

## *Original Paper*

# Computer-Based Feedback (CBF) in Writing Classes as Perceived by Saudi EFL Students

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### ***Abstract***

*This study examines how Saudi EFL students feel about using CBF in their writing classes and what they think it can offer them as a learning tool. The research method is descriptive-analytic, and a questionnaire is used to collect responses. Sixty-five Saudi English as a Foreign Language (EFL) students from the fourth year of the English language program at King Saud University in Riyadh make up the study population. The entire research population constitutes the sample for this study. The findings indicate that Saudi EFL students positively perceive CBF in their writing classes. They perceive CBF as beneficial for improving their revision process, reducing the workload associated with error correction, and providing insightful comments. The students also believe that CBF saves time and effort while offering sufficient explanations for errors. In addition, the results show that Saudi EFL students view CBF favorably and choose to implement it in their writing classes. However, the study emphasizes enhancing students' awareness of CBF and training them on its optimal use. The study suggests that integrating CBF tools into writing classes can provide positive learning experiences, but instructors should ensure that students receive proper training to utilize CBF effectively.*

### ***Keywords***

*Computer-Based Feedback (CBF), Writing Instruction, EFL, King Saud University, Saudi Arabia*

## 1. Introduction

Effective written communication is crucial to language study, providing students with the skills to construct meaningful texts independently (Elola & Oskoz, 2016). Texts are constructed from linguistic aspects like word choice, syntactic structure, and cohesive techniques (Hyland, 2003). Students of English as a Foreign Language (EFL) write for a variety of reasons that are informed by cultural norms and expectations, but they all want to improve their writing skills (Cumming, 2006).

Extensive studies have shown that FB has a major effect on pupils' writing (Sherafati & Mahmoudi Largani, 2023; Ashrafganjoe et al., 2022; Abtahi et al., 2020). Peer Feedback (PF) and Computer-Based Feedback (CBF) have gradually joined TBF, the traditional type of teacher-provided Feedback (CBF). Instructors often feel overwhelmed by the quantity and quality of written student work that needs Feedback (Alnasser, 2018). Computerized feedback can potentially revolutionize this field, as word processors now prioritize catching the most elementary grammar mistakes (Swales & Feak, 2012).

The introduction of computers and technology in education has revolutionized writing instruction, particularly in providing feedback. AbuSeileek (2013) suggests that students can benefit from receiving feedback on their work from a computer. Using computers as a source or medium for feedback enables immediate Feedback, automated scoring, enhanced test efficiency, and personalized Feedback based on the learner's responses (Han & Shin, 2017; Van der Kleij et al., 2012). Incorporating computers into writing instruction streamlines the writing, reviewing, and feedback processes, increasing efficiency (Elola & Oskoz, 2016).

Recent advancements in automated writing feedback have captured the attention of academics, particularly those in the field of EFL (Li et al., 2017; Li, 2021; Zhang, 2017, 2020). Computer-Based Feedback (CBF), initially defined as electronically generated feedback, has evolved into its current form (Stevenson & Phakiti, 2019). CBF assists writers by automatically generating comments on their work, allowing authors to implement the suggested ideas at their discretion. These technological tools offer various features, including content clarity, writing style, word choice, spelling, punctuation, organization, correctness, and more, providing instant feedback within minutes. However, there is a concern that authors may become overly reliant on these technologies and need to pay more attention to the value of human criticism (Dikli & Bleyle, 2014).

The Zone of Proximal Development proposed by Vygotsky (1978) is one example of a second language learning theory that CBF can help support (ZPD). Students may view CBF as an "expert" in their Zone of Proximal Development (ZPD), according to research by El Ebyary and Windeatt (2017). CBF may give students access to further learning opportunities and exams, which can help them become better writers (Hyland & Hyland, 2006).

Non-native speakers of a language sometimes need help to learn how to write well in that language because of the time commitment needed to do so (Hyland, 2003). However, more studies still need to examine how CBF affects EFL students' writing abilities (Zhang, 2020; Li et al., 2017). This study aims to inquire into how Saudi EFL students feel about using CBF in their writing classes. The study's findings are of the utmost significance because of how important it is to learn how efficient CBF is.

### *1.1 Statement of the Problem*

Universities around the Kingdom of Saudi Arabia need help providing feedback on written work written in a foreign language (Ahmed, 2020). Previous Saudi studies (e.g., Alsaweed, 2022; Alnasser, 2022; Althoubiti, 2019) have highlighted the limited use of Computer-Based Feedback (CBF) in EFL instruction and the continued dominance of teacher-based feedback. Furthermore, Alnasser (2018) found that Saudi EFL students need clearer perceptions of CBF due to the lack of exposure to best practices in integrating CBF into writing classes.

There has been a limited emphasis on computer-based feedback in the Saudi context, despite its potential for language learning. For instance, Fageih (2012) found that traditional teacher feedback remains the primary method used in EFL classes. Mustafa (2012) also highlighted that Saudi students often need to pay more attention to feedback due to dissatisfaction with the feedback process. Furthermore, Grami (2005) observed that Saudi EFL students anticipate feedback from their language teachers more constructively during writing classes.

Recently, there has been much discussion on how teachers of English as a Foreign Language (EFL) can benefit from using Computer-Based Feedback (CBF) systems with their student's written work. However, more research must determine how EFL students feel about using such technologies. Therefore, this research aims to examine how Saudi EFL students in higher education see the incorporation of CBF into writing instruction.

### *1.2 Research Questions*

The questions of this research can be stated as follows:

- 1) How do Saudi EFL students perceive computer-based feedback in their writing classes?
- 2) What are the attitudes of Saudi EFL students toward computer-based feedback in their writing classes?

### *1.3 Research Objectives*

The goals of this investigation are as follows:

- 1) To explore the perceptions of Saudi EFL students regarding computer-based feedback in their writing classes.
- 2) To examine the attitudes of Saudi EFL students toward computer-based feedback in their writing classes.

#### *1.4 Research Significance*

In the context of contemporary language instruction, technology has had a major effect on written production in target languages (Hyland, 2003). Li et al. (2017) classified these resources into three categories: Web 2.0, automated writing assessment, and corpus-based tools. While there has been a lot of research on Web 2.0 and corpus-based technologies in Saudi Arabia, not much has been done to see how students react to receiving automated writing criticism (Zhang, 2020). By analyzing the views of Saudi graduate students on the usage of various forms of automated writing feedback in their academic papers, this study aims to gain insight into the effects of real-time comments on writers' draughts.

Few research has looked into how Saudi EFL students feel about their teachers using CBF. With the exception of Alnasser's (2018) study, previous research in the Saudi context has not paid much attention to learners' perceptions on the nature of CBF (e.g., whether CBF and peer feedback can replace teacher feedback). Our findings address a gap in the literature and expand existing knowledge by suggesting new avenues for research and practical uses.

#### *1.5 Literature Review*

Providing feedback to students is widely recognized as an effective approach to enhancing their writing skills in second language instruction (Hyland, 2003). Learning relies heavily on feedback, and several approaches have been taken. Numerous studies have shown that providing constructive criticism helps ESL students improve their writing skills. For example, Razali and Jupri (2014) surveyed ESL students in Malaysia and found that scathing criticism, among different types of feedback, was most effective in improving their writing. Srichanyachon (2012) also highlighted the influence of teachers' comments on students' language proficiency and motivation. In Saudi Arabia, various feedback forms benefit ESL students' writing development (Grami, 2005, 2010; Alshuraidah & Storch, 2019).

Changes in how a second language is learned have been made possible by technological developments. In recent years, computer-based feedback has been investigated (Zhang, 2017; Grami, 2020). Utilizing electronic feedback tools with diverse capabilities has made the editing and rewriting process more efficient for students. Research on automated feedback has shown promising results. For instance, Zhang (2017) found that EFL students who actively used feedback on their writing through a web-based automated grading tool demonstrated improvements in their writing abilities.

The effectiveness of computer-based feedback has been a topic of debate. Advocates argue that utilizing computers for feedback provides immediate responses, enabling learners to promptly address discrepancies between their current level and intended learning outcomes (Lee et al., 2010). They also suggest that computers can provide personalized feedback tailored to individual responses (Lopez, 2009). However, critics express concerns about students' mistrust and unfavourable attitudes towards feedback from computers (Ferguson, 2011; Bridge & Appleyard, 2008). Additionally, the social nature of Learning may be compromised when computers are solely relied upon for Feedback (Scott, 2006).

Research into the usefulness of computer-based feedback in enhancing writing skills has been significant because of the importance of feedback and the present differences among academics. Computer-based feedback was studied by Sherafati and Mahmoudi Largani (2023) to see how it affected the writing abilities, self-control, and confidence of Iranian EFL students. The findings suggested that digital evaluations replace traditional classroom models. Iranian English as a Foreign Language (EFL) students' perspectives on writing were examined by Ashrafganjoe et al., who looked at the effects of Grammarly, a system that delivers instant corrected feedback (2022). Users who used Grammarly reported higher levels of assurance in their writing. To better understand how Iranian EFL students handle developmental faults in writing, Vakili and Ebadi (2022) compared face-to-face and computer-mediated dynamic evaluation. Students' motivation to read improved using the computer-mediated method, and they could better transfer their knowledge to novel situations.

Abtahi et al. investigated how different forms of feedback, such as written and digital feedback, affected the composition skills of Iranian intermediate EFL students (2020). Qualitative analysis revealed that the collaborative handwritten group received more input than others. Zhang (2017) examined how students interacted with feedback received from computers. The study integrated a free online platform, Pigai, into a writing course and found that the extent of impact varied based on students' motivational, affective, and cognitive involvement.

Wilson and Czik (2016) demonstrated that combining computer-based feedback with teacher comments improved writing competency, suggesting that automated essay assessment supports teachers in providing valuable feedback and expediting the writing process. The effects of Criterion software's corrective feedback on students' writing were studied by Li et al., 2015. Many students expressed satisfaction with the computer-based comments they received. Automatic Writing Evaluation (AWE) was studied by Wang et al. (2013), who discovered that EFL students who received feedback from computers improved in areas such as writing quality, precision, and awareness.

Computer-mediated feedback on writing has many benefits, which have been studied in depth. Dizon (2016) compared the Facebook writing of Japanese EFL students to that of students who completed their work on paper. More progress was made in the experimental group's writing fluency than in the control group. Sain et al. (2013) looked into the question of whether or not corrective feedback delivered via computer is more beneficial than traditional corrective feedback. The results showed that pupils favoured receiving comments on their writing from computers.

In the Saudi Arabian context, studies have examined the perceptions of Saudi university EFL students regarding computer-based feedback in writing lessons. Alnasser (2022) found that integrating such technologies benefited students and increased their motivation to learn, but access to working devices and adequate internet connections were crucial. Alsaweed (2022) investigated Saudi graduate students' perspectives on software providing comments on their work and found that automatic writing feedback systems were well-received. According to research by Althoubiti (2019), Saudi students prefer

computer-mediated remedial feedback over traditional methods.

A study by Alnasser (2018) surveyed Saudi undergraduate EFL students' opinions on using peer and automated feedback as alternatives to traditional instructor comments. The results indicated that students were not yet ready to forgo instructor criticism, and intermediate-level students' comments could cause anxiety in their peers.

Using computers to provide feedback on student writing has advantages and disadvantages, as discussed in the existing literature. The benefits of computer-based feedback have been the primary focus of research, but there is still room for more study, especially in Saudi Arabia. To better integrate technology in writing classrooms, it is helpful to understand how Saudi university EFL students feel about automated writing feedback.

## **2. Method**

### *2.1 Research Method*

This study adopts a descriptive-analytical approach as the research method. The descriptive approach aims to provide comprehensive information on a subject by describing relevant occurrences and analyzing them into their constituent parts. Analytical research goes beyond descriptive research by identifying the underlying causes of an event. Once a chain of causation is established, the next step is identifying modifiable factors (variables) that may impact the outcome. The research questions in this study are derived from the researcher's literature review and fieldwork.

### *2.2 Subjects*

The population of this research consists of fourth-year EFL students at King Saud University in Riyadh's College of the Arts. The English language department has 65 EFL students, and the research sample includes the entire population. Therefore, the sample size is 65 students, selected through complete consensus sampling.

### *2.3 Data Collection*

In this study, data collection was primarily conducted through the use of a questionnaire. The questionnaire was developed based on previous empirical research on Computer-Based Feedback (CBF) and aimed to investigate the perceptions of EFL students towards CBF. The questionnaire consisted of 20 items and was distributed to the research sample in a paper format. Participants were given a week to complete and return the questionnaire.

The survey employed a five-point Likert scale, allowing participants to express their agreement or disagreement with each item. It is worth noting that the questionnaire was administered in English, as it was the language of instruction for the participants. The response rate for the survey was 87.69%, with a total of 57 students completing and returning the questionnaires.

While the total number of respondents was initially 65, there was a discrepancy of eight students who did not fully complete the questionnaires. As a result, these incomplete responses were excluded from the final analysis. To ensure face validity, the researcher sought feedback from judges with EFL degrees to assess the questionnaire's accuracy in measuring the variables of interest. Based on the reviewers' feedback, the questionnaire was revised to include more concise questions aligned with the research's primary aim.

Cronbach's Alpha, a statistic for gauging the consistency of research findings, was used to evaluate the questionnaire's reliability. The reliability coefficient for the questionnaire items was found to be 0.814, exceeding the threshold of 0.5 and indicating a high level of reliability.

#### *2.4 Data Analysis*

The choice of appropriate statistical methods depends on the characteristics of the data and their alignment with the study's objectives. In this study, the primary methods of data analysis include calculating the mean score (M), percentage (%), standard deviation (SD), frequency (F), and ranking in line with the research questions and theoretical framework.

#### *2.5 Ethical Considerations*

Prior to beginning the study, clearance was given by the King Saud University Research Ethics Committee. The study's goals were explained to all participants, and they were guaranteed that their replies would be kept confidential and used only for statistical analysis.

### 3. Result

The findings of the investigation are presented in full below. The questionnaire used for data collection in this study is the primary topic of this report. A discussion of the research's findings is included with the findings itself.

**Table 1. The Perceptions & Attitudes of Saudi EFL Students towards CBF in Writing Classes**

S	Statements	Mean	Standard Deviation	Order
1	I get really useful comments on my writing errors through CBF	4.45	1.82	2
2	CBF is a fair way to evaluate my written texts	3.86	1.50	8
3	The FB provided by the computer is reliable and detailed	4.08	1.54	7
4	CBF makes revising, editing, and publishing easier	4.50	1.85	1
5	CBF encourages me to try different styles of writing	4.31	1.69	4
6	CBF encourages collaboration with teachers & peers in the writing process	3.82	1.47	9
7	The teacher explained to me the errors corrected by the computer	3.78	1.38	10
8	I am well aware of CBF software such as Grammarly & Ginger Software	3.74	1.32	11
9	CBF saves me time in correcting writing errors	4.38	1.72	3
10	CBF improves my writing.	4.27	1.66	5
11	I need more instruction on CBF	4.12	1.60	6
12	CBF allows me to improve my writing content	3.41	1.23	13
13	CBF leads to making a comparison between the right and wrong answers	3.26	1.15	14
14	I recommend using CBF in writing classes	3.20	1.08	15
15	I will always use the FB I receive from my computer	3.48	1.26	12
16	CBF focuses more on vocabulary and spelling errors than grammatical & content errors	3.02	0.83	20
17	I do not always understand the corrections made by CBF	3.19	1.02	16
18	I do not know how to use the computer to correct my writing	3.17	0.89	17
19	I do not agree with some CBF suggestions	3.04	0.81	19
20	CBF encourages me to spend more time writing than I write with a pen	3.08	0.91	18
Overall Mean			3.70	



The study's results show that Saudi EFL students view and feel positively about using CBF in their writing sessions. They recognize the advantages of CBF ( $M=3.70$ ) and believe it offers valuable benefits to their learning process. The results show that CBF makes revising, editing, and publishing easier provides useful comments on writing errors, saves time correcting errors, encourages exploration of different writing styles, and improves overall writing skills. Students also appreciate the reliability, detail, and fair evaluation CBF provides. The findings align with previous research that highlights the positive impact of CBF on EFL students' writing skills, time management, and willingness to correct errors.

However, the study also reveals that students require more instruction on CBF. They express a need for better explanations from teachers regarding the errors corrected by CBF and indicate their use of software tools such as Grammarly and Ginger Software. While students value CBF's ability to compare correct and incorrect answers, they recommend more training to understand and utilize the feedback provided fully. This finding corresponds with previous research suggesting that EFL students should receive proper training on CBF tools and feedback utilization.

Additionally, the study identifies some areas of concern raised by students. They express uncertainty about always understanding the corrections made by CBF, needing more knowledge of how to effectively use computers for writing correction, and feeling that CBF encourages more time spent on writing than handwriting. Students also indicate less agreement with certain CBF suggestions and perceive a focus on vocabulary and spelling over grammatical and content errors. These findings support recommendations from previous studies that emphasize the need for thorough training on CBF tools and feedback utilization. Research has shown that CBF can significantly improve writing quality, particularly in vocabulary development, coherence, punctuation, organization, and grammar.

While previous research has shown that CBF is helpful for EFL writers in the classroom, it is crucial to remember that certain studies have found the opposite to be true. There is a need for more research and exploration into the effects of CBF on writing quality because other studies have found that using automatic spelling and grammar checkers did not affect the coherence of essays.

Overall, this study highlights the positive perceptions and attitudes of Saudi EFL students towards CBF in their writing classes. It emphasizes the importance of adequate training and support to enhance students' understanding and utilization of CBF tools and feedback. Future research can further investigate the specific areas of improvement needed in CBF implementation and explore strategies to address the identified concerns of students.

#### 4. Discussion

Saudi EFL learners have positive perceptions and attitudes towards CBF. It also helped them much in proofreading, rewriting, and overall writing quality. According to the findings, incorporating computers into the classroom is an efficient and powerful way to enhance students' writing ability, self-control, and belief in their academic prowess. Using computers to provide feedback would greatly improve classroom instruction. Given that the ultimate goal of writing workshops is to nurture writers competent of controlling their Learning, this is an alternative to the traditional approach of feedback giving, in which the teacher takes on all of the responsibilities.

The findings of this study have important consequences for curriculum developers, educators, and learners. Instructors of writing should take into account the usefulness and ease of use of computer-based feedback when planning lessons and curricula. Teachers are encouraged to carefully craft a written lesson plan that emphasizes students' participation in class activities, builds students' confidence in their learning abilities, and encourages them to take responsibility for their Learning in this technology-enhanced setting. Teachers may make better judgements about how to provide educational input if they have data on how computer-based feedback affects students' writing performance, self-regulation skills, and confidence in their abilities.

There needs to be more research. The first problem with this study is its small sample size. In addition, this study has only looked at the emotional effects, not the academic ones, on college students (which may be measured by comparing pre-and post-writing samples). Second, since the participants were all from the same university, it is difficult to extrapolate the findings. Future research directions should replicate the study with a bigger sample size from a wider range of educational institutions and skill levels to learn more about the efficacy of computer-based feedback.

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