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Research Article

Ctrl C + Ctrl V: Plagiarism and Knowledge on Referencing and Citation among Pre-service Teachers

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ABSTRACT

Issues on plagiarism among pre-service teachers (PSTs) have increased in modular and online learning. To confirm this, the study determined the PSTs' level of awareness on plagiarism; their knowledge on referencing and citation; and the correlation between their level of awareness on plagiarism and knowledge on referencing and citation, with their academic performance. The study employed a descriptive-correlational research design participated by 235 PSTs randomly sampled through strata. The data were gathered through a web-based survey. Results showed that the PSTs' level of awareness of plagiarism was moderate, while the majority have fair knowledge in referencing and citation. Also, results showed a significant relationship among the level of awareness on plagiarism, knowledge on referencing and citation, and academic performance. It is recommended that institutions equip librarians and educators to teach PSTs about citation and referencing skills. Besides, the institution should make sure that a policy is implemented to pursue academic integrity. This policy must articulate the various types of plagiarism, plagiarism measurement, and fair and consistent disciplinary actions.

Keywords: *academic integrity, citation, plagiarism, pre-service teachers, referencing style, teacher education*

Background

Plagiarism has far-reaching ramifications, and no one is invulnerable. A person is not exempted from the professional boundaries raised by enforced plagiarism because of unfamiliarity or ignorance. Student integrity, academic performance, and professional reputation are all jeopardized by institutional

misconduct, as are legal ramifications and liquidated damages. The issue of plagiarism causes a lot of anxiety to people working in the educational field (supervisors, administrators, professors). As a result of the COVID-19 global pandemic, many educators and students have shifted to virtual interactions and modular instruction (Sangster et al., 2020; Tabuena &

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Pentang, 2021; Agayon et al., 2022), which heightened the issue of plagiarism.

The question of what constitutes general understanding which does not necessitate authorship is one of several aspects of plagiarism controversy that students transitioning from high school to college are likely to encounter. In general, clear information and reliability and validity factors are not subject to plagiarism restrictions; however, abstract concepts, analyses, opinions, and viewpoints are, and should thus be cited. Plagiarism does not happen when you least expect it. The majority of unanticipated or unplanned plagiarism occurs precisely when one would expect it to. Students are concerned about their academic performance, stressed by deadlines, unsure of how to properly cite, disorganized in their research, and frantically attempting to complete a paper at the last minute.

Online education also provides physically challenged students with more freedom to participate in virtual learning environments that require minimal supervision (Basilaia & Kvavadze, 2020; Tabuena & Pentang, 2021). Following the implementation of COVID-19, there is a greater need to assist students in significantly reducing plagiarism in virtual classrooms. Bertram Gallant (in Lederman, 2020) stated in the most recent live broadcast for digital learning that she would not be surprised if the sudden shift to web-based learning leads to increased cheating by students. Students are expected to commit dishonesty when they are stressed and pressured when the norms are uncertain, and when urges and opportunities exist, she explained (Lederman, 2020). Students are increasingly vulnerable to plagiarism in a technologically transformed world where users are actively connected via the internet, cloud computing, and social media platforms (McHaney et al., 2016). However, the same technology also causes alarming problems such as low engagement, poor student discipline, and academic dishonesty (Sithole et al., 2019). Dishonesty, including plagiarism, is not a recent occurrence.

Plagiarism is defined as the use of another person's thoughts, work, and relevant data among others without the author's

justification. This paper used Ellis et al.'s (2018) definition of plagiarism, which defined it as the "practice of presenting someone else's words and/or ideas as your own without appropriate attribution". This issue has previously been reported, and that has always been a major concern for teachers at educational institutions and in all schools. Plagiarism is becoming more prevalent, and it is being intensified in the classroom by students' proliferation of online information resources. Plagiarism was time-consuming before the internet because students had to hand-copy text from books, encyclopedias, newspapers, and other sources. This time-consuming task has been shortened and replaced by new simple commands, "*ctrl+C*" and "*ctrl+V*", the well-known "copy and paste."

Crucial to academic writing is referencing and citation of works by other scholars. To date, no study was carried out to determine the awareness of plagiarism and knowledge of citation and referencing pre-service teachers (PSTs) in the Philippines, who are deemed to be the mentors and models of the future generation (Pentang et al., 2021). Following Romanowski (2021), understanding plagiarism is critical for PSTs because they will be the gatekeepers of academic honesty in their future roles as teachers. With the paradigm shift in education brought by the pandemic (Agayon et al., 2022), where plagiarism is prevalent and considering the above facts and observations on the issue of academic integrity, the purpose of this study is to assess WPU PSTs' awareness of plagiarism and knowledge of proper citation. As a result, PSTs will have a better understanding of how plagiarism is viewed, making it easier to identify which aspects of the learning process can be improved. Furthermore, findings will provide more insight into the issue of plagiarism in teacher education institutions (TEIs) and will serve as a guide towards policy development to address the issue, as well as open support the University's subscription to software to detect and diminish plagiarism.

Statement of the Problem

Generally, the study aimed to determine the knowledge on referencing and citation among

PSTs. Specifically, this study will answer the following problems:

1. What is the level of awareness on plagiarism of the PSTs in terms of the types of plagiarism, consequences of plagiarism, policy on plagiarism, and plagiarism detection tools?
2. How many of the PSTs are knowledgeable on referencing and citation in terms of citing books, journal articles, webpages, and social media?
3. Is their significant relationship between the level of awareness on plagiarism and knowledge on referencing and citation of the PSTs;
4. What is the academic performance of the PSTs;
5. Is there a significant relationship between the level of awareness of plagiarism and the academic performance of the PSTs; and
6. Is there a significant relationship between the knowledge on referencing and citation and the academic performance of the PSTs?

Significance of the Study

The study highlighted valid and reliable information that would be relevant to every stakeholder. This research could help teacher educators develop materials for an appropriate instructional process. It may provide them with various ideas in the process of knowledge transfer, with which the students may be able to cope easily. Also, this study could help students assess their ability to deal effectively with the subject being discussed. This research will help students have a more successful educational experience as they progress in their studies. Besides, the findings may also be useful to parents and other institutions or individuals involved in preparing PSTs for their significant contribution as agents of change and mutually assured instruction.

Although the scope and strength of evidence in the study are limited, it could be used as a baseline for the university to evaluate its curricular programs and academic activities aimed at raising students' awareness of plagiarism and referencing. Further, this study may serve as a reference for future related research and provide insights into how to deal with the issue of plagiarism.

Scope and Limitation

This study was conducted in a teacher education institution in West Philippines. This focuses only on the randomly-sampled PSTs' awareness of plagiarism and knowledge on referencing and citation. Only academic performance was correlated to these two variables. An anonymized web-based survey was used to collect sensitive information from students for this study. Although the students' anonymity was protected, some students were likely reluctant to admit to any fraudulent behaviors they may have committed, which can also explain why their scores on that variable were significantly lesser in comparison to other analyses. One could argue that self-reports should be interpreted with caution because PSTs may have a distorted view of their attitude and actions; they may report how they believe they should and would like to act rather than how they behave. Another limitation is that attitudes change daily, and a negative experience on the day of the survey could skew PSTs' responses.

Literature Review

Plagiarism

Plagiarism, as a form of cheating, has been challenging academic institutions. Plagiarism is now a massive problem for 21st century higher education institutions globally (Diaz et al., 2018). E-cheating is the use of modern technologies to copy another author/s material without proper citation and acknowledgment (Forsyth et al., 2018). The habit of "Ctrl C + Ctrl V" or "copy and paste" in the education system poses a significant challenge (Gasparyan et al., 2017). Forsyth et al. (2018) outlined the following as ways that technology impacts academic dishonesty, namely 1) improper citation after using another author/s information, 2) use of unauthorized sources and materials while doing assessments (test or examination), 3) having another person complete academic assessment, 4) submitting other students work from a different semester or institution, and 5) waiting for another student to complete an assessment and then copying and submitting it.

Several attributes may heighten plagiarism cases among students. Too many assignments

given to students within a short period can lead to plagiarism (Sprajc et al., 2017). Jereb et al. (2018) indicated that factors influencing student plagiarism in South Africa could be attributed to academic institutions' attitudes and actions towards plagiarism. Chien (2017) investigated a sample of Taiwanese students' views regarding plagiarism and revealed that although the students had some degree of familiarity with plagiarism, they had a problem recognizing it. Yu et al. (2017) who investigated factors that result in cheating among college students found that academic cheating is significantly associated with demographic characteristics, character qualities, college experience, student perceptions, and attitudes. Studies with undergraduate students showed a lack of understanding of the concept of plagiarism, and the consequences of it (Ehrich et al., 2016).

Babaii and Nejadghanbar (2017) found that students' lack of familiarity with the concept of plagiarism, poor academic writing skills, lack of time, laziness and deceitfulness, low language proficiency, unfamiliarity with the subject of writing, and teachers' high expectations, teachers' carelessness, and leniency were the reasons for plagiarism among the students. Naumeca et al. (2020) revealed a low level of students' awareness of the university policy on academic integrity and a lack of a systematic institutional approach to promoting academic integrity, and students with a higher awareness of the university policy on academic integrity were less tolerant towards violations and perceived academic integrity as an essential aspect for both the academic community and student life. Jereb et al. (2018) showed that the students had an average level of knowledge of what academic plagiarism is and a poor level of knowledge about what paraphrasing is, asserting that pressures sometimes push students to indulge in unfair means such as plagiarism as a shortcut to performing better in exams or producing a certain number of publications.

Chien (2017) has also highlighted that most of the students had some basic understanding of plagiarism. They had some familiarity with the Western notion of plagiarism but based on the writing exercise, often they were not able to recognize plagiarism when it occurred.

Students' understanding was generally, but not entirely, consistent with their source use behavior. Bruton and Childers (2016) found that if the student violated the plagiarism rules unintentionally faculty members did not penalize the student that did not coincide with the ones written in the syllabi about the penalty of plagiarism. Many students seek the quickest solution to tasks, regardless of the validity of the sources or without respecting the work of others (Negre et al., 2015).

Not only students but professionals and graduate students are prone to plagiarism. Many studies showed that supervisors or other academic staff had also plagiarized (Bruton & Childers, 2016). Kocak and Ozbek (2016) enumerated cases of plagiarism such as citing without providing a reference, publishing an article by translating it without the permission of its author, using someone else's quantification approach without permission, and publishing someone else's research with own name.

Proposals have been made to eliminate plagiarized outputs. If they propose students mind busting project topics to be submitted in an acceptable period, arrange the courses' workloads by cooperating with other courses' instructors, give a clear definition of the plagiarism in the syllabi, teach how to detect, check and prevent plagiarism, and inform students obviously about the consequences of the dishonesty, and act consistently when enforcing the sanctions, the violation of plagiarism rules may decrease (Babaii & Nejadghanbar, 2017). Nevertheless, Levine and Pazdernik (2018) provide clear evidence of a reduction in plagiarism following a combination of initiatives, including structured educational modules, implementation of policies, increasing the difficulty of plagiarism by requiring students to submit drafts, and ensuring there are consequences of plagiarism. Morris (2018) on the other hand, suggests a more holistic model of five considerations for addressing contract cheating, including determining strategy, reviewing institutional policy, developing an understanding of students, editing and revisiting practices for assessment, and including areas for staff professional development.

Referencing and Citation

Referencing and citation is the process of acknowledging the sources you have used when writing your work. Correct referencing and citation also allow the reader of your work to easily identify those sources used in your work and to follow up on them if necessary. It is a good academic practice to acknowledge the contributions that others have made to your work (Libguides, 2021). The University of New South Wales (2021) highlighted that referencing allows you to acknowledge the contribution of other writers and researchers in your work. Any university assignments that draw on the ideas, words, or research of other writers must contain citations. It is also a way to give credit to the writers from whom you have borrowed words and ideas. By citing the work of a scholar, you acknowledge and respect the intellectual property rights of that researcher. As a student, you can draw on any of the millions of ideas, insights, and arguments published by other writers, many of whom have spent years researching and writing. All you need to do is acknowledge their contribution to your assignment.

Turnitin (2019) mentioned three reasons students may struggle with a citation: 1) students do not have prior knowledge of citation; 2) competing citation standards, and 3) poor research habits. With this, attempting to organize source documents and learning to add citations as you write, rather than as part of the editing process, may become out of date as a result. Therefore, students may struggle to understand where their information comes from and may forget particularly important citations. When it comes to education, students are not on a straight path. Even the best students frequently require extra assistance in filling in the gaps in their prior education, and citation is no exception. This is a major reason why it is critical to have basic skills analytical and critical thinking programs to assist students who require it.

Academic Performance

Knowledge of students on proper referencing and citation is related to academic performance. The inclusion of technology in education (Pentang, 2021a) showed different effects

on the academic performance of students, similar studies present contradictory results (Torres-Diaz et al., 2016). Students who achieved higher grades plagiarized less than students who had lower grades (Curtis & Popal, 2011). Selemani (2018) stated that despite those students having a conceptual understanding of plagiarism, most of them reported that they had intentionally and unintentionally committed plagiarism, mainly due to pressure for good grades, laziness, poor time management, and lack of good academic writing skills. The study also established that prevalent forms of plagiarism admitted by students and reported by academic staff to have been committed included lack of proper acknowledgment after paraphrasing, summarizing, and using quotation marks. The study further found that the common sanctions applied by academics include giving a warning and asking the student to re-write the plagiarized work.

The study contributes to the existing body of knowledge, which verified the PSTs' awareness of plagiarism, their knowledge on referencing and citation, and the relationship between these two variables with academic performance.

Methodology

Research Design

A quantitative approach specifically descriptive-correlational research design (Magulod et al., 2021) was employed to describe the PSTs' awareness of plagiarism, knowledge of referencing and citation, and academic performance, as well as to determine the relationship between (a) awareness of plagiarism and knowledge of referencing and citation, (b) awareness of plagiarism and academic performance, and (c) knowledge of referencing and citation with academic performance.

Participants

The PSTs of the study were 235 pre-service teachers (teacher education students) enrolled in three several teacher education program during the school year 2020-2021. PSTs were chosen using a stratified sampling technique with the entire population available. The study utilized a large sample size to decrease sample

error (Cohen et al., 2007), and it increases the validity and reliability of the result. The population is divided into strata based on their year levels (first year, second year, and third-year students).

Research Instruments

Data were obtained using a researcher-made web-based survey instrument. The researcher employed a 5-point Likert scale and a multiple-choice test to assess the PSTs' plagiarism awareness and knowledge of referencing and citation. The general weighted average (GWA) of the PSTs was used to describe their academic performance. Additionally, the researcher seeks experts to validate the questionnaire. The Cronbach's alpha for this web-based survey instrument is 0.75, indicating that it is reliable. The questionnaires were answered discretely, and the questions were designed to maintain privacy and security.

Procedures

Following the receipt of consent from the authorities, an initial request for PSTs was made. These serve as an invitation to participate and respond to the web-based questionnaire. The researchers developed a quantitative questionnaire with questions that the subjects answered using a Likert Scale. Finally, the researcher distributed the web-based questionnaire to all PSTs and allowed enough time for them to complete the questionnaire.

All PSTs enrolled in the course received an email containing a link to the online questionnaire as well as a study summary. In all statements, the researcher emphasized the importance of anonymity, and personal questions about anonymity and procedures were answered via email. When the PSTs began to open the questionnaire, they expected to provide informed consent to continue. All the surveys were collected by the researchers, and the data were tabulated and analyzed using *jamovi* software (Pentang, 2021b).

Data Analysis

The data that was collected went through coding and screening to assure valid data to be reported. Arithmetic mean was used

to describe the PSTs' awareness of plagiarism, knowledge of referencing and citation, and academic performance. Data on the level of awareness of plagiarism among PSTs were analyzed by calculating mean scores on the awareness scale. To perform this, numerical scores were assigned to each of the five response options on the level of awareness, which is rated using a 5-point Likert scale ranging from 1 (Not Aware) to 5 (Fully Aware). Spearman rank-order correlation coefficient (r_s) was used to test the relationship (Pentang, 2021b) between (1) level of awareness of plagiarism and knowledge on citation and referencing, (2) level of awareness of plagiarism and the academic performance of PSTs, and (3) knowledge on citation and referencing and the academic performance of the PSTs.

Ethical Considerations

PSTs were authorized with their explicit consent. The principle of explicit consent requires researchers to provide adequate information and assertions about participation for individuals to understand the significance of participation and make a fully informed, considered, and freely given decision whether to participate, free of any pressure. The PSTs' dignity and well-being were always protected. Throughout the study, the research data was kept confidential (Magulod et al., 2021). No personal information was collected.

Results and Discussion

PSTs Level of Awareness of Plagiarism

The awareness of plagiarism of the PSTs were determined by their awareness of how frequently certain statements were applied to them (Table 1). In sum, the PSTs' level of awareness on plagiarism was moderate for all certain statements, with a grand mean score of 0.50. This shows that the PSTs were somewhat familiar with the concept of plagiarism akin to Asunka (2013) where PSTs have a fair understanding of plagiarism. Similarly, Chien (2017), Babaii and Nejadghanbar (2017), Bruton and Childers (2016), Ehrich et al. (2016), Jereb et al. (2018), and Naumeca et al. (2020) found that most students from different levels had a basic

understanding of plagiarism and academic integrity.

Specifically, the statements under types of plagiarism obtained a mean score of 0.83 which shows that the PSTs had a full awareness, which shows their good background on the types of plagiarism. Besides, the statements under consequences of plagiarism obtained a mean score of 0.79 which shows that the PSTs uphold the nobility of the teaching profession, thus, acknowledging the consequences of plagiarism.

The data revealed that the PSTs' level of awareness was slight in terms of the policy on plagiarism with a mean score of 0.25, which means that the PSTs are somewhat aware of the policy of plagiarism. As to plagiarism detection tools, results revealed that the PSTs are not

aware with a mean score of 0.14, which indicate that most of the PSTs are not aware of plagiarism detection tools.

This clearly shows that the PSTs need to be educated with the types and consequences of plagiarism as well as the policies on plagiarism and plagiarism detection tools to make them fully aware. Since academic integrity is at stake, teacher educators must take measures such as information drives and constant reminders to enlighten the PSTs about the drawback of ignorance towards plagiarism and its impact on their profession as future teachers. Teacher educators may also provide illustrations or situations for the plagiarism types, consequences, policies, and detection tools to clarify misinformation and misinterpretation among the PSTs.

Table 1. PSTs Level of Awareness on Plagiarism

Plagiarism	Mean	Interpretation
Types of Plagiarism	0.83	Fully Aware
Global Plagiarism	0.91	Fully Aware
Paraphrasing Plagiarism	0.81	Fully Aware
Verbatim Plagiarism	0.91	Fully Aware
Mosaic Plagiarism	0.93	Fully Aware
Self-Plagiarism	0.89	Fully Aware
Incorrect Citation	0.78	Aware
Collusion	0.91	Fully Aware
Auto-Plagiarism	0.67	Aware
Reverse Plagiarism	0.67	Aware
Consequences of Plagiarism	0.79	Aware
Accidental plagiarism	0.46	Moderately Aware
Deliberate plagiarism	0.80	Aware
Expulsion	0.76	Aware
Degree revocation	0.98	Fully Aware
Damage your reputation	0.94	Fully Aware
Copyright infringement	0.81	Fully Aware
Policy on Plagiarism	0.25	Slightly Aware
Copyright violation	0.23	Slightly Aware
Republic Act 10175	0.27	Slightly Aware
Plagiarism Detection Tools	0.14	Not Aware
Copyleaks	0.19	Not Aware
Edubirdie	0.05	Not Aware
Grammarly	0.56	Moderately Aware
Paperrater	0.02	Not Aware
Plagiarisma	0.11	Not Aware
PlagScan	0.08	Not Aware
Quetext	0.16	Not Aware
Search Engine Report Plagiarism Checker	0.13	Not Aware

Plagiarism	Mean	Interpretation
Small SEO Tools	0.07	Not Aware
Viper	0.05	Not Aware
Grand Mean	0.50	Moderately Aware

Legend: 0.81-1.00 = Fully Aware
 0.61-0.80 = Aware
 0.41-0.60 = Moderately Aware
 0.21-0.40 = Slightly Aware
 0.00-0.20 = Not Aware

PSTs’ Knowledge on Referencing and Citation

Table 2 shows the knowledge on referencing and citations of the PSTs. The majority of the PSTs performed satisfactorily in referencing (65.11%), citing books (68.09%), citing journal articles (67.23), and citing webpages and social media (60.43%). This implies that the PSTs have some knowledge of referencing and citation. This is parallel with Muzata and Banja (2019) where the school of education students did not demonstrate understanding and skills in referencing and citation. Nevertheless, this knowledge can be improved given that the PSTs are required to practice appropriate citation and referencing format in their outputs.

With the technological advancements in education (Pentang, 2021a) anchored by the availability of online referencing and citation tools, teacher educators may provide experiential learning to the PSTs for them to improve their knowledge and skills as well as to emphasize academic integrity and honesty with the implementation of flexible learning.

Since the teacher education program aims to equip PSTs with the necessary skills and competencies (Pentang et al., 2021), TEIs and teacher educators may work together to fully prepare these future teachers as module writers, learning materials developers, and action researchers where the knowledge of referencing and citation is necessary.

Table 2. PSTs’ Knowledge on Referencing and Citation

Referencing and Citation	Frequency* (n = 235)	Percentage (%)	Descriptive Rating
Referencing	153	65.11	Satisfactory
Citing Books	160	68.09	Satisfactory
Citing Journal Articles	158	67.23	Satisfactory
Citing Webpages and Social Media	142	60.43	Satisfactory

Legend: 90.01-100.00 = Outstanding
 70.01-90.00 = Very Satisfactory
 40.01-70.00 = Satisfactory
 00.00-40.00 = Unsatisfactory

*multiple responses

Correlation between the PSTs Awareness on Plagiarism and Knowledge on Referencing and Citation

Table 3 presents the correlation between the level of awareness of plagiarism and knowledge on referencing and citation of the PSTs. The results revealed that the calculated correlation coefficient is significant ($r_s = 0.296$, $p < .05$). The correlation coefficient also

implies a direct relationship between the level of awareness of plagiarism and knowledge on referencing and citation of the students. However, the magnitude of the correlation was low between the two variables considered.

Though it does not guarantee a strong association, this finding emphasizes the importance of learning plagiarism as well as referencing and citation. PSTs must understand that

exploring both is not only part of an academic requirement, but also involves academic integrity and the veracity of their school compliances such as action research, reaction/reflection papers, essays, and the like. Exposing the PSTs to Libguides (2021) and Turnitin (2019)

among other useful online sources may be helpful. Besides, the University Library with the teacher educators may also provide workshops for PSTs particular to writing, citing, and referencing etiquette, practices, and tools.

Table 3. Correlation between the PSTs Awareness on Plagiarism and Knowledge on Referencing and Citation

Variables	r_s	Interpretation
Level of Awareness on Plagiarism Knowledge of Referencing and Citation	0.296*	Significant Weak Positive Correlation

*sig at .05 level

PSTs' Academic Performance

Table 4 shows the academic performance of the PSTs. As revealed by their mean performance in the first and second semester school year 2020-2021, a greater number (38.30%) of the PSTs had a fair performance. These students had performances ranging from 80-84. Some students had excellent (4.68%), very good (15.74%), good (24.26%) and poor (17.02%) performance. The mean grade for all the PSTs was 82.01 which was described as fair. Relating this finding to the other two variables being considered, the PSTs' fair perfor-

mance may be attributed to their basic awareness of plagiarism and satisfactory knowledge on referencing and citation. It can be deduced that increasing the PSTs' awareness and knowledge may contribute to improving their academic performance. Still, Selemani (2018) emphasized that knowledge of plagiarism is not an assurance for the students to earn an outstanding performance, since they may either intentionally or unintentionally be plagiarized out of pressure to obtain better grades along with other reasons.

Table 4. PSTs' Academic Performance

Level of Performance	Frequency (n = 235)	Percentage (%)
Excellent (95-100)	11	4.68
Very good (90-94)	37	15.74
Good (85-89)	57	24.26
Fair (80-84)	90	38.30
Poor (75-79)	40	17.02
Total	235	100.00
Mean = 82.01 (Fair)		

Correlation between the PSTs Awareness on Plagiarism and Academic Performance

Table 5 presents the correlation between the level of awareness of plagiarism and the academic performance of the PSTs. The results revealed that the calculated correlation coefficient is significant ($r_s = 0.723, p < .05$). The correlation coefficient indicates that there is a direct strong relationship between the level of awareness of plagiarism and the academic performance of the students. The finding may

be related to Curtis and Popal (2011), who highlighted that the students with higher grades plagiarized less than students with lower grades. However, a good academic standing is not always the result of ethically compliant output from students (Lines, 2016; Malesky et al., 2016). This may enlighten TEIs and teacher educators to screen the outputs of the PSTs for possible acts of plagiarism, whether they made it with or without awareness of its consequences.

Table 5. Correlation between the PSTs Awareness on Plagiarism and Academic Performance

Variables	r_s	Interpretation
Level of Awareness on Plagiarism Academic Performance	0.723*	Significant Strong Positive Correlation

Correlation between the PSTs’ Knowledge on Referencing and Citation with Academic Performance

Table 6 shows the correlation between the PSTs’ knowledge on referencing and citation with their academic performance. The results revealed that the calculated correlation coefficient is significant ($r_s = 0.806, p < .05$). The correlation coefficient further indicates a direct strong relationship between the knowledge on referencing and citation and the academic performance of the PSTs.

Enhancing the PSTs’ knowledge on referencing and citation may earn them an excellent academic performance. With this, it is neces-

sary to keep these PSTs abreast with the fundamental referencing and citation competencies through relevant programs provided by teacher educators.

Meanwhile, TEIs and teacher educators must be aware of the prevalence of contract and/or e-cheating, especially with online and modular learning. Not knowing that they are committing unethical actions, PSTs may venture on contract and/or e-cheating to avoid the issues of plagiarism. To reduce such cases, teacher educators may closely monitor and evaluate the submission of the PSTs as well as implement varied assessment methods (Harper et al., 2020).

Table 6. Correlation between the PSTs’ Knowledge on Referencing and Citation with Academic Performance

Variables	r_s	Interpretation
Knowledge of Referencing and Citation Academic Performance	0.806*	Significant Strong Positive Correlation

Conclusion

This study established that PSTs do not have full awareness and knowledge on plagiarism, referencing, and citation which may have resulted to their fair academic performance as reflected by their GWA. With the relationship recorded among the variables, awareness or knowledge of one is related to another, which implies that training on plagiarism among the PSTs may increase their knowledge and skills on referencing and citation and vice versa. Eventually, this can further impact their academic performance where teacher education programs require PSTs for outputs such as research papers, reviews, reaction, reflection, and essays among other written and/or performance tasks.

Recommendations

Based on the findings of the study and conclusions drawn, the following recommendations are offered.

Give PSTs a clear view of what constitutes plagiarism and what is considered appropriate collaborative work at the start of the semester. It is also important to give examples of how and when to credit others’ work in their writing. Besides, it would be healthy to motivate learners to peer-review each other’s work and provide opportunities for such activities during the classroom setting.

Use plagiarism detection software and make PSTs aware of its importance. It is necessary to provide the PSTs with resources to help them avoid plagiarism. It will be helpful to require them to submit the references for written outputs and performance tasks which include but are not limited to research papers and essays among others.

Despite the challenges in preventing plagiarism, it is critical for the institution to devise strategies to eliminate this practice. When it comes to plagiarism, the institution should make sure that a policy is developed and

implemented for academic purposes. This policy must articulate the various types of plagiarism, plagiarism measurement, and fair and consistent disciplinary actions.

The institution may subscribe to a software for screening the originality of PSTs' outputs along with equipping librarians and teaching personnel in training PSTs about plagiarism, citation, and referencing skills.

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Conflict of Interest

The authors declare no conflict of interest.

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