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ALAPSZAKOS SZAKDOLGOZAT

Kandikó Máté Péter

Anglisztika alapszak

Angol szakirány

2019

A HKR 346. § ad 76. § (4) c) pontja értelmében:

„… A szakdolgozathoz csatolni kell egy nyilatkozatot arról, hogy a munka a hallgató saját szellemi terméke…”

NYILATKOZAT

Alulírott Kandikó Máté Péter ezennel kijelentem és aláírásommal megerősítem, hogy az ELTE BTK Anglisztika alapképzés/alapszak Angol szakirányán írt jelen szakdolgozatom saját szellemi termékem, melyet korábban más szakon még nem nyújtottam be szakdolgozatként/záródolgozatként és amelybe mások munkáját (könyv, tanulmány, kézirat, internetes forrás, személyes közlés stb.) idézőjel és pontos hivatkozások nélkül nem építettem be.

Budapest, 2019. 04. 10.

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EÖTVÖS LORÁND TUDOMÁNYEGYETEM

Bölcsésztudományi Kar

ALAPSZAKOS SZAKDOLGOZAT

The role of feedback in the development of academic writing skills of L2 students in online courses

A visszacsatolás szerepe L2 tanulók tudományos íráskészségének fejlődésében online kurzusokban

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Anglisztika alapszak

Angol szakirány

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Abstract

This paper examines feedback offered by peers and automated writing evaluation (AWE) systems in online courses and its effects on L2 academic writing. In order to properly create a context for these methods, feedback on L2 writing, online learning, features of online peer feedback and five AWE systems are discussed. First, studies on AWE systems and the areas they affected are examined followed by the numerous aspects of academic writing that online peer feedback influences. The paper also takes a brief glimpse at training concerning both modes. Finally, the findings of the studies are summarized and topics for future research are indicated.

Keywords: online learning, online peer feedback, automated writing evaluation, L2 academic writing

Contents

Introduction

In the past few decades, the role of digitalization has increased immensely, appearing in every field of life. Therefore, its appearance in education was inevitable. Consequently, the examination of the impact of digital technology is necessary as there are several factors which may influence its successful utilization in education.

Lavolette, Polio and Kahng (2015) argue that one of the most frequently studied and disputed subject within second language acquisition is offering feedback to L2 writers. The purpose of this paper is to examine how the development of L2 students' academic writing skills and feedback provided in online environments correlate. In order to achieve this, numerous studies on two of the most controversial types feedback, online peer feedback and the feedback of automated writing evaluation (AWE) systems, will be investigated. This thesis claims that online peer feedback and automated writing evaluation successfully bolster the improvement of L2 students' academic writing skills, therefore, it should be employed in online language teaching. First, relevant topics are discussed which provide background information for the context of this paper. The thesis then proceeds to the discussion of various AWE systems and the skills they enhance. Finally, online peer feedback and its effects are discussed.

Background Literature

Feedback on L2 Writing

Feedback on L2 writing is one of the most researched and debated area of second language acquisition. It is widely recognized to be vital for enhancing L2 writing development (Biber, Nekrasova, & Horn, 2011; Hyland, 2010; Muncie, 2000). Hyland and Hyland (2006) support the idea, arguing it facilitates learning and motivation. They note the shift from summative to formative feedback during the last few decades, allowing feedback to assist with the writing process. Similarly, Zamel (1985) claims feedback should be applied

in a way that prompts internalization to support the revision process. However, views on its impact on writing are mixed and its potential is often not maximized (Hyland & Hyland, 2006). There is no agreement on which type of feedback is efficient, the areas of improvement in proficiency they lead to or whether one mode and source of feedback is more efficient over the other (Biber et al., 2011; Dikli & Beyle, 2014). Similarly, Séror (2009) states that the effectiveness of feedback is contested when it is examined in the light of its implementation, internalization and long-term impact on L2 writing (p. 205). Biber et al. (2011) argue that the tone of feedback is crucial as overwhelmingly negative comments might result in a decrease in motivation. Positive feedback may have no significant effect if feedback eliciting revision is accepted more.

Corrective feedback (CF) is likely to be the most controversial area. Its effectiveness and use in writing instruction have been researched for decades, however, it is not widely accepted due to mixed research results. (Bitchener & Knoch, 2010; Hyland, 2010; McGarrell & Verbeem, 2007; Zamel, 1985). Ene and Upton (2018) define corrective feedback as targeting "formal aspects of learners' language and is provided with the intent to improve linguistic accuracy" (p. 2). Combining direct and indirect CF is recommended to enhance its effectiveness. Samburskiy and Quah (2014) claim CF can reinforce the correlation between form and meaning and it helped raising students' awareness of gaps and errors in the language they produced. Additionally, Chen et al. (2009) list various aspects that can affect effectiveness of CF such as the feedback type, error type, the writing task, students' individual differences. This list is complemented by the findings of Lavolette et al. (2015) whose items include immediacy, student's attention, appropriate proficiency level of feedback and explicitness. Hyland (2010) argues that students should be viewed as active participants of the writing process as the effects of CF on language learning cannot be maximized otherwise. In addition, students need to be encouraged to have their own

strategies for utilizing feedback as it supports autonomy. However, Bitchener and Knoch (2010) highlight that the level of treatability of certain linguistic error domains and categories is not clear (p. 207). McGarrell and Verbeem (2007) claim that evaluative feedback focuses on form with the aim being the production of a theoretical "ideal paper" (p.229). However, the lack of feedback on macro-level features will not prompt students to improve their texts and any further revisions will be done purely based on teachers' instructions.

Feedback on macro-level features has been the subject of several studies. McGarrell and Verbeem (2007) argue that formative feedback puts awareness of audience and developing communicative purpose in the centre to increase the effectiveness of the written product. As a result, meaning is the primary focus which in turns increases students' engagement with their assignments. Students gain agency as they navigate through their own writing process. Feedback on form can be a means of improving content when it is in relation to the meaning of the paper. Biber et al. (2011) note that feedback on macro-level elements are important for advanced-level writers. Conversely, Séror (2009) states that feedback on content has its drawbacks with potential issues arising from incorrect interpretation and lack of uptake.

The social aspect of feedback is worth investigating. Séror (2009) argues that the effectiveness of feedback may depend on the social functions it carries in itself. Supporting this idea, Hyland (2010) emphasizes that the interactivity and dialogic function of feedback are vital factors for supporting learning. Hyland and Hyland (2006) claim that when it is aimed at a specific genre of writing, feedback is able to increase confidence and provide the literary resources necessary to be part of the discourse community. The findings of Hyland (2010) and Reid (1994) support this idea.

The role of teachers is emphasized by several studies. Muncie (2000) notes that teachers are inevitably authoritative figures; therefore, revision is prompted by their position. As a result, improvements in students' papers are the result of receiving feedback from the evaluator or using the feedback out of respect for their teachers' superior expertise. It is recommended to aim at long-term goals with feedback instead such as learner autonomy, confidence in writing and critical thinking. McGarrell and Verbeem (2007) note that the conflict between the teachers' roles of evaluator and collaborator often limits feedback to sentence-level. Zamel (1985) recommends adopting the role of collaborator as it facilitates communication which can focus on meaning and purpose, leading towards an improved product. As a result, teachers cannot take over the revision process unlike in Muncie (2000). Finally, Reid (1994) highlights teachers' role as the substitute audience students' assignments.

Online Learning

The rapid technological advancement of the last few decades found its way to education and, more importantly, language learning. As online learning is becoming an increasingly popular way of writing instruction, digital tools are being employed more and more often.

Carliner (2004) defines online learning as "learning and other supportive resources that are available through a computer" (p. 1). Additionally, it is crucial to consider what e-learning is, which Carliner (2004) argues is a form of online learning which requires Internet connection as it consists of material that is not available within the learning tool.

Naturally, a significant number of studies have been published on the features of online learning in several platforms such as blogs (Ciftci & Kocoglu, 2012; Grami, 2012), Facebook (Saeed & Ghazali, 2017) or Google Docs (Bikowski & Vithanage, 2016; Kessler, Bikowski, & Boggs, 2012). Bikowski and Vithanage (2016) highlight the interactivity and

communicative focus of online learning. They argue that it can assist with developing writing skills as threat-factors are removed and the emphasis is on the student in digital environments. In addition, students have access to various modes of learning resulting in more opportunities and involvement in various tasks that feature different learning styles. Samburskiy and Quah (2014) note the ability of digital space to improve communication skills, however, they mention that the opportunities need to be "authentic and meaningful" and professional facilitators are required (p. 158).

Online peer feedback

As technology becomes more prominent in education, digital alternatives to traditional methods are being employed in classrooms more frequently. Accordingly, online peer feedback has been steadily gaining the attention of both researchers and teachers. Its implementation in L2 writing courses has produced varying results.

Studies found that students' reception of online peer feedback is mixed (Chang, 2012; Yu & Lee, 2016). Ciftci and Kocoglu (2012) report overwhelmingly positive attitude towards the online peer task. On the other hand, Chen (2015) notes that students' opinions were less positive by the end of the assignment.

The targets of feedback-initiated revisions vary in the studies. While there are studies where mostly micro-level features are targeted by feedback (Chang, 2012; Saeed et al., 2018; Chen, 2015), in others, emphasis is placed on macro-level (Tuzi, 2004; Guardado & Shi, 2007; Ho, 2015). Additionally, Chang (2012) states that comments may not aim at areas the writers hoped for.

Online peer feedback can successfully boost engagement during the writing assignment (Chang, 2012; Chen, 2016; Hyland & Hyland, 2006; Saeed, Ghazali, Sahuri, & Abdulrab, 2018). In addition, it may allow participants to perform the task more equally than during in-class setting (Chen, 2016; Guardado & Shi, 2017), partly because the risk of losing

face is reduced (Chen, 2016; Ho, 2015). In addition, Saeed et al. (2018) emphasize the positive role of social dimension in making online peer feedback efficient. Nevertheless, accessibility (Chen, 2016; Hyland & Hyland, 2006) and lack of confidence (Guardado & Shi, 2007; Ciftci & Kocoglu, 2012) might lower participation rate.

The effectiveness and the rate of the integration of online peer feedback is constantly debated as studies provide contradictory findings when comparing it to face-to-face feedback (Chang, 2012; Ciftci & Kocoglu, 2012; Guardado & Shi, 2007; Ho, 2015, Yu & Lee, 2016) Several factors play a role in the effectiveness of online peer feedback. Hyland and Hyland (2006) note that high amount of comments can reduce efficiency as students cannot follow them properly. Furthermore, online peer feedback may prove to be superficial (Chen, 2016; Chen, 2015; Ene & Upton, 2018), incorrect or unhelpful (Chen, 2015; Godwin-Jones, 2018; Kim, 2010) on occasion. The lack of non-verbal communication (Chen, 2014), technical difficulties (Chen, 2014; Hyland & Hyland, 2006) and the bigger workload (Chen, 2016; Moloudi, 2012) are also perceived as negative features. Ene and Upton (2018) and Kim (2010) state it can make students work for a considerable amount of time; however, Moloudi (2012) argues that online peer feedback may allow more time for in-class activities.

Finally, Chang (2012) claims that different modes of online peer feedback will impact efficiency. However, it is unclear how the utilization of such modes during the various stages of the writing process can maximise their potential.

Automated writing evaluation systems

Automated writing evaluation (AWE) programs have been in use since the 1960s. Tang and Rich (2017) define AWE as „artificial intelligence to evaluate essays and offer feedback" (p. 117). However, their employment in writing courses is frequently debated.

AWE is criticized for removing the social and communicative factors from the writing process (Li, Link, & Hegelheimer, 2015; Tang & Rich, 2017; Wang, Shang, & Briody, 2013). Ranalli et al. (2016) note that its utilization in large-scale, standardized exams

is viewed negatively (p. 8). Chapelle et al. (2015) raise concerns over the validity of AWE systems, while Ranalli (2018) notes that the accuracy of such tools varies. Its true ability to instruct and evaluate is still unclear (Li et al., 2015; Wang et al., 2013). Wang et al. (2013) claim that the efficiency of AWE programs' macro-level evaluation is questionable. Additionally, Li et al. (2015) argue that they might even make students neglect macro-level features of essays. Conversely, they note that CF via AWE may facilitate revision and enhance writing skills. Furthermore, Ranalli et al. (2016) claim that AWE as an assistance tool in writing courses is well received. Its emphasis on micro-level elements of writing is emphasized as it is ideal for L2 writers. It enhances autonomy and allows students to focus on macro-level elements of writing. These findings clearly indicate that there is no consensus on the efficiency of CF from AWE tools. Finally, AWE is believed to either match or surpass human raters in reliability (Tang & Rich, 2017; Wang et al., 2013). In spite of a mixed perception of these programs, they have been gaining popularity in education.

The following paragraphs will provide a brief overview on the features of AWE systems discussed in the paper. 'Research Writing Tutor' consists of three separate modules: Analysis, Demonstration and Learning. The Analysis Module utilizes color-coded and numerical feedback. This is where students can start working on a new draft or proceed with a previous one. The drafts are stored along with the formative feedback they received. The Demonstration Module includes a concordancer containing annotated research articles (along with the originals) from over 30 disciplines offering genuine models for the structures of research articles.

Figure 1. Feedback in the Analysis module of RWT from Cotos (2014)

'MY Access!' is a web-based AWE with the IntelliMetric scoring system which was adjusted with essays with human scoring. It offers holistic and analytic scores along with diagnostic feedback on 5 main aspects: focus and meaning, content and development, organization, language use and style and mechanics and convention. It has a large spectrum of prompts for writing tasks across several genres. Its formative feedback can be utilized to initiate cycles of revision, while its summative feedback evaluates overall performance. It has several tools to help students during the writing process. 'My Editor' is responsible for corrective feedback. 'Wordbank' contains vocabulary based on different genres while 'Thesaurus' can be used for synonyms. Finally, 'My Portfolio' stores all the written products and assessment for students to access (Chen & Cheng, 2008, p. 99).

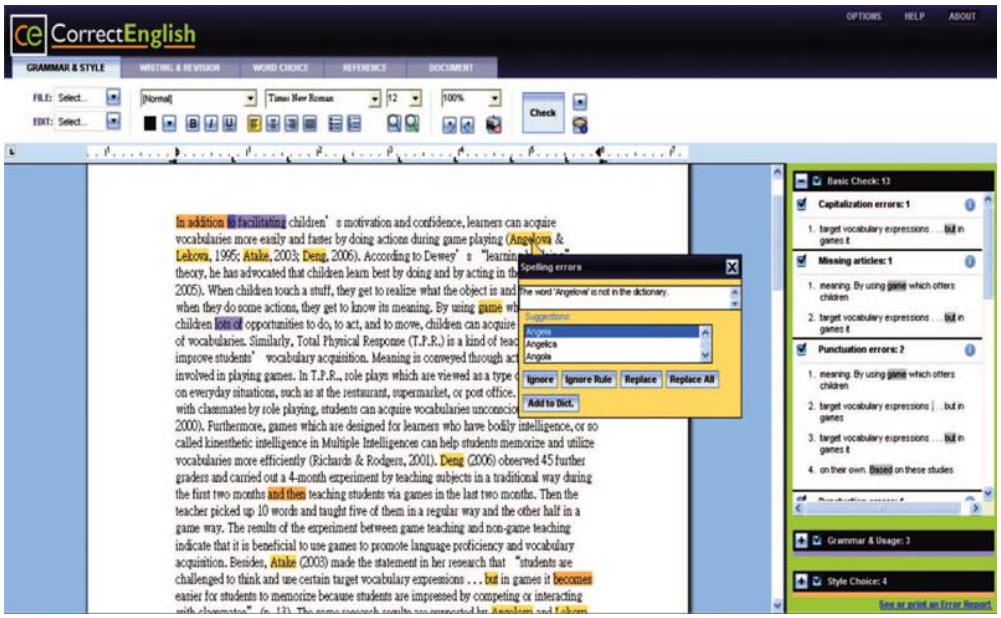

Figure 2. Feedback in CorrectEnglish from Wang et al. (2013)

'CorrectEnglish' offers holistic score and immediate feedback on content, focus, organization, style and overall performance. It includes an AI that provides a review of the assignment in the form of an annotated example as guidance which can be used until the final draft. It has a checklist to assist with self-assessment during the writing process. Furthermore, support for English grammar and several publishing formats is also available. The immediate feedback indicates errors and offers commentary on grammar and style, writing and revision and word choice (Wang et al., 2013, pp. 239-240).

'Writing Roadmap' features an assessment criteria containing 6 main aspects: idea and content, organisation, voice, word-choice, fluency and convention. The immediate feedback displays errors, offers narrative comments, holistic scores, assessment based on the 6 features and evaluates revisions. Its supporting tools, 'hint'; 'tutor'; 'thesaurus' and 'grammar tree', help with micro-level issues (Tang & Rich, 2017, p. 122).

'Criterion' was created for classrooms mostly on secondary and tertiary level. In addition to its holistic score, its diagnostic feedback focuses on grammar, usage, mechanics, style and organization and development.

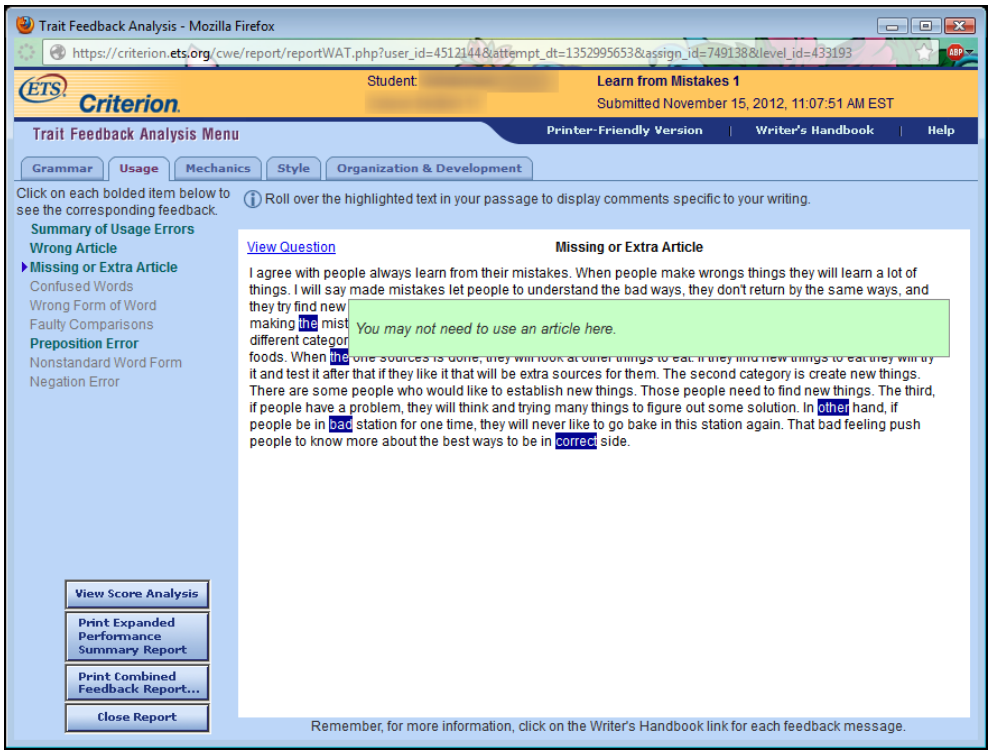

Figure 3. A glimpse at feedback from 'Criterion' from Lavolette et al. (2015).

It provides prompts and a planning tool for outlining and numerous genres. Its writer's handbook feature is available to assist with the interpretation of feedback or during writing (Chappelle, Cotos, & Lee, 2015, pp. 388-389).

Automated writing evaluation and its effects

In this section, automated writing evaluation (AWE) and the effects they may have on academic writing skills are discussed. Numerous AWE software have been researched, as a result, this paper will closely examine findings only on a select number of programs. Finally, the importance of training for both students and teachers is discussed briefly.

'Criterion' and its beneficial effects have been studied by various researchers. Chapelle et al. (2015) claim the use of Criterion is beneficial during the revision process due to its corrective feedback; however, they note the program could be developed further to be more accurate. According to Ranalli et al. (2016), students' accuracy in writing improves by using Criterion although its utilization is more useful for those with lower levels of knowledge in English. Additionally, they could take advantage of the specific feedback

offered by the program claiming it was precise and less exhausting to handle mentally. Nevertheless, it is highlighted that Criterion is limited in that it cannot provide specific feedback for every situation. In the research of Li et al. (2015), Criterion was used in two courses, for the revision stage and the composition of the final draft; furthermore, instructors recommended using the tool outside class. The levels and the structures of the courses differed, the use of AWE in class depended on the instructors' methods. In general, the corrective feedback of Criterion was well received and deemed helpful in the writing process. Moreover, it motivated students to use other tools to correct their errors. Additionally, motivation and purpose were further improved by setting a minimum score participants had to reach in the scoring feature of Criterion. In the lower level course, instructors assisted with the interpretation of corrective feedback which in turn resulted in higher confidence and a significant increase of accuracy during the time period.

Li et al. (2015) also emphasize the role of teachers' positive attitude towards the AWE software which resurfaced in the students' interview as well. Finally, due to the effectiveness of the corrective aspect of Criterion, instructors could focus on content and organization feedback although some students could utilise the latter from Criterion as well. Dikli (2006) highlights the Writer's handbook feature of the software which provides guidance for students to enhance accuracy through defining feedback, offering examples of use and explaining reported errors. Wang et al. (2013) state that the immediacy of Criterion's feedback could allow for more revision and content development by reducing editing time, therefore, enhancing learner autonomy in the process. Additionally, Dikli (2006) claims that the presence of a digital portfolio develops autonomy as students can closely monitor their progress and feedback. Finally, Lavolette et al. (2015) suggest that Criterion can be used as a tool to improve independent editing skills.

'MY Access!' was examined in several studies. Chen and Cheng (2008) found that the feature responsible for grammatically accuracy was the most well received among students, although it was criticised by some for being too generic. Furthermore, in one of the observed classes a minimum score was set similarly to Li et al. (2015), which boosted confidence, and paired with instructor feedback, made students continue to revise their works. On the other hand, students in a class where they had to depend on MY Access! entirely recommended using the automated scores to follow their progress in drafting and revision instead of having their grades depend on the tool. Furthermore, like in Ranalli et al. (2016), it was suggested that AWE might be more fitting for students with lower proficiency in English as form is more important in those stages and it does not allow enough flexibility and creativity for higher level users. Overall, Chen and Cheng (2008) proposes using both human and AWE feedback in order to increase learner autonomy, "awareness of writing conventions and mechanics" (p. 108), for efficient meaning negotiation and developing a sense of purpose. Finally, Hoang and Kunnan (2016) propose that the loss of face can be avoided in an AWE environment, which could make feedback more acceptable to students.

In their research, Tang and Rich (2013) examined the 'Writing Roadmap' (WRM) tool. The software consists of detailed assessment criteria, immediate online feedback and several assistance tools. The use of WRM had a positive impact on writing skills, especially for English majors, which was explained by the emphasis on language development in their curriculum. Furthermore, the integration of human and AWE feedback (suggested in Chen and Cheng [2008]) resulted in more interaction and greater motivation for rewriting and revision. Moreover, the higher frequency of revisions could also be explained by the use of the Tutor tool, which offers instructions for error correction, as it facilitates the memorization of correct forms. Additionally, students were willing to write more. Furthermore, the assessment criteria played a role in developing academic writing skills.

Not only did instructors start using it to give feedback, but students also showed signs of increased learner autonomy when they internalized its elements during the production of their texts. As a result, they successfully acquired knowledge of the English rhetoric style, making cross-cultural communication more effective. In addition, they possessed a definite communicative purpose. Furthermore, by developing (self-)evaluation skills and actively using them, they became a significant member of the assessment process which again reflects enhanced autonomy. Finally, although the research only focuses on the early drafting and revision stages, the skills acquired by students are applicable in later and more complex phases as well.

The following tool, 'CorrectEnglish', was studied by Wang et al. (2013), and it shows similarities to the previous software in its features. During the experiment, students' accuracy increased after employing AWE and spiked much higher than those of belonging to the traditional writing instruction group. The number of errors significantly dropped and word usage greatly improved. Furthermore, learner autonomy was enhanced due to the effective guidance formats, which helped students with organization and re-examination. In addition, there was no time or frequency limit, which further boosted autonomy. In general, the motivation for better and more text production was higher. Nonetheless, human feedback on content and organization is still required, echoing the study of Li et al. (2015).

The final software is 'Research Writing Tutor' (RWT) which was studied by Cotos and Huffman (2013) and Cotos (2014). Participants claimed feedback from the software was helpful for various reasons. First, it facilitated self-evaluation and revision. Second, it enhanced their awareness of the communicative effectiveness of their texts. Third, its individualized feedback was well received along with its tendency to prompt critical thinking. Finally, Cotos (2014) claims that RWT promotes autonomy through accessibility, non-prescriptiveness and positive or negative feedback. As a result, recalling Dikli's (2006)

findings, students can follow their progress, which develops self-efficacy and willingness to write.

The aspect of training was a recurring element in all of the aforementioned research on AWE. Each paper emphasizes its importance to successfully use AWE in the course. In Cheng and Chen's study (2008), the class that had the most negative perception of AWE did not receive much instruction and the instruction admitted to not having explored the software either. Furthermore, Li et al. (2015) claims that certain issues surrounding the minimum requirement could have been avoided by examining the scoring system. In studies where there was thorough preparation for the implementation of the software (Cotos & Huffman, 2013; Tang & Rich, 2017; Wang et al., 2013), the results of the experiments were positive and the reception of the software was better. In addition, Lavolette et al. (2015) claim that training is crucial, as it leads to a higher response to rate to the feedback given by the AWE.

Online peer feedback and its effects

This section discusses the various ways in which online peer feedback might be beneficial to L2 students' academic writing skills development. Research conducted on numerous digital platforms include wikis, Facebook, Google Docs, blogs and networked computers. Furthermore, both individual and collaborative writings will be examined.

The utilization of online peer feedback successfully raised L2 students' awareness of audience for academic writing tasks. According to Hsieh and Liou (2008), the implementation of online peer feedback during abstract writing tasks had positive effects. Students took on the role of both the reader and writer; therefore, their awareness of audience increased which led to higher learner engagement. However, it is important to note that the task was limited to abstract writing, not a full essay. Nevertheless, the results are promising. Similar results were present in the findings of Bikowski and Vithanage (2016). During the web-based collaborative writing task, students' self-reflection was reinforced, which

resulted in enhanced learning and the application of a more analytical approach to their writing as they made comparisons to their groupmates' written products. Consequently, they gained higher awareness of their audience; moreover, the authors claim that this could even form a healthy competition within groups further improving individual writing.

Saeed and Ghazali (2017) also found correlation between peer feedback and awareness of audience in a collaborative environment. However, in this research it was the comments made by peers that prompted revisions in the area. Additionally, the research of Ciftci and Kocoglu (2012) supports the aforementioned claims. The application of blog writing and peer feedback raised students' awareness of audience and they gained communicative purpose in the authentic environment, as the teacher was no longer the only recipient of their essays.

Moreover, Kitchakarn (2013) argues that in "an authentic communicative context" provided by blogs, participants' realization of having their work examined by peers prompted a conscientious approach to their written products. As a result, students' sense of audience was increased. Similarly, Grami (2012) claims blogs enhance the writers' sense of audience as well. However, the extent to which that improvement is realized is not certain, as the sample in the research was relatively low (n=7). In addition, Tuzi (2004) states that the multiple sources of peer feedback could propel students to take their audience into consideration and adjust their product accordingly while writing. Finally, Guardado and Shi (2007) found that peers' concern for the audience of the texts and their targeted feedback helped increasing the recipients' sense of audience. Therefore, multiple instances indicate that awareness of audience can be improved successfully by using online peer feedback in L2 academic writing courses.

Learner autonomy can be affected by the application of online feedback in academic writing courses. Warni and Suryoputro (2014) found that that the implementation of online

peer feedback via blog tasks had a positive effect on learner autonomy. They highlighted two main components that can potentially boost autonomy: metacognitive strategies and motivation. In relation to the former, students recognize their own weaknesses in their texts via providing feedback on others' work. Furthermore, they also acquire knowledge on various elements of academic writing in order to write purposeful comments; therefore, they need to have a solid knowledge of the aspects they reflect on. Finally, making an effort for better performance is promoted by online feedback.

Students' motivation is enhanced in several ways. First, the authenticity of their audience prompts students to write. Second, as their written products are stored on the blogs they can easily track their learning process and the progress they have achieved throughout the course. Third, satisfaction is emphasized as a key component of motivation. Consequently, positive comments received from peers further boosts willingness to write. Finally, Warni and Suryoputro (2014) note that the customizability of the online platform might have played a role in motivating students; however, that effect is limited to those with an interest in design and it would be difficult to measure. Bikowski and Vithanage (2012) argue that students could recognize weaker areas in their writing allowing them to improve those later on. Furthermore, participants started exploring alternative types of organization. Finally, motivation was also increased with the authors noting the task was especially effective with unwilling students who would not participate in individual writing beforehand.

According to Li and Li (2018), the accessibility of other students' papers prompted self-correction. In addition, Saeed et al. (2018) highlight the importance of non-revision oriented feedback as they help students accept and utilize the feedback they receive; furthermore, it motivates them to learn more for better writing performance. Kim (2010) claims that the online collaborative environment improved students' motivation, as

participants felt responsible towards their peers and they showed willingness to achieve better performance in writing via other means. Kitchakarn (2013) claims that learner autonomy was greatly improved in a blogging context. Students were in charge of their own progress as well as the feedback they provided on their peers' works. However, the latter may have the opposite effect, as many students noted their lack of confidence in giving feedback. Furthermore, they realized that working with others' texts is beneficial; therefore, they were motivated to become and stay active participants throughout the course. Finally, removal of limitations such as time or the classroom environment might have supported motivation as well. These findings are echoed in the research of Ebadi and Rahimi (2017) as well. They highlight the design of the platform they used (Google Docs) as another factor in boosting motivation. Tuzi (2004) argues that peer feedback can reinforce students' willingness to perform revisions on their texts; moreover, it directs attention to weaker areas in writing and can prompt the recipient to attempt to improve them. Nevertheless, it is crucial to note that the effects in Tuzi (2004) were not consistent in all of the participants' products, as they were mostly present in the initial drafts. Finally, Guardado and Shi (2007) state that autonomous revisions might have been elicited by their peers' revision-oriented comments on other parts of their texts, albeit indirectly. To conclude, learner autonomy can be enhanced in numerous ways by utilizing online peer feedback.

Online peer feedback has a significant effect on micro-level features in L2 students' academic writing. Bikowski and Vithanage (2016) argue that students' accuracy benefitted from the feedback and the opportunity to practice during the collaborative work. Furthermore, speed and fluency were affected positively. Saeed and Ghazali (2017) found that grammar and accuracy were improved by peer feedback. However, the number of revisions on micro-level made without peer suggestions was much higher; therefore, it must be taken into consideration when observing the overall quality of the papers. Kessler et al.'s

(2012) research corroborates with the aforementioned findings and highlights that approximately 4/5 of the error corrections were adequate and meaning negotiation was the students' main focus, which resulted in improved written products. In Chen (2015), general peer feedback helped students improve their accuracy by identifying errors made by their peers in their own paper. However, the targeted feedback offered explicit suggestions, which prompted revisions in return. As a result, awareness of grammar and mechanics of writing was increased. Saeed et al. (2018) also observed that in students' feedback on micro-level issues, the emphasis was placed on meaning, accuracy, and mechanics of writing in order to improve their papers. Similarly, Kim (2010) claims that providing feedback, students accuracy increased as they noticed errors in the reviewed essay and their own writings. Furthermore, more emphasis was on meaning and fluency, and the mechanics of writing improved. Finally, Ebadi and Rahimi (2017) argue that students' accuracy and lexicon were drastically improved through peer feedback. However, they note the efficiency of the comments were greatly enhanced by the user-friendly interface of Google Docs which allowed smooth collaboration between participants. In conclusion, online peer feedback is beneficial for the improvement of micro-level features in L2 students' academic writing.

Macro-level features in L2 students' academic writing are enhanced by online feedback. Bikowski and Vithanage (2016) report that organization was improved as a result of peer feedback and they highlight the importance of interaction during the collaborative writing tasks. Each group had members with strengths in different skills (e.g. organization). Consequently, improvement was first experienced on a group-level, which later transferred to the individuals. As members were collaborating with peers of certain skills, the learning potential was magnified. According to Saeed and Ghazali (2017), macro-level revision-oriented feedback propelled students to improve their group essays in various ways. Comments helped with developing ideas and organizing their texts. Furthermore,

argumentative genre awareness was raised. The authors highlighted the impact feedback had, although a relatively low number of them targeted global issues. In addition, groups with lower proficiency integrated more feedback to perform better. The findings are promising as this type of group work could help close the gap between students, at least on macro-level components of academic writing. Li and Li (2018) claim that reading each other's papers was beneficial for students, as their idea development and organization improved. Furthermore, they highlight the efficiency of Turnitin's two-stage evaluation process (micro first, then macro) in directing attention to macro issues via questions provided by the instructor as guidance. Consequently, students can more easily identify the correlation between the issue and its effects on their paper. Finally, they might be able to recognize the interaction of micro and macro errors. This is a significant process, as writers would no longer treat writing problems in isolation.

Liang (2010) contributes the improvement in text organization and idea development to students' exchange of knowledge, discussion of the task and the writing process during revision-oriented feedback. Moreover, Ho (2015) argues that explicit suggestions for macro-level issues, such as developing ideas and organizing texts prompted revision which led to better written products. The high integration of the comments is also emphasized, however, the reason behind it is not discussed in detail. Nevertheless, such high awareness of macro-level features on the students' part is worth noting. In addition, Wahyudin (2018) claims online peer feedback helped with organization; however, the extent to which peer comments were utilized is not discussed, neither is the effect of external sources like feedback provided by the teacher. Saeed et al. (2018) found that participants in online collaborative writing have targeted such issues as organization and content. However, they note that the application of such feedback was often proven difficult for the students and could only make adjustments on the micro-level. In spite of this, the awareness shown by students and the

high number of comments aimed at revision provide a solid basis to work with for future projects.

Moloudi (2011) also claims that the fields of organization and developing ideas were improved, although the extent to which it was present in students' essays is not discussed. Nonetheless, the overwhelmingly positive reaction to online feedback and its apparent efficiency should warrant successful implementation in writing courses. Tuzi (2004) argues that engaging in online peer feedback was especially practical for facilitating macro-level revisions. Idea development was a component that was affected the most especially via addition and clarification. Furthermore, online feedback was responsible for the majority of text modifications. In spite of perceiving oral feedback as better and more effective, students actually made less changes based on that format, proving that online peer feedback has a place in writing classes. Similarly, Guardado and Shi's (2007) research supports the findings on the connection between macro-revisions and online peer feedback in Tuzi's (2004) article. Finally, Ebadi and Rahimi (2017) report that the cohesion and coherence of students' text were greatly improved as a result of interaction among peer. To conclude, the application of online peer feedback results in major improvements in macro-level features of L2 students' academic writing.

Critical thinking of L2 students is affected positively by online peer feedback. Bikowski and Vithanage (2016) argue that online collaborative writing supported critical thinking as students did not analyse the product of an individual; therefore, they adopted different approaches to review the texts. Kitchakarn (2013) claims that the use of online peer feedback bolsters critical thinking as it creates an environment, unlike face-to-face classroom activities, which does not hinder the provision of useful observation. Finally, Grami (2012) states that students' critical thinking improved as they recognized the comments they receive were not of professional opinion. This is a significant find as critical

thinking is needed not only for reviewing the papers, but for evaluating feedback as well in order to make the correct modifications. In conclusion, online peer feedback can influence the development of L2 writers' critical thinking.

The way online peer feedback was offered had an impact on L2 writing performance. In the findings of Li and Li (2018), students highlighted the anonymity of feedback, as it caused less stress and they were able to write purposeful and straightforward comments, which led to an unbiased assessment by the recipients. Conversely, Chen (2015) claims that while students preferred to provide feedback anonymously, they made more thoughtful comments during the pair work where the identities of students were known. As a result, the acceptance rate of feedback was higher and participants performed better. However, it is crucial to note that task design might have played a role in this, as during the anonymous stage students were to make general comments. Should they have been required to make more specific suggestions, the difference between the two modes might have been smaller. Ho and Savignon (2007) state that the non-threatening environment online feedback allowed students to be honest and precise, therefore, they could pinpoint issues in each other's texts which might not have happened during in-class activities. Lastly, the research of Guardado and Shi (2007) corroborates with the aforementioned findings. Students highlighted anonymity as an important feature as they had the opportunity to be truthful in their feedback; in addition, it raised the chance of comments being integrated into subsequent revisions. Consequently, numerous studies show that L2 writing performance is affected by the mode of online peer feedback.

Finally, the last component of online peer feedback that must be discussed is proper training, not just for preparing students how to provide useful comments on their peers' texts but also for the use of the digital platform employed in the course. Training can help refocus students' attention to a particular area (macro or micro) of issues in academic writing (Ebadi

& Rahimi, 2017; Li & Li, 2018; Saeed & Ghazali, 2017; Wahyudin, 2018). Moreover, it improves the quality of their feedback (Ciftci & Kocoglu, 2012; Saeed & Ghazali, 2017; Tuzi, 2004) and can enhance the rate of acceptance by peers (Guardado & Shi, 2007). According to Ho and Savignon (2007), training can help students feel more comfortable when providing feedback by emphasizing how straightforwardness can support better writing performance. Finally, peer feedback training can raise confidence. Bikowski and Vithanage (2016) claim training in technology and digital communication allows students to focus on writing concerns instead of technological barriers. Moreover, Ciftci and Kocoglu (2012) emphasize the importance of putting online platforms in an academic context during training to make the writing process easier.

Conclusion

Studies observed in this paper clearly indicate that utilizing peer feedback and AWE systems in online courses is beneficial for the development of L2 students' academic writing skills. However, the distribution of the improved skills differs. AWE systems' primary target were micro-level issues such as accuracy or meaning. Macro-level features were affected at a lower rate, nevertheless, several articles noted the positive role of using AWE systems letting students focus more on macro-level features of writing. They were proven to be particularly effective in assisting students with lower proficiency in English. Other aspects such as motivation, learner autonomy and confidence also increased while using AWE.

Online peer feedback affected both micro- and macro-level aspects of writing. In the former, improved accuracy was the most frequent finding of the studies. On the other hand, organization and idea development were the most relevant elements in the latter. Similarly, to AWE, learner autonomy and motivation were bolstered. The awareness of audience and critical thinking of L2 students also developed as a result of peer feedback.

Further research should investigate how AWE could be used to improve macro-level features of L2 writing. Furthermore, a reoccurring theme was the dependence on teacher feedback in spite of having other sources, therefore, ways to balance the acceptance of feedback should be looked into as well. This paper did not cover the procedure of training for both teachers and students nor successful ways to create a course structure, two crucial matters that need attention since they heavily influence the outcome online assignments.

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