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Comparing English Language Learners' Perceptions of How Reliable Computer-Based, Teacher-Based, and Peer Feedback Is: A Case Study

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***Abstract*—The literature emphasises the role of feedback (FB) in writing development, leading to explorations of different types of FB to provide, such as teacher-based FB (TBF), peer feedback (PF) and computer-based feedback (CBF). This quasi-experimental study aimed to investigate EFL learners' perceptions of the reliability of TBF, PF and CBF. The participants (n = 40) were Saudi male EFL students in a BA English programme at a Saudi university. The study employed an experimental group (n = 21) and a control group (n = 19). For data collection, pre- and post-intervention questionnaires were administered. The intervention exposed the participants to giving and receiving PF and introduced them to CBF. Following training in providing PF and using the automated system, the participants went through four cycles of writing during which they developed four essays; with each essay, PF and CBF were employed to produce multiple drafts. The main findings indicated that TBF was perceived to be the most reliable type of FB, and that CBF was considered more reliable than PF. Additionally, our findings suggest that the more students are exposed to CBF, the more likely they are to accept it. Pedagogical implications arising from these findings are also discussed.**

***Index Terms*—feedback, automated systems, reliability, academic writing, perceptions**

I. Introduction

In most EFL countries, English dominates to such an extent that many institutions shift much of their attention to teaching English. In fact, English has become the language of instruction in several undergraduate and graduate programmes. This has created an increased demand for higher education (HE) institutions in EFL countries to provide high-quality English language teaching. In academia, the focus of English teaching is on the four language skills, with writing skills being given the most attention. Writing is the main form of communication between students and their instructors, and instructors base their assessments mainly on students' written work (e.g. homework, assignments, projects and reports). According to the literature on L2 teaching and learning, how to develop writing skills is clearly of significant concern to researchers and practitioners. Therefore, it appears that writing plays a prominent role in teaching and learning in general (Bitchener & Ferris, 2012; Cho & Schunn, 2007; Gibbs & Simpson, 2004).

An aspect of language learning that is regarded as an essential component for learning development is the provision of feedback (FB) to learners (Gibbs & Simpson, 2004; Haigh, 2007; Lee, 2007; Miller, 2009). Hyland and Hyland (2006) argued that FB had a positive impact on language proficiency and stimulated learners' motivation to learn languages. For these reasons, the nature of FB and how best to provide it in L2 contexts has been explored. In English writing teaching, several FB types have been identified, such as teacher feedback (TBF), peer feedback (PF) and computer-based feedback (CBF). The literature shows that TBF and PF have been thoroughly investigated from different perspectives (Bitchener & Ferris, 2012; Ferris & Roberts, 2001; Reid, 1997; Rollinson, 2005), but CBF has yet to be similarly examined. FB generated by computers is a relatively new topic that has gained much attention in recent years, in part because of the rapid development in technology and educational needs (Burkhart et al., 2020; Chang et al., 2017; El Ebyary & Windeatt, 2017; Lachner & Neuburg, 2019; Zaini & Mazdayasna, 2015), and in part because of the COVID-19 pandemic that the world has experienced since early in 2020. Investigations into CBF have branched out beyond the domain of language learning to include other learning domains such as accountancy (Helfaya, 2019) and medicine (Chang et al., 2017).

Previous research has focused on investigating learners' perceptions of the educational environments offered to them (Chien et al., 2020; Chou, 2020; Fu et al., 2019; Sletten, 2017; Wei & Chou, 2020). More specifically, a common practice associated with FB research is to explore learners' perceptions of the FB provided to them regarding their written texts (Cohen & Cavalcanti, 1990; Lizzio & Wilson, 2008; Peterson & Irving, 2008). Several studies have concluded that integrating technology into teaching and learning languages can positively influence the learning process (Cheung & Slavin, 2012; Li, 2006; Li, 2021; Zaini & Mazdayasna, 2015). In fact, technology can change learning experiences and quality by introducing innovative methods and sources for language learning and teaching that can

create a student-centred situation, engage learners deeply in their own learning and allow them to become active rather than passive learners (Chang & Windeatt, 2021; Walker & Patel, 2018). A number of studies have asserted that more learning outcomes will be achieved if learners have already formed positive perceptions of the integration of technology into their own learning processes (Alzahrani & O'Toole, 2017; Wei & Chou, 2019); as a result, it can facilitate deeper learning (Mohamed, 2008). Although the literature reflects an increasing interest in CBF in L2 writing, it provides very limited evidence that this area has been explored in the context of higher education in Saudi Arabia, especially in terms of perceptions of CBF. English is taught in Saudi Arabia as a foreign language (i.e. in an EFL context), and CBF is a new concept in higher education which may or may not be accepted by learners. To my knowledge, only one study has explored CBF and PF in Saudi higher education (Alnasser, 2018). However, the scope of that study was whether PF and CBF can jointly replace teacher FB, which is completely different from the scope of the current study. This study aims to investigate how Saudi EFL learners perceive the reliability of TBF, PF and CBF, and which of these three sources are perceived as more reliable. This study holds that this investigation can provide insights into the nature of the three types of FB and that critical pedagogical implications can accordingly be drawn.

II. Background

A. The Nature of Writing Skills and Their Development

EFL Practitioners around the world are frequently concerned with the deterioration of their learners' writing skills (Cho & Schunn, 2007), a concern that justifies the predominant interest in examining the nature of this skill and how it can be improved. In fact, it has been proposed that writing skills correlate with other language skills in that the better the writing skills, the better the other language skills become, and vice versa (McCutchen, 2011; Gomez et al., 1996). Cho and Schunn (2007) argue that students with well-developed writing skills are expected to overcome difficulties in most disciplines because their success is demonstrated mainly by measuring their knowledge in written form. Many HE institutions worldwide admit international students on condition that they meet the language requirements of an English standardised test (e.g. TOFEL, IELTS) and normally require that they meet a specific level in the writing component. Such conditions suggest that mastery of the English language is important, and that mastery of writing skills is particularly important for success in international higher studies.

Since the early 1970s, FB has been at the heart of writing education, with a focus on how to employ it effectively to achieve significant learning outcomes. This trend emerged to cope with the shift from teacher-centred to learner-centred teaching approaches in an attempt to allow FB to promote the learning of writing (Hyland & Hyland, 2006). Phuwichit (2016) argued that FB promoted writing development, as it informatively signified students' weaknesses (to overcome them) and strengths (to further support them). Here, the manner of FB delivery was crucial and influenced the motivation and perceptions of learners toward the learning situation (Grabe & Kaplan, 1996). Van Steendam et al. (2010) hold that for FB to be effective, it should be provided in an *adequate* and *timely* manner. Adequate FB in writing is described as 'detailed feedback which addresses global concerns in a text, uses metalanguage to diagnose textual problems, and suggests specific revisions' (ibid, p. 319) and can significantly impact learning (Tang & Thitecott, 1999; Van Steendam et al., 2010). Timely FB refers to FB that students receive shortly after completing a task (Brown et al., 2006; OECD, 2005). Other studies have gone this area of inquiry to provide even more effective FB and have examined areas such as whether the focus should be on global or local writing issues (Hyland, 2003; Min, 2008; Truscott & Hsu, 2008) and whether the FB should be focused or selective (Ferris, 1995; Gibbs & Simpson, 2002).

Nonetheless, practitioners who teach writing skills in higher education may encounter difficulties in providing timely and adequate FB to their students for several reasons. For instance, the number of students participating in higher education is increasing every year, and part of the requirements is to master writing skills in preparation for their academic studies. The nature of writing is not only *complex* – it is seen as more complex than other language skills, and the proper way to learn writing skills is by producing multiple drafts (Min, 2008). These factors may put practitioners in a difficult situation by preventing them from offering every student the attention they need (Grimes & Warschauer, 2010). It has been argued that some L2 students worldwide expressed dissatisfaction with the FB they received because they perceived it as insufficient and inadequate (Huxham, 2007). El Ebyary and Windeatt (2010, p. 122) proposed a way around this dilemma by integrating technology, specifically by employing the 'intelligent computer-assisted language learning (CALL)' They define this concept as 'computer applications which can interact with the material to be learned, including providing meaningful feedback and guidance' (ibid, p. 122).

B. Teacher and Peer Feedback

Hyland and Hyland (2006) argued that effective FB has several modes that enable two parties to interact with one another when giving and receiving FB. Of course, teachers are the most traditional providers of FB to learners. Learners in EFL contexts attach a great deal of importance to the written responses they receive from their instructors and value them even more than verbal responses (Hyland & Hyland, 2006). Writing conferences between instructors and students (i.e. one-to-one mediation) are commonly employed to provide feedback and discussion, and to highlight concerns observed in written texts. Williams (2002) noted that the Vygotskian concept of scaffolding is thought to be closely related to these conferences, as they can significantly develop writing skills. However, providing TBF proved to be

exhausting and time-consuming and led to a search for more supportive learning tools. One such tool involved students providing informative FB to their peers (Latifi et al., 2021; Rollinson, 2005; Yu, 2021). Rollinson (2005) argued that students tended to accept FB offered to them by their peers and revised their texts accordingly. PF can stimulate students' critical thinking, promote interaction and negotiation, and create a less formal situation than they have with their instructors. Such merits have encouraged instructors to integrate this technique into writing classes. On the other hand, learners might not value PF as much as is hoped for and, therefore, might not accept the PF offered to them (Hyland, 2003). As a result, they may be uncomfortable using this technique (Rollinson, 2005). Another major concern regarding this technique is its reliability (Leki, 1990; Hyland, 2003). Researchers have attempted to overcome this concern by offering professional training in how to provide PF (Min, 2008). This technique has been extensively examined in the literature. It offers instructors a supportive means for writing development that covers a larger number of students, allowing them to provide FB to learners more frequently and in a timely manner. More recently, innovative technologies have presented higher education with automated FB on written texts that are seen as supportive in writing classrooms. Because technology-based FB tools are relatively new, I discuss their relevant theoretical underpinnings in a separate section.

C. Automated FB (CBF)

The continuous development of emerging technologies and their integration into education has become an area of interest in almost every field (Burkhart et al., 2020; Chang & Windeatt, 2021; Walker & Patel, 2018). This interest increased during the recent COVID-19 pandemic. The interruption to students' learning in all sectors worldwide caused by the pandemic has resulted in greater reliance on what technology can offer the educational system, for example, to activate distant learning (Morgan, 2020). The pandemic has led to heavy reliance on computers to access online platforms such as Webex and Microsoft Teams, for students to make online submissions, for online examinations, and for using online materials and accessing databases (Hoq, 2020; Tanveer et al., 2020), all of which are related to the learning process, including language learning.

Some practitioners and researchers have resisted introducing technology into writing instruction. They claim that technology might have a negative influence on student writers as they could become reliant on auto-corrective software, and it may not allow for sufficient manual practice with pen and paper (Chen et al., 2011; Jarom et al., 1991). Nonetheless, most researchers have argued for employing technology in higher education, particularly in writing classrooms (Alnasser, 2018; Burkhart et al., 2020; El Ebyary & Windeatt, 2017; Lachner & Neuburg, 2019). The areas that researchers have shifted their focus to include addressing writing instructors' perceptions regarding the integration of e-rating systems into their teaching (Le, 2021), comparing the correlation between TBF and CBF scores (Wang & Brown, 2007), analysing the quality of FB generated by computers (Powers et al., 2001), appraising the reliability and validity of electronic FB systems (Diki, 2006), formatively employing e-rating systems to measure their effectiveness in improving written texts produced by students (Coniam, 2009; Deane et al., 2011), and how technology can be used to summatively assess students' written texts (Rudner & Liang, 2002).

Vygotsky (1978) introduced the 'zone of proximal development' (ZPD) concept. This concept was advocated by numerous educationalists worldwide, leading them to encourage practices that stimulate such development. El Ebyary and Windeatt (2017) suggested that offering student writers CBF might enable them to move to the next learning zone, as described by Vygotsky (1978). Hyland and Hyland (2006) argued that FB can *scaffold* the learning process by offering more frequent learning opportunities and better experiences while generating multiple drafts of written texts. Therefore, it can be argued that FB generated by computers promotes the development of writing skills. As discussed earlier, studies on CBF have tackled different aspects, including the nature and quality of CBF and how writing instructors perceive this type of FB. However, how student writers perceive CBF's reliability in comparison with their perceptions of the reliability of TBF and PF remains under-investigated. In particular, this has not been investigated in the Saudi EFL context. The current study therefore investigated and compared how Saudi EFL learners perceived the reliability of the three types of FB in their written texts after being exposed to them.

III. Method

The current study was a quasi-experiment in the Saudi EFL context. It explored Saudi students' perceptions of the reliability of TBF, PF and CBF and compared them to one another. We administered a pre-intervention questionnaire to both a control group and an experimental group. After the intervention, we administered a post-intervention questionnaire to the experimental group only. The research questions addressed in this study were as follows:

RQ 1: How do Saudi EFL learners perceive the reliability of TBF, PF and CBF?

RQ2: Which of the three FB types do Saudi EFL learners find the most and least reliable?

A. Study Sample

The study was conducted in a higher education English department in Saudi Arabia that offers BA, MA, and PhD programmes in English language-related fields. The participants were male Saudi BA learners. Their study programme offered five compulsory writing courses. The researcher took over the teaching of a level 3 writing course (year 2 of the programme) that comprised the experimental group. A different group of students from the same course that was taught

by a different instructor was used for data collection (the control group). Prior to this course, the participants had attended two writing courses in the same programme. The experimental group (taught by the researcher) consisted of 21 students, and the control group consisted of 19 students (a total of 40 students).

B. Instrument and Procedures

As mentioned earlier, a pre- and post-intervention questionnaire was administered. The questionnaire included an introductory section that explained the purpose of the study and provided key definitions. The first section enquired about their background regarding the three types of FB (TBF, PF and CBF). The second section provided 15 statements measuring the respondents' perceptions of the three types of FB (five statements each). A five-point Likert scale was adopted for these statements (*strongly agree, agree, not sure, disagree, strongly disagree).* The questionnaire concluded with an open-ended section that allowed the participants to share further thoughts.

The data collection procedure started with an explanation of the purpose of the study and the expected procedures, and consent to participate in the study was obtained. Immediately after that, the pre-intervention questionnaires were administered to the two groups of students. Following the teaching curriculum, students in the experimental group were taught essay writing for two weeks, three hours per week. They were given exemplar essays to examine and had to develop two of their own essays. The researcher provided FB on these essays and required them to produce a final improved draft (one at a time). Students were then trained to provide PF, practice feedback provision and conduct FB conferences between themselves. Then, an automated system was introduced (Criterion, an ETS international educational service); participants were shown how to work with the system, how to submit essays and receive CBF and how to incorporate the generated FB. In the following weeks, the participants went through four cycles of essay writing, in which they developed multiple drafts of four essays. Each cycle started with the development of a first draft which was provided with PF. A second draft was then developed and submitted to the automated system. A final draft based on the FB generated by the automated system was then developed. After exposure to this treatment, a post-intervention questionnaire was administered to measure the differences, if any, in participants' perception.

IV. Analysis and Results

This section presents the results obtained from the pre- and post-intervention questionnaires.

A. Survey Items

The introductory section of the pre-intervention questionnaire three items enquired concerning participants' previous experience with TBF, PF and CBF (Table 1). With regard to TBF, the majority reported receiving it from their instructors on a regular basis; specifically, 45% 'Sometimes' received it and 35% received it 'Often' (totalling 80%). This finding establishes that the majority of the participants were already familiar with TBF. With regard to PF, only 40% of the participants had received it; the larger proportion (60%) had not received it. This suggests that PF as a learning tool has been employed in the Saudi context, but not to a great extent, and that participants have partial awareness of the nature of the technique. Finally, the majority (85%) reported not receiving CBF in the past, suggesting unfamiliarity with the nature of CBF. In brief, the majority of participants in the study were very familiar with the nature of TBF, less familiar with PF, and unfamiliar with CBF.

Table 1
Participants' Experience Of TBF And CBF

TBF: How often did you receive TBF on your writing?		
Scale	**Frequency**	**Percentage**
Never	2	5.0
Rarely	6	15.0
Sometimes	18	45.0
Often	14	35.0
Total	40	100.0
PF: Have you received PF in the past?		
Scale	**Frequency**	**Percentage**
Yes	16	40.0
No	24	60.0
Total	40	100.0
CBF: Have you received automated FB in the past?		
Scale	**Frequency**	**Percentage**
Yes	6	15.0
No	34	85.0
Total	40	100.0

The second section of the pre-intervention questionnaire included 15 items divided into three themes, namely the reliability of the three types of feedback (TBF, PF and CBF). Under each theme, five identical items addressed aspects relevant to perceptions of how reliable each FB type was (Table 2). The five items were:

1- The reliability of the FB type (an overall statement).
2- Desire to avoid the type of FB.

3- Recommending the type of FB for writing classes.
4- The acceptance of the received FB.
5- The fairness of the FB type in evaluating learners' essays.

TABLE 2
PERCEPTIONS ON THE RELIABILITY OF TBF, PF AND CBF (PRE-QUESTIONNAIRE: RESPONSES OF THE TWO GROUPS)

Items	Mean (M)	Std. Deviation (SD)	*N*
TBF: 1 The FB provided by the instructor is reliable	4.3750	.58562	40
TBF: 2 I wish for my instructor to avoid providing FB on my texts	2.2250	.35061	40
TBF: 3 I recommend using TBF in writing classes	4.4750	.59861	40
TBF: 4 I will always use the FB I receive from my instructor	4.5000	.55470	40
TBF: 5 TBF is a fair way to evaluate my written texts	4.3000	.82275	40
PF: 1 The FB provided by my peers is reliable	2.2750	.96044	40
PF: 2 I wish for my peers to refrain from providing FB on my texts	3.2750	1.26060	40
PF: 3 I recommend using PF in writing classes	2.9750	1.20868	40
PF: 4 I will always use the feedback I receive from my peers	2.9000	1.15025	40
PF: 5 PF is a fair way to evaluate my written texts	3.0000	.96077	40
CBF: 1 The FB provided by the computer is reliable	3.6250	1.19158	40
CBF: 2 I wish for my instructor to avoid enabling computers to provide FB on my texts	2.5500	1.03651	40
CBF: 3 I recommend using CBF in writing classes	3.8250	1.08338	40
CBF: 4 I will always use the FB I receive from my computer	2.9250	1.04728	40
CBF: 5 CBF is a fair way to evaluate my written texts	3.6250	1.05460	40

The Reliability of the FB.

Participants' perceptions of the reliability of the three types of FB varied (Table 2). TBF was perceived to be the most reliable type of FB (*M* = 4.37 out of 5), which is an expected finding since the instructor has knowledge and experience in writing instruction and expertise in providing FB. PF was reported to be the least reliable type of FB (*M* = 2.27), possibly because of similar weaknesses to those reported in the literature regarding this technique. Interestingly, CBF was reported to be more reliable than PF (*M* = 3.62) even though participants had no previous experience with it. This suggests participants' interest in and acceptance of the integration of this type of FB into writing classes.

1. Desire to Avoid FB Type

With regard to which of the three types of FB the participants wished to avoid, the majority did not want to avoid TBF (*M* = 2.22; *SD* = 0.35), to a lesser extent the participants did not want to avoid CBF (*M* = 2.55; *SD* = 1.03), but were unsure about whether to avoid PF (*M* = 3.27; *SD* = 1.26). Further analysis showed that the standard deviations concerning PF and CBF were quite large, suggesting that there was a proportion of students who were not in agreement regarding the types of FB they wished to receive. The literature has suggested advantages for each type and has also raised concerns regarding each type, including concerns related to the reliability of, for example, PF. It is possible that the advantages and concerns of each type influenced participants' preferences, leading to such disagreements.

2. Recommending FB Types for Writing Classes

In terms of recommending each type of FB for future classes, TBF was recommended most often (*M* = 4.47), PF was recommended least often (*M* = 2.97), and CBF was recommended more than PF but less than TBF (*M* = 3.82). That participants perceive CBF to be more acceptable than PF is an interesting finding that possibly suggests that interaction with computers is easier and faster than with peers. The findings also suggest that TBF is perceived to be integral to writing classes owing to its reliable nature.

3. Acceptance of FB

If students use the FB they receive, it indicates that they find it valid and, therefore, reliable. The majority of the participants reported that they would use TBF that they receive (*M* = 4.5). They were hesitant to use PF (*M* = 2.90; *SD* = 1.15) and CBF (*M* = 2.92; *SD* = 1.04). Statistical analysis indicated that the standard deviations were large, suggesting disagreement regarding this notion. It may also suggest that there are different proportions of participants: those who wish to use it, those who do not wish to use it, and those who are unsure and wanting more practice before making a decision. In general, these findings indicate that when TBF is offered, learners will accept it as the primary type of FB for text improvement and other sources will possibly be marginalised.

4. The Fairness of the FB Type in Evaluating Learners' Essays

Regarding the fairness of the three FB types, the majority reported TBF as the fairest (*M* = 4.3), PF as the least fair (*M* = 3.00), and CBF as relatively fair (*M* = 3.62), but not to the extent of comparing CBF with TBF. It can be argued that fair FB is more likely to be accepted and incorporated into written text. In this regard, TBF was viewed as fairer than the other two types; therefore, it was more likely to be accepted by the participants (see earlier analysis). Additionally, these results in general concur with the results of previous studies, and a pattern emerges in which TBF is always ranked at the top, followed by CBF, and PF is always rated as the least valued.

Statistical analysis yielded few concerns, especially in relation to the large standard deviations relevant to some items. This called for a *post hoc* analysis, in which an in-depth analysis was conducted on individual responses, and a number

of patterns were observed. First, several participants highly recommended integrating CBF into writing classes while simultaneously expressing hesitance to use computer-generated FB. This may indicate their desire for innovative approaches in writing classes but not to the extent that they were willing to rely fully on this type of FB. A second pattern that was observed concerned participants who did not recommend PF; they reported that it was not fair and that they would not use it if it were offered to them. Concerns regarding the reliability of PF were commonly recorded throughout the data, which is in line with this pattern.

The post-intervention questionnaire included 10 items concerning only PF and CBF. TBF-related items were excluded because the participants were already familiar with their nature owing to their previous experiences (this is evident in their responses reflected in Table 1). For the analysis, the means of the pre- and post-intervention responses were compared using the Wilcoxon signed-rank test to investigate whether there were statistically significant differences in the responses after exposure to the intervention (Table 3). Among the ten items, the test yielded two statistically significant differences. First, concerning the use of CBF, the perception average value (item 4) was M = 2.93; after the intervention, it increased to M = 4, with a difference between the two means of 1.07. The Wilcoxon test revealed that this difference was statistically significant, α = 0.002. Second, the participants started off being relatively unsure about whether they wished to avoid CBF in writing classes (M = 2.55); after the treatment (M = 1.71), there was a statistically significant difference (α = 0.04; with a mean difference of -0.84). The mean differences concerning the other items were not found to be significant; therefore, there was no need to elaborate on them (see Appendix). In general, these findings suggest that perceptions regarding the nature and reliability of CBF and its reliability can be enhanced with further exposure, a finding that may not apply to PF. In other words, learners may have more preference for automated rather than peer FB in writing classes, although TBF remains their first choice.

TABLE 3
COMPARISON OF MEANS BETWEEN THE EXPERIMENTAL GROUP'S PRE- AND POST-INTERVENTION RESPONSES REGARDING PF AND CBF

Wilcoxon Signed Ranks Test										
	Pre & Post: PF is reliable	Pre & Post: Peers refrain from providing FB	Pre & Post: Recommending PF in writing classes	Pre & Post: Using received PF	Pre & Post: fairness of PF	Pre & Post: CBF is reliable	Pre & Post: Avoid offering CBF	Pre & Post: Recommending CBF in writing classes	Pre & Post: Using received CBF	Pre & Post: Fairness of CBF
Z	-.072[b]	-.826[b]	-1.531[c]	-.525[c]	-1.032[c]	-.660[b]	-1.979[c]	-1.734[b]	-3.153[b]	-1.330[b]
Asymp. Sig. (2-tailed)	.942	.409	.126	.599	.302	.509	.048	.083	.002	.183
b. Based on negative ranks.										
c. Based on positive ranks.										

B. Open-ended Section

As mentioned earlier, the questionnaires included an open-ended section to allow participants to express their thoughts on the phenomena under investigation This section was optional. The pre-intervention responses showed that none of the 40 participants raised any concerns about the reliability of TBF; in fact, they found no weaknesses in it (reported by 18 participants). With regard to PF, 14 participants, 4 of whom were in the experimental group, viewed it as the most unreliable; the FB was described to be 'wrong', 'inaccurate', 'unreliable', 'difficult to understand', and so on. Seven participants, two of whom were from the experimental group, also reported CBF to be unreliable but to a much lesser degree. Although several advantages of this type of FB have been described (such as easy access, instantly received FB, and an interesting FB tool), seven participants raised concerns regarding its reliability and clarity. Overall, these findings suggest that participants had full confidence in the reliability of TBF, a lesser degree of confidence in the reliability of CBF, and partial confidence in the reliability of PF. Finally, after exposure to PF and CBF, only six participants raised concerns about the reliability of FB provided by their peers and no concerns were raised regarding CBF. The change in their views suggests that more exposure to these two types of FB might increase learners' concerns about PF and reduce their interest in CBF.

V. Discussion and Conclusion

In EFL contexts, practitioners commonly seek best practices in offering educational services concerning English teaching and learning. In these contexts, writing particular emphasis is placed on writing skills, leading many researchers to explore different aspects of developing writing skills (Latifi et al., 2021; Yu, 2021). A common practice for EFL writing instructors is to provide FB to their students on a regular basis, preferably on each draft that they produce. This requirement places a heavy load on the instructors' shoulders that is likely to lead to a reduction in the frequency with which FB is provided and limit learners' writing development. This calls for innovation in providing FB by utilising different types of FB, such as PF and CBF (Burkhart et al., 2020; Chang et al., 2017; El Ebyary & Windeatt, 2017; Lachner & Neuburg, 2019; Rollinson, 2005). Since neither PF nor CBF can match the quality of FB provided by the instructor, learners may question the reliability of these two sources. The literature advocates that reliable FB can lead to optimal learning (Ernst & Steinhauser, 2018), and thus it can be argued that positive perceptions regarding reliability may positively impact learning. However, negative perceptions may lead to refraining from deep involvement in the learning process. The current study aimed to investigate EFL learners' perceptions of the reliability of the three FB types, and the findings are clearly indicative of their perceptions. It was found that the participants viewed FB provided by the teacher as the most reliable. In addition, the findings suggest that learners cannot do without it, even in the presence of other alternatives such as PF and CBF. This finding concurs with that of Alnasser (2013), who explored whether PF and CBF can replace TBF, a notion rejected by that study's participants. Experienced language instructors have the expertise needed to offer explicit and reliable FB on written texts. This raises learners' confidence in the FB they receive from their instructors and, therefore, they tend to value and accept it. In this study, the majority of participants reported their willingness to accept and use TBF (M = 4.50), reflecting their confidence in their instructors. In contrast, the differences in the overall means in responses between TBF and PF, and TBF and CBF were not nearly comparable, as the differences ranged from 0.81 to 1.6 (with the higher values pertaining to TBF; see Table 2 and Appendix). Nonetheless, CBF scored higher than PF in terms of reliability, fairness and employment in future classes. Not only is CBF perceived as better than PF, but a statistically significant shift in participants' responses was found after exposure to CBF in that they were willing to use more CBF in their writing and desired more practice with the automated system. No statistically significant changes were found with regard to PF after participants were exposed to it (see Appendix). These findings are supported by the open-ended sections, where concerns were raised more frequently before practice with CBF and PF, and significantly reduced after exposure to these two types of FB. This may indicate that greater exposure to these types of FB can positively impact EFL learners' perceptions of them.

These findings have pedagogical implications for Saudi Arabia and other EFL contexts. The primary implication is that teacher involvement in providing FB is integral because EFL learners find it to be the most reliable type of information they will ever have. TBF will always provide confidence and comfort to learners in the learning process; therefore, teachers should not limit their FB in writing classes. Of course, such a degree of reliance on this type of FB may dissuade learners from utilising other sources; therefore, teachers need to integrate other types of FB without creating a sense that they may replace TBF. Additionally, if a teacher has the choice of integrating either CBF or PF into a writing class, CBF is recommended as it was seen as more reliable and learners raised fewer concerns about it. Automated systems can be attractive and accurate, and generate instant FB which can be quite supportive to the teacher (Deane et al., 2011; Le, 2021). Teachers are encouraged to have their students submit their texts to automated systems to produce an improved version on which TBF can then be provided. This process can alleviate the teachers' FB-related burdens and hence enable them to provide more TBF. Finally, the literature suggests that CBF can positively impact learning; the current study found that the more learners are exposed to this type of FB, the more positive their perceptions of it will become. Therefore, considering the rapid development in technology, it is advisable to emphasise CBF in writing classes and to enable learners by providing unlimited access to such systems as an encouragement for learning autonomy and writing skills development.

A limitation of this study is that an analysis of the reliability of the written FB generated by computers and students was beyond its scope. Thus, researchers are encouraged to explore this area and study the nature of FB generated by these two techniques, especially the automated one, because it is a relatively new tool in writing classes. Additionally, further and thorough investigations are needed to answer the question of why EFL learners were hesitant to deem CBF as reliable and yet wanted to work with it in writing classes. Insights in this regard improve the utility of this tool and, therefore, improve the learning experience.

APPENDIX

TABLE 4
MEANS OF PRE- & POST RESPONSES OF THE EXPERIMENTAL GROUP (PF & CBF)

Descriptive Statistics (PF & CBF)					
Pre & Post Items	**N**	**Mean**	**Std. Deviation**	**Minimum**	**Maximum**
Pre: 1 The FB provided by my peers is reliable	40	2.28	.960	1	5
Pre: 2 I wish for my peers to refrain from providing FB on my texts	40	3.28	1.261	1	5
Pre: 3 I recommend using PF in writing classes	40	2.98	1.209	1	5
Pre: 4 I always use the feedback I receive from my peers	40	2.90	1.150	1	5
Pre: 5 PF is a fair way to evaluate my written texts	40	3.0000	.96077	1	5
Pre: 1 The FB provided by the computer is reliable	40	3.63	1.192	1	5
Pre: 2 I wish for my instructor to avoid enabling computers to provide FB on my texts	40	2.55	1.037	1	5
Pre: 3 I recommend using CBF in writing classes	40	3.83	1.083	1	5
Pre: 4 I will always use the FB I receive from my computer	40	2.93	1.047	1	5
Pre: 5 CBF is a fair way to evaluate my written texts	40	3.62	1.055	1	5
Post: 1 The FB provided by my peers is reliable	21	2.38	1.244	1	4
Post: 2 I wish for my peers to refrain from providing FB on my texts	21	3.1905	1.53685	1	5
Post: 3 I recommend using PF in writing classes	21	2.38	1.465	1	5
Post: 4 I always use the feedback I receive from my peers	21	3.19	.814	2	5
Post: 5 PF is a fair way to evaluate my written texts	21	2.62	1.203	1	5
Post: 1 The FB provided by the computer is reliable	21	3.76	.768	2	5
Post: 2 I wish for my instructor to avoid enabling computers to provide FB on my texts	21	1.7143	.64365	1	3
Post: 3 I recommend using CBF in writing classes	21	3.90	.831	2	5
Post: 4 I will always use the FB I receive from my computer	21	4.00	.894	2	5
Post: 5 CBF is a fair way to evaluate my written texts	21	3.5714	1.02817	2	5

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