A Bibliometric Analysis of the Research on the Web-based Formative Assessment in College English Writing Teaching in China from 2000 to 2009*

CAI Jing  
Beijing Foreign Studies University

Abstract

This paper makes an overview of the studies on web-based formative assessment in college English writing teaching in China from 2000 to 2009 on the basis of relevant papers published in 10 important Chinese journals of English language teaching. It analyzes the achievements and weaknesses of the research so far based on which to provide some implications for future development.

Key words: EFL writing instruction; formative assessment; information and communication technologies; review

1. Introduction

Two tendencies emerge from the research over the past decade on the theory and practice of assessment in the EFL writing classroom: a shift from summative assessment to formative assessment and the use of Information and Communication Technologies (ICT).

In 1967, Michael Scriven identified the differences between formative and summative assessments (Marzano, 2006). The former occurs while the subject is being taught and should continue throughout the period of learning with the primary objective to allow both the teacher and students to monitor and make decisions accordingly about the learning process so as to optimize the learning outcome. The latter, on the other hand,

* The research was funded by a key MoE project titled “Using Automated Writing Assessment in China EFL Classrooms” (Project number: GFA097005).
takes place at the end of a learning unit and determines if the content being taught is retained (Ainsworth, 2006). Since then, a host of Western scholars have investigated formative assessment from various perspectives. Cowie and Bell (1999) defined it as the bidirectional process between the teacher and the students to enhance, recognize and respond to the learning. Black and Wiliam (1998) considered an assessment formative when the feedback from learning activities is actually used to adapt the teaching to meet the learner’s needs. Nicol and Macfarlane-Dick (2006) revealed how formative assessment can help students take control of their own learning. As an ongoing and process-focused assessment, formative assessment helps teachers to check the current status of their students’ language ability and also gives chances to students to participate in modifying the upcoming classes, consequently growing their motivation to learn and raising their awareness on the target language (Bachman & Palmer, 1996). Formative assessment is thus believed to better help students to achieve their goals successfully. Based on an extensive literature review covering more than 500 publications on the subject of formative assessment, Black and Wiliam (1998) concluded that formative assessment, as opposed to summative assessment, produces the more powerful effect on student learning.

Meanwhile, the move to web-based assessment is a natural outcome of the increasing use of information technology to enhance the efficiency and effectiveness of language teaching and learning. Web-based assessment is a term that covers all forms of assessment, whether formative or summative assessments delivered with the help of computers and the Internet (Gomersall, 2005). Some obvious advantages include instant feedback to students, reduced workloads for teachers, improved consistency of scoring and enhanced question styles which incorporate interactivity and multimedia. It is therefore envisaged that web-based formative assessment, in particular, will play an increasingly important role in EFL assessment and evaluation.

Interests have also arisen since this century in the application of formative assessment to EFL writing instruction in China. Cao, Zhang and Zhou (2004) experimented with formative assessment in an EFL writing course for non-English majors in a Chinese university. The result showed that formative assessment helped to foster learner autonomy in the control over the writing process and hence contributed to more noticeable improvements in the experimental group of the students’ writing competence. However, more studies feature the incorporation of ICT to enrich formative assessment techniques and enhance its efficiency. Zhang and Wang (2004) explored the potential of e-portfolio as an effective formative assessment tool in the Chinese English writing classroom. Jiang (2005) compared online peer assessment against its face-to-face equivalent and found that the former performed better in enhancing the learners’ motivation and reducing their anxiety and stress. Some other researchers designed or piloted the different automated essay scoring (AES) systems to discuss their possibility of replacing human evaluators to provide more consistent and objective writing assessment (Yang, 2004; Wan, 2005; Ge & Chen, 2007).

The studies aforementioned, among others, by the domestic researchers have provided some valuable insights into the application of web-based formative assessment to EFL writing courses under the Chinese context. Nevertheless, they are not without
demerits, as are many explorations into uncharted territory. For one thing, the subjects of study may be varied to a greater degree. The researchers have presently paid adequate attention to the technological mechanisms of different assessment tools, yet comparatively ignored the impacts these tools are likely to make on learners. For another, a majority of the current research assumed cross-sectional analysis, which, if complemented by longitudinal or case-control studies, would have rendered the findings more accurate and in-depth. As we are heading towards the next decade, it is now necessary and significant to make an overview of the research efforts and findings made so far not only to applaud the achievements but also to identify the challenges so as to assure a thriving and sustainable development of the subject.

2. Overview of the Research in China from 2000 to 2009

From 2000 up to 2009, 15 papers were published in 10 Chinese journals\(^1\) that focused on the web-based formative assessment in tertiary-level English writing teaching. These journals are recommended by CSSCI (Chinese Social Science Citation Index) as the key ones of English language learning and teaching in China to reflect the latest important trends and developments in the field. The table below summarizes the major themes of the publications concerned.

<table>
<thead>
<tr>
<th>Year</th>
<th>Theme</th>
<th>Courseware/platform</th>
<th>Scoring system</th>
<th>Electronic portfolio</th>
<th>Peer evaluation</th>
<th>Role of the teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

What follows is a review of the articles on the strengths and weakness each of them are involved with. Since their number is not evenly distributed among the five themes, the discussions accordingly vary in length. Also, empirical research tends to be commented in greater detail largely because more considerations often need to be given to its design and procedure.
2.1 Courseware and Platform

The rapid advancement in the computer and multimedia technologies has spurred the use of multimedia courseware in the educational setting. Teaching assisted with multimedia courseware turns out to be more motivating and effective compared with the conventional one. Research has suggested that multimedia courseware can help to arouse learners’ interest, retain longer learning time and make them more proactive and self-reliant in the learning process (Wahab & Zaman, 2007).

In the first few years of the century, some Chinese teachers of English writing tried to innovate on their traditional classroom practice through this state-of-the-art teaching tool. Liu (2000) and his colleagues invented a writing courseware that can provide instant feed to objective questions and also allow students to submit questions electronically for feedback. These functions were designed to facilitate students to assess and adjust their own learning paces. Kang (2002) and her colleagues also developed a multimedia courseware for an English reading and writing course. It enables students not only to interact with the teacher through e-mail but also to discuss writing tasks with the classmates on an e-forum. The courseware also features an exhibition board where students’ writing assignments and the teacher’s feedback can be displayed. Compared with paper textbooks, multimedia courseware is superior in timeliness and interactivity, which render it a useful formative assessment tool.

The year 2004 saw a move of the research focus from compute-assisted courseware to web-based platform to deliver EFL writing instruction. Gu and Ding (2002) introduced the concept and construction of Online Writing Lab (OWL) in some Western universities. Harnessing the powerful Internet, OWL not only links student writers to abundant and diversified resources, but makes the exchange of their works convenient and fast for peer appreciation and comments. Wang and Zhang (2004) based on the theories of language learning and teaching proposed a theoretical framework underpinning the set-up of a subject website for Chinese college students to practice English writing. The website includes an evaluation module that can deliver self-, peer or teacher assessments across a range of criteria. It can also rank students in order of scores, which is intended to encourage peer competition and enhance learning interest and motivation. In addition, the website can develop a data bank for each student by recording his or her log-on time and number, assignments completed and feedback received, comments on others’ products, participation in online discussions, learning diary, etc., which all together outline an individualized learning path. Such a detailed and objective presentation of the learning process facilitates both formative assessment and personalized instruction.

The researchers above, among others, made valuable pioneering efforts in applying ICT mediated formative assessment to the Chinese English writing classroom. Their research has laid a solid sound foundation for the development of relevant macro-level principles and theories. However, their papers mainly gave accounts of the structures and functions of courseware or platform, but lacked the empirical data to demonstrate the impact of technologies on learners’ motivation, writing strategies and proficiency.
2.2 Automated Essay Scoring System

The recent interest in the development and use of Automated Essay Scoring (AES) systems has brought about both by the growing number of students attending universities and by the infinite possibilities provided by computers and the Internet to education. AES is defined as the computer technology that evaluates and scores the written text (Shermis & Burstein, 2003). Hamp-Lyons (2001) highlighted the advantages of AES technology as follows: the ability to provide the student with a score as well as feedback within seconds, to perform repeated functions without boredom and variation, flexibility of time, location and number of candidates, practicality in administering large scale assessments of writing ability, etc. A number of studies were conducted to prove the accuracy and reliability of the AES systems and found that the agreement rate between human raters and AES systems was high (Landauer, Laham, & Foltz, 2003; Nichols, 2004; Page, 2004). There are four main types of AES systems widely used at present: Essay Grade (PEG), Intelligent Essay Assessor (IEA), E-rater and IntelliMetric.

Yang (2004) and his team at Tsinghua University developed a Holistic Training Platform for EFL Writing whose self-evaluation module is equipped with an AES system. The system employs a corpus-based approach to model building whose design primarily relies on analysis of such surface linguistic variables of a text as “number of words”, “length of words”, “repetition of words” or “length of sentences” to represent fluency, accuracy and diction. Yang and his team deserve acclaim and recognition for their bold and creative work in developing such a system for Chinese learners in particular, though there still leaves some room for improvement. For one thing, by focusing on the surface structures, the system ignores the lexical content and the semantic aspect of an essay, which are another two essential indicators of good writing.

Wan (2005) reported a research among a group of English majors in a Chinese university on E-rater to discuss the possibility of replacing human raters. The Electronic Essay Rater (E-rater) was developed by the Educational Testing Service (ETS) to evaluate the quality of an essay by identifying linguistic features in the text. E-rater uses natural language processing (NLP) techniques, which identify specific lexical, syntactic, grammatical, topical and discourse cues in a text, to analyze essays (Burstein, 2003). The researcher compared the analysis and scoring of the texts by E-rater against those by the subject teachers. The results identified a high agreement rate between the system and the teachers, but also showed some differences. E-rater spotted a greater number of errors in grammar, spelling and punctuation, while it seemed less able to find out problems with word usage. For instance, although it diagnosed the repetitive uses of certain words, which can in some extent reflect a student’s limited vocabulary range, it failed to suggest alternatives as many of the teacher subjects did. Discrepancies were also detected in the evaluation of style. For example, E-rater advised that all the passive voices be converted into the active ones. Most of the teachers, on the other hand, preferred the students to keep some passive voices in order to increase syntactic variation. The researcher thus concluded that E-rater is more reliable to track surface language errors, but less efficient in detecting the content related features of an essay. Therefore he suggested that E-rater be used to reduce the workload of the teacher who can then spare more time and efforts to offer
individualized diagnostic feedback based on the types of evaluations that E-rater gives.

Ge and Chen (2007) reviewed the merits and demerits of the existing automated scoring systems in the West hoping to provide references as to the construction of similar systems for Chinese students. They pointed out that the AES systems developed by the foreigners need to be modified to offer accurate scoring for Chinese EFL writings. One reason is that most of such systems employ a corpus-based approach to model building, so they have to be trained on a set of essays by the foreign students. Therefore we need to develop the Chinese ASE system based on Chinese learners’ essays so as to enhance the accuracy of scoring. The paper furthermore proposed that the organizational, stylistic and topical aspects of an essay should be ignored though importance also needs to be attached to language for Chinese learners. In addition, affective elements can also be added to render the system more humanistic and intelligent in providing sympathetic, encouraging and enlightening feedback. Therefore an accurate and reliable AES system calls for cross-disciplinary efforts and expertise from linguistics, language teaching, artificial intelligence, psychology and computer science.

2.3 Electronic Portfolio
A portfolio in education is a purposeful collection of a student’s work that exhibits his or her efforts, progress and achievements during the learning of a subject. Numerous advantages associated with the use of portfolio-based assessment in EFL writing instruction have been suggested by the literature. Some researchers have reported growth in students’ pride and confidence as a result of portfolio assessment (Frazier & Paulson, 1992; Krest, 1990). Others have mentioned that it provides teachers with a holistic view of students’ development as they are able to examine many different indicators—not only from the teacher’s perspective but from those of the peers or even themselves—of achievement (Valencia, 1990) and it allows teachers to evaluate students’ skills by collecting, preserving and making it available for both teachers and students to revisit (Gomez, Grave & Bloch, 1991).

Since the mid-1990s in America, a new movement of IT-supported writing assessment, e-portfolio, has been widely applied, spreading from L1 settings to L2 writing, and soon later from America to some other Western countries. Because the electronic writing portfolio easily interweaves assessment with teaching and is a good tool to accommodate learners’ needs to communicate digitally, many language instructors have adopted this teaching tool in their language classrooms (Grondlund, 2006). An electronic portfolio sometimes referred to as “multimedia portfolio” or “webfolio” is similar to paper portfolio; however, the medium used to present and organize the portfolio artifacts is different. It is organized by using a combination of media tools such as audio or video recordings, multimedia programs, database, spreadsheet and word processing software as well as CD-ROMs and the World Wide Web with hypermedia links connecting that evidence to the objectives of the course and program (Kilbane & Milman, 2003). There has been vast evidence to support the potential of e-portfolio as a tool for enhancing reflective thinking, autonomous learning and writing skills development of EFL learners: (1) increase in the technology knowledge and skills, (2) facility in accessibility
and distribution, (3) storage of vast information and (4) an opportunity to work collaboratively (Strudler & Wetzel, 2005; Tosh, Light, Fleming & Haywood, 2005; Barrett, 2007).

Compared with their foreign counterparts, the Chinese scholars have not paid much attention to the use of e-portfolio as a formative assessment tool in EFL writing instruction until very recently when Zhang and Wang (2004) described its application in the American EFL writing classroom and explored its feasibility under the Chinese context. However, their discussion and suggestion on the introduction of e-portfolio into the EFL writing class of China were not supported by any relevant experimental data. Although some Chinese college teachers have experimented with the paper portfolio assessment in their classrooms (Cao, Zhang & Zhou, 2004), no study has so far been reported to investigate the perceptions of teachers and students on e-portfolio assessment and its possible effects on the development of writing competence.

2.4 Peer Evaluation

Pedagogical benefits of the web-based EFL writing instruction have been widely acknowledged. In an online learning environment, students can work at their own pace, leading to more careful reading and reflecting on the writing and peer review processes. Not only does the technology provide students with diversified learning resources, the online platform also has the potential to make the composition, review, and revision process much easier (Blair, 2003). The interactivity afforded by online writing that enables the students to share the writing with a wider audience has also been shown to provide authentic and stimulating motivation for student writers who might have previously been writing only for the teacher (Warschauer, 1999). For the reasons above, not only the scholars in the Western countries but a growing number of Chinese researchers have tried to develop an online-based EFL teaching mode. Given the focus of this overview, we mainly concentrate on the formative assessment aspect of such a teaching mode.

Guo (2009) made an attempt to explore the potential of blog—a type of subject website—in improving teaching of college English writing. To exploit the timeliness and interactivity offered by blog, she introduced peer evaluation into her teaching practice. The pedagogical value of peer review in writing instruction has received significant attention by scholars. Rollinson (2005) suggested that peer readers can provide useful feedback that tends to be different from and more specific than teacher feedback, that peer writers can and do revise effectively on the basis of comments from peer readers, and that becoming a critical reader of others’ writing may make students more critical readers and editors of their own writing. Blog allows more timely and individualized communication between the teacher and the students so that a revising process can be repeated efficiently in this online environment till both parties felt satisfied. Such repeated evaluating and revising procedures make up good formative assessments in which the act of reflection is integrated to enhance and stimulate the students’ cognitive capabilities and enable them to improve in their writing skills. The research finding indicated that the experimental group achieved more rapid progress in fluency, syntactic variation and organization than the control group who were not required to conduct peer review. A follow-up questionnaire
survey showed that 92.3% of the subjects preferred peer review online. Similar conclusions were also drawn from the studies by Huang and Li (2006), He (2007) and Zhang (2008).

All the above studies were intended to probe into the role of web-based peer assessment in improving EFL writing ability. The researchers adopted both the qualitative and quantitative methods to testify their hypotheses. The questionnaire surveys and interviews were conducted to find out the subjects’ responses to this innovative formative assessment approach. Also the data were processed statistically to identify any possible correlations between performances of experiment groups and those of control groups. However, a shared problem with the research design may partly undermine the validity of findings. In all these studies, peer review was adopted only in the online teaching mode, whilst in the conventional classroom instruction the students were required to hand their writing directly to the teacher for evaluation. Therefore, if the students in the experiment group were found to improve faster in their writing proficiency, it was uncertain whether peer review or peer review online made the difference. So the following two studies show an improvement in research design because they compared online peer review with its face-to-face equivalent to find out which can better help the students to develop their writing competence.

The study by Jiang (2005) was intended to find out if learners’ perception of web-based peer review would be different from that of face-to-face peer review. To fulfill the purpose, the researcher required the subjects to write two compositions and have one peer reviewed online and the other face to face. The subjects were randomly selected from the four grades of the English department of a Chinese university. The researcher then conducted a questionnaire survey to find out how they responded to these two modes of peer review.

The findings revealed that a majority of the subjects held that the former mode could be more effective in arousing their interest in English writing, fostering reflective thinking and reducing anxiety and stress. This may be because interaction within a virtual context can to some extent avoid embarrassment that people often experience in face-to-face communication when making criticism. The subjects also tended to concentrate more on the evaluation task while in face-to-face review, their attention were more easily distracted to off-task topics. And the comments made online featured more complete sentences and coherent discourse structures. All these can contribute to the quality of review which in turn can enhance the quality of revision and that of composition as a whole. However, since the researcher did not specify online peer review was made in the oral or written form, it can not be safely concluded that the above differences were due to the different reviewing modes—online vs. offline rather than the different interactive modes—oral vs. written.

Meanwhile, some interesting variations were found among the four groups of subjects. The freshmen reported to have experienced greater stress and anxiety with online peer review than the other groups. Furthermore, the sophomores expressed more doubts on the effectiveness of online peer review in upgrading their writing proficiency. Follow-up studies are needed to account for such discrepancies. Nevertheless, they remind teachers of the necessity to consider learners’ language proficiency, cognitive level, learning
The other study (Weng & Li, 2009) was of a one-group longitudinal design. It adopted a case-study approach to explore how the students used text-based peer assessment in synchronous learning network (SLN) to evaluate each other’s writing in an elective, university-level 6-session writing course. This study used E-communication of Blackboard as its research platform, which is a web-based learning management system (LMS). E-communication is a synchronous interactive tool designed to promote student-student and student-teacher interactions online and thus help to build an online learning community. The study focused on examining the frequency and styles of various techniques the students employed while assessing each others’ writing and their attitudes towards doing so in a SLN context.

By analyzing the archives automatically recorded by the system, the researcher was able to collect the data showing frequency of peer assessments within each 40-minute activity: 1) the number of times each article and its responsive posts were read; 2) the number of responsive posts each article received; and 3) the number of assessments given to each article. The result showed that the participants preferred to read others’ works or the assessing posts responsive to them rather than give comments during SLN-based peer assessment activities. The most significant barriers to the participants’ active responses were learner preference for spending more time reading than giving feedback and the time constraints of a SLN environment.

Regarding the style of peer assessment techniques the students used, the researcher drew on a framework by Riel (2006) to analyze how online participants assessed each other’s writing. The framework consists of four categories: affirmation, editorial, extension and critique used to codify student assessing posts into peer assessment techniques. Through content analysis, the participants’ assessing posts were collected and grouped to obtain an in-depth look at the quality of peer assessments. The findings indicated that peer assessment happening in the context of SLN did not efficiently promote critical thinking or a deeper understanding of the issues. But it did provide good opportunities for the students to practice their morphological techniques and reduce the heavy work-load of the teacher. These may due to time constraint. Although the participants read a wealth of peer compositions and the responsive comments received, they did not read in depth. This again lends support to the conclusion that, within a synchronous learning community, students do not have sufficient time to reflect and thus produce feedback at surface levels.

Another finding was that the percentages off-task peer assessments over the sessions remained stable. This indicates that socio-emotional feedback in the context of SLN is necessary and that SLN could support considerable socio-emotional content. Content analysis shows that most of the off-task feedback was social, which has great value in community-building online.

Finally the questionnaires were distributed to the subjects to elicit their views on peer review in the SIN context. It was found that the students had positive attitudes towards the process and the results of peer assessments in a SLN context. But they also felt that peer assessment happening in such a SLN context was more demanding than in the classroom.

The two studies aforementioned help us to gain deeper insights into how to design...
and implement effective web-based peer review in EFL writing instruction. Nevertheless, due to the limited length of study and the number of peer assessment activities (one in Jiang’s study and five in Weng & Li’s), further studies are required to determine any long-term effects of online peer assessment on the development of learners’ writing proficiency.

2.5 Role of the Teacher
Technology-mediated learning offers teachers the opportunity to create an environment of learning that enables students to discuss the task and acquire skills through reflection on the task and evaluation of students’ messages (Harasim, 1996). Not only can teachers easily overcome constraints of time and space to offer feedback and support to the students’ writing process, they can also conveniently organize and monitor the students to do the same themselves through collaborative learning. The shift from traditional classroom instruction to an online environment therefore entails significant changes in the role of the teacher as an assessor.

The constructivist notion of generative learning supports the teacher’s role as a guide in a learning environment to enable discovery by the students (Applefield, Huber & Moallem, 2001). So from this perspective the teacher’s role is to guide students to generate their own questions, interpretations, and reflections when listening to the other members of the student’s group. When it comes to EFL writing instruction, this means that the main focus is on the need for student interaction for knowledge construction through collaborative writing, including group discussion or peer evaluation. Peer group interaction in an online environment and the strategies that e-moderators, or teachers, are required to adapt is an important aspect of learning (Salmon, 2000).

Despite the vital importance of teacher as both an assessor and a director of assessors in an online environment, we found only one descriptive study by Zhou and Liu (2005) on this significant issue. Based on constructivism and the process-oriented teaching methodology, the paper described ten major roles of the teacher in a web-based instructing environment. Among them, the role of being an assessor is regarded one of the key factors leading to the success of web-based EFL writing instruction. It is worth noting that the responsibilities of the teacher being an assessor in question involve more than what he used to do in the traditional writing teaching—revising or marking the students’ compositions. More significantly, he is expected to monitor and evaluate the learner’s process of learning to write based on which to guide and support the latter to make further progress towards the ultimate learning goal. He is also expected to organize and facilitate the learners to assess their own or others’ performances, as self- and peer evaluations are two important components of formative assessment that are proved to be conducive to the achievement of learning objectives. He furthermore needs to join student assessment activities online, browsing their comments, encouraging the silent ones to voice the ideas, or asking questions or giving responses to keep the communication going. To sum up, guidance, participation and encouragement from the teacher are of vital importance to maintaining learners’ interest in self- or peer assessments and in turn to uplifting their writing competence continuously. Zhou and Liu gave a comprehensive and detailed account of the contributions teachers are expected to make to creating for
students a facilitative computer-assisted English writing learning environment. Although based on the theories of second language acquisition, constructivist learning and process writing approach, their elucidation would have become more reliable and valid had it been tested and verified through some empirical evidence.

3. Implications and Trends

The overview above offers some implications for future research. First, the subject of study needs to be expanded in scope. The studies so far concentrated mainly on the design of various web-based assessment tools, as demonstrated from the number of articles published on this topic. Tools can be effective only in the right hands. So it is also in need to look into their relations with the users—both teachers and learners—under different assessing scenarios. However, there are comparatively fewer such studies. To gain a more comprehensive understanding of the issue, we need to examine not only students’ perceptions on these technologically advanced tools and the innovative teaching pedagogy brought about accordingly, as some researchers have already done, but also teachers’ attitudes and concerns. Also, apart from peer review, self-evaluation is another important form of formative assessment that can serve to trigger students’ reflective thinking, providing opportunities for them to transform learning or modify strategies and as a result, improve their writing skills. Hence we are looking forward to seeing more research efforts be made in this field.

Second, impacts of the web-based formative assessment on the development of EFL writing competence are expected to be explored in greater depth. The relevant studies, partly due to the short experiment length or the limited number of assessment activities, failed to generate adequate empirical evidence to identify more significant correlations between the two variables to explain how the former affected the latter. At the same time, online learning involves an array of factors that can affect the learner’s performance to varying degrees, such as familiarity with computer and web skills, easiness of interacting within a virtual domain or abilities to learn independently and collaboratively. These systemic, affective and metacognitive concerns, along with the academic ones, all have to be considered and measured in order to analyze and assess group and individual performance effectively and objectively. Thus further inquiries should be made regarding the above two aspects.

In addition, the teacher’s role in enabling students to assess themselves or each other online also deserves better attention. Some foreign researchers have reported that teachers’ feedback was useful for students’ online interaction (Dawson, Taylor, Geelan, Fox, Herrmann & Parker, 1999; Mahesh, 2000). So the teacher’s strategies of creating opportunities for and facilitating students’ online assessment, and the success of these strategies in relation to students’ growth in EFL writing proficiency can constitute good themes of future investigations.

Finally, the research design and methods can be more rigorous or varied. Though the descriptive studies are still dominant, they are complemented with a growing number
of empirical researches. In the latter category, most of the researchers adopted both the qualitative and quantitative methods to testify the hypotheses. The questionnaire survey and interview were most frequently used to collect qualitative data. However, some potential weaknesses of these two instruments are that certain subjects may not say what they mean in order to “please” or “satisfy” the researchers who are often their teachers; or that they may not reflect accurately or objectively on their own achievements or problems during the experiment. Therefore, other qualitative means such as learner diaries, the thinking aloud protocol (TAP) or content analysis of learner writing or online interaction can also be employed to strengthen the reliability of research findings. When conducting the quantitative research, most of the researchers made clear descriptions of subject selection, data collection and analysis, but they do not pay enough attention to controlling variables. A typical example is that different assessment schemes were used in the control and experimental groups, so it is difficult to determine that any performance variations between the two groups had been caused by the respective implementation of summative and formative assessments, or by the assessments activities organized under different settings—in the classroom or on the web. Moreover, a majority of the studies lasted for only one term, which may not be able to identify in a more comprehensive and precise manner the effects of web-based formative assessment on the development of learners’ English writing proficiency of which some traits and characteristics often take a longer period of time to be observed. Besides, the studies overviewed chose the subjects from both English and non-English majors, while few grouped and compared the subjects in terms of age, gender, personality or achievement to examine any causal relations between such demographic elements and effectiveness of web-based formative assessment. So researchers may also like to investigate further in these respects in the future.

Although the application of ICT to EFL writing assessment was initiated in China only a decade ago, its research and practice on the tertiary level have since undergone rapid and encouraging development. The achievements made so far, along with the limitations, have both provided valuable references for future studies. It is believed that with the increasing integration of ICT with language teaching, the coming new decade will witness more vigorous efforts and inspiring contributions from the domestic scholars in regard to this subject of great significance.

Note

1. The 10 journals are in the alphabetic order Chinese Journal of Applied Linguistics （《中国应用语言学》）, Computer-assisted Foreign Language Education （《外语电化教学》）, Foreign Language Education （《外语教学》）, Foreign Languages and Their Teaching （《外语与外语教学》）, Foreign Language Teaching and Research （《外语教学与研究》）, Foreign Languages Research （《外语研究》）, Foreign Language World （《外语界》）, Journal of Pla University of Foreign Languages （《解放军外国语学院学报》）, Journal of Sichuan International Studies University （《四川外语学院学报》）, Modern Foreign Languages （《现代外语》）.
References


(Copy editing: Duncan Sidwell)