations, and integrating a minimum of six academic sources into their writing.

In contrast to other writing courses, the study conducted by Yang et al. (2019) examined the implementation of writing instruction that utilized students' own words. The course was designed to help students become more aware of several types of plagiarism and writing issues through analysis of their writing. Students identified instances of plagiarism and made corrections to their actions. Similarly, Dayyeh and Skakiyya (2018) study focused on academic writing training by increasing students' awareness of academic standards. Students received education on plagiarism and were equipped with basic research skills through a mandatory university course in their first year. The course also utilized the library to raise awareness of plagiarism, practiced theory, and activated the writing centre for academic assistance. Elander et al.'s (2010) course was designed to change students' attitudes about themselves as academic writers. Writing practices were accompanied by examples of works to help students illustrate general plagiarism rules. However, the study revealed that students preferred learning in groups, receiving professor feedback, and using internet-sourced plagiarism content.

Holt's (2012) plagiarism prevention course focused on understanding plagiarism and improving paraphrasing skills and citation methods. Efforts were made to ensure that citations and paraphrasing were plagiarism-free by giving assignments to summarize literature using their own words. It differs from the writing course in Perkins et al.'s (2020) study. The class began with analyzing students' needs related to knowledge of plagiarism, research, and academic writing. Students were provided with information about the course procedures and plagiarism's dangers and penalties. In the study, students wrote essays based on several questions and reading sources offered in the Academic English Masterclass (AEM) application. If there was a potential suspicion or occurrence of plagiarism by students, it was addressed in a graduated manner, starting from the faculty to the university.

The prevention of plagiarism through gradual training and mentoring in academic writing was carried out in three studies. Carnero et al. (2017) conducted writing courses by gradually presenting the contents of each section and the basics of scientific writing. This learning process was done with strict plagiarism detection and zero tolerance for plagiarism behaviour. Meanwhile, Teh and Paul's (2013) study presented three aspects of a gradual writing education model. The first aspect was a systematic education on plagiarism. The second aspect was guided instruction for students to complete tasks designed to enhance their understanding of plagiarism. The third aspect was collaborative learning in writing skills by having students give feedback to each other in groups. Du's (2019) course focused on providing knowledge about plagiarism and abilities in making source references over two hours for three weeks. In writing exercises, students were expected to distinguish between quoted/paraphrased/summarized sources, ideas, and reflections.

In contrast to the approaches above, El Tantawi et al. (2018) study-oriented plagiarism prevention in writing instruction through gamification. Students competed in groups to collect the highest number of points in detecting and avoiding plagiarism, with score acquisition accompanied by evidence of using supporting references in their writing. The task was submitted through an LMS, given anonymous feedback, and checked through Turnitin. The gamification method implemented in this study cannot be utilized for a prolonged time with the same pattern, as it may cause students to become bored.

C. Contents of Writing Instructions

A diverse range of learning content is provided to prevent and reduce plagiarism in writing (Table 2). Although different content is given, all reviewed studies provide knowledge about plagiarism and writing ethics, aiming to increase students' awareness of plagiarism. In addition, the provision of writing content is based on the issues faced by students and the duration of the writing intervention. Among the 22 reviewed studies, ten studies teach paraphrase content along with academic writing techniques (Carnero et al., 2017; Colton & Surasinghe, 2014; El Tantawi et al., 2018; Elander et al., 2010; Larsson & Hansson, 2013; Odom & Helfers, 2016; Owens & White, 2013; Perkins et al., 2020; Rathore et al., 2018; Wrigley, 2019). Academic writing content includes grammar, scientific paper components, word choice, writing style, and referencing. Nine studies combine paraphrase content with citation, referencing, and using various sources (Burgess-Proctor et al., 2014; Chew et al., 2015; Dayyeh & Skakiyya, 2018; Divan et al., 2015;

Du, 2020; Holt, 2012; Liu et al., 2018; Vaccino-Salvadore & Hall Buck, 2021). Three studies focus solely on paraphrasing content (Dalal, 2015; Teh & Paull, 2013; Yang et al., 2019).

D. Supporting Tools for Plagiarism Checking in Writing Instruction

Several supporting learning tools were used to assess the changes in students' writing abilities related to plagiarism (Table 2). Of all the reviewed studies, the software most commonly used for plagiarism checking was Turnitin (Chew et al., 2015; Dalal, 2015; Divan et al., 2015; Du, 2020; El Tantawi et al., 2018; Holt, 2012; Larsson & Hansson, 2013; Liu et al., 2018; Perkins et al., 2020). Other software tools were iThenticate (Carnero et al., 2017) and WCopyfind (Owens & White, 2013). In addition to using software, the use of rubrics in assessing student writing was also found (Burgess-Proctor et al., 2014; Odom & Helfers, 2016; Yang et al., 2019). In the study by Owens and White (2013), plagiarism checking was done by directly comparing articles or reading sources that had been given previously.

The assessment of similarity through Turnitin output has been employed in several studies as a feedback tool to address student plagiarism. In addition to Turnitin, some studies have utilized the SciPro application with an itemized checklist containing peer-reviewed evaluations and assessments as a reflective tool for student self-evaluation. The purpose of providing feedback through these supporting tools is to enhance student knowledge and awareness of plagiarism (Larsson & Hansson, 2013).

E. Changes in Plagiarism Behaviour After Writing Instructions

Of the total studies reviewed, 18 examined changes in students' knowledge, attitudes, and behaviours regarding plagiarism after writing instruction (Table 2). These studies include (Burgess-Proctor et al., 2014; Carnero et al., 2017; Chew et al., 2015; Colton & Suringhe, 2014; Dalal, 2015; Du, 2020; El Tantawi et al., 2018; Elander et al., 2010; Holt, 2012; Larsson & Hansson, 2013; Liu et al., 2018; Odom & Helfers, 2016; Perkins et al., 2020; Rathore et al., 2018; Vaccino-Salvadore & Hall Buck, 2021; Watson, 2017; Wrigley, 2019; Yang et al., 2019). In addition to changes in plagiarism behaviour, four studies examined changes in students' confidence in writing (Burgess-Proctor et al., 2014; Divan et al., 2015; Elander et al., 2010; M. Liu & Wu, 2020; Odom & Helfers, 2016). Through the courses provided, students felt confident in writing essays well. They thought they had paraphrased and cited correctly.

Several obstacles were encountered during the implementation of academic writing courses. Students were afraid of the feedback from Turnitin (Chew et al., 2015). Another impact of plagiarism prevention efforts found that students tended to overuse citations due to signing an integrity statement and a desire to avoid plagiarism (Burgess-Proctor et al., 2014). Watson's (2017) study showed that students who struggled with language were more likely to engage in patchwriting (Watson, 2017). Divan et al. (2015) argued that to reduce/prevent plagiarism, it is not enough to educate students about plagiarism simply, but it must be accompanied by writing practice from sources and instructor feedback. Student characteristics should be distinguished based on their understanding of plagiarism culture and writing abilities, including foreign learners.

IV. DISCUSSION

This review's findings contradict Wette's (2010) claim that literature on plagiarism tends to be more problem-oriented than the solution or practice-oriented. Many alternatives can be implemented to address student plagiarism behaviour, including using methods that reflect best practices in plagiarism prevention, providing content, and using plagiarism prevention tools, as well as addressing plagiarism behaviour. The most employed learning method in plagiarism prevention practice in writing is tutorials and workshops. The tutorial method can help students understand lesson content well (Azer, 2015). With tutorials, students can interact to provide feedback with the guidance of a tutor. Interaction can broaden insights, add ideas about topics, and add experience. The combination of tutorial and workshop methods makes the learning process and interaction integrated into one learning unit. As evidence of their effectiveness in addressing student writing plagiarism behaviour, several studies in this review also found that combining tutorials with workshops can provide knowledge and practice in preventing plagiarism (Divan et al., 2015; Larsson & Hansson, 2013). Furthermore, combining both allows students to experience a more interactive writing process.

The provision of knowledge and training has been found to address academic writing plagiarism effectively. All the studies in this review corroborate this, which indicates that students need to be educated on plagiarism content as a preventive measure. The attitude and behaviour of student plagiarism are influenced by the implementation of writing training accompanied by plagiarism education (Awasthi, 2019). Plagiarism education needs to clarify the broad and diverse definition of plagiarism to prevent opportunities for misunderstanding and ambivalence among students (Elaine, 2017). In addition, knowledge of plagiarism in academic writing must be integrated with cultivating anti-plagiarism attitudes. Individuals who possess knowledge coupled with the cultivation of attitudes are more effective in changing their behaviour (Memon & Mavrincac, 2020). Furthermore, the study strengthens the argument that to enhance academic integrity, students must be equipped with moral identity as the fundamental basis for forming academic attitudes (Wangaard, 2016). Thus, students need to be equipped with knowledge of plagiarism and the cultivation of anti-plagiarism attitudes to strengthen academic integrity.

In addition to plagiarism education, this review also highlights the need for providing writing skills training for students. The best practical form of this training, according to various studies, involves writing exercises with feedback

and peer review by classmates. The involvement of students in the process of developing their understanding and skills is crucial. Providing feedback on the plagiarism behaviour of students is appropriate for self-reflection. Moreover, feedback activities can also be a form of self-directed learning to inform the improvement of students' writing skills (Chew et al., 2015). Most studies on feedback refer to Turnitin's plagiarism-checking results. It is done to help students reflect on their plagiarism behaviour in writing. It accords with Eaton and Edino (2018), who argue that Turnitin can be utilized to strengthen students' academic integrity. This tool can be used at the university level, as students are capable of self-directed learning through reflection and self-efficacy improvement (Lock et al., 2017). Furthermore, Liu et al. (2018) advocate that providing feedback is a form of self-evaluation to prevent plagiarism (Liu et al., 2018).

In addition to Turnitin, feedback can be provided through the method of comparing source writing previously given based on a rubric (Odom & Helfers, 2016). Students favour workshop activities with the assistance of writing rubrics as they can prepare assignments more effectively (Burgess-Proctor et al., 2014). Considering the advantages and responses to rubrics, scientific writing learning exercises need to be provided to self-check students. This would also anticipate findings indicating that students feel anxious about the results of Turnitin checks (Chew et al., 2015). Using plagiarism detection tools such as Turnitin needs to consider student privacy and avoid unintentional plagiarism identification errors.

Similarly, the study by Burgess-Proctor et al. (2014) found that exercise activities accompanied by peer review were disliked by students due to unsatisfactory review results and uncomfortable feelings about evaluating peers. A solution to this issue in Odom's study is providing anonymous student writing samples in the classroom. Inconvenience about evaluating peers can be overcome by not including student names in peer review/blind peer review activities. Using anonymity helps reviewers be more professional in assessing writing (Brown, 2007). Furthermore, their narrative review found that anonymous peer assessment benefits student perceptions of peer assessment learning outcomes, provides more critical peer feedback, and enhances self-perception of social effects (Panadero & Alqassab, 2019).

In providing academic writing content, consideration must also be given to the varying linguistic abilities of students. This review indicates that teaching writing to prevent plagiarism includes grammar, word choice, language style, paraphrasing, citation, and reference writing. Students must be taught good writing skills, paraphrasing techniques, citation techniques, and citation styles to develop academic integrity skills (Stephens & Wangaard, 2016). Furthermore, explicit teaching of academic integrity, citation techniques, and paraphrasing has the potential to reduce cases of academic integrity violations (Stoesz & Yuditseva, 2018). This view is supported by Bacha et al. (2012), who also recommended that students be given knowledge of paraphrasing and reference usage, how to access references, and encouraged to read more information related to the discussed topic. They provide academic writing content by gradually presenting each part's content and the basics of writings necessary (Carnero et al., 2017). With the appropriate knowledge, it is hoped that student plagiarism behaviour can be reduced.

Collaborative efforts are needed to reduce the incidence of plagiarism among students. University lecturers and officials should possess competencies that support academic integrity, create a learning environment and culture of academic integrity within the institution, apply strategies to address student cheating and develop students' moral identity (Wangaard, 2016). This review reveals prevention efforts integrated with the library as a comprehensive step towards preventing plagiarism through writing education. Studies suggest that library orientation provides research skills and enhances students' confidence in preparing academic papers (Burgess-Proctor et al., 2014). Using the library to raise awareness of plagiarism, apply theory, and activate the writing centre to seek academic assistance (Dayyeh & Skakiyya, 2018). Comprehensive education on plagiarism, specifically within writing education, is essential to instil habits among students that will prevent plagiarism in their future endeavours, including in the workforce. It is crucial because research has shown that academic cheating among students tends to increase as they progress to higher levels of education, even into their professional lives (Mulisa & Ebessa, 2021). In case of suspected plagiarism or other forms of academic misconduct, all stakeholders should be involved. Action should be taken stepwise from the faculty level up to the university level (Perkins et al., 2020).

Furthermore, this review reveals a conflict among the interventions of several studies regarding the follow-up actions on plagiarism behaviour. Two studies consider that the strictness and clarity of punishment are essential in preventing/reducing plagiarism (Carnero et al., 2017; Roe & Perkins, 2022). Moreover, a zero-tolerance policy's success in a course is due to the policy's implementation (Carnero et al., 2017). On the other hand, three studies believe that involving students in self-assessing their writing, accompanied by writing support, is more effective in preventing plagiarism behaviour than punishing students (Dalal, 2015; Owens & White, 2013; Yang et al., 2019). This view is supported by Chew et al.'s (2015) study, which suggests that students who commit plagiarism through email were not given punishment. Similarly, the Watson (2017) study focused on orienting students towards recognizing and identifying their own errors rather than punishing them for their plagiarism behaviour. Therefore, policies related to punishment for plagiarism behaviour in institutions need further examination.

To facilitate further research, this review presents the distribution of countries that focus on strengthening academic integrity through writing instruction. The countries with the most studies on this topic are America and Europe, while studies from Asia and Australia are still scarce, and no studies from Africa were found. It is acknowledged that practitioners in the classroom, library, and writing centre are trying to prevent plagiarism. However, the low percentage of articles found on preventing plagiarism through writing instruction reflects the low publication rate in this field.

Based on this, it is an opportunity for researchers in this area to focus their studies and provide more references on this topic for publication.

V. LIMITATIONS

This review has limitations, as it only investigates articles published in English, which may lead to incomplete findings and restrictions in accessing some full texts. Additionally, the review summarizes a relatively small number of studies and is limited to articles from higher education settings. The review is constrained by the selection of language and databases used to identify studies. Therefore, it is recommended that future research use a more diverse range of languages and databases. Another limitation is that the review only addresses interventions related to plagiarism behaviour. Two trends are identified in the studies reviewed: punishment for plagiarism behaviour or focusing on orienting students to become aware of and understand their own mistakes. However, the review does not address the effectiveness of these trends, indicating a need for studies that measure the effectiveness of follow-up actions for plagiarism.

Furthermore, cultural differences among students may affect their knowledge and behavioral responses to plagiarism. This finding suggests that understanding students' cultural backgrounds can help educators design more culturally appropriate academic integrity programs. In addition, the review identified challenges in teaching writing and preventing plagiarism in the digital era. With easy access to online sources, students can easily copy and paste text or paraphrase without considering changes in meaning. There is also a recent phenomenon of using artificial intelligence software to complete writing tasks. Future research should investigate these challenges and develop learning designs that solve the problems identified.

VI. CONCLUSION

Overall, this review focuses on the appropriate methods, supporting tools, and content for implementing effective writing instruction at the university level and the impact of such education on reducing student plagiarism. Tutorial and workshop methods were the most used approaches for teaching plagiarism and writing skills, with content focusing on word choice, grammar, citations, paraphrasing, reference writing, and knowledge of plagiarism. Supporting tools such as rubrics and Turnitin were utilized to facilitate reflection, feedback, peer review, and plagiarism detection. Across all studies, implementing writing instruction improved knowledge, attitudes, confidence, and behaviour related to writing and plagiarism. However, the review is limited in scope and may not fully represent all types of writing instruction at all universities. The study aims to stimulate discussion among policymakers and practitioners regarding effective methods for teaching writing and preventing plagiarism at the university level while also identifying areas for future research.

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