RESEARCH

Portfolio vs. summative assessment: impacts on EFL learners' writing complexity, accuracy, and fluency (CAF); self-efficacy; learning anxiety; and autonomy

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Abstract

Due to the benefits of e-portfolio assessment and summative assessment in Ethiopia and a dearth of research, this study attempted to contrast e-portfolio assessment and summative assessment use in developing Ethiopian EFL learners' writing complexity, accuracy, and fluency (CAF); learners' autonomy; learning anxiety; and self-efficacy as they have not been investigated in Ethiopia. In order to accomplish these goals, 60 Ethiopian intermediate EFL students were selected according to their OQPT performance. E-portfolio served as the experimental group (EG), and summative functioned as the control group (CG). Writing CAF, self-efficacy, autonomy, and anxiety pretests were administered to both groups. Then, groups received different treatments. Writing CAF, self-efficacy, autonomy, and anxiety posttests were then given to the groups after the instruction period of 21 sessions. The collected data were examined using SPSS software. Then, independent samples *t*-tests and paired samples *t*-tests were run to assess the effects of the assessments on the learners' writing CAF, autonomy, anxiety, and self-efficacy. The outcomes displayed that the experimental group and control group differed in performance. Actually, the e-portfolio assessment group outdid the summative assessment group. The e-portfolio assessment was found to be a more useful method for fostering learner autonomy, self-efficacy, and the writing CAF in EFL learners than summative assessment. Some recommendations, implications, and limitations were also listed at the end.

Keywords: Assessment, E-Portfolio Assessment, Summative assessment, Writing CAF, Learner autonomy, Self-efficacy, Anxiety

Introduction

The process of assessment is essential to both learning and teaching. It is impossible to verify that the educational goals and objectives have been reached without doing some form of assessment. The outcomes of assessments can significantly affect how educators and instructional planners judge the efficacy of ongoing programs and their capacity to recognize successful strategies to promote the next course of action (Jafarigohar, 2017).

Assessment, according to Lynch (2001), is a collection of procedures that may include testing and evaluation but is not only restricted to those two. When utilizing exams or other forms of assessment to evaluate students' abilities, we must use structured data that has been collected. The fundamental aim of the assessment is to aid and advance the teaching/learning process. According to Gipps (1994), there will be a paradigm change in assessment from a psychometric view to a more comprehensive form of instructional evaluation.

Assessment, in teaching–learning process, is a tool used by educators and learners during their instruction to offer the required feedback to change on-going teaching and learning to help pupils achieve specified goals (Robinowitz, 2010). Assessment, as put by Popham (2008), is a planned process in that educators use data on learners' progress to change their continuing educational techniques or learners use it to modify their existing learning approaches. Assessment seeks to enhance education and remove the distance between pupils' present learning situations and their desired educational aims (Heritage, 2012).

In the long-established behaviorism-based view, techniques like multiple choice tests have been in use for many years to analyze pupils' achievement at school, but these methods are inefficient and ineffective since they do not reflect students' true achievements and are primarily in line with the behaviorist approach, describing learning as "formation of habits." As a result, it is insufficient to assess students' competencies using traditional methods (Yastibas, 2015).

In contrast, the constructivist view, which is centered on the learners, encourages learner-centered skills in the class and characterizes instruction as "learning by doing" and serves as the foundation of contemporary educational techniques and methods, like problem-solving and project-based methods. Since learning by doing is the major emphasis, evaluating this process calls for various evaluation techniques that take into account students' knowledge, individual performance, and personal characteristics. The new methods of evaluation should be student-centered, in contrast to previous methods. As a result, various novel approaches to learning assessment are established (Yastibas, 2015).

Summative and e-portfolio-based assessments are among mostly used forms of assessments. Glazer (2014) asserts that summative assessments are typically used to assign students a score and provide nothing in the way of feedback. As a result, summative assessment is frequently employed to assess learning and seldom utilized to facilitate learning. By offering students the chance to take tests as learning opportunities, educators may make summative assessments more formative. Giving students feedback on their examinations and utilizing the teaching potential of exams would be necessary to accomplish this.

Summative evaluation measures if predetermined learning outcomes are attained in accordance with previously planned objectives or whether accreditation or certification requirements have been met (González-Tato & Mikic-Fonte, 2013). Summative assessment occurs when educators review pupils' learning at the end of a teaching period; then, they use the acquired information for feedback to improve teaching and learning (Lam, 2013).

E-Portfolios are characterized as possibly the most significant educational technology innovation. Of all the technology applications we have come across so far, e-portfolio has the potential to fundamentally change learning. This illustrates the significance of using e-portfolios in learning settings because they enable pupils to work on digital platforms in a searchable, structured, and portable manner (Rhodes, 2011).

The characteristics of an e-portfolio, such as its organization, searchability, and portability, are highlighted in the definitions of the term. An e-portfolio is defined as computerized collection of artifacts including demonstrations, accomplishments, and resources that echo a person, group, or organization. E-portfolios are individual, Web-based accumulations of works, self-reflections, and feedbacks to learners' work, that are utilized to display critical abilities and success in a number of time periods and contexts (Lorenzo & Ittelson, 2005).

E-portfolios are described in another definition as the pupil-made collections of digital artifacts explaining accomplishment and learning experiences, and as intentional accumulations of digital-based items—concepts, reflections, feedback, and evidence—that provide proof of a learners' ability and learning (Gray, 2008).

E-portfolios are advantageous for both institutions and students, according to Goldsmith (2007), since they enable them to evaluate their instructional attainments and experiences, and how they are aligned with their objectives, as well as how successfully they are educating their pupils. They link school tasks to objectives so that students may recognize these links, also the relationships among their work and lives. This results from a requirement to assess the development of pupils' "knowledge of the self and the course" (Gray, 2008).

Using summative and e-portfolios assessments can impact favorably learners' levels of anxiety. According to Zhang (2019), anxiety is linked to students' performance, self-confidence, and motivation, and it is possible to increase pupils' motivation to learn a language by lowering their anxiety levels (Yan & Horwitz, 2008). The improvement in students' self-confidence under purposefully anxiety-free instruction, according to van Batenburg et al. (2019), can predict their accomplishment in EFL learning.

Low self-esteem, class presentations, error corrections, peers' pressure, low motivation, teachers' and learners' perspectives on learning, teacher-student interactions, classroom teaching methods, stress associated with language testing, negative interactions among classmates, and a gap between the pupils' proficiency levels and the educational materials are all potential sources of anxiety. By assessing the learners in a different method, we can lessen the sources of anxiety (Piniel & Csizer, 2013).

The aforementioned assessments can lead to writing skills advancement in EFL students. Writing is a skill that reflects one's emotional and mental condition and promotes communication by allowing one to express ideas and experiences (Hidi & Boscolo, 2006). Writing may be viewed as the conveyance of phenomena including sentiments, ideas, experiences, imaginings, perceptions, and emotions, that are individual mental creativities, according to Topuzkanamış (2014). Writing is a skill that is developed as soon as school is started. Through active involvement in one's social and personal lives, this competence has a structure that concurrently stimulates one's high-level thinking abilities, emotional structures, and cognitive structures (Özdemir & Murat, 2016).

Because of the writing's sophisticated construction; the problems in following the feedback, corrections, and evaluating steps; the demanding nature of the classrooms settings, and teacher-related issues, it can be said that the development of writing abilities is slower and less sufficient than that of other skills (Karatay, 2013). Since writing is such a laborious process, students get bored and unmotivated, which makes writing much more challenging (Kurudayıoğlu & Özay, 2010). Also, negative emotions like fear and tension while writing might impair creativity. Emotional and cognitive characteristics like motivation, anxiety, attitude, self-regulation, self-control, and self-efficacy have a substantial impact on writing (Ahıskal, 2020).

Likewise, learner autonomy as another discussed concept is defined as the capacity to direct ones' personal learning (Holec, 1981). The fundamental ideas of learner autonomy are stressed through this definition, which includes defining learning goals, scheduling, choosing materials, tracking learning advancement, and self-evaluation (Benson, 2007).

In the age of multimedia creation, the value of being an autonomous learner is clearer. Due to the constant advancement of technology, students must cultivate their learner autonomy while also enhancing their technical proficiency (Enfield, 2013). Qamar (2016) underlines that when students are in command of their own learning, they can overcome some learning hurdles including shyness, anxiety, and language phobia. Furthermore, learners who are autonomous are less prone to undergo a mental block, in which they are unable to recall the words they need and are unable to communicate. The significance of learner autonomy is made clear by the fact that each student has unique learning styles, preferences, aspirations, demands, and levels of motivation.

It is assumed that learners' feeling of self-efficacy will be influenced by their sense of confidence following the assessment. Self-efficacy is defined as an individual opinion of her/his abilities to carry out tasks adequately, according to Bandura (1984). Graham (2011) links self-efficacy to people's perceptions of their capabilities to do particular activities, which are thought to have a noteworthy impact on persistence levels and decision-making.

In respect to the self-efficacy significance, Bandura (1984) assumed that it played a significant part in language acquisition by promoting or preventing learners' development. According to Bandura (1986), self-efficacy has a greater influence than knowledge, skill, and past achievement. A few studies have shown, according to Ross (2006), that allowing students to evaluate their own performance with no further instruction leads to increased self-efficacy, more intrinsic drive, and greater performance. McMillan and Hearn (2008) also believe assessment fosters self-efficacy.

Concerning the potential impacts of assessment on EFL learners, this study compared the effects of the e-portfolio and summative assessments on improving Ethiopian EFL learners' anxiety and writing CAF. The study also attempted to look at how these assessments affected the self-efficacy and autonomy of the EFL learners.

This research's significance lies in the inclusion of two key assessment types, the results of which can have substantial impacts on the skill development of Ethiopian EFL students. This study is important because it investigates novel subjects that have not been previously explored. The results of this study might also bring fresh knowledge to EFL literature review in relation to assessment, instruction, and testing.

Review of the literature

Assessment has been characterized in various ways across the literature. Of the various definitions, Linn and Miller (2005) description of assessment as a systematic process for obtaining information concerning students' progress towards the instructional aims stands out. They asserted that a range of techniques may be utilized to assess pupils' performance, containing traditional pencil and paper examinations, longer essays, doing real tasks, student self-report, and teacher observation.

In a similar manner, Dhindsa et al. (2007) characterized assessments as critical components of teaching and learning, an organized process of information collection on learners' progress. Educators have significant effects on how students feel about assessment and how they acquire subjects (Zare Toofan et al., 2019).

In most instructional settings, traditional teacher-centered evaluations still prevail, but worries about their flaws and possible downsides have paved the way for other assessments to gradually but surely start to appear. Al-Mahrooqi and Denman (2018) claimed that the creation of alternate assessments was mostly a reaction to criticisms of the conventional teacher-centered assessment types. The old-style assessments' emphasis on pupils' long-term recall of the taught content at the cost of their ability to think of their innovation and practice their autonomy in a range of learning actions is one of the most obvious examples of these flaws (Bourke & Mentis, 2011). Put differently, the bulk of old teacher-based assessments did not challenge pupils to think critically and creatively when presented with unexpected problems. Alternate learner-focused assessment procedures have been compared with the old-fashioned teacher-based assessments that underrate the contribution of the students. Student participation in the assessment process as well as their decision-making in the classroom are prioritized in learner-centered assessment procedures (Coombe et al., 2007).

E-portfolio assessments are one of the ways that students may learn, grow, and assess how well they are doing in the course. Many of the teaching and learning strategies employed in ELT are oriented on the learner. The importance of action is emphasized. Since learning by doing is the major emphasis, several assessment techniques that take into account elements like students' knowledge and personal differences while analyzing learners' performance are needed to assess this process (Yastibas & Yastibas, 2015).

Therefore, in order to evaluate ELT pupils, instructors need to create new student-centered assessment techniques. E-portfolios are one of these approaches. E-portfolios may be efficiently used as course assessments to enhance students' various learning preferences (Goldsmith, 2007).

Portfolios are a deliberate gathering of pupils' works to demonstrate their advancement, efforts, and accomplishments in diverse areas, according to Hudori et al. (2020). To Brown (2003), portfolio assessment is one of the mostly used assessment options, particularly when used in conjunction with a communicative language teaching paradigm. In contrast to more conventional modes of evaluation like paper and pencil examinations, portfolio assessments provide an additional choice. In addition to being real, portfolio evaluations evaluate a student's abilities rather than their knowledge (Hudori et al., 2020).

More areas of instruction, particularly language instruction, are being redesigned as society has advanced into the digital era so they can be used on digital/electronic

platforms. Slepcevic-Zach and Stock (2018) pointed out that digital portfolios, e-portfolios, or electronic portfolios are all used to describe portfolios that are implemented electronically. These words refer to digital substitute of paper portfolios that are utilized as electronic folders and are used interchangeably. E-Portfolios have supplanted conventional paper-based portfolios in the quickly evolving technological era, particularly in the sphere of education (Bauer & Baumgartner, 2012).

An e-portfolio is known as a learner's creation of a digital artifact that articulates his/her experiences, learning, and accomplishments. It is a decided accumulation of digital items, feedback, evidence, ideas, and reflections that provides evidence of an individual's learning and abilities (Gray, 2008). By knowing their capabilities and the areas they must develop in order to achieve their career and academic aims, students who create e-portfolios can improve their learning. Furthermore, students' digital artifacts may be utilized to evaluate learning at the course, program, and institutional levels (Lorenzo & Ittelson, 2005).

E-portfolios can encourage students' autonomy. Students' understanding of the language learning and its effects can be raised by using e-portfolio assessment in language instruction. Students can develop their autonomy through this method. They can first learn about and become aware of all the significant unnoticed elements, practices, and attitudes related to language learning. Second, by taking control of their language learning, children may realize that learning must also take place outside of the classroom (Gonzalez, 2009).

Student reflection on their learning processes may be required through e-portfolios. Put by Lin (2008), learners can get a feeling of concentration and purpose by using e-portfolios because, upon reflection, they compare their artifacts to the criteria to comprehend and verify whether they match the requirements or not, and then how and why they do. Additionally, it may examine pupils instructionally in terms of their learning, and eventually, as Rhodes (2011) stated, in terms of their development and accomplishment. In order to facilitate ongoing learning, e-portfolios can thereby enhance students' learning by reflection and feedback (Akçll & Arap, 2009).

On the other hand, numerous academics have defined the concept of summative assessment over the years. According to Popham (2008), a test's categorization as summative is dependent more on how the test's results will be used than on the exam itself. To put it another way, because of the nature of assessment, the summative-formative expression goes beyond being a typology and grows to be purposeful. The criteria for summative assessment have thus been mentioned. According to Cizek (2010), the summative assessment may be identified by two characteristics: (1) it is completed when a certain unit end and (2) its primary objective is to describe the achievements of the systems and learners. Its main objective is to measure achievement in order to make choices.

According to Cizek (2010), a summative assessment aims to evaluate students' performances throughout all of their courses. So, this kind of examination is not focused on giving diagnostic information. Significantly, he claimed that the goals of summative assessment are to rate, certify, calculate, and inspect how successful curricula are. The judgments made about the students, instructors, or curricula are intended to do this.

Summative assessments are occasionally given to determine what learners don't know and know. These kinds of assessments are carried out after the instruction is completed and offer details and feedback on how the teaching and learning processes went. At this point, only accidental learning that may result from completing the tasks and projects counts as real schooling (Black & Wiliam, 2006).

To Woods (2015), summative findings were used to assess the overall value of the instructional programs. Accordingly, summative assessment is directed toward its primary goal of describing what pupils know and are capable of, but if it is correctly designed, it has to also successfully accomplish a secondary goal of fostering learning (Shepard, 2006).

Brown (2003) mentioned that summative assessment's purpose is to observe or review what pupils have learnt. This simply paves the route for future progress, but it also means to look back and assess how effectively pupils have achieved their goals. Additionally, summative assessment is often referred to as learning assessment. Spolsky and Halt (2008) emphasized that this assessment is less comprehensive and aims to decide the effectiveness of learning programs or the results of pupils. Summative assessment is used to measure learners' accomplishments and various linguistic skills. Although it plays a significant part in the evaluation of the learners, it is insufficient to understand their progress and identify their primary areas of weakness (Pinchok & Brandt, 2009; Rezai et al., 2023).

This sort of evaluation aims to collect trustworthy data, especially quantitative data, about students' advancement toward a certain course goal. Summative evaluation is often done at the end of a course, and the results help teachers decide how far students can advance to the next level. This sort of assessment is particularly well-liked and trusted in the classroom due to its quantitative aspect (Siegler et al., 2011).

Summative evaluation has drawn criticism; however, it is one of the methods most frequently employed in ESL/EFL classrooms worldwide. The popularity of summative evaluation in the context of language teaching has increased as a result of the quantitative component. First, summative evaluation is meant to be built across predetermined time frames (Brown, 2010; Rezai et al., 2022). This means that the date and time of any tests are known in advance by both teachers and pupils. From the standpoint of the pupils, this enables them to prepare for such an occurrence; however, teachers can also anticipate potentially difficult situations regarding instrument design and make any necessary revisions. Second, because summative assessment is more convenient for scoring and reporting results, many language teachers worldwide are now increasingly interested in using it in the classroom (Jiang et al., 2022; Purpura, 2016).

Both kinds of assessments have been the subject of many studies. E-portfolio used as an assessment instrument in speaking lessons has been explored in a research by Yastibas (2015). The study's findings indicated that e-portfolio assessment improved students' abilities to assess themselves since it allowed them to keep track of their educational progress, identify their strengths and flaws, and work to address those deficiencies. Additionally, it enabled them to assume responsibility of their education and keep track of its advancement (Yastibas, 2015). The pupils became more motivated, self-assured, and interested in their studies as a result (Heshmat Ghahderijani et al., 2021; Yastibas, 2015). Additionally, the research verified that e-portfolio assessment boosted active

engagement as it gave pupils control over how their e-portfolios were structured, what materials they chose, and how they were presented.

In another research, Tonbul (2009) addressed the creation of an e-portfolio model for a university in a different research. According to the study, learners could assess their learning and recognize their limitations and strengths while utilizing e-portfolios for assessment and learning. Learning was promoted by the increased interaction and collaboration between educators and learners. It improved self-assessment abilities, encouraged students to take more responsibility for their education, and helped them to maintain control over what they were learning.

Furthermore, Abbaszad Tehrani (2010) employed a net-folio to hone his writing abilities. E-portfolio can also be referred to as a net-folio. The study findings demonstrated that since pupils claimed control of the content of their net-folios, they were motivated and enabled to become accountable for their own learning. Additionally, it helped students get better at self-evaluation and peer criticism so they could learn from one another, recognize their own strengths and limitations, and analyze their own learning progress.

In an attempt, Erice (2008) looked at the e-portfolios' effectiveness in writing course assessment in a different study. The results showed that e-portfolios provided participants the ability to be in control of their learning, assisted them in self-evaluating their learning, inspired them, and allowed them to track their own learning's advancement.

Chang (2008) classified the benefits of e-portfolio assessment. He claimed that pupils constructed and arranged their electronic portfolios. It served as a representation of the learning course and academic accomplishment of the pupils. It enhanced students' capacities for introspection, self-evaluation, and self-learning. It encouraged reader assessment and teacher-learner interaction. Students could actively take part in e-portfolio evaluation. They were able to actively take part in the cycle of making decisions.

According to Mahshanian et al. (2019), summative assessment had a significant impact on students' achievements. Based on his study findings, combining summative and formative assessments could improve EFL students' performance more than using each type of assessment separately.

Anxiety as one of the most complex challenges EFL students face typically arises when speakers make an effort to deliver an incoherent or incorrect performance. Researchers have concurred that learning anxiety is among the most detrimental factors to the process of learning (Yashima et al., 2018).

This issue affects EFL/ESL pupils from beginner to advanced levels. More proficient ESL/EFL students also experience anxiety during studying, especially when speaking English outside of the classroom and in specific settings. This aims to know why they struggle to speak fluent English in front of others since their routine efforts cannot provide the desired results (Azher et al., 2010). Similar conclusions were reported in Campbell and Ortiz (1991) study that observed university students' language anxiety was shocking and consistent (Salehi & Marefat, 2014). The results of several research indicated how much more anxious language learners are in foreign language lessons compared to other subjects such as history and math (Gardner, 2010).

Language anxiety was described as the anxiety experienced while a situation necessitates using a second or foreign language within which the learners are not completely

adept (MacIntyre and Gardner, 1994). Nervousness, pressure, apprehension, and introversion are some of the signs (Park & French, 2013). Although there seems to be disagreement among researchers over the definitions and constructs of anxiety, there is value in addressing it as a distinct construct since it sorts the reader's cause of fear (MacIntyre, 1995). According to Onwuegbuzie et al. (1999), pupils experienced anxiety while learning other subjects such as mathematics, statistics, etc., and while there may be common factors that contribute to anxiety across disciplines, each learner also had different experiences that contributed to anxiety.

Regarding autonomy, there is a continuum in the teaching of foreign languages. Beginner students rely largely on their educators for support and direction. However, when students gain proficiency in the target language, most instructors want their pupils to move to the other opposite end, where they may increase their learner autonomy and become independent learners (Farrell & Jacobs, 2010). Teachers and linguists have long debated what is meant by learner autonomy. Little (2007) and several other language experts supported Holec (1981) widely acknowledged definition of learner autonomy, which follow as the capacity to take responsibility of one's own learning. Planning, setting learning objectives, choosing materials, tracking learning growth, and self-evaluation were highlighted as the key ideas of learner autonomy in this description (Benson, 2007).

One who is totally eager to accomplish what [they] are doing and [they] embrace the task with a sense of enthusiasm and dedication is labeled as an autonomous learner (Deci, 1996). Thornbury (2005) defined autonomy as the potential in self-regulating performance by obtaining control over skills that were previously under the influence of external circumstances. Little (2007) asserted that an interactive approach fosters the development of learner autonomy. According to student feedback, Enfield (2013) pointed out that making learning exciting is a good technique to aid students in internalizing the material and boosting their confidence in their capabilities to study autonomously. By giving their students more influence over the pace and substance of their education, instructors' job is to steadily increase the extent and level of their learners' autonomy.

Concerning self-efficacy, Bandura (1977) marked the beginning of the relatively recent history of the self-efficacy notion. Self-efficacy was first included in social-cognitive theory of Bandura in 1986. The social-cognitive theory asserted that people have influence over their behavior. Bandura's theory of social-cognitive was founded on the concept that people have the capacity to control their behavior (Bandura, 1986).

Bandura (1977) further outlined self-efficacy as the conviction that a person has in her/his capabilities to do tasks at a specific level. Described by Bandura (1993) as a learner belief in her/his efficiency to govern learning, complete tasks, and decide on objectives, self-efficacy is the capacity of a learner to control learning. Self-efficacy is crucial because it seems to have a significant impact on a range of behaviors, including attributions, task selection, effort, emotions, cognition, goals, perseverance, and accomplishment (Bandura, 1986). No process of human activity is more fundamental or ubiquitous, according to Bandura and Locke (2003), than the conviction in one's own efficacy. According to Mills et al. (2006), views about one's own efficacy depend more on what one thinks one's own skill set is capable of than it does on one's own skills.

Before being merged as a trio, the individual components of the CAF underwent a lengthy procedure and were thought to have the ability to shed light on language usage as well as to measure language improvement and competency (Rausch, 2012). In the past, the majority of academics that tracked the beginnings of CAF said that it appeared soon after the creation of SLA in the 1970s (Housen et al., 2012).

The CAF triangle, according to Housen and Kuiken (2009), emerged from studies on L2 pedagogy. For the aim of examining the evolution of L2 competency in educational settings, scholars drew a fundamental difference between L2 fluency and L2 use accuracy in the 1980s. The former will encourage L2 oral output that is spontaneous, while the latter will focus on L2-controlled creation of syntactic structures that are grammatically accurate. In other words, accuracy is the language usage that is clearly exhibited for evaluation, whereas fluency is the natural instinctive and implicit language use for communication (Hammerly, 1991).

The most important question was whether the emphasis in the classroom is on memorizing exact L2 forms to attain accuracy or on expressing a message to obtain fluency. Therefore, precision is seen as the product of a deliberate concentration on form rather than the outcome of an unconscious remodeling process (Wolfe-Quintero et al., 1988).

Complexity, as the third part of the CAF triangle, was added as a result of Skehan's L2 model offered in 1998. For the first time in this paradigm, the author employed CAF as one of the three core aspects of proficiency. Additionally, at that time, working definitions for the three constructs were produced, and they have been in use ever since (Housen et al., 2012).

Statement of the problem

Reviewing the literature shows that the use of summative and e-portfolio assessments is helpful in the process of EFL learning. Simultaneously, a few research have been accomplished on the usefulness of the aforementioned assessments on two or three skills and sub-skills, with the majority focusing on a single skill. Therefore, the present survey compared the impacts of these two kinds of assessments on improving writing CAF of Ethiopian EFL learners. Moreover, this study inspected the impacts of e-portfolio assessment and summative assessment on learners' autonomy, self-efficacy, and anxiety.

Based on these objectives, the following questions were suggested:

1. Does applying e-portfolio and summative assessments affect EFL learners' writing CAF differently?
2. Does applying E-portfolio and summative assessments affect EFL learners' self-efficacy differently?
3. Does applying E-portfolio and summative assessments affect EFL learners' learning anxiety differently?
4. Does applying E-portfolio and summative assessments affect EFL learners' autonomy differently?

Based on the aforementioned research questions, the following null hypotheses were proposed in this research:

H01: E-portfolio and summative assessments do not have any significant effect on Ethiopian EFL learners' writing CAF.

H01: E-portfolio and summative assessments do not have any significant effect on Ethiopian EFL learners' self-efficacy.

H01: E-portfolio and summative assessments do not have any significant effect on Ethiopian EFL learners' learning anxiety.

H01: E-portfolio and summative assessments do not have any significant effect on Ethiopian EFL learners' autonomy.

Methodology

Participants

According to the findings of the Oxford Quick Placement Test (OQPT), 60 students were chosen for the research from a pool of 87 Ethiopian EFL students. They were chosen from a private English Language institute in Addis Ababa. They were 17–25 years old male students with intermediate level. Running a convenience sampling technique, we selected the respondents and separated them into two groups at random: CG (summative) and EG (e-portfolio). We could choose only male participants because of the gender segregation in the institute.

Instruments

Oxford Quick Placement Test (OQPT)

In this study, the first instrument used to homogenize the subjects was the OQPD, developed by Oxford University Press. It featured 60 questions that assessed the students' grammar, reading comprehension abilities, and vocabulary. The researchers could be able to comprehend the levels—elementary, pre-intermediate, intermediate, and advanced—at which their participants were functioning. Based on the outcomes, respondents who scored between one standard deviation (SD) above and below the mean were chosen as the intermediate and were considered the research's target sample.

Self-Efficacy Scale

This instrument was created to evaluate self-efficacy beliefs connected to English (Hancı-Yanar et al., 2012). Thirty-four items were used to investigate the pupils' degree of self-efficacy in learning English. Participants gave a variety of answers, including fully agree, agree, neutral, disagree, and completely disagree. Each item received a score, ranging from 1 for completely disagree to 5 for completely agree. Total scores were tallied to establish the individual final results for each participant. A group of English teachers validated the scale and the instrument reliability was calculated by Cronbach's alpha ($r=.89$). The scale was used both as the self-efficacy pre-test and the post-test of the research.

Anxiety Questionnaire

Horwitz et al. (1986) anxiety questionnaire served as the other data collection method. Thirty-three items on a 5-point Likert scale made up this tool. Each response included one of the following: totally agree, agree, neutral, disagree, and totally disagree. A score

was assigned to each item, ranging from 1 for totally disagree to 5 for totally agree. A group of English teachers validated the questionnaire and the instrument reliability was calculated by Cronbach's alpha ($r = .85$). This questionnaire was employed both as the anxiety pre-test and the post-test of the research.

Writing CAF Scale

The next and the most significant instrument to gather the data needed to respond to the writing questions was a researcher-devised writing pre-test. It was based on the course book (Practical Writer with Readings). The pupils had to select one of the two topics and write an essay on it. Under the researcher's guidance, the participant had to write a composition on the selected subject. The participants had to write an essay of at least 100 words. The researcher monitored the pre-test administration in the classroom to ensure that the pupils finished it on their own. Following the writing on the subjects, all the essays were collected and graded using a set of scales. The faults committed by the test-takers were all counted, and after that, they were given scores. The inter-rater reliability of the test was decided by Pearson correlation analysis ($\alpha=0.89$). Also, two English specialists confirmed the pre-test validity.

A post-test in writing CAF was also used in the current experiment. On the post-test, the students had to write an essay of 100 words. Two raters scored the student writings. Participants took a post-test to see how much their writing has improved as a result of the treatment. It should be noted that the validity of the post-test was examined by two English specialists and that Pearson correlation analysis was used to evaluate its reliability ($=0.87$).

It should be emphasized that the primary metrics employed in some prior research that looked to be pertinent to our data were the ones we utilized to determine the particular CAF measures. So, the proportion of dependent clauses and clauses to T-units was used to determine complexity (Foster et al., 2000). TT-units are described as consisting of a main clause and any embedded or attached subordinate clauses (Hunt, 1966). The type/token ratio (TTR), which is the number of distinct words in a text divided by the total number of words, was also used in our assessment of complexity (Malvern et al., 2004). The percentage of error-free clauses compared to the total number of clauses and the number of mistakes relative to the total amount of words was taken into account for the analysis of accuracy (Wigglesworth & Storch, 2009). Finally, the number of words, clauses, and T-units in a text was used to quantify fluency (Wolfe-Quintero, Inagaki, & Kim, 1988).

Learner Autonomy Questionnaire

A modified version of the learner autonomy questionnaire, developed by Kashefian (2002), was applied in the current study. This 25-item questionnaire has a 5-point Likert scale. Participants were encouraged to select a response for each item based on their current level of autonomy, which was measured on a scale from 1 to 5. These were the options: According to the following scale, 1 indicates highly disagree, 2=disagree, 3=neutral, 4=agree, and 5= strongly agree. This questionnaire's reliability (internal consistency coefficient) was 0.78, which shows satisfactory internal consistency, according to Cronbach's alpha.

Procedure

To determine the test-takers' homogeneity in terms of their degree of English proficiency, the researchers administered the OQPT. Out of 87 participants, 60 were selected to represent the sample subjects in the present study. After that, two equal groups were randomly selected from them (CG and EG). Following this, both groups completed pretests for writing CAF, autonomy, anxiety, and self-efficacy. Two groups were then given various treatments. Regarding the treatment, the participants in the EG were given e-portfolio assessment and the CG took summative assessment.

In order to apply e-portfolios in the EG, the learners were first acquainted with e-portfolio assessment. To that aim, the teacher presented learners with an example e-portfolio and encouraged them to browse over it and ask any queries they had. A sample e-portfolio with writing assignments gathered by a student from past semesters was displayed to the students. Furthermore, learners were told that they would receive feedback on syntax, lexicon, organization, and coherence for each writing assignment. The students were also advised that they were allowed to add anything relating to their works in their folders (e.g., video clips clarifying key grammar issues, links connected to vocabulary exercises, and so on). They were instructed to write 100 words on each topic. A web-based e-portfolio platform was created to assist students with their e-portfolio activities. Because all participants had no past knowledge on the e-portfolio, they were given a training session on the technical abilities required for e-portfolio creation. The learners then learned how to make and organize their writing in the folders.

The participants in EG were allowed to write about whatever they wanted. After receiving their first drafts, the instructor (i.e., the researcher) thoroughly evaluated them and provided feedback. Each learner could log into his account separately, view the instructor's comments and change his draft accordingly (submitting the second draft), the score he earned, and ask any requests they had about his assignment. Although they could not view each other's assignments or scores, some of the writing examples were periodically shared on the platform to help students receive peer correction and comments. Other students could add their comments about many elements of the writing, including the overall organization, the terminology used, the topic and supporting ideas, and even the punctuation.

During the whole semester, teachers, peers, and self-assessment procedures were used to assess the writing of the pupils. The researcher also made an effort to record weekly field notes on her observations of the class, the students' comments and ideas, and any difficulties they had compiling their e-portfolios.

Contrasted to the EG, the participants in the CG had no possibility to alter or reword their texts into better ones. Summative evaluations were occasionally used to determine what students knew and did not know. After the learning was completed, this evaluation was conducted. The teacher used midterm and final tests to evaluate the students' learning in the summative group. The teacher's comments were confined to true/false and yes/no, without any more explanation. They also did not get any peer feedback.

After 21 sessions, writing CAF, autonomy, anxiety, and self-efficacy posttests were run. The acquired data were examined using SPSS software, version 22. First,

descriptive statistics were calculated. Then, independent samples *t*-tests and paired samples *t*-tests were utilized to assess the effects of the assessments on the learners' writing CAF, autonomy, anxiety, and self-efficacy.

Results

Both descriptive and inferential data pertaining to the writing CAF, autonomy, anxiety, and self-efficacy are presented in the results' division. The results and data are detailed in the sections that follow.

Table 1 includes descriptive info about the accuracy of the two groups. The EG had a mean score of 10.0 whereas the CG received a mean score of 9.9. This shows that the writing accuracy of the two groups was similar at the beginning of the intervention.

An independent samples *t*-test was conducted to display the accuracy pre-test variations between the two groups (Table 2). The findings indicate that the Sig value (.80) is higher than 0.05; as a result, the difference between the two groups is not substantial at (*p* 0.05). On the pre-test, they really gave the same performance.

In the accuracy post-test, the summative group had a mean score of 11.06, whereas the e-portfolio group had a mean score of 14.93, as indicated by the descriptive data in Table 3. The performance of the e-portfolio group was noticeably superior to that of the summative group on the accuracy post-tests.

Table 1 Accuracy pre-test descriptive statistics

Group		N	Mean	Std. deviation	Std. error mean
Score	CG	30	9.90	1.49	.27
	EG	30	10.00	1.66	.30

Table 2 Inferential statistics (accuracy pre-test of both groups)

		Levene's test for equality of variances		*t*-test for equality of means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	.38	.53	−.24	58	.80	−.10	.40
	Equal variances not assumed			-.24	57.35	.80	−.10	.40

Table 3 Accuracy post-test descriptive statistics

Group		N	Mean	Std. deviation	Std. error mean
Score	CG	30	11.06	1.70	.31
	EG	30	14.93	2.09	.38

Table 4 Inferential statistics (accuracy post-test of both groups)

		Levene's test for equality of variances		*t*-test for equality of means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	2.45	.12	−7.83	58	.00	−3.86	.49
	Equal variances not assumed			−7.83	55.59	.00	−3.86	.49

Table 4 shows that there is a statistically noteworthy difference between the summative and e-portfolio groups at (*p* 0.05). In practice, the e-portfolio group excelled the summative group in the accuracy post-test.

Using a paired samples *t*-test, Table 5 compares the pre-test and post-tests in each group. The difference between the pre-test and post-test of the summative group is thus significant because Sig (0.0) is less than 0.05, and the same is true for the pre-test and post-test of the e-portfolio since Sig value (.00) is less than 0.05.

The descriptive data for the fluency of the two groups are shown in Table 6. In comparison to the EG, the CG's mean score is 9.53, whereas it is 9.93 for that group. It is concluded from this that the two groups' writing fluency was equivalent at the start of the treatment.

The differences between the two groups' fluency pre-test scores are shown in Table 7 using an independent samples *t*-test. The findings indicate that the Sig value is more than 0.05 and that the difference between the groups is not statistically significant at *p*>0.05. The fluency pre-test revealed that they performed similarly.

The CG's fluency post-test mean score was 11.30, whereas the EG's mean score was 15.16, as shown by the descriptive data in Table 8. As a result, in the post-test for fluency, the e-portfolio group outperformed the summative group.

Table 9 shows that there is a statistically significant difference between the summative and e-portfolio groups at (*p*<0.05). In fact, the e-portfolio group fared better than the summative group on the fluency post-test.

Table 5 Paired samples test (accuracy pre and post-tests of each group)

		Mean	Std. deviation	Std. error mean	t	df	Sig. (2-tailed)
Pair 1	CG. Pre — CG. Post	−1.16	1.59	.29	−3.99	29	.000
Pair 2	EG. Pre — EG. Post	−4.93	1.28	.23	−21.03	29	.000

Table 6 Fluency pre-test descriptive statistics

Group		*N*	Mean	Std. deviation	Std. error mean
Score	CG	30	9.53	1.30	.23
	EG	30	9.93	1.36	.24

Table 7 Inferential statistics (fluency pre-test of both groups)

		Levene's test for equality of variances		*t*-test for equality of means				
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	.005	.94	−1.16	58	.25	−.40	.34
	Equal variances not assumed			−1.16	57.89	.25	−.40	.34

Table 8 Fluency post-test descriptive statistics

Group		*N*	Mean	Std. deviation	Std. error mean
Score	CG	30	11.30	1.31	.24
	EG	30	15.16	1.96	.35

Table 9 Inferential statistics (fluency post-test of both groups)

		Levene's test for equality of variances		*t*-test for equality of means				
		F	Sig.	*t*	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	5.04	.02	−8.94	58	.000	−3.86	.43
	Equal variances not assumed			−8.94	50.65	.000	−3.86	.43

Table 10 Paired samples test (fluency pre and post-tests of each group)

		Mean	Std. deviation	Std. error mean	*t*	df	Sig. (2-tailed)
Pair 1	CG. Pre — CG. Post	−1.76	1.47	.26	−6.54	29	.00
Pair 2	EG. Pre — EG. Post	−5.23	1.40	.25	−20.38	29	.00

A paired samples *t*-test is used in Table 10 to compare the pre- and post-test results for each group. As a result, the difference between the summative group's fluency pre-test and post-test is significant because Sig (0.0) is less than 0.05; similarly, the difference between the pre-test and post-test of the e-portfolio is significant because Sig (.00) is less than 0.05.

The descriptive statistics regarding the levels of writing complexity in the two groups are shown in Table 11. The mean score for the EG is 10.13 whereas the mean score for the CG is 9.61. This suggests that the two groups' writing complexity was equivalent at the beginning of the therapy.

Table 11 Complexity pretest descriptive statistics

Group		N	Mean	Std. deviation	Std. error mean
Score	CG	30	9.61	1.58	.28
	EG	30	10.13	1.65	.30

Table 12 Inferential statistics (complexity pre-test of both groups)

		Levene's test for equality of variances		*t*-test for equality of means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	.20	.65	−.55	58	.57	−.23	.41
	Equal variances not assumed			−.55	57.90	.57	−.23	.41

Table 13 Complexity post-test descriptive statistics

Group		N	Mean	Std. deviation	Std. error mean
Score	CG	30	11.43	1.45	.26
	EG	30	15.26	1.81	.33

An independent samples *t*-test was performed on Table 12 to display the differences between the two groups' pre-test complexity levels. The findings demonstrate that the Sig value (.57) exceeds 0.05, and as a result, the difference between the groups is not significant at (p0.05). On the complexity pre-test, they were really equally similar.

In the complexity post-test, the CG's mean score was 11.43, whereas the e-portfolio group's mean score was 15.26, according to the descriptive data in Table 13. The complexity post-test results showed that the e-portfolio group proved to be more efficient than the summative group.

Table 14 shows that there is a statistically significant difference between the summative and e-portfolio groups at (*p*0.05). In fact, the e-portfolio group outscored the summative group in the complexity post-test.

A paired samples *t*-test is utilized in Table 15 to compare the pre- and post-tests of each group. Therefore, the difference between the complexity pre-test and post-test of the summative group is significant because Sig (0.0) is less than 0.05; similarly, the difference between the complexity pre-test and post-test of the e-portfolio is significant as Sig value (.00) is less than 0.05.

The descriptive data for the learning anxiety in the two groups are presented in Table 16. The EG's mean score is 64.10, whereas the CG's mean score is 64.96. This suggests that the anxiety levels of the two groups were similar prior to treatment.

Table 14 Inferential statistics (complexity post-test of both groups)

		Levene's test for equality of variances		*t*-test for equality of means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	1.50	.22	−9.01	58	.000	−3.83	.42
	Equal variances not assumed			−9.01	55.33	.000	−3.83	.42

Table 15 Paired samples test (complexity pre- and post-tests of each group)

		Mean	Std. deviation	Std. error mean	t	df	Sig. (2-tailed)
Pair 1	CG. Pre — CG. Post	−1.63	1.27	.23	−7.03	29	.00
Pair 2	EG. Pre — EG. Post	−5.23	1.86	.34	−15.33	29	.00

Table 16 Anxiety pretest descriptive statistics

Group		N	Mean	Std. deviation	Std. error mean
Score	CG	30	64.96	8.67	1.58
	EG	30	64.10	8.50	1.55

Table 17 Inferential statistics (anxiety pre-test of both groups)

		Levene's test for equality of variances		*t*-test for equality of means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	.08	.76	.39	58	.69	.86	2.21
	Equal variances not assumed			.39	57.97	.69	.86	2.21

An independent samples *t*-test was conducted to reflect the pre-test anxiety differences for both groups in Table 17. The findings indicate that the Sig value (.69) is higher than 0.05, and as a consequence, the difference between the groups is not statistically significant at (p0.05). On the anxiety pre-test, they really had identical results.

The CG's anxiety post-test mean score was 68.83, whereas the e-portfolio group's mean score was 102.40, according to the descriptive data in Table 18. The anxiety post-test results revealed that the e-portfolio group exceeded the summative group.

Table 19 shows that there is a statistically significant difference between the summative and e-portfolio groups at (*p* 0.05). In fact, the e-portfolio group outpaced the summative group in the anxiety post-test.

Table 18 Anxiety post-test descriptive statistics

Group		N	Mean	Std. deviation	Std. error mean
Score	CG	30	68.83	8.40	1.53
	EG	30	102.40	10.55	1.92

Table 19 Inferential statistics (anxiety post-test of both groups)

		Levene's test for equality of variances		t-test for equality of means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	.87	.35	−13.62	58	.00	−33.56	2.46
	Equal variances not assumed			−13.62	55.22	.00	−33.56	2.46

Table 20 Paired samples test (anxiety pre- and post-tests of each group)

		Mean	Std. deviation	Std. error mean	t	df	Sig. (2-tailed)
Pair 1	CG. Pre — CG. Post	−3.86	1.19	.21	−17.71	29	.00
Pair 2	EG. Pre — EG. Post	−38.30	6.65	1.21	−31.49	29	.00

Table 21 Self-efficacy pre-test descriptive statistics

Group	N	Mean	Std. deviation	Std. error mean
Score	30	52.80	6.01	1.09	30
	30	51.90	6.36	1.16	30

A paired samples t-test is presented in Table 20 to compare the results of the pre- and post-tests for each group. As a result, the difference between the anxiety pre-test and post-test of the summative group is significant because Sig (0.0) is less than 0.05; similarly, the difference between the anxiety pre-test and post-test of the e-portfolio is significant since Sig value (.00) is less than 0.05.

The descriptive statistic for the self-efficacy of the two groups is shown in Table 21. The EG's mean score is 51.90 while the CG's mean score is 52.80. This implies that the self-efficacy levels of the two groups were comparable prior to the commencement of treatment.

The self-efficacy pre-test differences between the two groups are shown in Table 22 using an independent samples t-test. According to the findings, the Sig value (.57) is higher than 0.05; hence, the difference between the groups is not significant at (p 0.05). On the self-efficacy pre-test, they really had identical results.

Table 22 Inferential statistics (self-efficacy pre-test of both groups)

		Levene's test for equality of variances		*t*-test for equality of means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	.17	.67	.56	58	.57	.90	1.59
	Equal variances not assumed			.56	57.82	.57	.90	1.59

Table 23 Self-efficacy post-test descriptive statistics

Group		N	Mean	Std. deviation	Std. error mean
Score		30	60.46	6.44	1.17	30
		30	105.56	10.62	1.93	30

Table 24 Inferential statistics (self-efficacy post-test of both groups)

		Levene's test for equality of variances		*t*-test for equality of means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	6.07	.01	−19.88	58	.00	−45.10	2.26
	Equal variances not assumed			−19.88	47.81	.00	−45.10	2.26

Table 25 Paired samples test (self-efficacy pre- and post-tests of each group)

		Mean	Std. deviation	Std. error mean	t	df	Sig. (2-tailed)
Pair 1	CG. Pre — CG. Post	−7.66	4.95	.90	−8.48	29	.00
Pair 2	EG. Pre — EG. Post	−53.66	13.06	2.38	−22.50	29	.00

The CG's self-efficacy post-test mean score was 60.46, whereas the e-portfolio group's mean score was 105.56, as shown by the descriptive data in Table 23. In the self-efficacy post-test, the e-portfolio group outscored the summative group.

Table 24 shows that there is a statistically significant difference between the summative and e-portfolio groups (*p* 0.05). In fact, the e-portfolio group excelled the summative group in the self-efficacy post-test.

A paired samples *t*-test is applied in Table 25 to contrast the pre- and post-test results for each group. As a result, the difference between the summative group's self-efficacy pre-test and post-test is significant because Sig (0.0) is less than 0.05; likewise, the difference between the pre-test and post-test of the e-portfolio is significant because Sig value (.00) is less than 0.05.

Table 26 Learner autonomy pre-test descriptive statistics

Group	N	Mean	Std. deviation	Std. error mean
Score	30	66.83	6.14	1.12	30
	30	64.40	8.01	1.46	30

Table 27 Inferential statistics (learner autonomy pre-test of both groups)

		Levene's test for equality of variances		*t*-test for equality of means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	3.13	.08	1.31	58	.19	2.43	1.84
	Equal variances not assumed			1.31	54.31	.19	2.43	1.84

Table 28 Learner autonomy post-test descriptive statistics

Group	N	Mean	Std. deviation	Std. error mean
Score	30	70.96	6.81	1.24	30
	30	105.03	9.46	1.72	30

Table 26 contains descriptive information about the autonomy of the two groups. The mean score for the EG is 64.40, compared to 66.83 for the CG. This demonstrates that the two groups' learner autonomy levels were quite equivalent at the beginning of therapy.

An independent samples *t*-test was used to display the learner autonomy pre-test differences between the two groups in Table 27. According to the data, the difference between the groups is not statistically significant at a *p*-value of 0.05 since the Sig value (.19) is higher than that threshold. They were really equally identical on the learner autonomy pre-test.

The learner autonomy post-test mean score for the CG was 70.96, whereas the mean score for the e-portfolio group was 105.03, according to the descriptive statistics in Table 28. In the learner autonomy post-test, the e-portfolio group was found to outperform the summative group.

Table 29 shows that there is a statistically significant difference between the summative and e-portfolio groups (*p* 0.05). On actuality, the e-portfolio group significantly outperforms the summative group in the autonomy post-test.

Using a paired samples *t*-test, Table 30 compares the pre- and post-tests for each group. In light of this, the difference between the autonomy pre-test and post-test of the summative group is significant because Sig (0.0) is less than 0.05; similarly, the difference between the autonomy pre-test and post-test of the e-portfolio is significant as Sig value (.00) is less than 0.05.

Table 29 Inferential statistics (autonomy post-test of both groups)

| | | Levene's test for equality of variances | | t-test for equality of means | | | | | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Score	Equal variances assumed	2.81	.09	−16.00	58	.00	−34.06	2.12
	Equal variances not assumed			−16.00	52.70	.00	−34.06	2.12

Table 30 Paired samples test (autonomy pre- and post-tests of each group)

		Mean	Std. deviation	Std. error mean	t	df	Sig. (2-tailed)
Pair 1	CG. Pre — CG. Post	-4.13	2.45	.44	−9.20	29	.00
Pair 2	EG. Pre — EG. Post	−40.63	8.40	1.53	−26.47	29	.00

Discussion

The researcher then moves on to the discussion section to contrast and compare the findings of this study after data analyzing and obtaining the results. The results revealed a noteworthy change among pre- and post-tests of the two groups. The results of this study also showed that using an e-portfolio assessment was more advantageous than using a summative assessment for the dependent variables indicated above (writing CAF, learners' autonomy, self-efficacy, and learning anxiety). E-portfolio and summative assessment groups really fared considerably differently on their post-tests. In every single variable, the e-portfolio assessment group performed better than the summative assessment.

These outcomes are consistent with Yastibas' (2015) research, demonstrating that e-portfolio assessment enhanced learners' self-assessment skills by helping them keep track of the learning, recognize their weakness and strengths, and try to remove those weaknesses. Students were also enabled to be responsible of their progress and to know how their learning was advancing.

These results support Tonbul (2009) research, which focused on creating a university e-portfolio model and found that utilizing e-portfolios in assessment allowed students to think on their learning and identify their learning limitations and strength. It thus improved their ability to evaluate themselves and motivated them. The outcomes also confirm Abbaszad Tehrani (2010) findings, who employed a net-folio to enhance writing abilities. The findings demonstrated that since pupils claimed content control in their net-folios, they were able to be more independent in their learning. They progressed to the point where they could analyze themselves, track their learning progress, and monitor it.

These results are consistent with those of Erice (2008). He investigated how e-portfolios may be used in writing classrooms as assessment and learning aids. E-portfolios, in Erice's opinion, provide students the opportunity to control their learning process, assist them in refining their evaluation abilities, and inspire them to reflect on what they

have learned. These research results are consistent with those of Alexiou and Paraskeva (2010), who attempted to improve self-regulating abilities' learning by use of e-portfolios in a university of computer science. The results showed that e-portfolios increased motivation and enthusiasm for learning in students, and they also demonstrate a strong association between cognitive, motivating, and emotional aspects. They contend that because e-portfolio use fosters and supports students' learning, e-portfolio design can improve learners' self-efficacy.

These results can be linked to a few traits that encourage and support the aforementioned conclusion. As they are controlling each stage of e-portfolio assessment, including choosing and arranging the e-portfolios content, establishing objectives, and assessing their learning progress, students are active in the learning process. Similar to this, autonomous learning encourages students to take an active role in their education by empowering them to assume responsibility of their learning. The ability to manage own learning process comes from being in charge of one's own education, which is another e-portfolio-based assessment. feature.

E-portfolio assessment also gives students access to artifacts they may use to track their own learning progress. The ability to reflect on and assess own work can assist individual understand one's strengths and shortcomings and enhance learning in accordance with those discoveries. This is made possible by keeping track of one's own learning in e-portfolio assessment. E-portfolios save effort and time for both teachers and students. Students may keep information easily, provide simple access for monitoring and reviewing it, and reduce any risks of loss by using electronic portfolios (Goldsmith, 2007). E-portfolio assessment helps students reflect more effectively since they are aware of their learning and can demonstrate their critical reasoning, critical thinking, and integrative learning skills (Rhodes, 2011). This reflection enables students to reconsider their learning experiences and alter how they saw their learning.

In that it enables students to recognize their learning, make conclusions, and be prepared for more learning, e-portfolio assessment is a sort of sustainable assessment. It is an ongoing assessment that is backed up by evidence. It enables students to link tacit knowledge to information that has been constructed. It monitors how well students are learning. As they choose their learning and reflect on it, it helps students to own and drive their own learning. Students can verify if the strategies they chose were effective or not and advance their learning through e-portfolio-based assessment. Additionally, e-portfolio-based assessment can inspire pupils. Also, by regularly evaluating oneself, students' perceptions of their abilities in EFL improve.

E-portfolio-based assessment can help students feel less anxious and more enthusiastic about studying since it helps them realize their potential. Students may feel less apprehensive and more self-assured as the result. Therefore, e-portfolio-based evaluation can help learners get ready for their learning processes on a behavioral, metacognitive, and motivational level. By promoting and supporting active engagement, taking ownership of own learning, and student reflection and observation on learning, this style of assessment aims to empower pupils to customize and individualize their learning.

The implementation of electronic portfolio assessments strengthens the foundation for evaluation among students, their parents, and their teachers. According to Birgin and Baki (2007), portfolio assessments provide parents, teachers, and staff the opportunity

to examine a student's strengths and weaknesses, which boosts parental support for the student and improves parent-teacher communication. This was furthered by Gürbüz and Mustafa Ulu's (2009) observation that e-portfolios encourage contact between students, instructors, and parents. Parents, instructors, and students may all gain an understanding of the sort of learning that occurs in the classroom through portfolios.

E-portfolio assessment helps students take control of learning process by selecting the writing works that will be part of their portfolio. Students that have this level of autonomy feel more free in their work and have greater internal drive to achieve. These emotions might demonstrate that students are at ease in their capacity to construct knowledge using the e-portfolio. In a nutshell, the findings of this study show that e-portfolio evaluation can greatly increase writing skills, autonomy, and self-efficacy of EFL learners in contrast to traditional methods of assessment, which may not allow students the possibility to evaluate their own work. They also feel less anxious as a result.

In conclusion, the outcomes can be explained by the fact that an electronic portfolio provides instructors, parents, and the student himself with more accurate and up-to-date information about kids. Additionally, employing this assessment method in educational contexts offers teachers useful information about their students' strengths and areas for improvement.

Conclusion and implications

This study attempted to comparatively examine the effects of e-portfolio and summative assessments on Ethiopian EFL learners' writing CAF, autonomy, anxiety, and self-efficacy. The results illustrated that using these two kinds of assessments enhanced EFL learners' writing CAF, autonomy, and self-efficacy and lowered their anxiety. The e-portfolio group showed better improvement than the summative group on post-tests. As e-portfolio assessment was more effective, it can be concluded that this assessment is a fruitful alternative to effectively evaluate language than the traditional assessments as it produces plenty of information on students' capabilities. In nutshell, it can be concluded that incorporating e-portfolio assessment into EFL settings brings about substantial results more than summative assessment. These results can help EFL learners advance in different skills and sub-skills. Broadly speaking, this necessitates introducing more learner-based approaches into language learning process.

This study can offer some implications for EFL curriculum developers, educators, and learners. With the assistance of EFL instructors, language pupils grow acquainted to a variety of assessments, including the topic of the present research. Teachers may help pupils more effectively by utilizing the evaluative feedback they receive from it. This is a helpful tool for enhancing writing abilities, autonomy, anxiety, and self-efficacy. Teachers may promote autonomy in students by making them take part in assessment tasks and by employing a collection of assessments in the classroom. EFL students may increasingly realize what it takes to be a self-efficacious learner as a consequence. Another technique for instructors to reduce anxiety and improve cooperative learning is through e-portfolio assessment activities. As a result, it is intensely recommended that EFL instructors, particularly those who place a high value on writing skills, incorporate strategies like e-portfolio assessment into their lessons.

The results may suggest that EFL students might benefit from having a basic under-standing of various types of assessment and from having a specific understanding of the e-portfolio, to help them develop their abilities similarly. Students may identify the pre-cise areas in which they need guidance and support by completing e-portfolio assess-ment tasks, and they can subsequently approach their teachers for assistance in those areas. Additionally, since this study has shown that e-portfolio assessment improves the EFL students' writing abilities, teaching strategies and course content for EFL classes should be developed so that they promote assessment methods and, as a result, influ-ences the language abilities of foreign language students. In general, e-portfolio assess-ment settings provide students greater benefits than having their work assessed by an instructor. By completing exams and frequently by obtaining comments, they gain knowledge. The current analysis also benefits syllabus designers and material produc-ers. The outcomes can aid syllabus designers in having a better knowledge of various assessment techniques and how they may affect the language development of EFL learn-ers. Designers of syllabi are urged to incorporate a range of assessment modalities in their courses. The study's findings could also help material designers provide a range of assignments and activities that are suitable for the different ability levels of L2 learners.

Like other studies, this one also had some restrictions and was unable to address every relevant issue:

1. The study included only individuals with intermediate level. Therefore, the results cannot be generalized to other levels of competence.
2. There were a maximum of 60 participants in this research. Therefore, this cannot be used broadly.
3. The study only included male students, so it is conceivable that the results do not apply to female pupils.
4. The study investigated writing CAF, so the results are not applicable to other domain of competencies.

A few suggestions for further investigations are offered. In the next investigations, it is advised that the procedure used in the current study be repeated over longer periods of time. The same study may be carried out on a larger sample of L2 learners to provide the researcher(s) with more accurate and generally applicable results. It is feasible to do study on different linguistic proficiencies. Other methods as interviews and observation can also be utilized to gather qualitative data on the effects of different assessment styles and their use for students and instructors. The present study can be duplicated in other educational settings such as ESL, ESP, and EAP. Further, this study might be applied in the case of other levels like elementary or advanced learners or genders as well.

Abbreviations
CAF   Complexity accuracy fluency
EFL   English as a Foreign Language
EG   Experimental group
CG   Control group
ESL   English as a Second Language
OQPT   Oxford Quick Placement Test
SD   Standard deviation

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Declarations

Competing interests
The authors declare that they have no competing interests.

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