Zero Tolerance to Plagiarism in Multicultural Teamwork: Challenges for English-Speaking non-EU and EU Academics

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Abstract

The paper discusses scientific communication and notes that the primary means is through scientific literature, which serves as a vessel for circulating knowledge and information about the world around us. However, in today's post-academic scientific landscape, where the number of publications in international databases is the main yardstick for assessing the productivity of scientists, research, and educational institutions, the issue of plagiarism in scientific communications has become increasingly relevant. It's worth noting that scientific articles are recognized as the primary form of communication, while other types of scientific publications such as monographs, abstracts in collections, and conference proceedings, which constitute a significant portion of modern scientific communication, are often overlooked. It has been shown that in Ukraine and EU countries where scientists from different nationalities and cultures participate, the objective isn't to eradicate plagiarism as a deviation from morality and law, but rather to significantly decrease its prevalence in science and higher education by addressing the factors that contribute to it. The most immediate consequence of plagiarism is the inundation of outdated scientific information with articles that imitate scientific activity, making it challenging to discover genuinely novel scientific information even with the assistance of the internet. Plagiarism also devalues the significance of scientific publications, complicates the identification of truly valuable publications, and violates the ethical and legal norms of scientific activity and scientific communication.

Keywords: plagiarism, multicultural teamwork, post-academic science, bot, anti-plagiarism systems, rewriting

1. Introduction

Modern science is a collaborative endeavor of trained professionals and researchers aimed at generating, preserving, and disseminating new knowledge about nature, society, and humanity. In this context, communication plays a critical role. Most contemporary models of science operate on the principle that knowledge is a product of social relationships and, as such, is inherently communicative.

As a fundamental component of culture, science is directly dependent on the level of information exchange and interaction among its participants, as well as their moral values. Science is cumulative, relying on the achievements of its predecessors and contemporaries to develop further. Scientific communication encompasses a range of forms and types of professional communication among scientists, including written publications, oral presentations, and electronic means of communication.

While scientific communication can take various forms, written or electronic publications such as articles in specialized journals, reports, and messages are the most common. These publications serve various functions in science, but their primary purpose is to inform the disciplinary scientific community about new developments. Scientific journals are expected to publish only articles that have undergone independent scientific review in the form of external reviews. Scientific publication demands professionalism and accountability, as it forms the basis of scientific prestige, recognition, and impact of a scientist within the scientific community.

As a result, plagiarism and other forms of scientific misconduct listed below constitute violations of the professional ethics of a scientist and the ethics of scientific communication. These practices undermine the integrity of scientific research and the credibility of scientific publications, ultimately harming the scientific community as a whole.

The prohibition on re-plagiarism existed before the information society, but the emergence of the Internet and modern information technologies has significantly expanded the possibilities for plagiarism and drawn attention to this process. This reduces the significance of the entire variety of forms of scientific communication existing in world science today to only one type of communication. Articles and the absolutization of their number as the main indicator of a scientist's success have inevitably exacerbated such violations as plagiarism,

compilation, and auto-plagiarism. Although, this is not the only reason for the growth of these violations of the scientific ethos. The latter – auto-plagiarism, which in Ukraine is referred to as multiple (repeated) publications and auto-plagiarism in EU countries, deserves particular attention. This phenomenon involves an author reusing their previous work's results (texts) under different titles, with minor modifications, and submitting them to different journals, often those that publish for profit and without plagiarism checks. This differs from plagiarism, as the author is not using someone else's work without permission but rather repurposing their own work for publication multiple times.

The transgressions of scientific ethics can have detrimental effects on the overall scientific community by diminishing the trustworthiness and significance of scientific publications. It is essential to address these issues and promote responsible and ethical behavior in scientific communication to ensure the integrity and authenticity of scientific research.

The purpose of this article is to examine the factors contributing to the rise of plagiarism and to provide a comprehensive overview of its various forms and consequences in contemporary science. Additionally, this article seeks to explore potential solutions to address the issue of plagiarism in scientific publications by multicultural English-speaking scholars and researchers from the EU and non-EU academic teams, reasonably accounting for successful multicultural teamwork in the EU countries.

2. Method

To achieve these objectives, the study utilizes general scientific methods. These methods include the descriptive and analytical method, as well as deductive, inductive, and comparison methods. The mentioned methods are employed to analyze the relevant data and draw meaningful conclusions that can inform policies and practices aimed at reducing the incidence of plagiarism in scientific publications. It is crucial to address the problem of plagiarism as it poses a significant threat to the integrity and authenticity of scientific research. The proliferation of plagiarized work undermines the credibility of scientific publications and hinders the advancement of scientific knowledge. Thus, it is imperative to develop effective strategies to combat plagiarism and promote ethical behavior in scientific communication.

3. Theoretical Background

The issue of plagiarism, particularly in academic circles, has been extensively researched and analyzed by various scholars. Researchers such as Andreescu (2013), Austin and Brown (1999), Barrie and Presti (2000), Baruchson-Arbib and Yaari (2004), Biliæ-Zulle et al. (2005), and Bilic-Zulle et al. (2008), as well as Braumoeller and Gaines (2001), have provided scientific interpretations of plagiarism and its nuances, including academic plagiarism. Their works have shed light on the various forms of plagiarism, including verbatim copying, paraphrasing, and mosaic plagiarism, as well as the consequences of such actions on the scientific community, including the devaluation of scientific publications and the violation of ethical and legal norms. The insights provided by these scholars have also informed the development of methods to detect and prevent plagiarism, such as software tools and plagiarism awareness programs. By drawing on the works of these scholars, the current study aims to analyze the reasons for the increase in plagiarism in modern science and propose effective ways to reduce its volume, particularly in multicultural teamwork in academic English-speaking teams of EU and non-EU countries.

While the pursuit of high rankings for domestic universities is a laudable goal, some educational institutions have taken a different approach to achieve it. Rather than focusing solely on publishing in English-language journals indexed by Web of Science and Scopus, they emphasize the importance of producing quality research that contributes to the advancement of science and benefits society. This approach eschews the commercialization of the publication process and avoids the creation of low-quality "junk" journals.

Furthermore, these institutions prioritize the development of a research culture that promotes collaboration, critical thinking, and innovation. They foster an environment where scholars are encouraged to explore new ideas and pursue research that has practical applications. They also recognize the importance of building strong partnerships with industry and government, which can provide funding, resources, and opportunities for collaboration. In contrast to the trend of bureaucratization in science and education management, these institutions value academic freedom and support researchers in their pursuit of knowledge. They provide resources for professional development, such as funding for conferences and workshops, and encourage interdisciplinary research.

While the literature may overemphasize the role of American scientists in world science, these institutions recognize the value of collaboration and seek to build partnerships with scholars from around the world. They recognize that scientific advancement is a global endeavor, and that diversity of perspectives and expertise can lead to breakthroughs in research. Thus, while the pursuit of high rankings for domestic universities is important, it is crucial to prioritize quality research and academic integrity over commercialization and the creation of low-quality publications. Educational institutions in Ukraine, and other parts of the world, should foster a research culture that promotes collaboration, critical thinking, and innovation, while recognizing the value of building strong partnerships with industry and government, and supporting academic freedom.

Following the above, plagiarism is a big issue. Recently, it has become a prevalent issue, facilitated by the computerization of the research process. In the rush to publish as many articles as possible, plagiarism has become a convenient means to achieve this goal. Therefore, it is necessary to conduct a detailed analysis of the phenomenon of plagiarism, including its history, definition, and ways to reduce its volume and combat it.

In this context, plagiarism has become an inevitable means of creating as many articles as possible. Thus, a detailed analysis of this

phenomenon is necessary, including the history of its occurrence, its definition, ways to reduce its volume, and combat it. This has been highlighted by various scholars in the field (Devoss & Rosati, 2002; Elzubier & Rizk, 2003; Kyong-Jee Kim et al., 2016; Chopiak, 2016; Shyshka, 2014; Kovalova, 2014).

Therefore, in order to maintain research authenticity, it is essential to address the issue of plagiarism in the scientific community and to promote ethical conduct in research.

Let us take a closer look at the history of plagiarism in art and science. The original meaning of the word "plagiarism" comes from the Latin "plagium" and translates as the kidnapping and sale of a free person into slavery (Bretag, 2019). In the seventeenth century, this concept was first used in the sense of literary theft, as "intentional appropriation of the authorship of another's work or its fragment" (Posner, 2007). It is in this sense that the term "plagiarism" most accurately expresses the essence of the phenomenon today, particularly for the assertion that plagiarism is the use of someone else's scientific result without reference to the work of its author (Kovalova, 2014). Plagiarism is theft, it is the use of someone else's scientific result without reference to the work of its author (Shyshka, 2014).

It is believed that an expanded definition of plagiarism leads to a blurring of the boundaries of this concept. In this case, plagiarism can include, in addition to direct borrowing, the theft of ideas, words, and phrases, presenting previously known material as original, etc. Plagiarism originated with writing and has existed since time immemorial, but it is obvious that the advent of the printing press, the printed form of scientific books, articles, and works of fiction accelerated the spread of plagiarism and increased its possibility. With the advent of the Internet and the massive spread of computers, plagiarism also became widespread. This forced the authorities in all countries to take the most active measures to combat plagiarism, first, of course, in countries with more advanced technologies - the United States, Japan, and Germany, as scholars argue in their works (Li Y., 2013; Rabab A.A. Mohammed, Omar M. Shaaban, Dalia G. Mahran, Hamdi N. Attellawy, Ahmed Makhlof, Abdulkader Albasri, 2015).

At some point, D.S. Price proposed a citation quota of 10-20 references per printed page of scientific work, specifically for the natural sciences, to ensure scientific value and avoid simple compilations or review works (Price, 1971). This figure was based on a study of 154 reputable American and European scientific journals. Each scientific discipline has its own disciplinary matrix, which is an element of the scientific paradigm. T. Kuhn introduced this concept in his book "The Structure of Scientific Revolutions" (Kuhn, 1968). Plagiarism is not a significant problem at the level of the disciplinary matrix because scientific discoveries cannot be made multiple times, and authorship is fixed by patents or publications.

In extreme cases, a discovery made more or less simultaneously by different authors leads to a dispute over priority or to a double name for the newly discovered phenomenon or new scientific law. There is another option - not to publish; however, if research results are not published and made known to the scientific community, they do not hold value in that scientific discipline.

The treatment of plagiarism varies in different fields such as science, literature, and art. Plagiarism is easier to detect, condemn, and prosecute in science compared to art, where it is harder to prove. Therefore, it is important to define plagiarism precisely and narrowly in the context of science. Plagiarism is the use of another author's text or information without proper reference, or the use of a new name for an already established phenomenon or pattern (Verhun, 2017; 2019). An inexperienced or even a seasoned researcher could benefit from a list of instances, where indicating the page number in addition to the title and author of a work, in square brackets, is necessary.

These include:

- Using a fragment of text from a publication, when enclosed in quotation marks;
- Using someone else's drawing, table, diagram, photograph, or statistical data in one’s work.

The omission of page numbers when referencing a work by only its title is considered plagiarism. When citing online resources, it is important to not only include the source's name but also the date of access, enclosed in square brackets. Many students neglect to do this when writing their term papers, theses, or dissertations, erroneously assuming that naming the source is sufficient, much like they would for a school essay. However, even PhD theses have been found to contain such violations.

The act of compiling different fragments from various sources on a topic is also a breach of professional and ethical standards of scientific research. While the work may appear to be scientifically sound and correctly cited, it lacks originality and does not contribute anything new to the field. Compilations can be useful as an overview of a subject, which is why some social science and humanities journals publish them as such (Mazurok, 2012; Khobzei, 2016).

Another form of violation of moral norms in science is the practice of auto plagiarism, where authors repeatedly publish the same material under different titles or with minor changes. This is distinct from plagiarism, as the author is reusing their own previous work in a new publication. Such authors are often published in journals that prioritize quantity over quality, without any peer review or plagiarism checks. Such publications hold no scientific merit and are only beneficial to the authors themselves, who may be struggling with limited funding for research and education, and are hoping to secure a position in a higher education institution. However, such authors are typically not very innovative and may resort to unethical means, including plagiarism, falsifying data, and manipulating research results.

4. Results

The publication of research results is a critical event not only for individual researchers but also for the scientific community at large. However, the battle against plagiarism varies in intensity and consequences at different levels of the organization of science and society.

At the level of a scientific discipline, a disciplinary matrix exists, where researchers must balance the prohibition of repeating plagiarism and the requirement to link to the previous body of scientific knowledge (Kuhn, 1962).

At the social matrix level, which pertains to the culture and mentality of a particular country within the context of the industrial and information society, the interest of the government and society in science amplifies the importance of preventing plagiarism. Plagiarism can jeopardize the credibility of scientific institutions, schools, and even governments. At this level, plagiarism is viewed as an act of theft and fraud, and its prevention is often addressed through the moral and legal responsibility of the offender (Shamoo & Resnik, 2015).

The issue of plagiarism in science is a multifaceted problem that requires a multifaceted approach to address. While legal action may be difficult to pursue, the importance of maintaining the integrity of scientific research and knowledge cannot be understated. As noted, the only real obstacle to the spread of plagiarism in science is the sense of honor and decency of scientists themselves. It is therefore crucial to instill in future scientists a strong sense of corporate ethics and the importance of maintaining academic integrity.

At the administrative level, anti-plagiarism measures must be in place to prevent financial and human resource losses. These measures should be implemented by those with the necessary knowledge and qualifications to detect and address plagiarism, but should also take into account the self-organizational nature of science. Heavy-handed measures that do not take into account the unique characteristics of scientific research may do more harm than good.

In addition to anti-plagiarism measures, there must also be a focus on promoting and supporting innovative and original research. This can be achieved through funding and resources dedicated to promoting groundbreaking research and encouraging collaboration across disciplines. By emphasizing the importance of original research, the scientific community can work towards a future where plagiarism is not only discouraged but actively avoided.

Therefore, the issue of plagiarism in science is a complex one that requires a multifaceted approach. While legal action may be difficult to pursue, a strong sense of corporate ethics and academic integrity must be instilled in future scientists. At the administrative level, anti-plagiarism measures must be in place to prevent financial and human resource losses, but these measures should be implemented with an understanding of the self-organizational nature of science. Ultimately, by promoting and supporting original research, the scientific community can work towards a future where plagiarism is not only discouraged but actively avoided.

Following the observations in the domain of academic writing by students, colleagues and peers inside and outside Ukraine, analyses of the collected data, findings of the ethics committee meetings at relevant universities in Ukraine, it is found that multicultural collaboration between English-speaking non-EU and EU researchers with different backgrounds and skills in academic writing can present unique challenges when it comes to issues such as plagiarism. With these gaps identified, it appeared necessary to conduct some theoretical study in to the matter, which leads to the following insight into the challenges identified. Next, it is seen relevant to provide potential solutions to these challenges under this research.

One study by Jia and Zhang (2019) explored the perceptions and attitudes of Chinese and German researchers toward plagiarism in the context of cross-cultural collaboration. They found that Chinese researchers had a lower understanding of plagiarism and a more lenient attitude toward it compared to German researchers. The study suggested that establishing clear guidelines and training programs could help bridge these cultural differences and reduce instances of plagiarism.

Similarly, a study by Alotaibi and Al-Ghafri (2021) investigated the challenges faced by international students in academic writing and identified plagiarism as a significant issue. The study of students' behaviors – Ukrainian and those from other countries, when bachelor / master students worked together under research projects in Ukraine, or when conducted relevant studies and formalized them into the year paper, project, theses, turned out to bring to light very similar issues. In communication, the students commented that they felt more relaxed about compiling different pieces of scientific work, on the one hand, and fairly confident it was not plagiarism, on the other, for they cited the sources in the references. Therefore, it is recommended that institutions provide more support and resources for domestic and international students, including writing workshops and anti-plagiarism training.

Another study by Henningsen et al. (2021) focused on the experiences of non-EU PhD students in Denmark, who may come from diverse cultural backgrounds and face challenges in adapting to academic writing conventions in a new language. The study found that these students often struggled with plagiarism and recommended that institutions provide more targeted support to help them understand and adhere to academic writing norms.

Modern methods involving AI and other software tools can be particularly useful in maintaining a Zero Tolerance to Plagiarism in Multicultural Teamwork. The following are some of the ways in which these tools can be employed:

1. AI-powered plagiarism detection software: AI-powered plagiarism detection software can aid in identifying potential cases of plagiarism in multicultural teamwork. By comparing submitted texts with an extensive database of sources, these software tools can highlight any matching text and provide an overall similarity score. This can assist educators and researchers in detecting potential plagiarism efficiently and promptly, irrespective of the cultural or linguistic backgrounds of the team members.
2. Language support tools: Language support tools, including grammar checkers and translation software, can assist non-native speakers of English in expressing their ideas more effectively and avoid inadvertent plagiarism. These tools can provide suggestions for improving grammar and sentence structure and can translate text between different languages. This can help prevent misunderstandings between team members and promote more effective communication.

3. Cultural sensitivity training: Cultural sensitivity training can help team members comprehend the diverse cultural norms and attitudes towards plagiarism. By providing training on the cultural differences in attitudes towards plagiarism, educators and researchers can prevent misunderstandings and miscommunications between team members. This can also establish a culture of academic integrity and prevent intentional plagiarism.
4. Online citation and referencing tools: Online citation and referencing tools can help team members cite and reference their sources accurately. These tools can generate citations and bibliographies in different styles automatically, which can help prevent inadvertent plagiarism. By utilizing these tools, team members can ensure that they adhere to the academic writing norms and conventions of their particular discipline or field.

Overall, AI and other software tools can play a crucial role in promoting Zero Tolerance to Plagiarism in Multicultural Teamwork. By utilizing these tools, educators and researchers can maintain academic integrity and hold team members to a high standard of academic excellence, regardless of their cultural or linguistic background.

With the above in mind, it is believed that multicultural collaboration between English-speaking non-EU and EU researchers can present challenges in terms of plagiarism, but there are strategies that can be employed to address these issues. It is emphasized that providing clear guidelines and training programs, offering support and resources for domestic and international students, and providing targeted support for English-speaking non-EU PhD students can all help to mitigate the risks of plagiarism and ensure a more successful and productive collaboration across multicultural teams.

5. Discussion

In recent years, combating academic plagiarism has become a significant concern in the non-EU and EU countries, and a popular trend is to use computer programs for detecting and verifying instances of plagiarism. Licensed anti-plagiarism software tools are now routinely installed and maintained in research departments to help identify matches and calculate the percentage of text uniqueness. The software is regularly updated to ensure the accuracy of its results.

To ensure academic integrity, research papers, dissertations, and departmental research reports are scrutinized by the designated technical examiner responsible for assessing the validity of research papers. This process is initiated by the relevant university department, and the examiner attaches a certificate of automated analysis of the work for plagiarism to the referral and/or response of the institution. This certificate is mandatory for the publication or defense of scientific work.

In 2005, the European Association for Quality Assurance in Higher Education (EAQA) proposed, together with the European Students' Union (ESU), the European Association of Higher Education Institutions (EAHEA), and the European Association of Universities (EAU), the Standards and Guidelines for Quality Assurance in the European Higher Education Area. One of the mandatory elements of quality assurance in higher education singled out in these guidelines is academic integrity.

While the term "academic integrity" is commonly associated with the issue of "plagiarism" among those involved in the educational process, its definition goes far beyond that narrow interpretation. In fact, academic integrity is widely recognized as a fundamental component of various aspects of the educational process.

In 2012, the International Center for Academic Integrity at the Rutland Institute for Ethics, Clemson University in South Carolina, published a document titled "Fundamental Values of Academic Integrity" (Fishman, 2012). This document highlights six core values that form the basis of academic integrity (Fig. 1 Six core values of academic integrity): honesty, trust, fairness, respect, responsibility, and courage.

Figure 1. Six core values of academic integrity

The academic community is expected to adhere to these values, even when faced with challenges or obstacles. These six core values of academic integrity are of utter significance in the educational process.

Honesty: Honesty is the cornerstone of academic integrity. It requires individuals to present their work truthfully and without deception. It involves being transparent about the sources used in their work, citing them properly, and not misrepresenting the work of others as their own. Honesty is crucial for the credibility and trustworthiness of academic research.

Trust: Trust is built on honesty and is essential for the proper functioning of the academic community. It involves having confidence in the integrity of others and their work. Trust is necessary for collaboration and open communication in research and educational settings. When trust is lost, it can undermine the integrity of the entire academic community.

Fairness: Fairness is about treating others equitably and impartially, without bias or discrimination. It is essential for ensuring that all individuals are given an equal opportunity to succeed in the academic environment. Fairness involves following established rules and procedures, as well as being transparent and accountable for decisions and actions.

Respect: Respect involves showing consideration and appreciation for the work of others, as well as for the values and beliefs of the academic community. It involves recognizing the diversity of perspectives and opinions in the academic environment and engaging in constructive dialogue. Respectful interactions are critical for fostering a positive and collaborative academic culture.

Responsibility: Responsibility is a commitment to fulfilling one's obligations and being accountable for one's actions. It involves taking ownership of one's work, being reliable and dependable, and following through on commitments. Responsibility is essential for maintaining the quality and credibility of academic research and education.

Courage: Courage is the willingness to stand up for what is right, even in the face of adversity or opposition. It involves being honest about mistakes and taking responsibility for them. Courage is essential for promoting academic integrity, particularly when individuals are faced with ethical dilemmas or difficult decisions.

In summary, the six core values of academic integrity provide a framework for ethical behavior in the educational process. These values are interconnected and reinforce one another, and they are critical for maintaining the quality, credibility, and trustworthiness of academic research and education.

Another valuable facet of the research may associate with a look into optimization processes which require more and more technical skills. Having admitted that plagiarism is a serious issue in the academic community under shared responsibility for international performance of English-speaking EU and non-EU researchers in particular, the solutions are with the modern technology which has provided new and innovative ways to detect it. Python, in particular, has become a valuable tool in the fight against academic plagiarism, thanks to its ability to analyze large amounts of data quickly and accurately. One of the significant advantages of Python is the availability of a vast number of written libraries, making it easier for specialists to design scripts that can automatically detect potential instances of plagiarism. For instance, libraries such as "nltk" and "gensim" are used for natural language processing (NLP), and "Scikit-learn" and "TensorFlow" are used for machine learning, which is useful in detecting plagiarism (Li et al., 2019).

Additionally, many Western blogs share best practices on how to use Python to detect plagiarism in academic texts, providing a wealth of knowledge for specialists seeking to improve their skills. By using Python to analyze academic texts, specialists can detect similarities between texts and highlight potential instances of plagiarism, helping to ensure that academic work meets the standards of academic integrity.

Overall, the fight against academic plagiarism has become more accessible and efficient thanks to modern technology, and Python has proven to be a valuable tool in this fight. Its ability to analyze large amounts of data quickly and accurately, combined with the availability of numerous written libraries, makes it an essential tool for specialists seeking to maintain academic integrity.

RSS feed generation. Plagiarism is a growing concern in the academic world, and researchers are constantly seeking new ways to combat it. One such method is generating an RSS feed for article sites whose content is rarely changed. This approach is particularly useful for quickly launching pages to test theories and see the results of technology implementation (Belter, 2012). It requires Netpeak Spider, basic knowledge of XPath, and installed Python libraries. Among the advantages of the approach are its quick use, the fact that it doesn't require the involvement of a programmer, and that it doesn't need to connect to a database where the content is stored. All content and markup are taken directly from the pages, and standard SEO tools can be used (Jubb, 2016).

However, there are also some disadvantages to this tool. For example, the generated XML file cannot be updated, so after changing the content, the content needs to be reassembled and a new XML file needs to be generated. Additionally, new pages will not be included in the file, so content and XML need to be created for them again.

The audience for this tool includes researchers, educators, and editors who want to ensure the originality of their work or the work of their students. By using an RSS feed to check for plagiarism, they can quickly and efficiently detect any instances of copied content and take the necessary steps to correct the issue (Suber, 2012). This method is especially useful for academic journals and publishing houses, which have a responsibility to ensure the originality of the work they publish.

To generate an RSS feed, the content of the pages for which the turbo pages are connected is first parsed using Screaming Frog SEO Spider or Netpeak Spider. At this stage, data is prepared for the mandatory elements required to generate an XML file, including the page URL and page title.

Next, the creators of TurboCheck and TurboText have developed an efficient tool for working with text on Telegram. This smart AI bot is capable of generating headlines, writing rewrites, producing content for marketplaces, checking for text uniqueness, predicting CTR, analyzing trends, and performing SEO analysis (TurboCheck & TurboText, n.d.). By launching neural networks, users can access a range of functions by selecting the necessary commands from the menu. The Create Text section offers several functions such as Author of the

title, Text from the description, Continue Text, Rewriting, Product Review, and Product Description. The Check Text section provides commands such as Anti-plagiarism, SEO analysis, Text readability, Language style, Clickbait of the article, Attractiveness of the headline, and Positivity of the text (TurboCheck & TurboText, n.d.). In addition, the AI Analytics section offers the commands Current Trends and Trending Keywords (TurboCheck & TurboText, n.d.).

While this tool offers a range of features to enhance the efficiency of text production, it is important to ensure that academic integrity is maintained, especially when dealing with plagiarism as a serious concern in academic writing, and international English-speaking researchers from different backgrounds may struggle to adhere to academic integrity standards. To combat this issue, it is important to provide education and resources on proper citation and referencing. Additionally, universities and academic institutions can implement plagiarism detection software to ensure that academic work meets the required standards of originality (Carroll, 2007; Howard & Davis, 2009; Scanlon, 2019).

6. Conclusion

The research shows that there are numerous reasons for the rise in plagiarism in scientific communication across European Union countries. Ukraine makes no exception. One of the main factors is the emergence of technological tools that make it easier to copy and paste information, leading to the formation of screen-based thinking. Additionally, the lack of sections in computer science courses that introduce ethical and legal norms for using computers and the internet contributes to the problem. Ethics-related subjects are also missing in secondary and higher education, with the absence of ethics courses or courses on the history of ethical studies in most schools and universities inside and outside the European Union.

Another significant issue is the low level of moral culture in the scientific environment, which creates an environment that tolerates plagiarism. Moreover, the general decline in morality in modern society, where money has become the primary value, further exacerbates this problem. The emphasis on publishing a large number of articles as a measure of individual and institutional effectiveness in research and education, coupled with the increasing role of managerial and bureaucratic principles in science, higher education, and society as a whole, has also contributed to the rise in plagiarism.

Furthermore, the prestige of academic degrees for individuals in positions of authority, such as ministers, deputies, and officials from science and education who are not directly involved in scientific activities, has added to the problem. Finally, the low salaries in science and education compared to other professions, especially in comparison to business, make obtaining a degree an end and a means of improving one's financial situation and status in science and education.

These factors, when combined, create an environment that is conducive to plagiarism, making it a complex problem to solve. It is found in the research that it is essential to understand the root causes of this issue to implement effective solutions that promote academic integrity and ethical behavior.

Therefore, to address the problem of plagiarism, education and awareness play a crucial role. Universities and academic institutions should offer courses and workshops on ethical writing and citation practices. Such initiatives could be introduced as early as secondary school and could be integrated into computer science courses to help students develop a better understanding of the legal and ethical norms of using computers and the internet. Given the prevalence of plagiarism, it is necessary to emphasize the importance of academic integrity and ethics during the education of students, master's students, and postgraduate students from all fields of study. This can be achieved by introducing academic courses such as "Sociology of Science," "Philosophical Issues in Science," and "History and Philosophy of Science" to promote scientific ethics and academic integrity among students and those who at present or in future may decide to continue with academic careers.

Furthermore, academic institutions could implement plagiarism detection software to ensure that academic work meets the required standards of originality. The use of such software can help deter plagiarism and promote original writing. In addition, institutions could encourage open communication among faculty and students to facilitate discussions on ethical writing practices and promote a culture of academic integrity.

Addressing the root causes of plagiarism in scientific communication is critical to maintaining academic integrity and ethical behavior in research and education. By promoting awareness and education, encouraging open communication, and implementing plagiarism detection software, we can create a culture that values originality and honesty in academic writing.

Further, more in-depth studies on the analyzed topic may focus on cross-cultural perceptions of plagiarism. The research may delve into variances in attitudes towards plagiarism across various cultures and how these beliefs can influence academic practices in multicultural teams. Furthermore, more research can be carried out to explore methods of bridging the gaps in these attitudes and promoting a mutual comprehension of academic integrity.

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