The Role of the Dalton Plan-Based Instruction in Enhancing Learner Autonomy and Reading Proficiency for Chinese College English Students

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Abstract
This study explored the role of the Dalton Plan-based instruction in improving learner autonomy and reading performance among non-English major university students in China. A quasi-experimental design was utilized to reach the goal. The Dalton Plan-based instruction in this study consists weekly individual sessions and monthly class meetings, which were held on the basis of the problems reported in students' self-reports in accomplishing their reading assignments. The experiment was undertaken in one university characterized by students from multi-ethnic background in China. The participants were 62 second-year non-English major students from medical college of the university, thirty-two of them makes the experimental group, the rest 30 composes the control group. The experimental group received the Dalton Plan-based instruction and the control group received conventional classroom instruction. The quantitative data of Autonomous Learning Scale and reading tests were collected and analyzed to answer the research questions. The results of this study revealed that the Dalton Plan-based instruction was more conducive to building learner autonomy and improving reading proficiency than conventional instruction, and there's a moderate positive relationship between the learner autonomy and reading proficiency among College English learners under the Dalton Plan-based instruction.

Keywords: the Dalton Plan-based instruction, learner autonomy, reading performance

1. Introduction
Research on English instruction and learning has shown that teachers must equip their students with 21st-century skills (Min et al., 2023; Chandran et al., 2022; Albakri et al., 2021; Sarudin et al., 2019). Additionally, observing students' behavior and interests is crucial for helping them improve their language skills (Zulazli, 2024; Saputra et al., 2023; Tahir et al., 2021; Tahir et al., 2020; Prasangani, 2019; Bakara et al., 2019; Omar & Kussin, 2017; Ismail et al., 2012; Ismail et al., 2010). Learner autonomy, a vital 21st-century skill, has garnered significant attention in the educational setting, especially in English teaching. Reading is one skill that students need to develop independently to improve their academic performance. Therefore, educators must provide lessons that promote student autonomy. The Dalton Plan is one instructional form that educators have used to enhance learner autonomy in students.

1.1 What is the Dalton Plan?
The Dalton Plan was an unconventional instructional approach. It diverges with traditional classroom teaching in empowering the students more freedom in making choices related to their time management, pace of learning, and ways of learning. The core of the Dalton Plan is assignment, which was thought to be able to function as a good teaching assistant if it’s compiled reasonably by Parkhurst, the originator of the Dalton Plan (Parkhurst, 1922). In her opinion, traditional classrooms teach students too much, which is detrimental to students' initiative and enthusiasm in learning, leaving little chance for students to make their own decisions related to learning. It’s also not conducive to the cultivation of students’ responsibility for their learning and collaboration among students. The Dalton Plan transformed what the teacher is going to teach to students into what the students are going to learn by themselves in the form of assignment contracts, it actually shifts the responsibility of learning to the shoulders of the students and thus makes the students become owners of their
Freedom and cooperation are two main principles of the Dalton Plan. Freedom is embodied in students’ deciding which category of assignment to choose to do, how to do, and when to do, and with the cancellation of the traditional class timetables, students are not restricted and are able to manage their time and pace of learning according to their own condition. Cooperation takes place between student and teacher, as well as among students themselves. Students report his progress to teacher, and the teacher guide and help the student in accordance with his problems individually, the guidance and help is also undertaken collectively to the whole class in the form of class conference. Cooperation among students refers to students’ accomplishing some tasks together with everyone’s contribution, students’ help each other, usually those more capable students reach a hand to not so capable ones.

The Dalton Plan as an instructional approach consists of two instruments, assignment and feedback graph, the assignment supports students in the management of their learning tasks, the feedback graphs are utilized to make the learners’ progress visible (Stary & Weichhart, 2017). Under the Dalton Plan, students take the responsibility for their learning by signing assignment contracts with the teacher, teacher checks their work, records their progress by graphs, and gives corresponding guidance to students in the form of individual tutoring and classroom conference.

1.2 Feasibility of the Dalton Plan in Modern Education

Although the Dalton Plan was put forward one century ago, its theory is still utilized in about 200 secondary schools today, many of them have made great achievements in teaching reform (Chen, 2018). The Dalton Plan’s implication for modern education is great. In this information explosion era, one’s autonomous learning ability is more important than ever. In school education, students with high level learner autonomy are usually students who are academically excellent. However, the conventional teacher-centered classroom teaching does little to build students’ learner autonomy (Benson & Voller, 2014). Research work contended the Dalton Plan instruction was more conducive to building learner autonomy by making learners more independent and responsible in their learning, than non-Dalton instruction (Babuščáková, 2008; Moosavi, 2019). Assignment in the Dalton Plan plays a role of general goal for students to reach, according to Morrison & Navarro(2012), goal-setting was an important foundation to develop autonomy. The mission of the Dalton Plan is aimed to urge students to learn independently under the goal-direction and teachers’ guidance, this is significantly important in this era of “Internet +” (Tian, 2017). It's noteworthy that the emphasis on students’ independence and autonomy in learning does not downplay the roles that teachers play. Rather, teachers are more of helpers and progress trackers instead of knowledge transmitters.

The Dalton Plan’s first introduction to China was in 1922, since then, it had had a significant impact on the education across the country (Huang, 2022). In recent years, remarkable achievements were seen in a large number of schools utilizing the conception from the Dalton Plan in education reforms in China (Tian, 2017). Although most of schools adopting Dalton instruction were middle or high schools, college students were more in need of this independent-learning-based instructional mode since they were more psychologically mature, principles of freedom and cooperation in Dalton Plan could be applied in instruction to college students to realize the ultimate goal of higher education, which is to cultivate students with free spirit in learning and responsibility for community (Zhang, 2018).

1.3 CE (College English) Course and CET (College English Test)

College English (CE in the following) is a required course for all non-English major college students in China. The duration of the course is 2 years (the first 4 semesters) for undergraduate college students. College English Test is a national standard test held twice a year, usually in June and December. It has two bands, CET-4 and CET-6, the latter is a higher rank in difficulty. Most students attend CET to get a qualified certificate for the benefit to their future job seeking or postgraduate studying.

2. Problem Statement and Research Questions

Although the overall aim of CE course is to train college students comprehensively in listening, speaking, reading, writing, translating, it’s not possible for college English teachers to do everything in the assigned course time, which is usually 3 course hours each week (135 minutes a week), many CE teachers put the focus of teaching on reading and listening. In addition, the College English Teaching Guide issued in 2020 highlights its emphasis on reading, requiring students’ reading should be combined with their major learning, namely, students should use English as a tool to read their major-related articles to improve their expertise in their major (The College English Teaching Guide, 2020). Therefore, reading makes an unarguable vital part of CE course.
Problems exist in reading among CE course learners. Cai, the director of College English Guiding Committee in Shanghai, stated that technology graduates from Chinese universities were weak in reading English literature of their own discipline, thus made them lose many chances to participate in international conferences and publish their ideas in their field (Cai, 2016, 2017, 2018). The reason for the problematic situation can be partly traced to the inadequacy of reading practice resulted from lack of learner autonomy in conventional teacher-centered CE classroom teaching, which is the main instruction form chosen by CE teachers today. Researchers (Benson & Voller, 2014; Han, 2015; Ho & Crookall, 1995) asserted that traditional classroom teaching did not contribute to build students’ independence and autonomy in language learning. Lian (2017) concluded the present monotonous mode of teacher-centered classroom instruction in CE course, which featured teacher’s explication of most of things in texts to students, caused students become passive and lose interest in reading gradually. Whereas, a proficient reader could not be made without enough exposure to large amount of reading materials in the form of interaction between reader and texts, only the reader’s own devotion to reading can bring the maximum benefit to him. In view of the overall scenario, the research questions designed in this research are as follows:

(1) Does the Dalton Plan-based instruction improve students’ learner autonomy in reading performance?
(2) Does the Dalton Plan-based instruction improve students’ reading proficiency?
(3) What is the relationship between reading proficiency and learner autonomy among the CE course learners?

3. Research Methodology

The research design in this research was a quasi-experimental design utilizing a quantitative research approach.

3.1 Sampling

This study adopted convenient sampling since the samples offered the most accessibility for the researcher. According to Dörnyei & Griffie (2007), convenient sampling is a type of non-random sampling where participants meet certain practical criteria, such as easy accessibility, geographical proximity, or the willingness to participate.

The participants of the study were 62 second year medical school students from two intact CE course classes assigned to the researcher. The participants all had passed CET-4 (with a score equal to or higher than 425 points, the full points were 710) and 60 of them were to attend CET-6 at the end of the semester. The reasons for considering scores in CET-4 were to ensure the homogeneity of participants. The participants were also from those who expressed their willingness to participate in the experiment according to a survey done before the intervention to learn their attitudes toward the Dalton Plan-based instruction, which cancelled the classroom timetable and thus seemed greatly different from conventional classroom teaching. Thirty students make the control group and the other 32 students constitute the experimental group. The following table is the demographic information of the participants:

Table 1. Demographic Constitution of the Participants

<table>
<thead>
<tr>
<th>Group</th>
<th>Total</th>
<th>Gender</th>
<th>Majors</th>
<th>Medical Laboratory Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>male</td>
<td>female</td>
<td>Clinical Medicine</td>
</tr>
<tr>
<td>Control</td>
<td>30</td>
<td>14</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Experimental</td>
<td>32</td>
<td>11</td>
<td>21</td>
<td>16</td>
</tr>
</tbody>
</table>

3.2 Instruments

3.2.1 Autonomous Learning Scale (ALS)

Autonomous Learning Scale was also known as Learning Autonomy Questionnaire. It was developed by Macaskill, A., & Taylor, E. (2010). Autonomous Learning Scale is a 12-item measure, responses were recorded on a 5-point Likert scale from 1 (very unlike me) to 5 (very like me), the highest score from this 12-item scale is 60, and the lowest score is 12. The median value was determined as 36. Higher scores indicate greater levels of autonomy and more independence in learning activity. The alpha coefficients are 0.82 for the total scale, and the convergent and discriminant validity are satisfactory (Macaskill and Taylor 2010).

Autonomous Learning Scale (ALS) was chosen by the researcher for the reason that the Dalton Plan is an
unconventional instructional approach “based on motivational psychology”(Parkhurst, 2005, p.3,p.182). ASL is a brief measuring tool to be used to check the psychological features of learner autonomy(Macaskill & Taylor, 2010). It is contended by the researchers(Macaskill & Taylor, 2010) that psychometrical measure of autonomous learners is essential and sufficient to explain the features of autonomous learners. Therefore, ASL is an ideal instrument to use to investigate the status of students’ learner autonomy under the Dalton Plan-based instruction.

3.2.2 Reading Test Paper

Reading test paper was the reading section chosen by the researcher from one model CET-6 paper (the whole test paper consists of sections of listening, reading, writing and translating). Just as aforementioned, all participants had already passed CET-4 and all of them registered for CET-6 and were making preparations for the attendance of CET-6. There were altogether 4 passages followed by corresponding questions in the paper, the first passage (about 250-300 words) with 10 words omitted and blanks left was on vocabulary usage, requiring closing the blanks with the given words, the second was a long passage (about 1200 words) with each paragraph numbered, which examined reading comprehension of main idea and required matching the given 10 sentences following the passage with the appropriate paragraph, the last two passages (about 400-450 words) followed by 5 questions for each were on reading comprehension, mainly checking readers’ reading ability in in-depth-reading. The pre-test paper and the post-test paper were the same paper only with some adjustments of the questions orders. To ensure the reliability of the test, the statistical method was utilized to locate the status of internal consistency, it revealed that the Cronbach Alpha of the responses was 0.821, and this value is acceptable to accept the reliability of the test.

3.3 Data Collection Method

Autonomous Learning Scale (ALS) was done online to both the control group and experimental group before and after the experiment to see whether there is the difference between control group and experiment group in status of learner autonomy. The time needed to finish the questionnaire was 3-5 minutes. Among 12 items in the scale, all items (e.g., item 3 “I am good at meeting deadlines.”) except for item 2 require a positive response, item 2 (“I frequently find excuses for not getting down to work.”) requires a negative response. The researcher flipped the responses to item 2 with the data transformation function in the SPSS statistical package in order to make all of them “in the same direction”.

Reading test was done to both the control group and experimental group before and after the experiment. The pretest and posttest were undertaken in the class session with the distribution of the printed paper and answer sheets, the duration of each test was 40 minutes. After the two tests, the researcher figured out the scores of each student. The pre-test paper and the post-test paper were the same paper only with some adjustments of the questions order in post-test paper.

Both ALS and reading test were done at class sessions, the confidentiality of the data and its irrelevance to students’ scores of CE examinations were emphasized in order to get the most authentic responses from students.

3.4 Process of Instruction

3.4.1 Treatment (The Dalton Plan-based Instruction)

The intervention duration was three months (12 weeks). The experimental group received the Dalton Plan-based instruction, which consisted of weekly individual sessions and monthly class meetings. The control group received the conventional classroom teaching. Participants in the experimental group were given reading assignments by the researcher in the form of monthly assignment contracts, which were further divided into weekly tasks by the students themselves. They did not need to obey to the CE course classroom timetable, namely, the conventional classroom timetable was cancelled for them, they can decide when to do, where to do, what to do, and how to do, as for the accomplishing of the assignments. Students in the experimental group were asked to complete and submit online self-report form weekly on their progress and problems during the course of undertaking the reading assignment. Altogether there were 9 weekly reports and 3 monthly reports.

The Dalton Plan-based instruction for the experimental group was undertaken in four steps. The first step was object building. Students decided on his/her own objective of reading through consultation with the researcher, since objective which suits oneself is most practicable. Next, monthly reading assignment contract was signed between each student and the researcher. Three categories (maximum, medium, minimum in amount) of reading assignments (Appendix D&E) were offered to students to choose the one which suits him/her best, students were permitted to subtract or add tasks if they felt the workload was too heavy or too light, then they sent the signed assignment contracts to the researcher. It’s noteworthy that the task of words memorization was also included to the assignment based on the participants’ request, since words memorization is popularly used by EFL students.
to improve their reading proficiency according to research work (Ozkan & Kesen, 1990). Research work also contended the lack of adequate vocabulary constitutes the big impediment to the fluent reading in EFL/ESL (Grabe, 2009). The next step was students’ reading practice followed by weekly individual session between students and the teacher. After students submitted their self-reports, the teacher undertook the individual session on WeChat to students who reported problems, the time set for the session was every Saturday afternoon after consultation with the students. The last step was the monthly class meetings held at the end of fourth week every month, with the aim to meet each other person to person to work together. The teacher gave the general feedback of the progress of the completion of the assignment, explicate and clarify some commonly reported problems, or organize some reading activity, to the whole group. Students discussed their teamwork or shared experience and strategies in reading. Both the individual and collective sessions were based on students’ self-reports. There were 3 monthly rounds of these four steps since the duration of the experiment was 3 months. Students in the control group received conventional classroom teaching. The teacher’s instruction was based on text book and teacher’s own belief or choice on what should be presented in class, not like the instruction in the experimental class, which was based on problems reported by students in their undertaking the assignment contract. Students were instructed mainly in the following aspects: 1. Structure, genre, and main idea of the texts (such as extracting the main idea of the passage from the title or subtitles, analyzing the structure of the passage, analyzing the writing style of the passage). 2. Explication of difficult points of texts (such as complex sentences). 3. Text-related exercises (such as sentence structure exercises). 4. reading practice (most students spent this time doing CET-6 reading for the preparation of the test).

4. Results

Q1: Does the Dalton Plan-based instruction improve students’ learner autonomy in reading performance?

In order to answer the first research question whether the Dalton Plan-based instruction improves students’ learner autonomy in reading performance, pre-survey scores of experimental and control groups, pre- and post-survey scores of both experimental group and control group, and at the end post-survey scores of both groups in Autonomous learning Scale (ALS) were compared.

Table 2. Pre-survey Scores of Control Group and Experimental in ALS

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>42.30</td>
<td>6.064</td>
<td>-0.248</td>
<td>0.805</td>
</tr>
<tr>
<td>Experimental</td>
<td>32</td>
<td>42.62</td>
<td>4.133</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 above shows the pre-survey average scores of experimental group and control group. Students in the experimental group, who received the Dalton Plan-based instruction, had an average score of 42.62 in pre-survey, students in the control group, who had traditional classroom teaching, had an average score of 42.30 in pre-survey. To infer if there is a significant difference between them, an independent sample t-test was conducted to compare pre-survey scores of experimental and control groups. It can be seen that there was not a statistically significant difference in scores of experimental group (M=42.62, SD=4.133) and control group (M=42.30, SD=6.064); t(60)=-0.248, p=0.805. These results suggest that students in both groups were homogeneous in their learner autonomy in pre-survey.

Table 3. Pre-survey and Post-survey Scores of Experimental Group in ALS

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-survey</td>
<td>32</td>
<td>42.63</td>
<td>4.133</td>
<td>-2.588</td>
<td>0.015</td>
</tr>
<tr>
<td>Post-survey</td>
<td>32</td>
<td>44.88</td>
<td>4.591</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It can be seen from Table 3 that students in the experimental group made progress in learner autonomy from a mean of 42.63 points in pre-survey to a mean of 44.88 points in post-test. A paired sample t-test was conducted to assess whether there’s statistically significant difference between them, the results revealed that there was a highly significant difference between pre-survey (M=42.63, SD=4.133) and post-test (M=44.88, SD=4.591) scores of experimental group; t(31)=-2.588, p=0.015. These results indicated students under the Dalton Plan-based instruction improved the status of learner autonomy in post-survey in comparison with that in the pre-survey.
Table 4 presents the descriptive statistics of ALS of the control group before and after the experiment, the mean scores of the ALS was 42.3 and 41.6 before and after the experiment respectively, a paired sample t-test was computed to determine whether there’s a statistically significant difference between them, the results revealed that there was not a statistically significant difference between pre-survey ($M=42.30$, $SD=18.05$) and post-survey ($M=41.60$, $SD=7.045$) scores of control group; $t(29)=-1.29$, $p=0.40>0.05$, signifying no significant difference was found between the mean scores of ALS, namely, students in the control group kept the almost same status of learner autonomy before and after the experiment.

Table 5 shows the result of the comparison between the mean reading scores of the control group and the experimental group in their post-survey of ALS. An independent sample t-test was performed to compare scores of experimental and control group on post-survey in order to see if there is a significant difference between them. The results suggested there was a statistically significant difference between the post-survey scores of experiment group ($M=44.81$, $SD=4.591$) and control group ($M=41.60$, $SD=7.045$); $t(60)=-2.128$, $p=0.033$, $p<0.05$, with the experimental group showing a higher status of learner autonomy than students in the control group.

Based on the comparison of the data of pre-survey and post-survey of ALS within the group as well as between the groups, the first question was answered. The results of the quantitative data showed that the Dalton Plan-based instruction was more conducive to improving the participants’ status of learner autonomy in comparison with the conventional instruction. Therefore, it could be concluded that the Dalton Plan-based instruction had a positive effect in improving CE (College English) course learners’ learner autonomy.

Q2: Does the Dalton Plan-based instruction improve students’ reading proficiency?
First, to ensure that there was no violation of the assumption of normality of the scores of reading tests, it’s necessary to know whether all the data of reading scores were normally distributed or not, so the normality analysis was undertaken.

Table 6 shows the result of the comparison between the mean reading scores of the control group and the experimental group in their post-survey of ALS. An independent sample t-test was performed to compare scores of experimental and control group on post-survey in order to see if there is a significant difference between them. The results suggested there was a statistically significant difference between the post-survey scores of experiment group ($M=44.81$, $SD=4.591$) and control group ($M=41.60$, $SD=7.045$); $t(60)=-2.128$, $p=0.033$, $p<0.05$, with the experimental group showing a higher status of learner autonomy than students in the control group.

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Table 6. Testing Normality of Reading test Scores of Pre-test and Post-test by Groups

As shown in Table 6, there was no violation of the assumption of normality because the statistics of Skewness and Kurtosis were mainly in between −2 and +2 for the variable, so the scores were approximately in normal distribution(Kline, 2023).

In order to answer the second research question whether the Dalton Plan-based instruction improves students’ reading proficiency in reading test scores, pre-test scores of experimental and control groups, pre- and post-test scores of both experimental group and control group, and at the end post-test scores of both groups in reading test were compared.
Table 7. Pre-test Scores of Experimental and Control Group in Reading Test

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>128.1</td>
<td>18.05</td>
<td>-0.247</td>
<td>0.806</td>
</tr>
<tr>
<td>Experimental</td>
<td>32</td>
<td>129.4</td>
<td>20.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7 above shows the pre-test average scores of experimental group and control group. Students in the experimental group, who received the Dalton Plan-based instruction, had an average score of 129.38 in pre-test, students in the control group, who had traditional classroom teaching, had an average score of 128.10 in pre-test. To infer if there is a significant difference between them, an independent sample t-test was conducted to compare pre-test scores of experimental and control groups. It can be seen that there was not a statistically significant difference in scores of experimental group (M=129.38, SD=20.64) and control group (M=128.10, SD=18.05); t(60)=-0.247, p=0.806. These results suggest that students in both groups were homogeneous in their reading proficiency in pre-test.

Table 8. Pre-test and Post-test Scores of Experimental Group in Reading Test

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>32</td>
<td>129.4</td>
<td>20.64</td>
<td>-1.27</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Post-test</td>
<td>32</td>
<td>148.1</td>
<td>28.88</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It can be seen from Table 8 that students in the experimental group made progress in reading scores from a mean of 129.4 points in pre-test to a mean of 148.1 points in post-test. A paired sample t-test was performed to assess whether there’s statistically significant difference between them, the results revealed that there was a highly statistically significant difference between pre-test (M=129.4, SD=20.643) and post-test (M=148.1, SD=28.88) scores of experimental group; t(31)=-4.10, p<.001. These results indicated students under the Dalton Plan-based instruction made good progress in their reading performance in post-test in comparison with that in the pre-test.

Table 9. Pre-test and Post-test Scores of Control Group in Reading Test

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>30</td>
<td>128.1</td>
<td>18.05</td>
<td>-1.29</td>
<td>0.207</td>
</tr>
<tr>
<td>Post-test</td>
<td>30</td>
<td>134.2</td>
<td>26.66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9 shows students in the control group made progress in reading scores from a mean of 128 points in pre-test to a mean of 134 points in post-test, a paired sample t-test was computed to determine whether there’s a statistically significant difference between them, the results revealed that there was not a statistically significant difference between pre-test(M=128.1, SD=18.05) and post-test(M=134.2, SD=26.66) scores of control group; t(29)=-1.29, p=0.207. The results suggested that students in the control group had progress in their reading proficiency in their post-test compared with pre-test, but the improvements were not statistically significant.

Table 10. Post-test Scores of Experimental and Control Group in Reading Test

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>134.2</td>
<td>26.66</td>
<td>-2.128</td>
<td>0.037</td>
</tr>
<tr>
<td>Experimental</td>
<td>32</td>
<td>148.1</td>
<td>28.88</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 10 shows the result of the comparison between the mean reading scores of the control group and the experimental group in their post-tests. An independent sample t-test was performed to compare scores of experimental and control groups on post-test in order to see if there is a significant difference between them. The results suggested there was a statistically significant difference between the post-test scores of experimental group (M=148.1, SD=28.88) and control group (M=134.2, SD=26.66); t(60)=-2.128, p=0.037. This indicates students in the experimental group outperformed students in the control group.

By comparing data of pre-test and post-test within the group as well as between the groups, the second research question was answered. The results showed that participants under the Dalton Plan-based instruction did much better than students under conventional instruction in their reading performance, since statistically significant difference was found between post-test scores of experimental group and control group, with both groups in almost similar status before the experiment. Therefore, conclusion could be drawn that the Dalton Plan-based instruction had a positive impact in improving reading proficiency among CE course learners.
Q3: What is the relationship between reading proficiency and learner autonomy among the CE course learners?

Table 11. Correlation Test Between Reading Test Scores and ALS Scores

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Test Scores</td>
<td>32</td>
<td>148.09</td>
<td>28.879</td>
<td>.365</td>
<td>.040</td>
</tr>
<tr>
<td>ALS Scores</td>
<td>32</td>
<td>44.88</td>
<td>4.591</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).

Table 11 shows the results of correlation test between the reading test scores and ALS scores. The correlation coefficient was 0.365, it’s between 0.3-0.5, signifying there’s a moderate positive relationship between reading scores and learner autonomy. With reference to the Sig value (Sig=0.04), which was below 0.05, it can be inferred that the moderate positive relationship between reading performance and learner autonomy was significant. Therefore, there was a significant positive relationship between reading proficiency and learner autonomy among the CE course learners, meaning the students who were more proficient in reading performance usually had a higher status of learner autonomy under the Dalton Plan-based instruction.

4. Discussion and Conclusion

With regard to the first question of the roles of the Dalton Plan-based instruction on students’ learner autonomy in reading, the results demonstrated that the experimental group showed higher status of learner autonomy than the control group after the intervention. Therefore, the conclusion could be drawn that, in comparison with the conventional classroom instruction, the Dalton Plan-based instruction had a positive effect in improving CE (College English) learners’ learner autonomy in reading. The following discussion was based on the two subdimensions constituting ALS(Autonomy Learning Scale) utilized in this study, independent learning and study habits.

First, from the aspect of independent learning, in the present study, the students’ learner autonomy in reading was believed to be benefited from the Dalton Plan-based instruction in that the flexible organization of the instruction gave students opportunities to be an independent reader. Students, without the restriction of CE course timetable, were having enough time to practice reading independently in order to complete the reading assignment. It’s claimed students could not become autonomous learner without some triggering factors (Tran, 2020). The assignment in this study just played the function of the trigger of one’s learner autonomy in that students needed to devote much more time and involve themselves in independent reading for the completion of the task. It’s noteworthy that students were not left on their own completely, instead, the teacher just stepped aside as a close progress tracker, a weekly individual tutor, and a monthly class conference organizer.

Assignment contracts were both general plans to undertake and goal to reach for the students. The core of Dalton plan is assignment contracts between students and teacher, "assignment" represented the substantive basis of the Dalton Plan learning system (Vorobiova, 2022). In the present study, students needed to make their own smaller plans under the general plan, otherwise they could not do the work in an organized way and might risk the possibility of unfulfillment of the assignment at the end of the month. The beginning weeks saw students’ endeavors in trying to adjust themselves in order to make themselves catch up with the supposed pace. This was a self-evaluating process from problems to progress. The weekly self-reports were just the very platforms for the students to go through this process, students tracked down the source of their problems, concluded what they achieved, presented their concurrent problems or ready-to-do adjustment measures. It should be noted the self-reports were based on their voluntariness, they were informed they could leave the area of problems and progress blank in their self-reports if they had nothing to say, otherwise it would be contradictory to the principle of freedom in the Dalton Plan, but students were encouraged to try to present their problems or progress they would like to share in a detailed way, in order to keep a better cooperation with the teacher and other students. The teacher’s later feedback showed the progress as well as problems anonymously in the WeChat class group for students to learn from each other, or contribute his or her solutions to the problems posted, thus, a cooperative learning surroundings was also created.

According to research work (Le & Nguyen, 2022), non-major English students had low confidence in learning English autonomously. Therefore, it was important to weaken the students’ ingrained conception that learning English was just “teacher teaching in the front, students listening below”. The awareness of “everyone can be independent reader” was frequently propagated by the researcher in the first month of the intervention to encourage students to be confident in becoming an autonomous reader. One of the ways utilized to encourage students’ confidence was to put some carefully-chosen sentences in WeChat class group to ask students to post...
their understanding in it, these sentences were somewhat difficult for students and also very easy to be misunderstood without careful analysis of the structure, students who did correctly were praised or given some form of awards.

Therefore, a small conclusion could be drawn that, in prompting the students to be an independent learner, the assignment played the role of a goal to reach, the self-reports functioned as a self-evaluating process, and the teacher was the assistant in students’ autonomous completion of the assignments, a feedbacker of the students’ progress and problems, and also a helper in building this cooperative learning surroundings. All these factors contributed to the effectiveness of the Dalton Plan-based instruction on independent learning of students.

Concerning study habits, it is necessary to mention that the Dalton Plan-based instruction had positive impacts on development of good study habits because the students, in order to complete the assignment, not only read much more frequently than before, but also most of time they worked on their own to deal with problems and challenges in reading. In the following sections, the two aspects of regular reading habit and finding one’s own solution were elaborated.

Most of the students in the study did not have habitual reading habit before the intervention, namely, they did not read very often, also, they only read texts or CET materials for exams. However, with the advancement of the intervention, a gradual transformation from a non-habitual reader to somewhat habitual reader could be discerned from students’ self-reports, students used words like “reading everyday” “read every evening” “read in spare time” “a habit is formed” to report they had to read frequently for the timely completion of the reading assignment. It’s believed that repeated practice of something will lead to some habit. A habitual or regular reading is supposed to be vital in mastering a foreign language, according to input hypothesis (Krashen, 2009), reading is the most important way we used to have language input. In EFL context, students may do not have access or opportunities to speak English every day, but they do have various means to get to much reading materials to read in this information technology era. This study answered the call for EFL teachers to attach great importance to the cultivation of regular reading habit, which was usually neglected by EFL teachers (Nurhayati & Fitriana, 2018).

Likewise, under the Dalton Plan-based intervention, students were encouraged to rely on themselves to solve problems and difficulties they met in undertaking the reading assignment, the purpose of this was to try to dilute their dependency on teachers resulted from traditional teacher-centered teaching, which is characterized by teacher’s “teaching” everything to students. Conventional teacher-centered classroom teaching tended to build students’ laziness in English language learning (Tram & Kha, 2022). “Not much teaching” or “offers little instruction” was regarded as one of the principles in Dalton Plan (Van der Ploeg, 2013, p.87, p.91). In order to build learner autonomy, teacher should step aside and only give a hand when needed. Miller (2013) contended “if students remain dependent on teachers to remove all obstacles that prevent them from reading, they won’t become independent readers (p.18)”.

As far as the study habits was concerned, the conclusion could be drawn that under the Dalton Plan-based instruction, students were improved in aspects of reading more regularly and frequently, which was contributed greatly by the completion of the reading assignment contract signed between students and teacher. The other improvement was that students’ dependency on teachers had begun to wane under this “not much teaching” instruction, in which they were encouraged to solve most of their problems with their own efforts.

With regard to the second research question on the effect of the Dalton Plan-based instruction on reading proficiency, the above results demonstrated the Dalton Plan-based instruction was effective in improving students’ reading proficiency. In this study, it was reasoned there were three elements which contributed to the improvement of students’ reading proficiency. The first was the establishment of students’ responsibility for one’s completion of reading assignment in the form of reading assignment contract signed between students and teacher, the second was the relatively large amount of reading tasks students completed in accomplishing the assignment, the third was the efficiency in reading activities obtained by students through effective use of the time devoted to reading.

First, since the signing of the reading assignment contract between the students and the teacher, a seriousness, even a sacredness, for the completion of the assignment was established, which was a driving force to make students go on with it no matter how challenging it might be. The students were challenged in many aspects, e.g., the pressure from a large task to finish, the need of change of reading habits, the difficulties met in reading process. The effect of the assignment on one’s personal drive could be seen in students’ various endeavors to overcome all these. They were trying to make themselves adapted to the mode of “reading everyday” or “reading all the time” instead “reading occasionally”. Actually, it could be said that the teacher tactically shifted the
responsibility of learning to the students in the form of assignment contracts. With responsibility on their shoulders, students were willing to devote much time in reading to fulfill it.

Next, the reading assignment contracts played the roles of a general goal and plan for students to achieve and undertake. Students had to read a relatively larger amount of materials in order to achieve the goal, more than before the intervention when they were accustomed to read only textbook and CET related materials. The “amount” of the reading materials should be emphasized and put into a vital place to improve reading proficiency. According to Krashen (2009), the reader’s acquisition of the target language, including acquisition of vocabulary and spelling, is built on large quantity of language input by reading. The ultimate purpose of learning a foreign language is to make it as familiar as our native language to us, the familiarity could be built by numerous reading practices on large quantity of reading materials. Just as stated by research work that the nature of learning a foreign language was to “make it familiar and literally 'not foreign'” (Esch, 1997 p.173).

The third element was the higher efficiency in reading activities students attained in the Dalton Plan-based instruction than the traditional instruction. In this study, the classroom timetable was abrogated and students did not need to go to the classroom to attend the CE course, instead, they were given the freedom to finish the task as they liked, at the same time, those who had problems were individually tutored by the teacher, those who had no problem or could solve the problems by themselves could go ahead without worrying others’ pace. The effective use of instruction time was regarded as of vital importance in improving reading efficiency (Hammerschmidt-Snidarich et al., 2019). In the present study, in each class conference, teacher’s instruction focused on problems commonly reflected in students’ self-reports, and individualized instruction was set for each participant who needed the teacher’s help, which was not only in problems related to reading materials, but also in some other aspects, e.g., emotion control, strategies used. Thus, the instruction was problems-targeted and the time of instruction was maximally made use of.

The results of the second research question in this study supported findings of the research work (Rican & Lankov, 2019) that students in the instructional surroundings implementing Dalton Plan principles enhanced their reading comprehension significantly. The very principles of the Dalton Plan applied in this study were freedom and responsibility, which were deemed as key components in performing one’s work excellently. Parkhurst, the originator of the Dalton Plan, wrote in her book Education On The Dalton Plan, “Freedom and responsibility together perform miracle(Parkhurst, 1922. p.29).” In this study, the freedom was embodied in students’ own choice of ways(how), time(when), places(where), what (what materials), pace (how much) in undertaking the reading assignment. The responsibility was established in the form of reading assignment contracts which bore somewhat seriousness even scaredness in fulfilling it.

The results of the second research question in this study also accorded with the findings of research work(Geraskevich, 2021; Hanior, 2017) in that the students under the Dalton Plan instruction showed a significant progress in academic achievements in comparison with the stage before the intervention. In this study, in addition to the elements contributing already listed above, the progress may also stem from the fact that the lessened dominance of the teacher in reading activity, instead, students were given the right to arrange their own time, in this way everyone’s time was used economically, and everyone paid attention to the efficiency of the work done. Learning itself is something individual, this is especially true for reading activity, which is undertaken with different strategies by different people. The traditional unified instruction in reading, much time of which was occupied by teacher’s teaching without students’ reading practice, may slow down students’ progress in reading comprehension.

With regard to the third research question of relationship between reading proficiency and learner autonomy, the findings suggested that there is a significant positive relationship between learner autonomy and reading performance among the CE course learners, meaning the students who are more proficient in reading performance usually have a higher status of learner autonomy under the Dalton Plan-based instruction. This is in accordance with the results of the research work(Deng, 2007; Myartawan & Latief, 2013) that learner autonomy and English proficiency had a significant, strong, positive relationship, the students’ English language proficiency increased with their learner autonomy and vice versa. Therefore, it’s important that to foster learner autonomy in second or foreign language teaching and learning to help improve learner’s English language proficiency, and to improve language proficiency needs learners’ own efforts and investment of time and energy in it.

The results of this study supported the viewpoints that the application of the Dalton Plan-based instruction in college context to promote learner autonomy and academic achievement might be practically achievable(Zhang, 2018). Although at present most of schools undertaking the Dalton Plan are secondary schools, college students
are more mature physically and psychologically, so they are more in need of this learner-centered instruction. The results are also supported the call that the Dalton Plan instruction might be a supplementary instructional form and also it might be a solution to problems existing in conventional classroom teaching (Tian, 2017). In reading in CE course, one of the problems is monotonous mode of teacher-centered classroom instruction, the main part of which is sentence-to-sentence grammar explication to students, causing students become passive participant and lose interest in reading gradually (Lian, 2017). More opportunities, more freedom, more time should be given to college students to develop their initiative and engagement in reading in EFL learning. According to Benson & Voller (2014), autonomy and independence in language learning tend to be built with the increase of age.

The limitation of the study is it was conducted in a specific university in China with a limited number of participants, so the findings may not be generalized to cover all university students. This research will benefit students and teachers in CE course as it sheds light on effective ways to improve reading proficiency and learner autonomy in learning English in the Chinese context. However, since empirical research on Dalton Plan’s effect in learner autonomy and language proficiency in college in China context is very few, more empirical research work revealing the effects of it on college students is urgently needed. In future, similar kinds of research work may be conducted on students in other universities in China and other countries. And the sample size may be increased to cover more students to check the generalizability of the current results. In that way, a better pathway will be paved to apply the Dalton Plan instruction to improve language proficiency and learner autonomy among college students.

References


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