First Steps to Research: Typical Mistakes That Undergraduate Students Make When They Approach Academic Writing

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Abstract

Research-based projects are traditionally targeted at senior undergraduate or postgraduate students. In this paper, we advocate teaching research skills to freshmen rather than older students. Academic writing might be a challenge for university freshmen, especially if their previous learning experience has not involved composing a structured written text that clearly presents the writer's point of view and supports it with facts and statistics from scholarly sources. The author analyses the problems that freshmen might face in the initial stages of research skills development and offers classroom activities that could help students overcome difficulties related to selecting sources and integrating them into the written text. At the beginning, a brief literature review is presented, which illustrates that the problem of freshmen academic writing has not been researched sufficiently. In the section *Discussion*, the author shares some examples of activities targeted at solving typical problems that freshmen face while writing research-based papers. For instance, among the suggested activities are those that might help students a) learn to differentiate between reliable and unreliable sources; b) decide on the length of the cited excerpt; and c) make judgements about the relevance of the selected source to the purpose of the research paper. Davidson (2018) referred to course-based research as 'a new pedagogical paradigm'. The author of this paper supports this opinion and emphasises that such a paradigm should be applied in the earlier stages rather than at the level of PhD or Masters studies, which might yield a significant improvement.

Keywords: EFL, academic writing, citation skills

1. Introduction

It has been proven by multiple scholars that conducting research provides undergraduate students with valuable experience and empowers them with certain skills that are essential for their further successful academic careers. Davidson (2018) refers to course-based research as 'a new pedagogical paradigm', while Hensel (2018) emphasises that course-based research 'helps students develop their own perspective and voice, learn how to construct an argument based on their own exploration of a topic, <...> work both independently and collaboratively, develop critical and creative thinking skills, and improve communication skills' (p. 10).

However, as noticed by a significant number of educators, students do not possess basic skills for conducting research and find it difficult to produce a research paper, select and evaluate sources, and select relevant citations (Leckie, 1996). Jones (2011) presents shocking numbers about undergraduate students engaged in internet plagiarism, while Turnitin experts claim that 'many students never truly grasp when, why and how they should cite the sources they use' (Turnitin, 2019). Therefore, many undergraduate students encounter frustration when they get an assignment that involves elements of research.

The problem that we are aiming to draw attention to in this paper is related to the early stages of education – first semesters of undergraduate studies. This paper scrutinises research skills, such as evaluating sources, selecting relevant citations, integrating them into the student's research paper and referencing them correctly. We are convinced that the initial stage of university studies is crucial in terms of forming a solid foundation for strong academic and research skills.

In this paper, we do not discuss the ethical issues related to plagiarism. Sufficient efforts are exerted, and various tools are used to explain the concept of plagiarism, its inappropriateness in academic life and the penalties it can

produce. Instead, we are examining students' inappropriate use of sources as a writing problem. This study explores a number of common challenges that undergraduate students face when they make their first steps as researchers. These findings might be helpful for instructors and research advisors who work with undergraduate students, as well as for the students themselves.

2. Literature Review

The literature review confirmed that the problem of conducting research, evaluating sources, selecting citations and referencing sources is exigent. Groups of researchers and educators have analysed the situation in higher education and made suggestions to overcome existing difficulties. However, as we noticed, such research papers analyse only the flaws in referencing or using citations in masters or PhD theses, but do not discuss the same problems in the works of younger researchers (Abasi & Graves, 2008; Badenhorst, 2019; Becker & Chiware, 2015; Daniel, 2022; Moore, 2014).

The academic writing of graduate students learning to become members of the academic community is also the focus of researchers' attention. However, these research papers focus mostly on language mistakes in writing (Izzo, 1999; Nuruzzaman et al., 2018; Ridha, 2012; Wee et al., 2010; Zheng & Park, 2013). For instance, Alam (2019) identified that students have difficulties with capitalisation, gerunds, infinitives, pronouns and spelling. A comprehensive analysis of students' typical referencing problems and an attempt to understand the reasons for students' inappropriate uses of source texts have not yet been carried out.

Papers about using external sources in students' academic writing often narrow the discussion to citation styles. For instance, Neville (2009) identifies common problems with reference lists, such as not listing them in alphabetical order or not recognising surnames from forenames. These problems are typical of our learners as well. However, we regard these as violations of formal stylistic requirements. We do not analyse this type of mistake in our work, as it can be eliminated by reading a reference manual more attentively.

In our research, we try to shift the focus to a qualitative analysis of the citations used by the students. Observations and empirical data show that the knowledge of formal requirements and 'the mechanics of referencing' (Vardi, 2012) is not sufficient and does not provide students with a deep understanding of the purposes and steps of the research process. Porter (1986, as cited in Badenhorst, 2019, p. 265) argued that, on a superficial level, students learn how to follow conventions, but unless they also know how to accommodate the ethos of the discourse community through citations, they will struggle to produce the necessary writing. Knowing the formal requirements of a citation style does not help solve all the complications that students face while writing. What matters more is that students 'understand the importance of citing a work' and 'the philosophy of citing' (Lanning, 2016, p. 22). In other words, the formal procedures of acknowledging authorship do not relate to the textual practices of arguing for one's own ideas and position through citing the authority and expertise of others. Critical reading, analysing and summarizing should be practiced more instead of merely presenting formal requirements of a selected reference style.

3. Methods

For this research, we randomly selected 150 papers provided by colleagues who teach academic writing. All the papers were written by freshmen in their first or second semesters at the undergraduate level, and their levels ranged from B2 to C1, according to The Common European Framework of Reference for Languages (CEFR). For all students, English was a second language. Teaching was conducted in a non-English environment, and all the students came from non-English speaking backgrounds and had previous experience learning English as a foreign language. Written texts varied in length from a paragraph to an essay; however, all the papers were based on research and incorporated ideas borrowed from external sources that the students were requested to read. The students had a choice of two to three general topics (e.g., advertising, homeschooling, globalisation, anger, etc.), which they narrowed down in the process of research. Scholarly articles were recommended for research, and students were introduced to the basics of academic writing. In particular, a series of sessions was conducted to practise organising ideas and selecting relevant sources to support these ideas.

While analysing the selected submissions, we focused mainly on how external sources were used and integrated into the students' written texts. This paper does not deal with language mistakes, such as run-on sentences or subject–verb agreement. Neither did we consider mistakes in using APA or MLA style. Although these mistakes were also noticed, we targeted problems related to the research nature of writing that the students were trying to master. The difficulties that many students encountered were those related to finding appropriate sources of information and using them to support their own ideas.

The majority of the written samples that were analysed included direct quotations as an attempt to support writing with external sources. We deliberately omitted papers that contained attempts to paraphrase or summarise and focused on misuse of direct quotations because paraphrasing and summarising are usually seen as more advanced academic skills with which students need further practice. Mistakes related to inaccurate paraphrasing and summarising are possible subjects for the follow-up research article.

4. Results

Before highlighting the mistakes that we classified as typical for our students taking their first steps in research, we should set the standard of an acceptable use of an external source to support the claim presented in students' written assignments, which will allow us to set boundaries around an acceptable use of a citation for undergraduate students in their first semester.

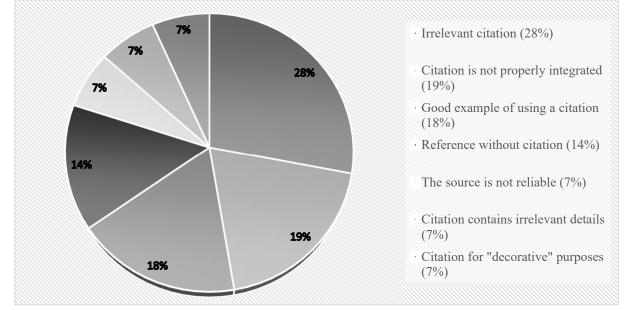


Figure 1. Ratio of Typical Mistakes in Using Citations in Research-Based Papers Written by Freshmen

Table 1. Number and Percentage of Written Assignments with Typical Mistakes in Using Citation	Table 1. Number and Per	centage of Written	Assignments v	vith Typical Mist	akes in Using Citations
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The way citations were used in the written work	Number of submissions (out of 150)	Percentage of submissions
Irrelevant citations	42	28
Citation is not properly integrated	29	19
Citation contains irrelevant details	10	7
Reference without citation	22	14
The source is not reliable	10	7
Citation for 'decorative' purposes	10	7
Good example of using a citation	27	18
Total	150	100%

We considered student papers acceptable if the following expectations were met:

- The external source used by the author was reliable. Students were recommended to use academic journals or reliable websites to conduct their research.
- This citation was relevant to the ideas of the student's paper. In other words, the selected citation echoed the ideas of the paragraph and served as an illustration or proof of the stated claim.
- An attributive tag (such as a signal phrase) was used to introduce a quote.

- The citation was well integrated. This means that the citation emphasised and elaborated on the idea stated by the student in the paragraph; for example, a separate sentence (containing a comment, an explanation, etc.) was written to build a connection between the source's ideas and the student's own ideas.

Of all the students' papers that were reviewed, only 18% were classified as acceptable. The rest of the papers had certain flaws, which we classified into six groups:

- 1. The citation was irrelevant and did not support the ideas of the written assignment.
- 2. The citation could be regarded as relevant because it somewhat supported the stated idea; however, it was not properly integrated and, therefore, sounded awkward, misplaced or even redundant.
- 3. The citation was too long and contained some irrelevant details that did not support the claim of the written work.
- 4. The citation was not provided, although the student wrote a reference for the source that was used.
- 5. The source used was not reliable.
- 6. The citation used served a 'decorative' purpose and did not contribute to the development of the main idea of the paragraph or essay.

Figure 1 and Table 1 provide statistical data about the ratio of the identified problems in students' written assignments. Further, we present our vision of the possible rationale behind each mistake, as well as possible solutions.

4.1 Irrelevant Citation

As reflected in the charts above, almost a third of the students used irrelevant citations in their written works. This means that the selected citations did not support the claim of the students' paragraphs or essays or, in worse cases, were barely related to the topic. As a result, the written passage sounded ambiguous and confusing.

The way Nienhaus (2004) describes how the student's writing is perceived by the teacher in the following situation is probably familiar to many: 'Suddenly, a strange voice would enter the paragraph, and typically the voice would talk about something other than what the student was talking about' (p. 339). In our opinion, such disruptions of relatively smoothly written paragraphs occurred because the students did not fully understand the meaning of the selected paragraph or did not approach it critically.

The reason behind this problem might be the phenomenon that researchers refer to as 'patch writing' (Abasi & Akbari, 2008; Cooper, 2007; Howard, 1995; Li & Casanave, 2012; Vardi, 2012): 'In many cases, students do not understand the whole text, consequently focusing on sentences they do understand' (Badenhorst, 2019, p. 271); '[s]tudents are not writing from sources; they are writing from sentences selected from sources' (Howard et al., 2010, p. 187). In other words, students were not aiming at understanding the overall message of the source that they used for the essay; instead, they picked out a phrase or word matching their topic. As a result, the selected citations seemed irrelevant to the context.

Looking for a possible rationale for this problem, we concluded that the source type might also be the cause. Quite often, the sources that the students were requested to use for assignments were scientific and not targeted at a general audience unfamiliar with the specific concepts of a particular scientific field. Therefore, we are convinced that at the initial stages, it would be advisable to use 'popular science' sources (e.g., *The Guardian, New Scientist, National Geographic*), gradually moving in the direction of publications that cover very specific issues. This might help students in their initial steps of conducting research because the texts are not linguistically overloaded with specific terminology and, therefore, are easier to understand, analyse and approach critically.

4.2 Poorly Integrated Citations

Researchers use citations to give credit to prior work and to construct new knowledge claims based on previous knowledge. This requires a close reading of the source. The samples of students' writing that we analysed, however, demonstrate that freshmen often lack these skills. Quite often (19%), students simply insert citations in their papers without any kind of introduction or follow-up. We classified this kind of problem as a citation poorly integrated into the text written by the student.

As Dong (1996) claimed, this might be a sign of an immature writer whose writing is limited to mere recounting of knowledge, while a mature writer reconstructs the knowledge. This might be the result of a lack of critical reading skills and certain feelings of 'fear' that students have when they are dealing with a text. The students have a false assumption that they 'have no right' to modify this text or demonstrate any critical attitude towards the ideas written

by specialists in the field. This internal desire to pay homage stops them from analysing the text and parsing it.

4.3 Citations That Contain Irrelevant Details

Another type of mistake, which we classified as citations that contain irrelevant details, is closely connected to the previous mistake or is caused by similar misconceptions. In 7% of cases, students used citations that were too long. In other words, they copied the whole phrase or sentence from the source, although some parts of it might not have been related to their writing and might have contained some details not mentioned in their writing.

This can be explained by the fact that the students do not critically approach the source text and cannot select the part of the citation most relevant to their paper. As a result, the citation loses its function of intensifying or illustrating the point made by the student. Conversely, written work loses coherence and becomes confusing for readers.

The rationale behind this problem is similar to that mentioned in the previous section: the students believe that as freshmen, they have no authority in the field; therefore, they feel pressured to adhere closely to the pre-existing text (Abasi & Akbari, 2008).

Critical engagement with the source requires what is referred to in pedagogy as 'higher order' thinking skills. Because students are so often requested to reproduce information, they are not completely ready to evaluate evidence and arguments, nor can they analyse and synthesise relevant ideas to come to an informed position.

4.4 References Are Provided without Any Citations

This might be regarded as a problem with following the formal requirements and conventions of the selected style. We claimed that these mistakes were not the focus of our research. However, this is also a sign of a misunderstanding of the nature and process of writing a research-based paper. Quite often, students read the assigned sources to form a general understanding of the subject matter. They have a false feeling that the written assignment presents their own ideas only because they do not copy-paste or paraphrase specific excerpts from the source text. Trying to demonstrate their academic integrity and not wanting to be accused of plagiarism, they add a list of sources, assuming that this is proof of their hard work.

4.5 The Sources Used Are Not Scholarly

Although scholarly articles were recommended by the teachers for written assignments and a reading list was provided, 7% of students relied on sources with low credibility. The modern generation of students has unlimited access to online sources, and it might be challenging to divert them to reading journal articles, conference proceedings and research reports. It is also normal practice for them to Google the answer to a question. As with any other habit, this one can be changed by practising and explaining the concepts of authority, credibility and reliability before students make it part of their research routine.

4.6 Citations for 'Decorative' Purposes

This category of misused citations includes samples of using famous sayings or motivational quotes related to the topic of writing. Trying to attract the attention of the audience, students often start or conclude their writing with citations. However, this is not what is expected in academic written assignments that involve research. The purpose of using citations in this case is to construct a claim or further the viewpoint. Motivational quotations sound irrelevant, as they might distract the reader from the main message.

We believe that this love for motivational quotations might be rooted in communication courses. While preparing for speeches and presentations, students apply certain strategies to gain or hold the attention of the audience or to produce an emotional touch, such as by starting or finishing a talk with a famous saying. However, in academic formal writing, such quotations sound irrelevant, as they do not provide any value.

5. Discussion

Having analysed several submissions by the freshmen, we discovered that they made numerous mistakes related to the correct use of citations. Less than a fifth of submissions were classified as relatively acceptable in terms of the satisfactory use of external sources. The rest of the students failed to use ideas from outside sources effectively. As we discovered, a large proportion of these mistakes was caused by a lack of critical reading skills and an inability to analyse the given text and state its main message. Instead, the students referred to specific sentences from the text that they believed might be used to support their writing. In most cases, these sentences disrupted the unity of the students' writing and hindered their understanding.

All these findings provide interesting insights into how first-year university students manage referencing and bring

us to the conclusion that working with different types of sources should be regarded as an essential skill that should be practised systematically to achieve better results. In this respect, we agree with the position expressed in the research done by Leckie (1996), that 'the time spent on research skills is a good investment from a pedagogical point of view' (p. 206). This can be done by means of collaborating with the university library and the writing centre and organising workshops and tutorials.

Another solution is to design research-based courses (Brownell et al., 2015). At the initial stages of undergraduate studies, the desired result could be achieved by incorporating elements of research into the course syllabi, for example, introducing activities focused on developing more effective search techniques or evaluating sources and citations. Nienhaus (2004) and Vardi (2012) also advocated the idea that citation performance can be improved by means of deliberate instruction and practice. For instance, students might be asked to analyse sample texts with appropriate and inappropriate source use and to revise them collaboratively.

Individual and group feedback on students' writing is another teaching technique that should be used in the classroom. Such attempts should be continued to ensure that students have a clear understanding of the way ideas from external sources can be integrated into their writing.

6. Conclusion

Despite some studies of students' writing problems, little is known about how freshmen acquire citation skills. We attempted to identify the most typical mistakes, which might assist in planning further remedial work. We do not claim that the list of causes of students' inappropriate use of sources is all-inclusive. However, our findings provide interesting insights into how first-year university students manage referencing and bring us to the conclusion that working with different types of sources should be regarded as an essential skill.

In the initial stages of undergraduate studies, the desired result of selecting a relevant citation, properly integrating and referencing it could be achieved by incorporating elements of research into the course syllabi. This can be done by means of collaborating with the university library and the writing centre and organising workshops and tutorials. Specifically designed classroom activities during the initial stages of university studies can foster students' understanding and consequently improve their citation styles. These activities should not be dominated by polishing the knowledge of the formal conventions of a specific citation style. Our approach goes beyond dealing with referencing as a means of avoiding plagiarism in its moral perspective to teaching to engage with sources and the expression of such engagement through the meaningful use of citations. It is also important that this problem is not only dealt with by English composition teachers, but rather that it turns into an interdisciplinary topic because all faculty members as well as university staff and educators in general expect undergraduate students possess sufficient skills which will allow them to conduct research in the future and advance the disciplines they specialize in.

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