A Comparative Study on the Engagement of Different Proficiency L2 Learners with AWE Feedback*

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* This work was supported by a General Grant on Higher Education and Teaching Reform of the NEAC, China (21122); a General Grant of Educational Science of Jilin Province, China (GH20045); a General Grant of Jilin Higher Education Institution (JGJX2021D68)

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[한국어초록]

글쓰기자동평가피드백에서 수준 높은 학생과 수준 낮은 학생의 참여도차이

비영어전공자가 혼합학습에서 글쓰기자동평가(AWE)에 어떻게 대응하는지가 쓰기능력을 향상시키는 관건이다. 본 연구는 중국의 모 대학의 77명 학생을 조사하여 1년간의 시간을 들여 그들의 자동평가피드백에 대한 습작투입을 수집하고 비교하였다. 학생들의 지난 두 학기의 기말성적에 따라 부동한 그룹으로 나누고, 그중 높은 수준 4명과 낮은 수준 학생 4명을 인터뷰를 통해 그들의 영어 글쓰기에서 AWE피드백에 대한 행위, 정서 및 인식에 대한 다양한 참여를 탐구하였다. 반구조화된 인터뷰를 통해 두 그룹의 학생들이 AWE피드백에 대한 감정몰입과 인지투입의 차이를 연구 하였다. 연구결과에 따르면 수준낮은 학생들은 AWE 피드백에 대한 감정참여가 상대적으로 긍정적이지만, 수준높은 학생들은 수준낮은 학생들보다 훨씬광범위한 행동과 인지참여를 보였다. 연구는 또한 학생들의 낮은영어수준이 AWE 피드백에 대한 인지참여에 부정적인 영향을 미칠수 있음을 발견 하였다. 연구결과는 영어수업에서 AWE 시스템을 효과적으로 활용하여 다양한 계층의 학습자의 글쓰기능력을 향상시킬수 있도록 실행 가능한 조언을 제공한다.

주제어 : 글쓰기자동평가, 피드백, 학습자참여도, 숙련도, 행위, 정서, 인지

1. Introduction

English writing has always been a mandatory part of various English exams, and the cultivation of English writing ability is an indispensable ability for students to gain competition in the employment market. Among the four basic abilities targeted in English instruction, cultivating the ability of students to write is believed to be the toughest abilities compared to other basic language abilities such as listening, speaking, and reading (Gu and Wang, 2012; Shi, 2015; Zhang, 2009). It is even more challenging to cultivate when instruction time is limited and class sizes become large. Additionally, written feedback from teachers under the traditional college English teaching approach for a large class is time-consuming and inefficient. Instructors often do not provide valuable feedback to students, except for a grade. With the development of internet -based technology, universities in China have started using online intelligent correction system like the Juku and Iwrite system. Although machines do not understand and evaluate writings using the same cognitive abilities as humans, AWE feedback were proved to have noticeable advantages over human reviewers such as instant feedback on student writing, repeated revision, analytic scoring (Dikli, 2006; Warschauer and Ware, 2006; Shermis and Burstein, 2003). The automatic online writing evaluation software is designed to provide instant computer-generated scores for a submitted essay along with diagnostic feedback (Bai and Wang, 2019; Chen and Cheng, 2008). AWE system has been claimed to stimulate students to revise their writing repeatedly through real-time feedback based on corpus analysis, thus releasing teachers from heavy workload of marking. (Black and Wiliam, 1998; Grime and Warschauer, 2010). AWE[1)] feedback is a useful

source of formative assessment in that it offers frequent and process-oriented diagnostic assessment in the revision process, in which the active role of the learners is also emphasized. Therefore, it has the potential to activate learning engagement. Zhang (2017) supported that computer-generated feedback might positively improve EFL writing, but the positive effect mainly depended on the student's engagement in the feedback. However, the mere provision of feedback does not automatically lead to writing improvement (Zhang and Hyland,2018). Engagement is a critical factor that link the provision of AWE feedback with learning outcomes. (Ellis, 2010). To improve AWE feedback in the English writing guide, promote students' learner engagement in writing and free teachers from hard grading work, we need to have a more thorough understanding of student engagement with AWE feedback. The complexity of learner engagement is manifested in its multifaceted nature, but is also evident in the individual differences demonstrated by learners using feedback. (Han and Hyland,2015). Higher proficiency learner and less proficiency learner differed in verbalizing the rules when problems indicated by reformulation (Qi and Lapkin ,2001). Moreover, little is known about why higher proficiency (HP) students and lower proficiency (LP) students engage or disengage in the different way they do. The present study investigated the engagement of an individual student in AWE feedback on English writing among Chinese EFL undergraduates with quantitate and qualitative interview methodology, focusing on the comparison between the engagement of HP and LP students in the AWE feedback on English writing. The research

1) Abbreviations: AWE, automated writing evaluation; LP, lower proficiency; HP, higher Proficiency; L2, second language; EFL, English as a foreign language; CF, corrective feedback

questions are as follows.

1. Whether HP students are more engaged in behavior in the AWE feedback than LP students?

2. Are HP students more engaged in emotion in the AWE feedback than LP students?

3. Are HP students more engaged in cognition in the AWE feedback than LP students?

We focus on engagement of feedback that could occur in any automatic evaluation feedback, including feedback from online teaching platform in blended learning.

2. Literature Review

2.1 Engagement

Engagement is described as “energy in action” (Lawson and Lawson,2013). Fredricks et al. (2004) postulate learner engagement as behavioral engagement, emotional engagement cognitive engagement; behavioral engagement is learning effort, on-task attention, asking questions and contributing to discussion; emotional engagement includes presence of interest, boredom, anxiety, sadness and happiness in the classroom; and cognitive engagement refers to student psychological engagement in learning, which stresses being strategic or self-regulating. Engagement has attracted increased scholarly attention in recent years (Hiver et al., 2021; Imamyartha et al., 2021). Research shows that increasing student engagement can reduce student negative emotions in learning, thus improving student satisfaction with the school, reducing the dropout rate at all stages of education, and helping student achieve academic

success (Wang &Wang, 2021). Previous research also pointed out that active learning engagement was correlated with academic achievement and cognitive development. (Wang, 2017; Guo 2021). Xu and Fan (2019) noted that learning engagement provides a new perspective for solving the "time-consuming and inefficient" problem of English teaching.

2.2 Writing Feedback

According to Ur (1996), feedback in teaching usually refers to the information sent back to students about the completion of a certain learning assignment in order to improve their learning effect. In the field of writing, feedback is the information that readers provide to authors to revise their compositions. Effective writing feedback can help students find shortcomings in their writing, promote them to reflect, and ultimately improve their writing ability. Researchers believed that detailed and explicit teacher feedback can effectively help students modify their compositions (Ferris, 1997). Scholars have done a lot of research on feedback from different perspectives. On the one hand, teacher feedback proved to play a positive role in the development of EFL students' writing ability and writing strategies (Jiang et al., 2011; Lu et al.,2010). On the other hand, some researchers think that teachers' comments are confusing and general, and they don't convey the importance of revision to students (Zamel, 1985). However, few studies have examined the effects of automatic writing evaluation feedback. Though a number of studies have investigated that teacher feedback focus on high accuracy and acceptability, some research still foresees the difficulty in the accuracy of scoring an essay by experienced and inexperienced raters. (Wolfe, Song and Jiao, 2016). In light

of this gap in prior research, the present study examined the effects of the automatic writing evaluation feedback as well as student engagement in writing tasks.

2.3 Corrective feedback engagement

Engagement also seems to involve students in devoting cognitive resources to understanding or memorizing the feedback they are given (Sachs and Polio, 2007). Research on student engagement with feedback has traditionally focused on student response to teacher written corrective feedback (Ferris, 2002; Han & Hyland, 2015; Zhang 2020). Ellis (2010) defined the engagement of CF as how learners respond to the feedback they receive. He proposed three perspectives to exam learner engagement: How learners attend to the CF they receive belongs to a cognitive perspective; in what way learners modify their written texts is considered as a behavioral perspective, and the emotional perspective is concerned with learners' attitude towards CF. New (1999) believes that without careful investigation of students' feedback on automatic evaluation, it is impossible to know how students modify their drafts and which factors will promote or suppress their reactions to feedback. In terms of behavior, students can modify drafts after receiving automatic evaluation feedback, but from a cognitive perspective, they may not focus on the quality of revisions in AWE feedback. In fact, surface-level modifications often exceed content-level modifications and organizational structure modifications when students responded to the written corrective feedback.

The opportunity to revise an essay multiple times at the learner's own pace is also an advantage of AWE feedback (Warschauer and Ware, 2006). Research has shown that learners

of different levels have different attitudes towards the effectiveness of online automatic feedback (Zhang and Xu,2019) . The extent to how learners is engaged in corrections is important for the study of AWE feedback. Effective student engagement with AWE feedback leads to improved writing. Student engagement with feedback is a complicated process whereby language proficiency, has influence on how student engage with external feedback on their writing (Zhang,2020). To date, little is known about the differences between the engagement of HP and LP students with the feedback of AWE on their writing in the revision process. To fill such a research gap, this study aims to provide insights into the comparisons of student engagement with AWE feedback on their writing in the revision process between HP and LP college students in China.

The study used the initial framework proposed by Xu and Han (2020), and was further informed by Ellis's (2010), Han and Hyland (2015) and Finn and Zimmer (2012). The conceptual framework allows us to more systematically investigate the different engagement with AWE feedback between HP student and LP students.

3. Methods

3.1 Participants

The participants of this study are 77 non-English major second-year undergraduate students who come from the School of Economics and Management and the School of Geography and Oceanography in a university in an ethnic minority area of China. Students attended the compulsory course "College English" and

used the Juku online writing system for a year. The teaching of "College English" adopts a blended teaching design of offline and online teaching. Due to limited instruction time, writing instruction focused on online teaching. Since the study was designed to explore the differences between HP students and LP students, students were divided into lower, medium and higher groups using 27% and 73% of the total number as distinguishing criteria based on the sum of the final grade data from two previous semesters completed by students, among them 21 individuals with an average final grade of less than 64 are defined as a LP group, while 21 individuals with an average final grade of over 80 are defined as a HP group. Four HP students and four LP students were selected as interviewees. Each student was interviewed individually at the beginning of the second year. HP students include 3 female students and 1 male student, represented by HP1, HP2, HP3, and HP4, respectively; LP students include 2 female students and 2 male students, represented by LP1, LP2, LP3, and LP4, with students aged between 18 and 20 years. Participants are clearly aware of the purpose of the research and data collection methods and are willing to participate and actively cooperate with the research.

3.2 Measurement

During the experimental process of this study, students were required to complete six writing tasks on the AWE system in 2 semesters. Each assignment required the students to complete a total of 120-180 words of essay, with a maximum score of 100 for each. The topic of writing is closely related to the daily life that learners are familiar with. Writing genres include; Narrative writing, expository writing, and argumentative writing. The Juku

online system provides AWE feedback, which includes both general evaluation and detailed feedback. In addition, the system's back-end automatically records evaluation data such as the number of submissions and score changes for each revision, as well as the final results.

The study developed an interview outline based on the RQ2 and RQ3and revised the interview outline through pre-interviews to ensure the effectiveness of the interview questions. Interview questions include:

1. “How did you feel when you revised your draft according to AWE feedback?”

2. “How much time do you usually spend revising a draft? Do you have a specific modification plan?”

3. “What do you focus on modification? Grammar, structure, or content?”

4. “What strategies have you adopted when using the AWE feedback?”

5. “Do you have any comments on AWE feedback or revisions?”

The first question is about the emotional engagement of L2 learners in the AWE feedback; RQ2-RQ5 assess the cognitive engagement of L2 with different levels of proficiency in the AWE feedback. Each student was interviewed face-to -face individually by the first author using a semi-structured interview technique and recorded the interview content.

3.3 Data collection and analysis

The study collected both quantitative and qualitative data. Quantitative data include number of submission, timestamp, and final results of 6 essays by 77 students including 8 interviewees

provided by AWE system; Qualitative data are transcribed texts from interview recordings of 8 participants. In terms of reliability, the research assistant and the author jointly coded and reached a consensus on inconsistent coding through discussion. In terms of validity, the interview content was recorded and transcribed by two authors and cross- checked. The data were processed strictly according to the three-level coding steps of grounded theory: In the open coding stage, try to use the language of the subjects for categorization processing; In the axial coding stage, a spindle category was developed; then determine the core categories and concepts during the selective encoding stage. The research mainly encodes the meaning units of learning and cognitive engagement based on the modified version of O'Malley and Chamot's (1990) classification of metacognitive strategies. Based on relevant research, the study takes the number of submissions and timestamp as measurement indicators of behavioral engagement, the respond to emotional attitudes as a measurement indicator of emotional engagement, and cognitive strategy as a measurement indicator of cognitive engagement (Xu and Han,2020)

4. Results

In light of the data collected from the Juku system and, the interview, the analysis of student engagement in the AWE feedback is carried out using three dimensions: behavioral engagement, cognitive engagement, and emotional engagement.

4.1 Behavior engagement

Behavioral engagement directly reflects students' level of participation in learning activities (Appleton et al., 2008) .The behavioral engagement of students in this study is measured by the number of writing submissions and timestamps completed by learners in 6 writing tasks.

Research data shows that the majority of students can fully rely on AWE feedback to revise their drafts repeatedly, but there are still differences in the average number of revisions made by different levels of students. The HP students exceeded the LP students in the average number of revisions during the first five writing tasks, while the LP students slightly exceeded the HP students in the average number of revisions during the process of the sixth writing modification. Figure 1 shows that the average number of revisions made by both LP students and HP students reached the highest in the sixth writing task, reaching 72 and 71, respectively. The highest modification number of HP students appears later than that of LP students, and the lowest average revision number in both groups appears in the fourth writing assignment (near the end of the first semester, students have spent more time on the final exam). There is a significant difference in the average number of revisions between the two groups of learners. LP students only spend an average number less than 12.5 on modification from the third to fifth writing task, while a minimum average number of 19.75 for HP students appears on completing the fourth writing task.

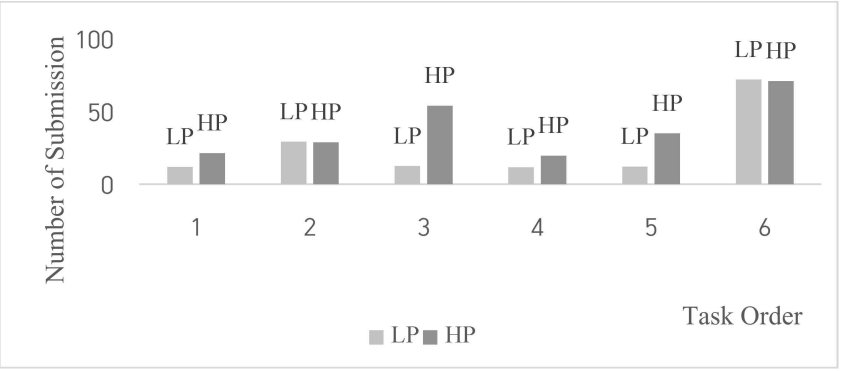

Figure1 Submission Numbers of LP and HP students

Research data indicated that the average time invested in revisions made by the LP students during the modification of the six writing tasks was less than that of the HP students. Figure 2 showed that the average time that LP students spent in revising reached its peak at the second writing task, then suddenly decreased at the third writing task and changed mildly till the last task, while the average time spent on modification made by HP students reached the peak at the third writing task, dropped at the fourth task, and then began to steadily increase. The average investment curve in modification time is consistent with the average number of modifications. More modifications and longer sustained effort indicate that HP students engage more in behavior with the AWE feedback than LP students during the process of modification.

The above results indicate that the average number of revisions and the timestamp in the modification process for AWE feedback by the HP students are significantly higher than that of the LP students. Differences between the engagement of HP and LP students became obvious in the responses to the AWE feedback when there was a multiple drafting opportunity. In

other words, we can draw a conclusion that the HP students engage more on AWE feedback than the LP students in the perspective of behavior engagement.

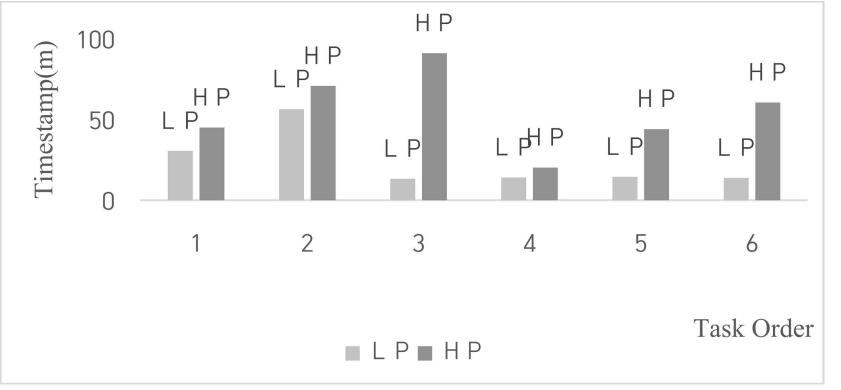

Figure2 Timestamp of HP and LP students

4.2 Emotional engagement

In the process of AWE writing, students' emotional engagement is mainly manifested in their experiences, feelings, and attitudes during the completion of writing tasks. (Henrie et al. ,2015)

Table 1 The coding guide lines for emotional engagement

Emotional engagement	HP (References)	LP (References)	Descriptions
Positive interest	11	9	Teacher correction takes time and AWE immediately completes the feedback, making it an efficient writing

			assistance tool. (HP3)
enjoyment			When the score gradually increases by revising, there is still a sense of achievement (LP2)
confidence			Every time when I revise my essay, I feel like improving a bit in my writing (HP4)
Negative	9	4	I will feel anxious when I
anxiety			put too much effort in revising without the desired results. (HP1)
boredom			It is okay to have a low score at the first draft, but if I lower it, it is annoying (HP2)

In the interview, both groups expressed that the AWE system is helpful in revising an essay and are willing to continue using it. Table 1 indicated that although it is often the case that students are score-obsessed, an increase in the score can also help motivate some students to improve their work (HP4).

On the one hand, both groups generate positive emotional engagement such as enjoyment by improving score when making revision (LP2); it can also generate negative emotional reactions such as boredom (HP1) and anxiety (HP2). The finding indicated that HP students have more negative reactions to AWE feedback than LP students. Due to the significantly higher frequency and time spent on AWE feedback modification, as well as deeper interaction with the system, HP students might have a better understanding of the drawbacks of AWE feedback, such as inaccurate prompts, excessive punctuation, etc., which makes HP

question feedback more than LP students, thus leading to HP students being more prone to negative emotional engagement. Given the lower behavior engagement supported by the analysis of behavior engagement, LP students lack in experience of deep interaction with AWE feedback, little did they feel negative emotional engagement, thus they prefer to ignore AWE feedback as follows: *LP3: "I never doubted the feedback from the AWE system."*

LP1: "The system seems to be fine for now, it is quite convenient to use. If the score is still the same when I revised the errors he listed, I will not make any further corrections."

LP2: "Sometimes I don't know how to modify the draft when the score drops after revision."

While HP students employ a negative emotional response to feedback, they accept the problems and actively identify the cause of the error: described how they felt about the AWE feedback:

HP3: "Sometimes I disagree with the feedback on the errors pointed out, but after carefully examining the error points, I find that I did make the mistake."

HP4:" If I get a low score, I may feel like I am incapable of using rich adjectives in writing."

Data analysis shows that LP students tend to take blind trust in AWE feedback that may hinder them from positive emotional engagement with the draft revision, but rather from low confidence in their English learning ability, believing that they are incapable of modifying the errors pointed out in the feedback and, ultimately only seeking surface knowledge modification such as punctuation and spelling, or just without making any revisions. Lack of confidence seriously affects students' further behavioral

engagement in feedback modification, which in turn affects the singularity of cognitive modification strategies for AWE feedback revision.

4.3 Cognitive engagement

Cognitive engagement is manifested in the use of sophisticated, deep and personalized learning strategies by students (Finn and Zimmer,2012). Cognitive engagement is not readily observable and gauged with more internal indicators, so it must be inferred from behavioral engagement or evaluated from self-report. (Appleton et al.,2008; Zhang and Hyland,2018).

Behavioral engagement is related to important outcomes such as academic achievement, while cognitive engagement is more likely to occur when measuring comprehensive, deep understanding of learning content. Cognitive engagement in the current study is associated with the engagement of students in active revision strategies such as planning, monitoring, and self-regulation and seeking conceptual understanding of feedback rather than surface use of AWE feedback.

Table 2 The coding guide lines for cognitive engagement

Strategies	HP(References)	LP(References)	Descriptions
Planning	9	9	Try to revise the errors provided by the feedback one by one. (HP 4) I have to select some modification feedbacks because I am not yet able to modify all the errors provided by the feedback. (LP3)

Selective attention	11	3	I found that using more clauses and difficult words can improve grades. (HP1) The feedback includes prompt words, so there is no need to consult the Internet. (LP2)
Self-regulation	7	4	I have honed my endurance through repeated revisions and my ability to persevere in the face of setbacks seems to have improved. (HP3) The feedback is not specific enough, so I don't know how to revise. (LP2)
Self-monitoring	8	6	Think carefully what is my weakness in writing when the score is low. (HP2) I will accept 80% of the feedback prompts. When I finish revising by the feedback prompts, I feel that my draft is better than before. (LP4)

Table 2 show that there is no significant difference in cognitive planning strategies between the two groups of students, however, LP learners are significantly less engaged in selective attention, self-regulation, and self-monitoring than HP language learners. The data also indicate that LP learners tend to choose more direct or easy feedback to revise but not seek comprehensive or complex modification. For example, LP learners choose to modify punctuation and spelling while neglecting or avoid revising the grammar or structure of the draft. On the contrary, HP students pay their attention consciously to vocabulary abundance and textual organization.

The specific examples are as follows: Taking the third writing assignment 'A city I have visited' as an example to compare the differences in cognitive strategies between students LP3 and HP3, both LH3 and HP3 submitted 7 times, that is, two students completed six revisions of the draft based on AWE feedback, Table 3 clearly indicated that LP learners tend to choose more direct or easy feedback to revise compared to HP3 learners.

Table3 Selective attention strategies LP3 vs. HP3

	First draft score	Final Draft	Submission times	Misspelling	Vocabulary richness	Verb agreement	Sentence accuracy
L3	56.5	62	7	4	1		
H3	79	84	7	3	6	2	6

HP students, through multiple revision processes, have already completed the integration with the AWE system when completing the second writing task. They have discovered the shortcomings of the AWE system, together with their own sufficient language skills, not only can they judge the accuracy of feedback, but they can also proficiently use various strategies to handle AWE feedback and modification suggestions, thus showing more initiative in cognitive engagement; LP learners, on the other hand, have poor ability to interpret feedback prompts due to a lack of interaction with feedback and insufficient language proficiency. Additionally, HP students are prone to give up in the face of learning difficulties, resulting in a single modification strategy and insufficient active cognitive engagement in AWE writing. The interviews provided more insights in this regard as follows:

LP1: "The low score is frustrating, but it is acceptable because my writing level is not high. Using some sophisticated vocabulary and phrases in the AWE system can easily lead

to higher scores. Also, I think the sophisticated words prompted by the feedback are sure to be better than what I wrote."

LP4: "Sometimes when I modify the draft according to his feedback prompts, it will actually lower the grade, then I will deliberately ignored, making no revisions at all even delete the sentence that may decrease the score."

Meanwhile, HP learners described how they felt about the AWE feedback:

HP1: "Most of the time I will use the feedback prompts, but sometimes I think it is better to use my own."

HP3: "Some long sentences that cannot be accurately corrected without finding hidden error points should not be considered as a problem of the AWE system, but rather a manifestation of my own insufficient writing abilities."

In summary, the HP students adopt deeper strategies when using AWE feedback to finish writing tasks, invest more, and achieve more by AWE feedback writing practice.

5. Discussion

The present study revealed the differences between engagement of HP and LP English learners with AWE feedback in the process of completing a writing assignment. Regarding RQ1, the analysis data provided from the AWE system showed that HP learners were significantly more engaged in behavior in the AWE feedback writing process than LP learners in terms of submission numbers and revision timestamp. Given their status as EFL learner and their language proficiency, LP learners are supposed to make less revisions, especially when AWE feedback

was provided implicitly. The finding supports the conclusions that indirect AWE feedback tend to create obstacles to behavioral engagement for less proficient students (Zheng and Yu, 2018).

Regarding RQ2, the interview data analysis demonstrated that HP learners have more negative reactions to emotional engagement in the AWE feedback than LP learners. Data analysis showed that HP students pursue more effective modification and invest more time and energy in the revision process, and they recognize more shortcomings of the AWE feedback; thus, sometimes they felt more frustrated. Although they have fewer comments on AWE feedback or revisions during interviews, when revising their drafts in response to feedback, LP students even seemed to feel frustrated more than HP students because they were aware of their lower linguistic competence. LP students still might be in the early stage of operating the AWE feedback when they finished the fifth writing task (the highest average revision number 72 appears in the sixth task compared to the fifth task 12.25), and they put less effort and achieved less in the revision process. (Average score is $M_{LP}=77.2<M_{HP}=85.3$). This finding may also imply that in the early stages of operation, the advantages of AWE feedback revision and continuous improvement in scores encourage students to be curious or encouraged to choose positive emotional engagement, as their interaction with feedback continues to deepen, the drawbacks of feedback (such as indirect and weak operability) reduce their trust in feedback, leading to negative emotional engagement (Xu and Han, 2020) .

RQ3 investigated whether HP students engage more in cognition in AWE feedback than LP students. The result indicates that HP students have a more active cognitive

engagement in AWE feedback modification, while LP learners adopt a relatively single strategy in modification. The lack of linguistic knowledge therefore affects LP students in correcting errors and discouraged them from doing so; thus, their cognitive engagement was reduced while higher proficiency enabled HP students to engage cognitively and encouraged their motivation. Extensive cognitive engagement should involve using sophisticated, deep, and personalized learning strategies; students who have extensive cognitive engagement are likely to be those who are experiencing deep learning (Zheng et al., 2020). HP students certainly seemed to be motivated and willing to take a range of cognitive and metacognitive actions to learn (Zhang and Hyland, 2018). The HP students in the present study made more efforts to improve the quality of their writing and deploy more revising strategies, while the LP students manifested their avoidance in the process of modification. Superficially, the lower cognitive engagement of LP students generated by the lack of linguistic knowledge, but actually it was the beliefs of learning English that affect the distinction of cognitive engagement between LP and HP students. Students are more likely to exert effort in academic tasks if they believe that they have the capacity to succeed (Greene,2015; Milligan et al.,2013). In the interview, all LP students admit that they will avoid complex revision because they question their ability to fully process the AWE feedback. Our findings add support to Ferris (2010) who found that the beliefs and goal of language learners can influence the extent to which they engage themselves with the course in general. Since LP students sought little extra help and took superficial strategies in processing the AWE feedback and revising draft, the confusion could not be resolved, and thus negatively influence their draft revisions and

writing development. If LP students were not fully engaged with cognitive feedback from AWE, they were less likely to benefit from it.

The above conclusions have certain implications for enhancing student engagement with AWE feedback.

Firstly, in the process of using automatic feedback to assist in L2 writing, teachers should provide targeted guidance based on learners' different levels of English proficiency. For LP students, the amount of corrective feedback overwhelmed them felt helpless about how to address the problems. Teachers should give examples to illustrate the difficult part of the AWE feedback; therefore, reduce confusion and enhance cognitive engagement during the early stages of using automatic feedback. Since the research found that the participants' fewer behavioral engagement led to negative impact on their understanding of AWE feedback, teachers may guide and encourage students to gradually increase the number of revisions, improve the ability to interpret feedback, and adopt deeper revision strategies step by step, then ultimately improve the cognitive engagement of LP students. For HP students, who are more prone to negative emotional engagement according to this study, teachers should take an emotional engagement intervention to reduce the negative emotions that students may experience after losing their freshness in AWE feedback after they completed several writing tasks, then encourage HP students to have reasonable doubts about AWE feedback, motivate them to try different modification strategies, and improve HP students' cognitive engagement and reflective ability.

Secondly, our findings suggest that teachers should provide their students training on how to respond to AWE emotionally. Through training, students should be aware that AWE feedback

is provided to help them build self-edit skills and eventually improve their writing ability. This may be helpful for improving the emotional and behavioral engagement of writing activities.

Thirdly, teachers can also help students with lower L2 proficiency get scaffolding from students with higher L2 proficiency by discussing the content of AWE feedback with classmates within offline class groups in the initial stages of using AWE system. In this way, students with lower L2 proficiency may enhance their cognitive and behavioral engagement.

Overall, the present study proved that there is a multidirectional interaction among the three types of engagement and a bi-directional interaction between the use of strategies and deep engagement in both HP and LP students (Zhang and Hyland ,2018).

6. Conclusions

This study explored the different engagement between HP and LP students with AWE feedback in the Chinese EFL context. Adopting both quantitative and qualitative approach, it analyzed data obtained from two groups of 8 university students to study how these students engaged differently in terms of behavior, emotion, and cognition to the feedback provided by the AWE system on their English writing. The findings indicated that the emotional engagement of the LP students with the AWE feedback was relatively positive, but their behavioral and cognitive engagement was not as extensive as that of the HP students. LP students may exert negative influences on their cognitive and behavioral engagement with AWE feedback. In light of the

findings, implications are provided for improving the engagement of students in AWE feedback.

Despite the possible contribution of the present study, the findings should be considered its limitations. First, it is difficult to generalize the findings of a case study that covers a limited spectrum of context. L2 teachers who worked with the AWE system may consider the implications generated from its findings in relation to their own AWE practices. A large qualitative study may be needed to investigate more students and looks at students' engagement with different automatic systems. Future research can examine more changes in students' engagement in different automatic systems and scrutinize how to increase student engagement in English learning, especially for the LP students.

[ABSTRACT]

Engagement Differences between Higher-Proficiency Students and Lower-Proficiency Students with Automated Writing Evaluation Feedback

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How non-English majors deal with automated writing evaluation (AWE) in blended learning is the key to improving their writing skills. This study has investigated 77 students from a university in China and took a year to collect and compare their writing engagement with automatic evaluation feedback. The students were divided into different groups based on the final course performance of the previous two semesters. 4 higher and 4 lower proficiency students among them were interviewed to explore how they engaged differently in behavior, emotion, and cognition with AWE feedback in EFL writing. The differences between the two groups of emotional and cognitive engagement of students with the AWE feedback were studied through semi-structured interviews. The study has found that while the emotional engagement of students with lower proficiency in the AWE feedback was relatively positive, the behavioral and cognitive engagement of students with higher proficiency was much more extensive than that of students with lower proficiency. It has also found that students' lower English proficiency may negatively influence their cognitive engagement

with AWE feedback. The research findings provide feasible suggestions for effective application of the AWE system to improve the writing ability of learners of different levels of proficiency in EFL teaching.

Key Words : Automatic Writing Evaluation, feedback, engagement, proficiency, behavior, emotion, cognition

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투고일: 2023.11.22 심사일: 2023.12.08 게재확정일: 2023.12.13