Integration of Automated Feedback Tools in EFL Academic Writing Classes: Teachers' Perspective

Mariam Merkviladze[1]

Abstract

With the introduction of AI-driven automatic feedback systems like QuillBot, Grammarly, ProWritingAid, and the Hemingway App, the field of teaching academic writing and English as a Foreign Language has been revolutionized. The current research explores the teachers' perspectives on the integration and efficacy of these tools in enhancing learners' writing abilities, motivation, and engagement. Within the quantitative approach, the online survey was administered to investigate the perceived advantages and challenges of employing automated feedback technologies in English as a Foreign Language (EFL) and academic writing classes in Higher Education Institutions (HEI) of Georgia. The questionnaire focused on teachers' views on what areas of writing may each aforementioned tool improve. It also investigated the participants' overall perceptions of automated feedback and its benefits. The findings of the study revealed that HEI teachers perceive automated feedback technologies very positively and see the benefits the latter bring to their classrooms. They find it effective due to its nature to be personalized, instant, precise and clear. They also find AI-driven feedback tools beneficial for enhancing their feedback skills and enabling them to address students' needs timely and effectively. This research adds to the expanding corpus of research on educational technology by emphasizing the crucial role that teacher perception plays in the effective integration of automated feedback technologies into writing instruction.

Keywords: EFL Teachers; Academic Writing Teachers; Automated feedback tools; Writing Performance.

1. Introduction

Writing is one of the crucial productive skills to gain while learning English as a Foreign Language and Academic Writing. It is due to its multifaceted importance in personal, educational, professional, and societal contexts. Composition skill allows individuals to express their perspectives, attitudes, and thoughts. It can become the source of self-actualizing the inner self and creativity (Defazio, Jones, Tennant, & Hook, 2010). It can also become the source to explore and articulate one's inner thoughts and emotions. While being engaged in writing tasks, EFL and academic writing Learners can develop their critical thinking and reflection skills. Writing also fosters their ability to organize their thoughts, filter the information, develop arguments, and express their stance in the target language. Through mastering EFL writing competence, learners can develop important skills such as research, organization, grammar, vocabulary, and fluency. According to Graham (2019, p. 277), if an individual is eager to succeed in school, work, or in personal life, one must learn how to write since it is a fundamental skill to learn new ideas, persuade others, record information, create imaginary worlds, express feelings, entertain others, heal psychological wounds, explore the meaning of events and situations (Graham, 2019).

EFL and academic writing teachers' feedback on learners' writing performance plays a crucial role in fostering their motivation, engagement, and mastery of writing. It has been discussed that there are limitations of conventional feedback approaches in EFL and academic writing classrooms in Higher Education Institutions. There is an urge to implement more effective practices for

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[1] School of Education, Humanities and Social Sciences, International Black Sea University, Georgia. Email: mmerkviladze@ibsu.edu.ge

promoting a process-oriented writing environment within which feedback can mediate student learning. Teachers are reported to lack resources to provide an adequate assessment of learners' writing and align the means of feedback with the 21st century students' needs and interests. Using AI-generated feedback on writing is believed to support peer and self-evaluation and encourage students to be sustainable since the shared responsibility between educators and students is of vital importance. Technological advancements have opened the wider ground for various means of providing feedback on learners' writing and Higher Education Institution teachers must keep up with new trends not only in methodology but very importantly in various means of feedback as well since it is believed that the innovations AI offers can lead to more effective feedback and can foster learners' writing competence (Lee, 2014; Aljuaid, 2024; Rad, Alipour, & Jafarpour, 2023; Escalante, Pack, & Barrett, 2023; Shum, Lim, Boud, Bearman, & Dawson, 2023). Integration of automated feedback makes learning more interactive, and enjoyable EFL and Academic writing classes become more process-oriented, learner-centered, and effective. Implementation of automated feedback tools can be dynamic and adaptable for learning experiences, mixed learning environments, and traditional classrooms in Higher Education Institutions. Hence, it can develop teachers' feedback literacy which is critical to keeping up with new trends in education and means of feedback.

Regardless the number of researches on Artificial Intelligence in education, there is still lack of sufficient sources on the aforementioned topics. In the Georgian context, it is even more novelty and there has been a very little number of studies in EFL and academic writing feedback through incorporating AI-driven technological tools.

2. Literature review

2.1 Importance of feedback on writing

Feedback is a central component in the educational process, particularly in English as a Foreign Language and academic writing. Feedback is an essential tool for students who strive to get better at writing academically or learning a new language. It shows where they are strong and where they may need to improve (Klimova, 2015). Feedback helps EFL learners overcome language barriers and improve their grammar, vocabulary, and general communication skills. It gives students focused guidance that accelerates language learning and makes them more competent and self-assured. Giving feedback on learners' writing performance is crucial as teaching is more about understanding students' progress in the teaching and learning process than it is about simply transferring knowledge. In light of this, students must understand their development through teacher feedback (Wahyuningsih, 2020; Algburi, Algburi, & Razali, 2022).

In academic writing, feedback is just as essential. It focuses on the structure, coherence, and critical thinking components of writing in addition to language accuracy. EFL and academic writing learners get better at organizing their arguments rationally, interacting with sources successfully, and creating an academic voice when they get constructive feedback. Additionally, feedback promotes a reflective writing style that helps students evaluate their work critically and make improvements (Lee, 2016).

The impact of feedback goes beyond immediate corrections. It plays a vital role in motivating learners giving them a sense of purpose and direction. Effective feedback can help students become more self-assured, more motivated to learn and more growth mindset-oriented. In a time when automated feedback tools such as Grammarly, ProWritingAid, HemingwayApp, and QuillBot are becoming more common, it is even more important to comprehend the dynamics of feedback, both automated and human. With the immediate, actionable input these tools provide, they can supplement traditional instructor-led feedback and provide learners with additional support. Feedback in EFL and academic writing is an effective teaching tool that fosters a lifelong love of learning and self-improvement in addition to strengthening language and writing abilities (Knight, et al., 2020). Through accepting

criticism, students can improve their academic performance and acquire the communication skills needed to prosper and thrive in a globalized world.

2.2 Teacher feedback literacy

Effective teaching requires teacher feedback literacy. The ability of educators to deliver timely, helpful, and actionable feedback that has a substantial positive impact on students' motivation and learning is known as feedback literacy (Carless & Winstone, 2023). the importance of feedback has grown as the educational environment has changed, emphasizing the necessity for instructors to be skilled in providing high-quality feedback. Studies show the significant impact that teacher feedback can have on students' performance. According to Hattie and Timperley (2007), feedback is one of the most important factors influencing learning and accomplishment (Hattie & Timperley, 2007). Depending on its quality and delivery, feedback can either help or impede learners' growth. Effective feedback enables students to recognize areas for growth, comprehend their present performance, and develop strategies for improving their abilities. It fosters a more in-depth comprehension of the material and a thoughtful attitude to education.

As Careless and Bound (2018) posit, feedback literacy entails raising educators' and learners' knowledge of how to successfully understand and apply feedback effectively. Teachers who are proficient in providing feedback can customize their remarks to each student's requirements, creating a nurturing learning environment that encourages continuous development (Carless & Winstone, 2020). Feedback literacy includes the capacity to keep a balance between praise and constructive criticism to provide feedback that is both educational and inspiring. Maintaining student involvement and confidence depends on this balance. Feedback should both correct mistakes and highlight learners' strengths to promote a positive learning environment (Nicol D. , 2010).

The rise of automatic feedback programs such as Grammarly, ProWritingAid, Hemingway App and QuillBot introduces new aspects to feedback literacy. In these circumstances, teachers need to consider including aforementioned AI tools in their feedback practices to address the individual needs of the digital native students' needs. According to Evans (2013), when feedback is provided as a part of a dialogue in which students actively participate in their education, its effectiveness is increased (Evans, 2013) .

Teacher feedback literacy is fundamental to effective teaching and learning. It gives educators the ability to give insightful feedback to students and has the power to change their learning experiences. EFL and academic writing teachers can better assist learners' academic development and promote a culture of lifelong learning and improvement.

2.3 Automated feedback on writing

Due to Artificial Intelligence, the use of technology in education has greatly improved. Artificial Intelligence is currently growing and spreading over every part of the globe at an alarming rate. The application of AI and machine learning in various gadgets, apps, and services is expanding as more people become aware of these technologies (Schindler, Burkholder, Morad, & Marsh, 2017; Tahiru, 2021). Over the past few years, there has been a huge interest in the application of Artificial Intelligence in the field of education and EFL and academic writing classrooms (Alzahrani, 2024). Students can now easily practice and receive instant feedback on their language abilities, particularly writing, at any time and location due to the widespread availability of technology and online platforms. This involves utilizing cutting-edge computer and mobile applications powered by Artificial Intelligence, which provides interactive and customized resources for improving writing skills and motivation (Marghany, 2023; Yan, 2023; Jiang, 2022; Meunier, Pikhart, & Klimova, 2022).

Online platforms and software such as Grammarly, Quillbot, Hemingway App, ProWritingAid, etc. have already been reported to influence enhancing the writing skills among learners (Ro'isatin, Hoesny, & Adibah, 2023; Nasution & Fatimah, 2018). The aforementioned automated tools have the potential to change the way that writing instruction uses feedback greatly. These resources provide individualized, easily accessible, and real-time feedback that can improve student learning and teacher feedback literacy. By incorporating these tools into their lesson plans, teachers may provide their learners with more comprehensive and productive feedback, which will ultimately help them become better writers.

Grammarly and other similar automated feedback tools offer real-time edits and recommendations on syntax, punctuation, style, and plagiarism. This immediacy promotes self-editing and continual growth by assisting learners in identifying and fixing mistakes as they write. Wilson and Roscoe (2020) posit that these tools can be used as additional resources to support instructors. Traditional feedback, strengthening and improving the feedback process as a whole (Wilson & Roscoe, 2020).

Another AI-drivel tool, QuillBot, provides paraphrasing, rephrasing, grammar checker, summarizer, plagiarism checker, AI detector, and citation generator. Due to its multifaceted functions, it helps students improve their writing style and their ability to express ideas clearly and concisely assuring grammar accuracy and academic integrity. QuillBot can also offer a variety of vocabulary choices and sentence construction, as noted by Leacock, Chodorow, Gamon and Tetreault (2021) (Leacock, Chodorow, Gamon, & Tetreault, 2021). The abovementioned AI tool can be very helpful for EFL and academic writing teachers and learners.

The Hemingway App emphasizes readability by highlighting the use of adverbs, passive voice, and complex phrases. The Hemingway App teaches students how to write more concise and clear sentences, and hence, it improves the learners' understanding of successfully written correspondence. According to the research carried out by Hojeij and Ayber (2022), readability-focused tools as such those mentioned above, can greatly increase EFL and academic writing students' understanding of the coherence and clarity of their writing (Hojeij & Ayber, 2022).

ProWriting Aid provides thorough comments on syntax, style, and organization in addition to comprehensive reports that point out writing flaws and strengths. Students can gain a better knowledge of their writing abilities and opportunities for development with this holistic approach. Crossley et al. (2019) highlight how crucial detailed feedback is for fostering learner growth and development (Crossley, Kyle, & McNamara, 2016).

Above all the positive aspects the aforementioned automated feedback tools carry, such technologies are essential for improving teacher feedback literacy. AI tools allow teachers to concentrate on higher-order issues like organization, reasoning, and critical thinking in EFL and academic writing students' writing performance by giving them regular and timely feedback. Teachers can address individual student's needs and foster a more customized learning experience by using the knowledge gained from these technologies to customize their comments further (Wilson, et al., 2021).

Furthermore, teachers can use automated feedback tools as resources for their professional development. Through engagement with the feedback produced by these technologies, educators can improve their comprehension of typical writing problems and practical solutions. This can improve their feedback procedures and capacity to offer focused, helpful criticism. Teachers who are familiar with these resources may help their students use them more successfully and promote a more supportive and collaborative learning environment (Stevenson & Phakiti, 2019).

Automatic feedback tools such as Grammarly, QuillBot, ProWritingAid, and the Hemingway App are very helpful in enhancing feedback procedures and elevating teacher feedback literacy. Educators can enhance learners' writing skills and foster a culture

of continuous growth and lifelong learning by incorporating these tools into their instruction offering more effective and comprehensive feedback.

2.3 Teachers' awareness, perceptions and attitudes

As more recent researches suggest, teachers' attitudes towards the use of automated feedback tools such as Grammarly, ProWritingAid, QuillBot and Hemingway App in EFL and academic writing have been controversial (Alharbi, 2023; Marzuki, Widiati, Rusdin, Darwin, & Indrawati, 2023; Escalante, Pack, & Barrett,2023; Ng, Leung, Su, Ng, & Chu, 2023 Taskiran & Goksel, 2022;) Since the tools mentioned above provide real-time feedback on grammar, punctuation, and style, many teachers have realized the potential benefits of automated feedback tools in providing immediate, consistent, and detailed feedback on students' writing. These tools can help address common language errors, improve grammatical accuracy and enhance overall writing quality (Bikowski, 2016). As automated feedback can lessen the teachers' burden and free them up to concentrate more on higher-order writing concerns like content, organization, and arguments, teachers value its efficacy. Instant feedback might also encourage students to be motivated to write and provide constant revision and improvement opportunities for their drafts (Zhang & Hyland, 2018).

Despite the advantages teachers report, some educators have concerns about the overuse of automated feedback tools. They express worry that AI technologies might make writing too easy and ignore how complex and context-dependent language use is. According to Beuningen (2010), automated feedback frequently follows predetermined rules and algorithms, which might not account for the nuances of academic writing and rhetorical devices (Beuningen, 2010). Another drawback teachers posit is that students might become overly dependent on AI-driven feedback, potentially neglecting the development of critical self-editing and revision skills. There is also the concern that these tools might not always provide accurate or contextually appropriate feedback leading to confusion or the reinforcement of incorrect language patterns (Ware & Warschauer, 2006).

To limit the drawbacks and increase the positive impact of integrating automated feedback tools in EFL and academic writing classes, a balanced approach is necessary. In addition to providing individualized, formative feedback that targets higher-order writing abilities and unique student needs, teachers can use these tools as supplemental resources. Higher Education Institution teachers can take advantage of the positive aspects of AI-driven feedback technologies as well as human feedback systems to help learners become more proficient writers and autonomous learners (Chen & Cheng, 2008). To achieve the balance mentioned above, teachers must receive professional development and training in order to fully comprehend the advantages and disadvantages of automated feedback tools. They must gain the skills necessary to assist and guide students use these automated feedback technologies critically, reasonably, and effectively. In-depth knowledge and the development of new skills can be promoted by encouraging students to consider and interact with the feedback rather than just take it passively (Lee, 2011).

The perceived advantages and difficulties of automated feedback on academic writing and EFL writing influence teachers' views toward it. Although automatic feedback can be a useful tool for enhancing writing quality and linguistic accuracy, issues with over-reliance and contextual appropriateness must be addressed. Teachers can use automated feedback to enhance their teaching strategies, raise feedback literacy, and help students boost their writing by taking a thoughtful, balanced approach.

3. Methodology

3.1. Methods

To acquire a comprehensive profile of the teacher participants' awareness, practice, and beliefs regarding the integration of automated feedback tools in EFL and academic writing classes, the current study employed the quantitative research method

executed in the online survey. The main objective of the survey was to investigate Higher Education Institution teachers' awareness, perceptions, and attitudes towards implementing AI-generated online feedback tools in EFL and academic writing classes.

3.2. Participants

The participants of the current research were 27 EFL and academic writing teachers from private and public HEI institutions in Georgia. All of them (100%) are teaching English as a Foreign language. 40.7% teach both EFL and academic writing and 14.8% teach other subjects apart from EFL and academic writing.

3.4. Procedure

Data for the present study was collected through an online questionnaire that evaluated HEI teachers' feedback literacy and attitudes toward integrating automated feedback in EFL and academic writing classes. The survey was designed through Google Docs and was purely quantitative. It focused on the participants' overall experience of providing feedback on writing through Grammarly, ProWritingAid, Hemingway App, and QuillBot. It also aimed to determine which AI tools were more frequently and effectively used. The survey was generally focused on the means of feedback and the automated feedback tools participants were aware of and which of them they use more often (Grammarly, ProWritingAid, Hemingway App, and QuillBot). The questionnaire also emphasized each particular AI-driven feedback tool and aimed to find out the participants' practices, advantages and disadvantages, and teachers' attitudes towards each automated feedback tool, including investigating which areas of writing they can improve better. The 5-point Likert scale questionnaire was employed with the following ranges: 1 (totally agree), 2 (agree), 3 (neutral), 4 (disagree), and 5 (totally disagree). The survey items also included multiple choice and open-ended question types to gain valuable findings.

The participants voluntarily took part in the research; they were informed about the purpose of the research and were assured of confidentiality and anonymity of the responses.

3.5. Results and analysis

The first part of the survey focused on overall information about the research participants and their practices of using automated feedback tools such as Grammarly, ProWritingAid, Hemingway App, and QuillBot in EFL and academic writing classes in Higher Education Institutions. Their age ranged from 30-39 (48.1%) and from 40-49 (25.9%). Only one of the 87 participants was male. According to the data, almost a fourth of the research participants (33.3%) have more than 20 years of teaching experience and the fourth (25.5%) has been teaching English and academic writing for 11-15 years. All of the participants are teaching English as a Foreign language. 40.7% of them teach both EFL and academic writing and 14.8% teach other subjects apart from EFL and academic writing in HEI.

The second part of the survey focused on HEI EFL and academic writing teachers' attitudes toward each of the mentioned AI-driven feedback tools and their perceptions of the writing areas that can be improved by automated feedback tools.

The third part of the questionnaire delved into the teachers' overall attitudes and perceptions of automated feedback tools and the fourth part of the survey seeks for the teachers' views on the challenges and limitation when applying automated feedback tools in EFL and academic writing classes.

Figure 1 below illustrates the HEI teachers' views on Grammarly and its impact on the improvement of the writing areas. According to the bar chart below (Figure 1), the majority believe Grammarly improves learners' grammar morphology (66.7%), grammar

syntax (55.6%), and spelling (51.9%). 40.7% think Grammarly can improve text structure and 44.4% believe students improve vocabulary and word choice through feedback provided via Grammarly.
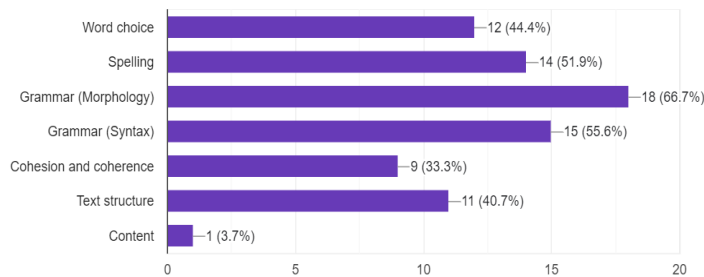
Figure 1. Writing improvement through Grammarly

Figure 2 below depicts the teachers' views on ProWritingAid and the writing areas students improve through it. Almost half of the participants (44.4%) think ProWritingAid improves students' grammar (morphology). For 37% of the participants, it is grammar syntax that is improved through ProWritingAid feedback. According to the data, ProWritingAid can improve text structure (29.6%) and spelling (25.9%).
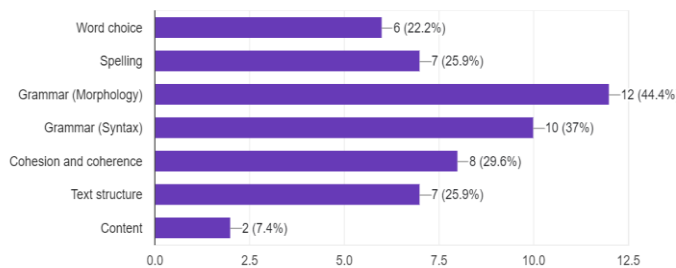
Figure 2. Writing improvement through ProWritingAid

Figure 3 below is the illustration of teacher participants' views on the writing areas students improve through the Hemingway App feedback. According to the findings, 40.7% of the teachers think the aforementioned automated feedback tool can improve learners' spelling and 37% believe it is text structure that is improved through the Hemingway App. The data also shows that in teachers' view, the Hemingway App can improve students' grammar competence in terms of morphology (37%) and the grammar competence including syntax (29.6%). Furthermore, 37% of the participants think that the Hemingway App can improve the structure of the EFL and academic writing students' writing.

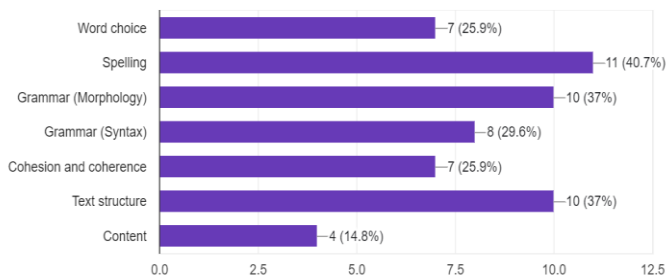**Figure 3. Writing improvement through the Hemingway App**

Figure 4 below depicts the teacher participants' attitudes toward automated feedback provided on the learners' writing performance through the incorporation of QuillBot. Almost half of the HEI teachers (48.1%) think QuillBot can improve students' grammar (syntax) while 37% believe Quillbot can address learners' spelling limitations. 33.3% of teachers think QuillBot can improve the structure of the learners' writing.

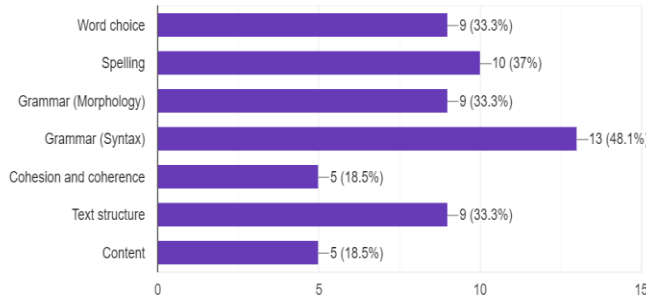**Figure 4. Writing improvement through QuillBot**

Table 1 below is an illustration of HEI EFL and academic writing teachers' overall perceptions and attitudes toward automated feedback tools. 33.3% agree and 44.4% are neutral about the statement that automated feedback tools help them provide more detailed feedback. The majority (37%) believe that AI-driven feedback tools save the teachers' time when providing feedback and 33.3% think that such tools also enhance their ability to identify student errors. However, almost half of the teachers (40.7%) neither agree nor disagree whether automated feedback tools support their professional development. 37% of the teachers agree that AI-driven feedback tools motivate learners to write more, while 44.4% of the participants neither agree nor disagree with the aforementioned statement. Almost half of the teachers (44.4%) believe that automated feedback tools increase students' confidence in writing and 40.7% think AI-driven feedback tools reduce students' writing anxiety. More than 51.9% of teachers think students are more engaged in the writing process with automated feedback tools.

**Table 1. Overall attitudes toward automated feedback tools**

Question	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
Automated feedback tools help me provide more detailed feedback.	3.7	3.7	14.8	44.4	33.3
Using these tools saves me time when providing feedback.	0	3.7	29.8	37	29.5
These tools enhance my ability to identify student errors.	3.7	7.4	25.9	33.3	29.6
Automated feedback tools support my professional development.	0	11.1	40.7	18.5	29.6
Using automated feedback tools motivates students to write more.	3.7	3.7	44.4	37	11.1
Automated feedback tools increase students' confidence in their writing.	3.7	0	37	44.4	14.8

Students are more engaged in the writing process with automated feedback tools.	0	0	33.3	51.9	14.8
Automated feedback tools help reduce students' writing anxiety.	0	0	33.3	40.7	25.9

Figure 5 below illustrates the challenges HEI teachers encounter when incorporating automated feedback tools in EFL and academic writing classes. Almost half of the teacher participants (48.1%) report that one of the challenges is the lack of training or knowledge about AI-driven feedback tools and their implementation methods. 37% of the teachers think that one of the limitations of automated feedback tools is the cost since some of them are not free and not easily accessible. 29.6% of teachers report it is the technical issues that can be one of the limitations of providing feedback through automated feedback tools.

Figure 5. Challenges encountered when using automated feedback tools
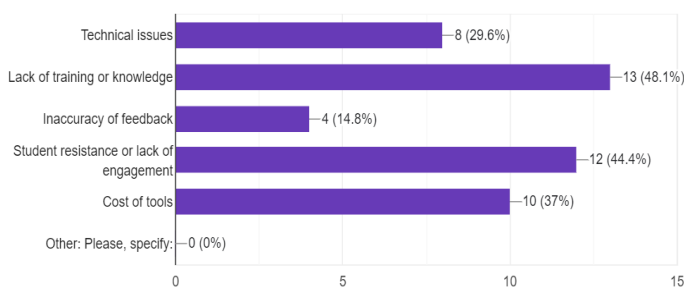
3.6. Discussion

The obtained statistical data revealed the teacher participants' view on the areas of improvement in writing when incorporating automated feedback tools. According to the findings, Grammarly enhances students' grammar (syntax and morphology), spelling, and text structure. Teachers also viewed ProWritingAid as a tool for developing learners' syntax and morphology and also enhance the coherence and cohesion of their writing. The Hemingway App is boosting the skills of developing well-structured text to enhance vocabulary and word choice. It can also enhance students' grammar (syntax and morphology). QuillBot is also seen as the booster of syntax, text structure, and word choice among learners.

The above statistics also revealed the overall attitudes of the teachers toward using automated feedback tools for assessing learners' writing performance. According to the findings, teachers believe that the automated feedback tools enable them to provide more detailed and personalized feedback on students' writing. It also enhances their ability to better identify student errors by raising their feedback literacy. Participants also feel that the AI-driven feedback tools can greatly save their time and workload. Moreover, they believe that the automated feedback tools reduce students' writing anxiety and affect the learners' motivation increasing their confidence and resulting in better engagement in writing and assessment activities.

The current study also revealed the challenges teachers encounter while providing feedback through automated feedback tools. The most important challenge reported was the lack of thorough knowledge of such feedback tools and the methods of how to apply them to their classrooms. Another limitation depicted was the cost of the tools and their accessibility. Technical issues can also be the challenges faced while incorporating AI-driven tools.

The teacher participants had the chance to answer the open questions about the ways of incorporating automated feedback tools in their EFL and academic writing classes. According to the data, teachers think that automated feedback tools should be

consistently used in EFL and academic writing classes since they believe that in this case students will also get used to it and this will have a more positive effect on enhancing their writing performance. Furthermore, as teachers report, such tools save teachers' time, enabling them to provide more detailed and personalized feedback and make teaching and learning environments more engaging and effective. Teachers also think incorporating automated feedback tools encourages learners' revision and self-assessment skills. HEI teacher participants believe that AI-driven feedback tools ensure that the feedback provided is meaningful and contributes directly to student learning objectives. The way the teachers see effective integration of automated feedback tools is to provide them with free accounts and access to them and expose them to trainings and workshops to increase feedback literacy among teachers and learners and be able to fully and effectively use the AI-driven feedback tools. As teachers report, teacher training and students' engagement can be considered to be one of the strategies for integrating automated feedback tools in EFL and academic writing classes. By means of this, the integration of automated teaching tools can enhance teaching effectiveness and ensure positive learning outcomes.

4. Conclusion and Recommendations

The current study explored the Higher Education Institution teachers' perspectives on integration of automated feedback tools in EFL and academic writing classes. It delved into their views on how and which areas of writing Grammarly, ProWritingAid, The Hemingway App and QuillBot improve. The online survey that was administered within quantitative research method, was filled by 27 teachers from private and public universities in Georgia. Based on the findings, it can be concluded that overall teachers have positive attitudes toward using automated feedback on learners' writing performance. The benefits they see is that it saves their time, gives them better understanding and find errors in students' writing. Teachers feel that the AI-driven technologies help them raise feedback literacy and make their feedback more effective and constructive meeting the needs of individual students. Participants also consider that automated feedback technologies encourage learners' engagement in writing process, increases their motivation and reduces writing anxiety among learners. However, teachers feel they need to have more access to such tools and in order to implement automated feedback in their classrooms they need to be provided with sufficient training sessions. This will give them better insights and will equip them with practical knowledge. They also suggest that AI-driven feedback technologies should be used more consistently and ensure that students engage in feedback activities more actively.

Based on the findings and the conclusions of the current research the following conclusions and recommendations can be drawn:

- To increase the teachers' feedback literacy and keep them updated on the newest trends in education and assessment, educational institutions, organizations and university administration should provide them with activities that will broaden teachers' knowledge and ensure their professional development. It can be the workshops, training sessions, seminars, forum discussions, conferences and various educational events. They should be easily accessible for all the teachers and educational experts.

- The HEI can also implement observation methods to see the challenges teachers face while using automated feedback. Based on the limitations they will observe, they can do needs analysis and plan further actions to address the problems teachers encounter.

- The Higher Education Institutions and organizations have to provide financial and technical support to have wider access to the latest educational technologies including automated feedback tools. Teacher professional development must be constantly promoted and encouraged.

⁜ Students should also be involved in the process of assessment and their attitudes and views must also be taken into consideration. Further research is necessary to find out how the students perceive the automated feedback tools and how can they develop self-efficacy and self-assessment skills through using AI tools.

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