On the Perceived Usefulness and Effectiveness of Eduflow as a Supplementary Tool for Online Writing Instruction

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Abstract

This paper centres around the use of Eduflow, a novel online learning management system (LMS) which was introduced in a university-level Academic Writing course in response to the challenges brought about by the mandatory switch from face-to-face to online writing instruction (OWI) over the course of the COVID-19 pandemic. In this paper, Eduflow is piloted with a group of second-year university students of English language and literature at Ss. Cyril and Methodius University in Skopje. These students chose to fulfil their Academic Writing course requirements by compiling a writing portfolio. The rationale behind the use of this platform was the assumption that it would facilitate the online management of all the stages of the essay writing process: Writing a first draft, doing a peer review of essays created by fellow students, considering the comments received from fellow students, reflecting on one's own writing by doing a self-review, and finally, submitting the final version. The relentlessness of the pandemic led to the continuous application of this learning management system over the course of two entire academic years, each year with a different group of students. An online survey on the perceived usefulness and effectiveness of Eduflow was administered among the second generation of students who used this platform. As this small-scale analysis demonstrates, despite experiencing some easily resolvable minor technical difficulties, these students generally found Eduflow effective and useful as a supplementary tool for online writing instruction and showed particular appreciation for the collaborative peer review experience.

Introduction

This paper centres around the application of Eduflow, a novel online learning management system (LMS) which was introduced in an Academic Writing course in response to the challenges brought about by the mandatory switch to online writing instruction (OWI) over the course of the COVID-19 pandemic. The Eduflow platform (accessible at www.eduflow.com) has not been specifically designed as a tool for writing instruction or practice. It is a social learning LMS, applied both in higher education and in corporate environments, the main features of which are ease of use, flexibility in course design and emphasis on social learning experiences. In the context of this research, the platform was piloted in a class of second-year university students of English language and literature at the Faculty of Philology of Ss. Cyril and Methodius University in Skopje, who decided to fulfil their Academic Writing course requirements by compiling a writing portfolio. This small-scale analysis delves into the students' perceptions of the usefulness and effectiveness of Eduflow used as a supplementary tool in their Academic Writing classes.

With the "paradigm shift" (Kroll, 1990, p. 8) in the last decades of the twentieth century, the attitudes towards writing instruction changed dramatically. Writing was no longer seen as an end product, but as a complex, exploratory and creative process that proceeds over multiple recursive stages (Hairston, 1982; Hyland, 2003; Lannon, 2011; Silva, 1990). In a similar vein, the Academic Writing course that forms the basis of this study cultivates the idea that writing is

a process consisting of several stages, some of which require considerable interaction and reciprocity among students. The outbreak of the pandemic and the shift from a face-to-face to an online mode of instruction presented serious challenges to the more interactive steps of the writing process. Organising the peer review stage and its subsequent management posed particular difficulties.

Thus, the rationale behind the use of Eduflow was that it would facilitate the online management of all the stages of the essay writing process. These include writing a first draft based on prewriting activities, doing a peer review of essays created by fellow students, considering the comments received from fellow students, reflecting on one's own writing by doing a self-review, and finally, submitting a final version. In addition to providing a structured system for doing writing assignments, the platform made a collaborative learning experience for the students possible, which is essential for the peer review stage of the writing process.

Amid the online pivot that shaped pandemic educational practices (Ganobcsik-Williams et al., 2022), we saw a sustained use of this learning management system over the course of two entire academic years, each year with a different group of students. An online survey on the perceived usefulness and effectiveness of Eduflow as a complementary instrument for online writing instruction was administered among the second generation of students who used this platform and these records served as a foundation for the analysis in this paper. To the best knowledge of the author of this paper, no other studies on the use of the Eduflow platform as an additional tool for writing instruction in higher education have hitherto been published.

Online pedagogy pre- and post-pandemic

The implementation of new technologies in teaching academic writing is a longstanding practice. Prior to the pandemic, research on the LMS qualities that are most conducive to student satisfaction has been conducted. In their attempt to assist higher education institutions in making informed decisions concerning their investments in LMS, Naveh et al. (2012) proposed five critical factors for determining student satisfaction with an LMS: Content Completeness, Content Currency, Easy to Navigate, Easy to Access and Course Staff Responsiveness. These criteria are equally applicable in cases when individual instructors are supposed to select a supplementary e-learning platform for their specific courses.

Similarly, Kwak's (2017) conclusion, based on the investigation of six massive open online courses (MOOCs), was that they were generally still centred around the traditional understanding of writing as a skill, rather than as a process. As our second-year Academic Writing course revolves around the idea that writing is a process that consists of several stages (mastering prewriting techniques, writing an outline, writing a first draft, peer review, reflecting on the peer review, self-review and submitting a final version) it was of utmost importance to figure out how to mimic the real-life writing practice in an online setting. Hence an idea was engendered that an online platform was necessary, but one was required that would provide guidance for the gradual stage-to-stage progression in the essay writing process. For example, it was important to consider how to effectively support collaborative learning online. Given that the concept of writing groups itself evolved from the theoretical frameworks of collaborative learning (Nelson & Murphy, 1992) and that social and community approaches to writing were common even prior to the pandemic (Caffarella & Barnett, 2000; Déri et al., 2021; Parker, 2009), this research seeks to demonstrate how such approaches can be transposed to an online context. Therefore, building on this work, there is a need to consider how such criteria reflect the online learning contexts that abounded amid the online pivot.

As with most of the world, the extent of digital media use in higher education instruction rose exponentially at Ss. Cyril and Methodius University in Skopje during the COVID-19 pandemic. However, the integration of information and communication technology in the process of instruction was not an entirely new concept, as some forms of ICT integration had been used in academic settings prior to the pandemic. Most notable examples include joint projects between groups of students from our university with groups from other universities worldwide in a synchronous or asynchronous fashion, using online forums for student-student and student-teacher interaction and Powerpoint presentations, to name but a few.

Since higher education shifted to online instruction on a state level during the COVID-19 lockdowns of 2020, instructors at the Faculty of Philology received elementary training in Zoom and Microsoft Teams and were also encouraged to explore other avenues that would potentially better suit the delivery of their particular courses. Understandably, the accessibility of these digital media to students from diverse social backgrounds was of utmost importance. In practice, this meant exploring freely available platforms and selecting the one(s) that were perceived as most useful and user-friendly. Interestingly, this intuitive judgement seemed to coincide with the Technology Acceptance Model (TAM), whose basic criteria are perceived ease of use and perceived usefulness (Davis, 1989). The Unified Theory of Acceptance and Use of Technology (UTAUT) extended the range of factors that contribute to technology acceptance by also including the perceived availability of technical support and the perceived expectation of individuals to adopt the proposed new technology (Venkatesh et al., 2003).

In the aftermath of the COVID-19 outbreak, there has been a surge of studies published worldwide that have investigated students' or teachers' satisfaction with online instruction. For example, Keržič et al. (2021) investigated student satisfaction and perceived performance in a digital learning environment by analysing data collected from ten countries (Slovenia, Italy, Mexico, Poland, Portugal, Romania, Turkey, Chile, Ecuador, India) during the COVID-19 pandemic. Their study demonstrates that the e-learning quality had a positive effect on the perceived student satisfaction, where e-learning quality was understood as a multidimensional concept comprising five constituent segments: Students' computer skills, system quality, online instruction, online service quality and online interactions. Moreover, the perceived student satisfaction was found to have a positive effect on the perceived student performance. Based on a study of online learning satisfaction among Chinese university students, She et al. (2021) found that there is a "significant positive relationship between interaction and online learning satisfaction (Q1), interaction and academic self-efficacy (Q2), academic self-efficacy and student engagement (Q3), and the student engagement and online learning satisfaction (Q4)" (p. 1). Adding to this growing canon, and focusing on Academic Writing instruction, this paper investigates the perceived usefulness and effectiveness of Eduflow as a supplementary tool for online writing instruction.

Materials and Methods

In the wake of the COVID-19 pandemic, education delivery switched to an online mode of delivery at the Faculty of Philology of Ss. Cyril and Methodius University in Skopje during the second half of the summer semester of the academic year 2019/20. The initial perplexity of the instructors and their lack of experience with alternative platforms led to the general adoption of either Zoom or Microsoft Teams as the primary vehicles for educational delivery. However, since the end of the pandemic was nowhere in sight, a time for exploration, experimentation and discovery ensued, ushering educators beyond crisis pedagogies towards more educationally grounded digital pedagogies (Curry, 2021). By reflecting on the advantages and disadvantages of these platforms, instructors strove to enhance the learning experience for the students in the following two academic years (2020/21 and 2021/22) that also proceeded online.

As a result of these endeavours, the Eduflow platform was piloted in the winter semester of 2020/21 in a class of second-year university students of English language and literature at Ss. Cyril and Methodius University in Skopje who attended Academic Writing classes within their compulsory course, "Modern English language 3". This pilot project was initiated to examine whether the addition of a freely available online LMS to the standard teaching via Zoom could better simulate a real-life writing classroom interaction, and whether it could attenuate the drawbacks of a standard bilateral student-student or student-teacher message/email exchange. Since the pilot project proved successful, the process of online writing instruction via Zoom was enhanced with the use of Eduflow for the duration of the academic years of 2020/21 and 2021/22. This platform was not used for teaching writing per se (in terms of providing explanations, analysing sample essays, acquainting students with the required essay format), but for writing practice only after the teaching part had been completed.

As the settings of the platform can be personalised to meet each instructor's specific objectives, a framework based on the curriculum was easily implemented. Students were asked to supply six different types of writing over course of the academic year: A formal letter, a paragraph, a five-paragraph essay, a problem-solution essay, an argumentative essay and a comparison and contrast essay. Specific sets of rubric questions were designed for the peer- and self-reviews in each particular type of writing. The significance of these questions cannot be overstated, as they help students realize the crucial differences between the types of writing they were to produce.

At the end of the course, an online Google Forms survey was administered so that students could share their impressions of the platform, as well as provide suggestions for improvement to the overall course experience. The survey was administered among twelve second-year students (mean age: 21.2 years), nine of whom were female and three were male. The survey comprised closed multiple-choice questions, linear numeric scale questions, Likert-scale questions and open-ended questions aimed at revealing the students' perceptions of the usefulness and effectiveness of the Eduflow platform as a supplementary tool for online writing instruction. The research was conducted in compliance with the Code of Ethics of Ss. Cyril and Methodius University in Skopje. All the twelve students participated voluntarily and gave their permission for the results of the survey to be anonymously used for research purposes. The results of their evaluation, complemented by the instructor's views on the application of this platform for OWI, are presented and discussed in the next section.

Results and Discussion

This section presents the results of an online survey administered among the participants of one such group with the purpose of exploring the perceived usefulness and effectiveness of the Eduflow LMS as a supplementary tool for online writing instruction.

Students' views on the usefulness and effectiveness of Eduflow
There was a total of twelve respondents to this survey, of whom nine were female and three were male. Regarding their preferred medium for delivery of instruction, eight of the twelve respondents stated that they preferred a combination of online and face-to-face instruction, while online instruction and face-to face instruction were preferred by two students each.

The data analysis indicates that students generally found the Eduflow platform to be an effective and useful addition to the standard online teaching practice via Zoom, with slight technical issues sporadically blurring the positive impressions for some students. Based on the students' responses in the survey, their experience was generally pleasant in the sense that this platform offered an easily navigable interface, which lowered the students' anxiety and increased their self-confidence. As is demonstrated by Figure 1, the overall experience with the Eduflow platform has been rated as positive, with 34% of the respondents opting for 'positive' and 58% of them labelling their experience 'very positive'. No student selected the 'neutral' or 'negative' option, while one student chose the option 'very negative'. This response could have been triggered by their technical issue with the platform earlier on the day of the survey, as the same student found the platform to be both useful and effective in subsequent questions.
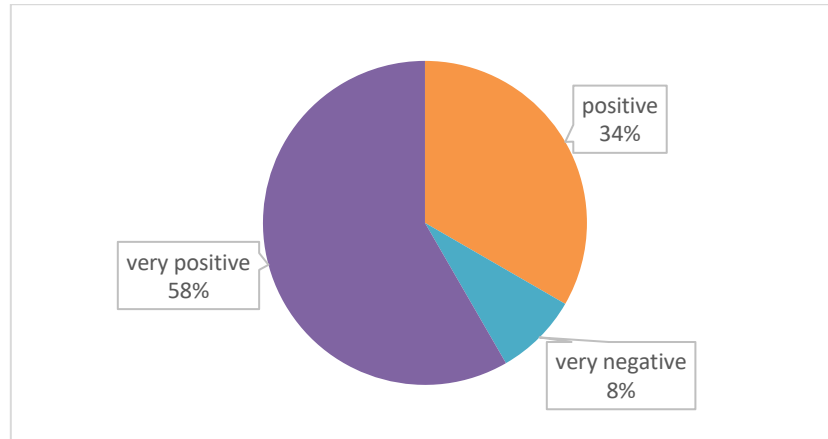
Figure 1. Students' responses to the question: How would you describe your overall experience with the Eduflow platform?

Two-thirds of the students did not specify any problematic aspects of their experience with Eduflow. The problems experienced by some of the students concerned the platform taking them back to the second stage (peer review) after it had previously allowed them to complete the entire assignment. This happened in cases when students received additional peer reviews after the system allowed them to progress to the final stage. Another problematic area specified by a student involved difficulty with the attachment of files, which was easily overcome. When asked how often they experienced technical problems with Eduflow, half of the students claimed that they experienced no problems whatsoever, one-third of the students rarely encountered problems, while one-sixth of the surveyed respondents said that they sometimes had technical issues with the platform, as is evident from Figure 2. The absence of answers 'often' and 'very often' testifies to the fact that the platform was relatively easy to use and that it posed no major technical hindrance to academic writing practice. According to those students who experienced some problems, they were either resolved on their own or with the assistance of the instructor.
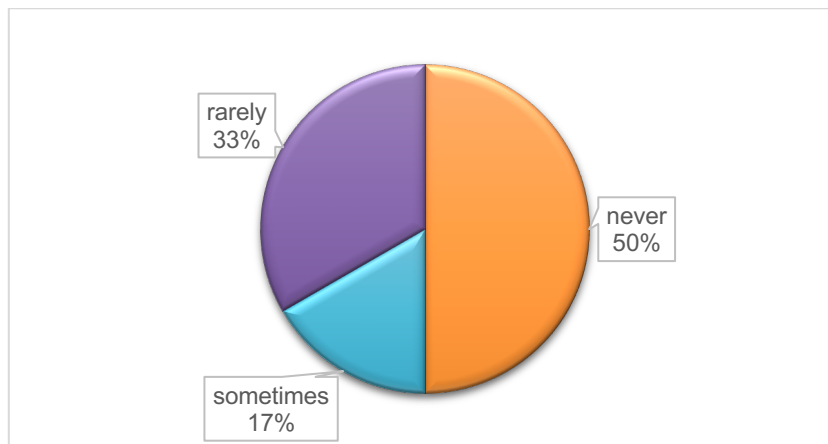

Figure 2. Students' responses to the question: How often did you experience technical problems with Eduflow?

As for the effectiveness of Eduflow as a supplementary tool for learning, Figure 3 demonstrates that half of the participants in the survey considered the Eduflow platform very effective, whereas the other half considered it effective. No students selected the first three options in the range on a five-point linear numeric scale ranging from 1 (not at all effective) to 5 (very effective). With a mean and median value of 4.5, the summary of these results indicates that all students thought that the platform served its intended purpose well.
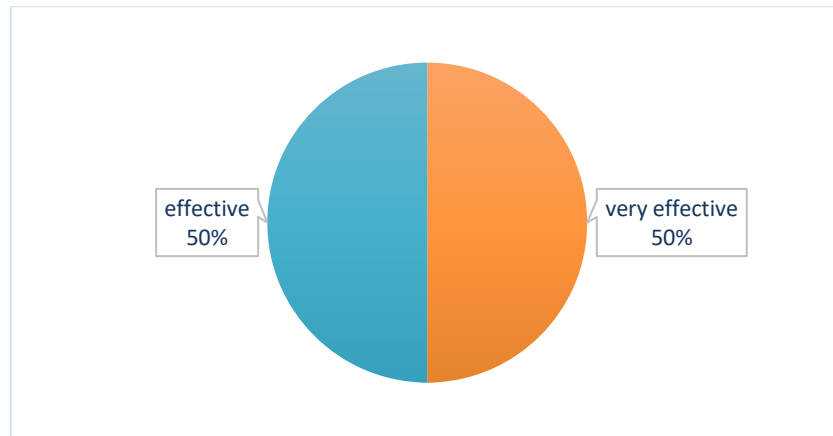
Figure 3. Students' responses to the question: To what extent was Eduflow effective as a supplementary tool for learning?

When asked about the extent to which Eduflow was useful in helping them master the different stages in the writing process, two-thirds of all respondents regarded the Eduflow platform as very useful for mastering the stages of the essay writing process, while one-third considered it useful, as is shown in Figure 4. Based on the students' rating on a five-point linear numeric scale from 1 (not at all useful) to 5 (very useful), the perceived usefulness of the Eduflow platform had a mean value of 4.67 and a median value of 5. When asked to specify what precisely they found useful about the Eduflow platform in an open-ended question, two-thirds of the students replied that they found the peer review section most useful. They stated that it was good that they could "share comments" with their colleagues and described the peer review activity as "a pleasant interactive piece" and "an interesting concept and quite useful". In addition, they appreciated learning from their "writing mistakes". This view reflects the multifaceted developmental function of writing groups, which is well established. Writing groups debunk the myth of writing as a self-contained solitary activity and they encourage constructive interaction among members. They "function to demystify the process of scholarly writing and publication, to build skills of review and critique, to provide early audiences for draft texts" (Lee & Boud, 2003, p. 190). As some students prefer digital modalities to interact with each other, in the last two decades there have been initiatives for using digital platforms for writing purposes, and this trend gained momentum during COVID-19 confinement measures (Déri et al., 2021).

Students also felt that the platform helped them focus on each separate stage of the writing process, which was something they found harder to do on their own, without guidance. In the words of one of the students, Eduflow helped them "focus on the process of writing", since before that they "used to jump and go straight to it, which proved ineffective". In addition, the platform was found to be user-friendly and some students tended to attribute their improvement in academic writing to their use of the platform.
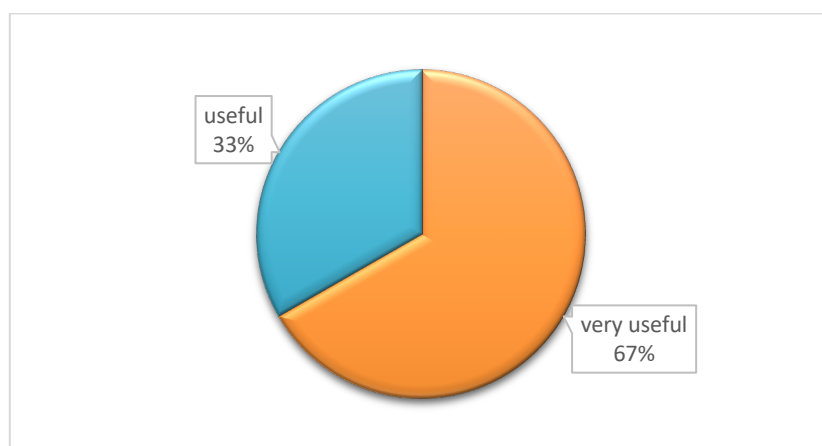
Figure 4. Students' responses to the question: To what extent was Eduflow useful in helping you master the different stages in the writing process?

The set of eight items presented in Figure 5 was intended to disclose the students' opinions with regard to the ease of use of the Eduflow platform, the pleasantness of the experience, the acquisition of new skills, the improvement in their writing as a result of the peer review activity, the reflection on their own writing, the suitability of the platform for producing a writing portfolio, their willingness to work on this platform again, as well as their recommendation for its use with future generations of students. Students were asked to rate the extent to which they agreed with the given statements by choosing one of five possible options on a Likert scale ranging from 'strongly agree' to 'strongly disagree'.

By and large, the platform was considered easy to use, with a total of 11 students (92%) agreeing with the statement and only one student answering 'not sure'. Interestingly, 16.5% (2 students) of the participants in the survey agreed and a further 67% (8 students) strongly agreed that using the platform was enjoyable. Ten students (83%) thought that the peer review activity helped them become a better writer and all students but one (92%) thought that the platform stimulated reflection on their own writing. By providing students with experience in giving, receiving and responding to feedback, peer review is generally believed to be of major significance in the scholarly writing process as it leads to better understanding of the scholarly writing process and to creating an improved final written product (Caffarella & Barnett, 2000). It is inextricably bound to the process of reflection in which students learn how to accept praise, appreciate critique and view their writing in a more objective manner. Thus, writing groups have dual effect, in that improvement is evident both in the students' attitude towards writing and in their knowledge of scholarly writing (Parker, 2009).

When it comes to the acquisition of new skills, 75% (9 students) were under the impression that Eduflow helped them gain new skills. As for the appropriateness of the platform for the purpose of producing a writing portfolio, the vast majority of the students deemed it suitable. With regard to the prospective use of this platform, 75% (9 students) confirmed that they would like to use it again in the future, while 92% (11 students) concurred that they would give their recommendation for the use of this platform with the next generations of students.
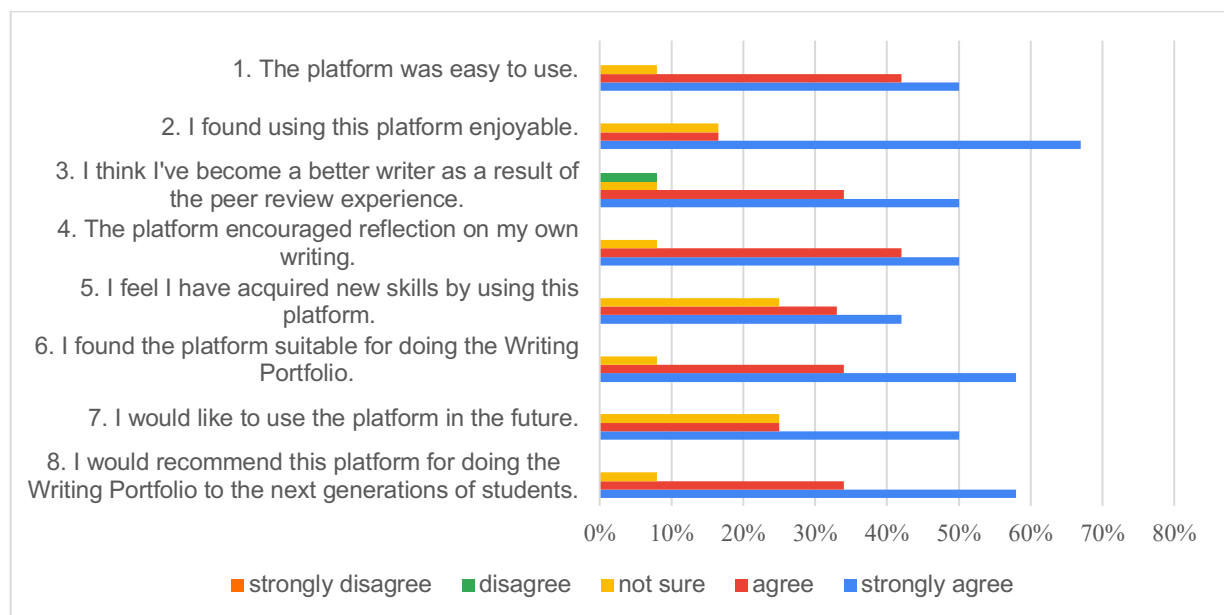

Figure 5. Students' views on their Eduflow experience

The students did not specify any possible improvements to the Eduflow platform, such that would meet their needs better, and they were not familiar with other platforms that could potentially be used with greater success instead.

In summary, the students' perceptions of the Eduflow platform were positive in that they felt that it effectively guided them through the stages of the writing process, especially by offering the peer review functionality. At the same time, the LMS was found intuitive and straightforward to use. This, coupled with the minor and transient technical issues experienced by some of the students, contributed to their overall satisfaction with this platform.

The instructor's views on the usefulness and effectiveness of Eduflow

Firstly, Eduflow's most useful functionality for online writing instruction is that any instructor can compose multiple different flows of assignments based on their own curriculum. Another advantage is the possibility to set prerequisites for each stage of the writing assignment, thus making sure that no student skips a stage, but all students get the benefit of engaging in all planned activities. In the case of this research, the flows consisted of five activities conducive to the improvement of the quality of the final version, with the instructor choosing the number and type of activities in their flow. Setting deadlines for the completion of each stage of the writing process is another advantage as it regulates the students' progress through the assignments. While there is a possibility for the assignments to be done in an asynchronous fashion, the experience shows that tight deadlines work better, and that doing the assignments in a synchronous fashion in class may even be preferred. The reason for this is that, in cases of asynchronous writing, there were instances when a student would be allowed by the system to complete all stages and submit a final version, only to be taken back to the second stage (peer review) when another student would send them a peer review request later on within the deadline.

It seems highly desirable that students are given clear instructions and that they are thoroughly informed of the instructor's expectations and of their obligations before the commencement of an Eduflow project. Since the LMS randomly selects peer reviewers from the entire pool of active participants in a given course, this might lead to some potentially unpleasant experiences in case there are students who have signed up for the course but are unprepared to commit to the assignments. As a result, some students may never receive feedback on their writing, and their further progress in the assignment would be blocked. In order to minimise problems with peer reviews, it would be prudent of the instructor to make sure that the group of students who sign up for such a project are serious in their intentions to fulfil their Eduflow obligations in a timely manner. It is also advisable to delete from the list of active participants those students who have decided to drop out for any reason, so that the system does not automatically allocate any peer reviews to them.

From the instructor's perspective, leaving some minor technical issues aside, the platform was of great assistance in the observation and tracking of the students' progress in six different types of writing assignments. Furthermore, the collaborative nature of the peer review stimulated interaction and a real-life peer review experience. An added benefit was that this activity encouraged both critical thinking and acceptance of criticism and praise. It has been shown that interactions between participants in writing groups may not always be amicable and pleasant as it might be expected from literature (Caffarella & Barnett, 2000; Nelson & Murphy, 1992). Similarly, in our case there were rare instances of students getting frustrated with the feedback they received. Thus, it may be sensible for the instructor to acquaint the students with the basic principles of constructive feedback prior to the commencement of such a project. Finally, the platform encouraged reflection and thus promoted learner independence. The findings of Manathunga and Goozee (2007) are also suggestive of an increase in independence and autonomy among participants in collective learning groups. Results also point to overall benefits of the community approaches to writing in addition to independent supervision in higher degree research education (Parker, 2009).

In terms of data organisation, instructors have all their students' pieces of writing conveniently stored in one location on the Eduflow platform, which enables an easy online access to them. Alternatively, essays can also be downloaded to one's PC or laptop, thus preventing a barrage

of disorganised emails in the instructor's inbox. The summary tab gives instructors a glimpse into the progress of each student for each assignment. The free version of this platform is limited to 15 active participants, so this is an issue that needs to be considered with larger groups.

Conclusion

This paper sought to explore students' perceptions of Eduflow, a novel LMS used as a supplementary tool in their Academic Writing course during the pandemic. The analysis of the survey results pointed to the students' appreciation of the platform. The features students were most appreciative of involved the simplicity and ease of navigating through the platform, as well as the peer review section that allowed them to learn from each other's feedback, both positive and negative. Some of the beneficial characteristics of this LMS for the instructor included its possibility for the customisation of the writing flows to respond to course requirements, the easy and permanent access to the students' submissions online, the well-arranged summary of the students' progress, as well as its affordability. Some drawbacks of the platform included the fact that the free version is restricted to 15 active participants and the minor technical difficulties occasionally experienced by some students that were easily resolved by the instructor's intervention. The main limitation of this analysis is its restricted scope, as it is only based on a single group of 12 participants. Clearly, further research will be required to validate these findings in other contexts and with more participants. Notwithstanding the fact that this platform was introduced in the teaching process only after the advent of the COVID-19 pandemic, the potential of this learning management system could be exploited to raise the academic writing learning experience to new heights even after the pandemic has receded. This statement resonates well with Hewett and Warnock's observation (2015, p. 555) that "the future of OWI is not down the road. It is now".

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