Reform of English Writing Teaching Method Under the Background of Big Data and Artificial Intelligence

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ABSTRACT

In the new era of informatization, big data, and artificial intelligence, the education field has also set off a wave of informatization development of English education. Teaching writing has always been the focus and challenge of English teaching, but there are various problems in English writing teaching in China. Problems such as difficulty in writing, vague expression, unclear main points, simple sentence structure, low vocabulary, etc. How to effectively carry out English writing teaching courses is worthy of our serious consideration. Based on this, this article studies the reform of English writing teaching methods under the background of big data and artificial intelligence. Survey data shows that only 10.53% of teachers often combine online teaching resources with English writing teaching, 25% of teachers have hardly used them, and 64.47% of teachers occasionally use online teaching platform resources. This shows that the reform of English writing teaching methods needs to start from the aspect of education informatization.

KEYWORDS

Big Data, Classroom Teaching, English Writing, Informatization Development, Serious Consideration, Multi-Angle Investigations, Teaching and Informatization

INTRODUCTION

With the continuous development of education informatization, my country’s education field has gradually promoted “artificial intelligence + education”. This trend has gradually made online education platforms widely used in various disciplines (Gannon, et al., 2021; Lim et al., 2017). At present, the English writing ability of Chinese students still needs to be improved. Problems such as difficulty in writing, vague expression, unclear main points, simple sentence structure, low vocabulary, and poor readability have become common problems in students’ English writing (Zheng et al., 2021; Thomas H et al., 2019). Big data helps educators in trying to keep track of their student’s progress. The external purposes in the understanding of personal and group performance. The statistical study of individual grades may assist educators in better understanding pupils’ points of focus. In the context of big data and artificial intelligence, the way to incorporate new technologies into English writing teaching has been highly valued by the education sector (Brian et al., 2020; Jeremy et al., 2019). Better communication, becoming a great writer, helping in deep and independent thought, and improving memory are all advantages of English writing approaches. The learning approaches subsequently assist in improved memory function, cognitive agility, and problem-solving abilities.

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RELATED WORK

In the research on English writing, many scholars have conducted multi-angle investigations. For example, Nes discussed whether the explicit teaching method of critical thinking can improve the critical thinking ability of higher education English learners. Wei researched the application of cloud computing and speech recognition technology in English teaching. Rao took the primary schools in East Asia as the research object, studied the challenges faced by primary schools in the area, and proposed countermeasures to the challenges (Wang et al., 2017; Zhang et al., 2021; Nes et al., 2019). Explicit teaching is a vital teaching approach that includes a number of processes where the teacher defines the learning goals and performance criteria. It enables pupils to see the intentions and objectives. Explicit teaching separates learning into manageable pieces. It reduces a student’s cognitive load, or the number of cognitive resources required to process data. Working memory is allowed when the cognitive burden is reduced. This is important because acquiring new skills requires a great deal of working memory. Therefore, relying on the background of “artificial intelligence + education”, this article explores the reform and innovation of English writing methods to promote the construction of English teaching informatization. The artificial intelligence will manage the good opportunities of language recognition for the teaching methods and the functions for the development of the teaching model for the background of the big data analytics for the traditional learning method here in this paper, both the online teaching and the traditional teaching methods are made to form in the artificial intelligence concept. The difference between the traditional teaching and online teaching method is that the traditional method is built on set schedules that require students and teachers to be present in the same geographical area at the same time. There are numerous ways to break this rigidity in online learning, including face-to-face online classes using virtual classrooms. The online teaching method will make good development in the network platform to produce the big data to manage the teaching effectiveness of the teacher and the listening power of the students here, the ability of the teacher and the students will be analyzed by the big data analysis method. Here, artificial intelligence makes the teaching reform for extensive data analysis.

This article uses questionnaire surveys, interviews, and classroom observation methods as research methods, and takes high schools in L City as the research object to investigate the current situation of the city’s English writing classroom teaching and find out the existing problems. Then it analyzes the causes of the problems from the aspects of teachers, schools, and students. Finally, it puts forward the reform methods of English writing teaching under the background of the new era, from strengthening teachers’ information-based English writing teaching ability construction and focusing on cultivating students’ autonomous learning ability. The proposed system is designed to analyze the current scenario of English writing classroom teaching in the school sector by using the questionnaire as a tool to collect information for finding the current problem.

The remaining of the article is as follows. Part 1 predicts the Introduction section, and Part 2 describes the Investigation and Design of the Current Situation of English Writing Teaching, Part 3 enumerates the Current Situation of English Writing Teaching, Part 4 discusses the Reform of English Writing Teaching Methods under the Background of Big Data and Artificial Intelligence, Part 5 ends with the Conclusion.

INVESTIGATION AND DESIGN OF THE CURRENT SITUATION OF ENGLISH WRITING TEACHING

Research Objects

The research object of this article is the English teachers and students at the senior high school in L city and explores the current situation of the English writing classroom teaching in the senior high school of L city.
Data Collection

Using the online questionnaire tool to launch questionnaires online is considered one of the important processes for collecting the data for the survey. The requirements for filling out the questionnaire are high school teachers and students in L City. A questionnaire is a research tool that contains a series of questions that are used to gather data from respondents. These devices use an interview-style format and incorporate both written and oral questions. After recovery, the questionnaires with incomplete answers and no reference value were eliminated, and 76 valid questionnaires were obtained for teachers and 264 student papers. The effective rate of the questionnaire recall is 100%, and the questionnaire has a reference value.

Interview Method

A sample survey of English teachers in 5 high schools of different grades in City L was conducted, and 5 English teachers in the region were randomly selected to gain an in-depth understanding of their views on English writing teaching courses, and to pay attention to the status quo of individual teachers’ information-based English writing teaching design capabilities. Understand its influencing factors, the interview conducted with the individual teachers were completely recorded as evidence and also to evaluate the data which is collected for the understanding. Students gain information and knowledge through an information-based approach. It is teacher-centered, and it requires a great deal of instructor input in providing pupils with a variety of text contents, such as historic, economic, social, and social circumstances. Database storing of the teaching strategies represents the courseware materials that are integrated with the AI classroom, retrieved from the database. Overall, the data is stored in the big data and retrieved by using the big data techniques.

Classroom Observation Method

In the course of classroom observation, according to the location and teaching situation, 5 high schools of different levels were selected in L city, including the performance of 3 public schools and 2 private
schools teachers environment learning is evaluated by observing the teaching process about English, it is considered as the quantitative method of analysis this is completely recorder to measure the teaching behavior of the teacher. Due to the relatively tight homework in the third grade, classroom observation will not be conducted. Therefore, this study selected two teachers from each of the five schools and followed up and observed the content of a teaching unit in the classroom after obtaining the teacher’s consent. Among them, each unit has 4 lessons and a total of 16 lessons are observed.

**Questionnaire Statistics**

The data of this study was entered into an EXCEL spreadsheet, and SPSS software was used to analyze the collected questionnaire data. SPSS is for the Statistical Package of Social Sciences, but it’s a statistical data analysis program utilized by a range of scholars. SPSS is a software package intended for data mining and statistical analysis in sociology. Among them, the count data is expressed as a percentage, and the Pearson chi-square test is implemented to ensure its credibility and validity. The Pearson chi-square test is a statistical test that is used on collections of categorical information to investigate whether probable any observed difference in them is due to chance. If the calculated chi-square value is larger than the chi-square significance threshold, your rejection of the null hypothesis. If your determined chi-square value is smaller than the chi-square significance threshold, your hypothesis is “fail to reject”. The Chi-square test is used to see whether an observed distribution is probably due to chance. It’s also regarded as a goodness of fit statistic because it evaluates how well the actual data distribution fits the expected distribution if the variables are non - stationary. For the IxJ form questionnaire, I represents the question, J represents the item, and the Pearson chi-square test is shown in formula (1):

$$x^2 = \sum_i \frac{(O_i - E_i)^2}{E_i}$$  

(1)

Among them, $O_i$ represents the observed frequency of the i-th grid, $E_i$ represents the theoretical frequency, and $\sum_i$ represents the sum of all the grids. For the data of each question, the corresponding pearson chi-square test can be expressed as:

$$Z_{CHI} = \sum_{i=0}^{2} \left( \frac{r_i - E_i}{r_i} \right)^2 \frac{n}{n} + \sum_{i=0}^{2} \left( \frac{s_i - E_i}{s_i} \right)^2 \frac{n}{n}$$  

(2)

Among them, $r_i$ represents the questionnaire question of a certain dimension, $s_i$ represents the questionnaire question of the corresponding dimension, and $n$ represents the total sample size. Under the null hypothesis, $Z_{CHI}$ obeys a central chi-square distribution with 2 degrees of freedom. The algorithm for the chi-square test is started by initializing the input variable for representing the grids. Then the formula is applied to the grid for each question, subsequently, the following condition is applied to the if condition as if (hypothesis = Null). Finally, the calculation for the chi-square test is identified.

Algorithm for chi-square test

**Input:** I - question, J - item, $s_i$ - frequency of ith grid, $E_i$ - theoretical frequency, $\sum_i$ represents grids
Compute $x^2$ as

$$x^2 = \sum_i \frac{(O_i - E_i)^2}{E_i}$$

For data of each question
If (hypothesis= Null)
Compute Pearson chi-square test as

$$Z_{cm} = \sum_{i=0}^2 \left( \frac{r_i - rn_i / n}{rn_i / n} \right)^2 + \sum_{i=0}^2 \left( \frac{s_i - sn_i / n}{sn_i / n} \right)^2$$

End if
End for
Return, chi-square distribution with 2 degrees of freedom

THE CURRENT SITUATION OF ENGLISH WRITING TEACHING

Teaching Effect
At present, the results of the questionnaire on the main problems in the teaching of English writing in senior high schools are shown in Table 1. Among the 76 teacher papers, 40 teachers believe that “teaching materials are single”, accounting for 52.63%; 17 teachers believe that “overemphasis on higher education Exams affect teaching”, accounting for 22.37%; 10 teachers think “students are not interested”, accounting for 13.16%; 9 teachers think “teaching methods are improper”, accounting for 11.84%

Table 1. Problems in English writing teaching

<table>
<thead>
<tr>
<th>Options</th>
<th>Problem</th>
<th>Proportion (%)</th>
<th>Number of people</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Single teaching materials</td>
<td>52.63</td>
<td>40</td>
</tr>
<tr>
<td>B</td>
<td>Improper teaching method</td>
<td>11.84</td>
<td>9</td>
</tr>
<tr>
<td>C</td>
<td>Students are not interested</td>
<td>13.16</td>
<td>10</td>
</tr>
<tr>
<td>D</td>
<td>Excessive emphasis on higher examinations affects teaching</td>
<td>22.37</td>
<td>17</td>
</tr>
</tbody>
</table>

Figure 2. Problems in English writing teaching
Figure 2 shows, problems in English writing teaching, in this grid representation is based on data, options, number of people, and proportion. Combining Figure 1 and interviews, it is found that the current English writing teaching test questions in City L mainly come from textbooks and previous real questions, while the teaching content is mainly textbooks. Only a small number of teachers use the Internet to collect multimedia (pictures, videos, audio) and use it in the classroom. A small number of teachers think that improper teaching methods are one of the problems. In the classroom teaching of English writing, the application of teaching methods will have advantages and disadvantages. The teaching model should be based on the concept of combining students’ language ability and learning ability, rather than overemphasizing their own deficiencies in teaching. Only by focusing on students’ actual writing shortcomings and providing effective guidance around students’ writing shortcomings can the quality of teaching be effectively improved.

**Students’ Attitudes Towards English Writing**

The results of “Are you interested in English writing” are shown in Table 2. Among the interviewed students, 88 are interested in English writing, accounting for 33.33%; 59 students are very interested, accounting for 22.35%; There are 21 students who are not interested in English writing at all, accounting for 7.95%.

<table>
<thead>
<tr>
<th>Options</th>
<th>Problem</th>
<th>Proportion (%)</th>
<th>Number of people</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>very interested</td>
<td>22.35</td>
<td>59</td>
</tr>
<tr>
<td>B</td>
<td>interested</td>
<td>33.33</td>
<td>88</td>
</tr>
<tr>
<td>C</td>
<td>Not very interested</td>
<td>36.36</td>
<td>96</td>
</tr>
<tr>
<td>D</td>
<td>not interested</td>
<td>7.95</td>
<td>21</td>
</tr>
</tbody>
</table>

**Table 2. Are students interested in English writing**

Figure 3 shows are students interested in English writing, in this grid representation based on data, options, number of people, and proportion.
It can be found from Figure 2 that in English writing courses, students still have the problem of low interest in English writing. It is precise because students are disgusted and even fearful of English writing that their writing purpose is not voluntary, but simply to cope with the tasks assigned by the teacher, to complete the test, or to complete the writing under the supervision and supervision of the elders. Whether it is a key middle school or a general middle school, whether boys or girls, most of them have varying degrees of fear of writing. This is reflected in their psychological reflection when writing. Only 22.35% of the students are very interested and have a pleasant feeling about writing.

**Application Frequency of Online Teaching Platform Resources**

At present, the online teaching platforms frequently used by high schools in L City include micro-courses, learning power, MOOC, etc. A massive open online course is a methodology for distributing learning online content to anyone who wants to take the class, with really no restriction on the number of people who really can participate. A MOOC is a public course of study which is made available to a large number of people via the Internet. The results of the “frequency of application of the English writing teaching network platform” are shown in Table 3. Only 10.53% of teachers often teach online the combination of flat resources and English writing teaching, 25% of teachers have hardly used it, and 64.47% of teachers occasionally use the resources of the online teaching platform.

**Table 3. Application frequency of online teaching platform resources**

<table>
<thead>
<tr>
<th>Options</th>
<th>Problem</th>
<th>Proportion (%)</th>
<th>Number of people</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>frequently used</td>
<td>10.53</td>
<td>8</td>
</tr>
<tr>
<td>B</td>
<td>Occasionally use</td>
<td>64.47</td>
<td>49</td>
</tr>
<tr>
<td>C</td>
<td>almost none</td>
<td>25</td>
<td>19</td>
</tr>
</tbody>
</table>

**Figure 4. Application frequency of online teaching platform resources**
Figure 4 shows, the application frequency of online teaching platform resources, in this grid representation is based on data, options, number of people, and proportion.

It can be seen from Figure 3 that the resources of the online teaching platform in City L have been integrated with English writing courses. Most teachers have begun to use the online teaching platform for English writing teaching, but they do not use it frequently. The application frequency of online teaching resources by teachers is low. The use of a virtual whiteboard, the flipped classroom method, and the recording of displays and videos using various tools are some of the techniques utilized to improve online teaching methods. Through interviews, it is found that the main reasons for this are: students have many tasks, teachers have heavy burdens, the production of multimedia teaching courseware takes a long time, and the degree of resource sharing among teachers is not high. Multimedia courseware is the use of multimedia to show the teaching and classroom setting, and multimedia cognitivism helps explain the human from the training algorithm of the multimedia material learning process. Multimedia courseware utilizes a multimedia model to determine the multimedia.

**Difficulties for Teachers to Use the Online Teaching Platform**

Regarding the problems or difficulties that teachers have in using the online teaching platform to teach English writing, the teachers find it difficult to analyze the student’s learning ability, students’ attention towards the subject, and poor internet connectivity. Microteaching, in which you divide your students into separate groups or even work with one of these students for a short period of time, is an option to macro teaching, which includes lecturing the rest of the class. Traditional education draws a larger number of pupils. The results are shown in Table 4. 47 teachers expressed that they are not familiar with the recording micro-class technology, and the production level is limited, accounting for 61.84%; they think “content and form” There are 29 “single” teachers, accounting for 38.16%; 8 teachers are “questioned by parents”, accounting for 10.53%; 10 teachers think that “students learn shallowly” and cannot study in-depth, accounting for 13.16%. Shallow Machine Learning’s extraction of features is a manual process that requires domain knowledge of the data we’re studying from. To put it differently, “Shallow Training” is a sort of computer vision wherein we learn from data that has been specified using pre-defined features.

<table>
<thead>
<tr>
<th>Options</th>
<th>Problem</th>
<th>Proportion (%)</th>
<th>Number of people</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Not familiar with the recording, limited production level</td>
<td>61.84</td>
<td>47</td>
</tr>
<tr>
<td>B</td>
<td>Single in content and form</td>
<td>38.16</td>
<td>29</td>
</tr>
<tr>
<td>C</td>
<td>Parents questioned</td>
<td>10.53</td>
<td>8</td>
</tr>
<tr>
<td>D</td>
<td>Shallow learning</td>
<td>13.16</td>
<td>10</td>
</tr>
</tbody>
</table>
Figure 5 shows the difficulties of teachers using online teaching platforms, in this grid representation based on data, options, number of people, and proportion.

Combining Figure 4 and interviews, it is found that there are still most teachers who are not good at making English online writing course videos, pictures, and texts, and do not use screen recording software. Even after online training, teachers are not particularly sure about how to make online courses, resulting in single writing materials such as videos, graphics, and audio, and lack of novelty.

REFORM OF ENGLISH WRITING TEACHING METHODS UNDER THE BACKGROUND OF BIG DATA AND ARTIFICIAL INTELLIGENCE

AI artificial intelligence is the technology that enables the machine to simulate the intelligence of a human. Big data is a large collection of data with a huge amount, and it will also be varied in different fields. Hence AI needs a large amount of data from big data technology for the process of effective learning and evolution process. AI assists teachers in improving their game by providing students with all the information they need. It also allows educators to create content that’s also suited to the specifications of their pupils, ensuring personalized learning. It automates tasks so that instructors have more time to teach and have a better impact on their students. AI technology provides the educational software with a personalized method of learning for individuals and it contains an adaptive learning program for students, this method is the most important in the field of education because it provides a comfortable learning process by improving one knowledge. Adaptive learning is a teaching and learning methodology that attempts to customize classes, reading, exercise tasks, and assessments to each student’s existing ability and achievement. As big data provide massive data it will be helpful to the learners to improve their knowledge by huge content related to English learning and writing.

Problems Encountered in the Informatization of English Writing Teaching

1. Student autonomy needs to be improved.

In English writing online teaching, some self-study content students need to complete independently at home and practice repeatedly to consolidate. In the English writing course, students will achieve the understanding, application, analysis, evaluation, and creation of the knowledge they have learned.
through a variety of teaching activities. The students with autonomous learning skills the critical thinking are encouraged to develop their individual skills. Students including an autonomous learning approach have the ability to regulate their learning activities — they have command over their learning processes. It increases the learner’s motivation and makes learning more effective. It gives kids more opportunities to communicate in English in a non-native environment. It is intended to meet the individual needs of students. Therefore, whether students can complete self-study tasks on time is one of the determinants of the depth of classroom teaching (Wei L et al., 2019; Rao Z et al., 2019). If students have strong self-learning ability, they will achieve twice the result with half the effort in actual English writing teaching. However, through interviews, it is found that some students find various excuses for not being able to complete the English writing task of self-study before class. This is also the reason why parents question the effect of online teaching.

2. Students are not willing to participate in online teaching.

When conducting online teaching of English learning courses, teachers may encounter students who are unwilling to participate in the teaching of the class. For example, students are unwilling to ask questions, speak and discuss in class. The teachers were indifferent to the students’ questions in the classroom. However, in online teaching, students are required to cooperate and explore actively speak, which can reflect the value of flipped classrooms (Ho W et al., 2020; Qi, M et al., 2021).

3. Challenges to teachers’ subject literacy and information literacy.

The production of high-quality online English writing teaching videos requires teachers to have good information technology literacy and high subject literacy (Nan, X et al., 2021). Therefore, for teachers, making high-quality teaching micro-videos is not a simple matter. Information literacy is considered an important factor as it promotes problem-solving ability by questioning and retiring answers from experts. From the production of micro-videos, the distribution of micro-videos, the design of autonomous learning tasks to the design of classroom teaching, teachers need to have high information literacy and subject literacy and be able to use a variety of computer software proficiently. The application of high-quality English writing teaching videos in English writing courses not only requires teachers to be particularly familiar with the content of the teaching subjects but also requires teachers to have high educational information literacy (Huang et al., 2021; Liontas et al., 2018).

**Strengthen the Construction of Teachers’ Information-Based English Writing Teaching Ability**

1. The school regularly cultivates teachers’ comprehensive professional ability.

The training of teachers’ comprehensive professional ability includes two aspects: professional level and the ability to use information technology. With the development of educational informationization, teachers can only improve their own ability to use information technology flexibly, so that online education platforms can become powerful assistants in English writing teaching activities (Wang et al., 2018). At the same time, teachers should continue to strengthen their professional knowledge in order to cultivate modern-oriented talents. Therefore, schools should regularly arrange for teachers to train their deep learning capabilities, including training in educational concepts and professional qualities, as well as training in information technology capabilities and flexible teaching methods.

2. Choose appropriate information technology tools for different teaching designs.
English writing teaching courses have different curriculum designs. Therefore, teachers should choose appropriate information technology tools according to the characteristics of different teaching designs. In the course introduction link, micro-classes, videos, etc. are mainly used to create situations to stimulate learning motivation (Khalil et al., 2020). In the writing application stage, a learning platform that is conducive to student communication and interaction should be selected. In the evaluation process, we mainly choose some systems that can automatically correct and review student essays. In addition, there are many different kinds of English writing learning APPs, such as English fun dubbing APP, English writing automatic correction APP, etc. Teachers can also choose according to different lesson types.

3. Appropriate use of information technology to strengthen supervision of students’ online learning.

The new curriculum standard emphasizes that the teaching of any subject must integrate information technology with advanced education and teaching concepts to improve teaching effects. However, it should be noted that the proper use of information technology will get twice the result with half the effort, which is conducive to classroom teaching. Conversely, excessive use will result in half the effort, take up a lot of classroom time, and reduce teaching efficiency. The same is true for new English teaching. Information technology is only a means to assist the teaching of English writing and cannot completely replace classroom teaching. Students’ extracurricular learning behaviors should be jointly supervised by teachers and parents. Parents should urge students to study and promptly report online learning status to teachers. Teachers should specify the specific submission time of the output results, and test the effect of online English writing learning through questions, tests, etc. in class (Wu et al., 2017; Lee et al., 2017; Aliyev et al., 2017; Sui et al., 2021; Olson et al., 2017; Steinlen et al., 2018).

4. Pay attention to the diversification of the content and the diversification of the English composition materials.

In English writing teaching courses, the choice of English composition materials is very important. On the one hand, the content of English composition materials should be suitable for selective learning by students of different levels. Teachers should select high-quality English composition materials to facilitate students to learn the writing style, article structure, and logical relationships among them. English composition materials include background knowledge introduction, textbook original texts, composition essays, exercise materials, and related topic development materials. However, due to the limited classroom teaching time, English composition materials should be based on the textbook content and real topic composition essays. Other content is auxiliary. On the other hand, different forms of English composition materials have very different effects on students’ learning motivation. Teachers can enrich English composition learning materials through pictures, videos, audios, multimedia courseware, tutorial plans, etc., mobilize students’ multiple sensory experiences, and promote students’ learning (Aliyev et al., 2017).

Focus on Cultivating Students’ Autonomous Learning Ability

1. Improve students’ self-study awareness.

Teachers should strengthen students’ ideological work, strengthen the importance of the self-learning ability of students for personal development, and encourage, motivate and supervise students to improve their self-learning consciousness. At the same time, teachers can formulate new rules for learning English writing. All the links of learning can get a certain score (Karaca et al., 2021; Bozkurt et al.,
When the score reaches a certain level, they can upgrade to obtain different grades and issue corresponding certificates and obtain gifts of corresponding grades. This kind of English writing learning game rules to a certain extent motivates students to complete English writing tasks on time and independently.

Table 5. Improve students’ self-study awareness

<table>
<thead>
<tr>
<th>Ideological work</th>
<th>Self-learning ability</th>
<th>Personal development</th>
</tr>
</thead>
<tbody>
<tr>
<td>59.176</td>
<td>1.14</td>
<td>55.981</td>
</tr>
<tr>
<td>53.166</td>
<td>1.01</td>
<td>51.149</td>
</tr>
<tr>
<td>51.795</td>
<td>0.98</td>
<td>45.521</td>
</tr>
<tr>
<td>51.827</td>
<td>0.97</td>
<td>41.682</td>
</tr>
<tr>
<td>52.542</td>
<td>0.98</td>
<td>41.895</td>
</tr>
<tr>
<td>53.385</td>
<td>1.00</td>
<td>41.478</td>
</tr>
<tr>
<td>53.585</td>
<td>1.00</td>
<td>41.543</td>
</tr>
</tbody>
</table>

Table 5 shows, improve students’ self-study awareness, in this table representation based on ideological work, self-learning, personal development.

Figure 6. Improve students’ self-study awareness

Figure 6 shows improved students’ self-study awareness, in this grid representation based on ideological work, self-learning, personal development.

2. Encourage students to participate in the teaching of English writing in a hybrid network + online mode.

Teachers should positively evaluate students’ behavior before and in the English writing course, so as to encourage students to participate in the online + online mixed mode of English writing teaching courses. In addition, the teacher’s evaluation of students should be specific and objective, focusing on commending students, making students happy and successful, and increasing students’
interest in English writing. Teachers should design an English writing classroom evaluation program and use multiple evaluation methods to stimulate students. In addition, teachers can set up incentive mechanisms, such as a point system. Students participating in every aspect of English writing teaching activities, such as completing pre-class self-study tasks and discussing speeches, can get a certain score. In this way, students are mobilized to participate in the learning of English writing courses.

Table 6. Encourage students to participate in the teaching of English writing in a hybrid network + online mode

<table>
<thead>
<tr>
<th>Online mode</th>
<th>Teaching courses</th>
<th>Evaluation system</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>41.734</td>
<td>1.08</td>
</tr>
<tr>
<td>2</td>
<td>37.897</td>
<td>0.96</td>
</tr>
<tr>
<td>3</td>
<td>35.843</td>
<td>0.89</td>
</tr>
<tr>
<td>4</td>
<td>35.673</td>
<td>0.89</td>
</tr>
<tr>
<td>5</td>
<td>35.568</td>
<td>0.88</td>
</tr>
<tr>
<td>6</td>
<td>35.802</td>
<td>0.90</td>
</tr>
<tr>
<td>7</td>
<td>36.381</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Table 6 shows, encourage students to participate in the teaching of English writing in a hybrid network + online mode, in this table representation based on online mode, teaching courses and evaluation system.

Figure 7. Encourage students to participate in the teaching of English writing in a hybrid network + online mode

Figure 7 shows, encourage students to participate in the teaching of English writing in a hybrid network + online mode, in this grid representation based on online mode, teaching courses and evaluation system.

CONCLUSION

The fourth industrial revolution brought about by artificial intelligence and big data technology is having a profound impact on the teaching of English writing, and it is also gradually affecting the
learning mode of students and the education model of teachers. The era of technological change in education is coming. In the face of such a background, this article investigates the current situation of English writing teaching in senior high schools in L City and finds that there are problems such as students’ low interest in English writing, low frequency of teachers using online education resources, and lack of educational information technology capabilities. Then it explores the reform and innovation of English writing teaching in the era of artificial intelligence and puts forward suggestions on the application of artificial intelligence and big data technology in English writing teaching: one is to strengthen the construction of teachers’ information-based English writing teaching ability; the other is to focus on training Students’ autonomous learning ability. The research in this article will help English teachers change their thinking in English writing teaching and better promote the development of English writing teaching.

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REFERENCES


