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Integration of Environmental Education into English Writing Lessons in A Malaysian Chinese Independent High School

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Abstract
Environmental education has a great importance in Malaysia as it helps students to be aware of the various environmental risks that exist. One of the main issues that people currently face is the deterioration of the environment on a global scale. Henceforth, this study aims to explore integration of environmental education into students’ English writing studies where they are expected to learn about the numerous environmental repercussions while also developing English skills. This study focuses on this approach at a Chinese Independent High School in Selangor, Malaysia. Given that it lends meaning to any culture and a variety of aspects in the realms of science, the arts, and commerce, this topic is crucial to study. The chosen research methodology is qualitative. Five participants who were recruited using a purposive sampling process were the subjects of semi-structured interviews to gather the qualitative data. Thematic data analysis revealed that critical and creative thinking ought to play a significant role in the learning process in the classroom. The study's conclusions imply that teachers should prepare lesson plans where environmental elements are embedded into the learning outcomes or objectives. They need trainings to improve skills in preparing appropriate materials and content as well as to hone their pedagogical skills to deliver lessons effectively.

Keywords: Environmental Education, English Teaching and Learning, Writing Lesson, Private School

Introduction
Environmental education is incredibly important for students as it enhances the scope of learning and understanding the needs of the environment through various modelling and knowledge-building activities conducted in schools (Wang et al., 2021). Environmental education is a highly concerning topic in various parts of the world where education is a conscientious and a reorganized effort to draw the attention of human beings towards the natural environment and how these humans can help and manage the conservation of the environment. Through environmental education, teachers develop the general knowledge of
the students with regards to the importance of environmental education and raising environmental awareness in the future may help the students with thought-provoking ideas as to the impact of pollution on future generations.

In Malaysia, environmental education is introduced as an across curriculum element of all subjects. However, numerous research continuously highlighted doubts about environmental education efficacy. The lack of a specialised environmental education curriculum and instructors’ lack of attention to environmental education, because there are no associated exams, have been cited as reasons for the success or ineffectiveness of environmental education programmes (Loubser et al., 2014).

As it is supposed to be a cross-curriculum element, language teachers should follow suit in participating in the delivery of environmental education and be aware of global environmental issues (Mete, 2018). However, environmental education is more commonly delivered through other subjects such as science and geography, and non-formal learning activities that are explicitly dedicated to educating the students about the environment. Examples of such activities are the activity of having and growing gardens around the school by the students and bringing nature to the science classroom. According to Setyowati et al (2020), making the school green by increasing the number of plants and developing gardening activities among the students promotes the practice of greenery.

Environmental education with terms of discussion in English language lessons can increase the semantic web and graphics of the students to create questions and also try to understand the environmental issues in English (Zhang & Kim, 2018). Lessons in English language subject can be divided into four categories: reading, writing, speaking, and grammar. This study aims to explore how English language teachers integrate environmental education in English writing lessons. English writing is a contemporary subject with English courses that are taught concerning a higher vocabulary and study that are informative and expository which consist of major requirements of the correct use of language at strategic places (Turan & Akdag-Cimen, 2020). Environmental protection has many derivations including global warming, greenhouse gases, ozone depletion, deforestation and species extinction (Al-Refai & Al-Omari, 2020). Based on this wide range of topics, students may also expand their vocabulary. Environmental education through English writing is expected to address environmental problem-solving-based learning in which students had to analyse issues, learn independently, generate ideas, and test solutions after critical analysis (Dawilai et al., 2021).

This study focused on English writing because its fluency is assessed in exams, which should be a strong incentive to incorporate environmental education. This is due to the tendency of schools to prioritise innovations in such learning that will be assessed in the exam. In addition, English writing offers a more comprehensive framework for content-driven critical thinking across all expository, descriptive, persuasive, and narrative writing genres (Price et al., 2020). Although debates regarding environmental issues are included in the English language curriculum, particularly in English writing, they do not necessarily relate to how it is practised in the real world. Following that, we believe that the student may become less conscious of the effects of pollution on their daily lives and future generations as a result.
Literature Review

Integrating discussions on the environment in English lessons is an innovative way to promote environmental awareness and preservation of nature in the future generation. The Chinese independent high schools have Chinese as their first language and English is taught there as a second language. So, as mentioned above, incorporating environmental education in a new language may not only make them aware of the global environment but also help them in building better communication skills of the topic. Teaching environmental issues through English lessons may help the students understand the issues that may affect their future. Thus, making them subconsciously aware of the environmental problems and the ways to protect it. This will promote a more meaningful English learning that will help them in future (Ramadhan et al., 2019). This is an ever-developing process as both the teachers and the students need to be aware of the environmental changes and development globally. The school teachers should make the students understand technology development and its effect on the environment. Students should be encouraged to be environmentally aware so that they could understand the substance and value of the effect of environmental problems in their future. This will help them to gain environmental awareness and compassion which will help them to understand and relate to the environment (Chen et al., 2020).

Environmental education helps to promote friendly attitudes among the students that helps to promote an ecological and a sound lifestyle (Parra et al., 2020). With the theory of social learning for promoting environmental education among the students in the Chinese Independent high schools. Combining environmental education with practical environmental community services will help the students develop a better understanding and practical knowledge of environmental awareness. Integrating environmental education through English classes in Chinese independent high schools will help the students build their global communication skills as well as making them aware of the global environmental condition. English is one of the most used languages globally, this integrated learning will help the students learn about the environment through newspaper articles, global media and the internet. These mediums also serve as a great learning tool in language learning classes as well as, making the students aware of the environment.

Different ways have been put forward to integrate environmental education with other subjects to enhance the concepts into the students. Language teachers are often encouraged to use creative teaching in the classroom and outdoors (Aswad, 2017). According to Palmer (1998), such a lesson that occurred in or through the environment is a subset of environmental education. Students are brought outdoors to let them reconnect with the environment. This approach is believed will create awareness to them on how the environment can be preserved and protected (Harrison, 2010; Abdullah, 2018). Teachers should play a role here to encourage them on the preservation and protection of the environment and make the students be able to create their own self-actualisation. To overcome the different issues like time allocation, teachers, locality effect, curriculum load and many more, three methods can be applied: demonstration method, discussion method and project method. The interdisciplinary approach is said to give much more holistic and better teaching approaches (Verma & Dhull, 2017).
Methodology
A qualitative research approach was adopted in the current study. A qualitative research design is concerned with establishment of answers to questions of how and why of the incident or phenomenon that is in question (Malhotra, 2017). The qualitative research design here has given a better insight into how environmental education can be incorporated into English education and most importantly the reasons. The qualitative research design provides a significant knowledge on the topic that the research is being conducted on (Mohajan, 2018). This is a qualitative research report on findings from teachers who had integrated environmental education in their English writing classes.

This study was specifically conducted at a Chinese Independent high school in Malaysia. Chinese Independent high schools are private high schools that provide secondary education by using Chinese language as the main medium of communication. English is just one of the taught subject in the school (Ong, 2020) as they are aware that the language is highly important for the students as its popularity and relativity in different countries is high (Sang, 2017). It is generally the continuation after primary education is completed in the national type of primary schools for the Chinese. There are various types of Chinese Independent high schools in Malaysia. These schools in particular coordinate with the curriculum created and are organised with the certificate of Unified Examination standardised examinations. Though each of these Chinese high schools is independent of each other, they can be freely managed depending on their state of affairs. The Chinese Independent high school which was studied in this research has a structured curriculum in most of its subjects including the English language subject. Additionally, this school was chosen for this study because this institution practises education for sustainable development.

The study used interviews for obtaining information that aimed at all three objectives. The interview objectives are to understand the perception of how environmental education can be considered by the teachers, the benefits, their opinions on possible constraints and best way to improvise. The interview involved 5 teachers, which each interviewed on separate occasions. All five participants’ interviews were conducted with audio recording and note taking methods. The interview was mostly semi-structured, which similar questions asked during the interview. The structured interview was opted as we wish to analyse research data with more objectivity. However, the participants sometimes were asked to elaborate further when their responses were too brief.

All questions are open-ended and do not require any choices of answer. The questions included the following themes: (i) general perception on environmental education; (ii) Benefits of having the environmental element in English writing; (iii) opinion of possible constraints of implementing Environmental curriculum in English writing; and (iv) best ways to incorporate environmental education in English writing. Table 1 presents the list of questions for each of the themes. In addition, the interviews integrate discussions on the existing school’s English writing curriculum, and existing Environmental policies set by the researched school as well as the Government of Malaysia, particularly the Ministry of Education. The purpose of having an existing curriculum by the school and understanding government environmental policies will provide a baseline on how to integrate environmental education into English writing as well as understanding the barriers or constraints on the
integration process. By knowing the barriers, the possible solutions for mitigating the barriers can be drawn up for future research.

Table 1
*Interview themes and questions.*

<table>
<thead>
<tr>
<th>Themes</th>
<th>Questions</th>
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<tbody>
<tr>
<td><strong>General perception on environmental education</strong></td>
<td>1. What is your general perception on environmental awareness among the public?</td>
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<td></td>
<td>2. What is your opinion about environmental related information that can be incorporated with our education system?</td>
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<td></td>
<td>3. What are the environmental related specific skills that are relevant for students in your school?</td>
</tr>
<tr>
<td><strong>Benefits of having the environmental element in English writing</strong></td>
<td>4. What could be the benefits of having environmental elements in English writing?</td>
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<td></td>
<td>5. How can the students benefit from this?</td>
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<tr>
<td></td>
<td>6. What benefits can it give to teachers in the school?</td>
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<tr>
<td><strong>Opinion of possible constraints of implementing Environmental curriculum in English writing.</strong></td>
<td>7. What is your opinion on the challenges faced by the students in learning the environmental curriculum in their English writing class?</td>
</tr>
<tr>
<td></td>
<td>8. What are the possible constraints in implementing an environmental curriculum in your school?</td>
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<td></td>
<td>9. In your opinion, how can the Government of Malaysia, particularly the Ministry of Education, be supportive in these changes of curriculum?</td>
</tr>
<tr>
<td><strong>Best ways to incorporate environmental education in English writing</strong></td>
<td>10. How can environmental education be best implemented in English writing?</td>
</tr>
<tr>
<td></td>
<td>11. What are the important elements that should be included in the English writing module involving the environment?</td>
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<td></td>
<td>12. What would the teacher’s supporting role in the new English writing module look like?</td>
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<tr>
<td></td>
<td>13. What would the student’s participating role in the new English writing module look like?</td>
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</table>

The interview data were analysed thematically and managed manually using matrices. The four themes used in the interview protocol are discussed separately in this section. The thematic analysis was used to grasp important keywords and phrases from their answers.

Since this research is conducted based on opinions and statements from participants, the participants’ data and privacy is being protected throughout the research. Except for demographic information, personal information of the participants is not revealed. The research was given permission by the school to conduct interviews with their selected 5 participants on a voluntary basis. Also, individual consent was requested before the interviews were conducted. At the beginning of the interviews, participants were briefed of their rights to withdraw their participation in this study at any time the study is being conducted.
Results and Discussions
As mentioned above, the interviews were conducted in a structured manner, and the data then analysed thematically. Therefore, the findings are presented in this chapter according to the themes, each of the questions asked and selected among those that provide most significant insights for answering the research questions. It is also noteworthy that every participant’s opinion differs and some of them are in a similar boat.

Perception on environmental education
The interview began by explaining about this research study on integrating environmental education into English writing lessons in their school. Then, participants were asked about their opinion about perception on environmental education as the first theme.

The general perception on environment education revolves around knowing how the participant’s opinion on people perceiving the education is related to the environment. The first question reflects their general perception on environmental awareness among the public. A participant mentioned that the awareness is unsatisfactory implying the participant’s opinion that environmental education is far behind their reach of knowledge. Another participant implied it had not reached a sufficient crowd. Most people from the education community, working adults, older generations and even business people are said not to be aware of educating with the environment.

The next question sought to understand their opinion about environmental related information that can be incorporated with the national education system. This question relates well with the theme as it involves the opinion of how the environmental information will be embedded into the education system. In response to this question, Participant 1 suggested that:

“... it would be a great start to have information about the environment to be included in daily lessons. This would indirectly teach and create awareness on the environment among school students.”

Having daily lessons incorporating environmental related information will ensure students and learners gain the understanding of how important the environment is towards our daily routine life (Sanchez-Llorens et al., 2019). For instance, lessons related to pollution can be taught as a sub-topic in English writing, whether it can be discussed for causes of pollution, effects of pollution or measures taken or to be taken to reduce pollution activities in the country.

Next, participants were asked to identify environmental related specific skills relevant for students in their school. This question is raised to recognize related skills that can be paired with environmental education in a school. Most participants perceived this question with similar opinions where critical thinking, analytical thinking, creative thinking come into play as important successful skills needed for the education of the environment. In fact, they are skills demanded in 21st-century learning. 21st-century learning is commonly defined as an education reform that aims to equip every student with the essential skills to face 21st-century challenges (Beetham & Sharpe, 2013). Through this approach, the students would get a deeper comprehension of the material. Also, they would be able to address complicated
challenges in this real circumstance if higher-order thinking and creative thinking skills are included in the lesson. With this being emphasized, students are believed to be able to relate their ideas to real-world issues such as environmental issues. Perhaps because the Malaysian education curriculum has been practicing the use of critical and creative thinking since primary studies (Barghi et al., 2017), the participants have become familiar with the aspiration, hence creating awareness about. The use of these skills are favourable to be utilized in environmental education.

Benefits of having the environmental element in English writing

English writing that consists of environmental elements is believed to have potential benefit for the learners and teachers as well. The questions under this theme discuss both students and teachers gain in adding their knowledge in the environment. From the interview with the five participants, all of them demonstrate a positive attitude towards potential benefits of environmental education for the students. Since the scope is English writing lessons, this study aims to understand the benefits of having environmental elements in the lessons. For example, as explained by Participant 1:

“I feel that this provides an immense chance for students to explore their existing knowledge on environmental elements through their writing. Not only that but also, they will be able to use and incorporate correct vocabulary related to the environment in their piece of writing.”

Based on this excerpt, the benefit of environmental elements in English writing is suggested to include both learning and increased knowledge about the environment and the English language. Environmental knowledge acquisition is a lifelong learning process. For every information gathered and understood, there will be a development of the knowledge through self-regulated learning (Granberg et al., 2021). In other words, changes to daily learning can be perceived as far as environmental education is concerned.

In addition, for most primary or secondary level students, learning about environmental related vocabularies can be interesting and worth the information gained. This could potentially be an important component of future efforts to lessen science knowledge gaps inside and outside the classroom (Lazaroff & Vlach, 2022). For instance, the use of degradation, contamination, harmful substances, wastewater treatment processes are vocabularies used by environmental technologists as a profession. It will be beneficial for students to explore such key terms or vocabularies to gain better understanding for their future while minimizing the gaps.

Then, the interview continued by getting to know the benefits that the teachers would gain instead. This indicates to what level of understanding the participants have towards the benefit they as teachers received for teaching environmental elements to students. Participant 4 replied with a rather interesting opinion, significantly indicating a difference from other participants, “teachers can also learn and be up-to-date on all the environmental issues”. Based on this excerpt, it can be interpreted that instead of only students, teachers as educators also get the chance to update themselves with information that may have not been heard or read before.
Constraints of implementing Environmental curriculum in English writing

This theme discusses the opinions from participants on constraints and challenges faced in implementing environmental curriculum in English writing lessons. The first question sought to know and understand the challenges faced by the students in learning the environmental curriculum in their English writing class from teachers’ perspectives. Below are the responses given by two participants interviewed.

“One of the biggest challenges that is faced by students in any classroom or lessons is the engaging class activity. Some students might not like the activity prepared for the environmental lessons,” (Participant 1).

“Students lack sufficient information about the environmental elements to develop their ideas in writing,” (Participant 5).

As this question was asked to the teachers, this finding suggests that the teachers thought that integration of environmental education in writing lessons can be more effective and/or practical if their students do have existing knowledge about and interest towards the environment. This finding supports Castillo-Montoya (2017), which stipulates that students learn more effectively when their teachers expand on what they already know. Such set of existing knowledge (as well as attitude and skills) that students bring to the classroom can be referred to as prior knowledge.

According to literature, when environmental education is associated with science, it is often perceived as an interesting lesson as it deals with interesting experiments, and that gives them the adrenaline rush of knowing the output of the experiment (Erhabor & Don, 2016). When such active learning experiences are not incorporated, it can be assumed that the environmental lesson or education can be boring or does not bring to the attention of students. For this reason, some participants reported that their students perceive environmental education as unexciting. Perhaps, the English writing lesson carried out by the participants involved less hands-on engagement, hence students’ participation was discouraged.

The next question aims to realize the possible constraints faced by the school in implementing the environmental curriculum. This question focused on deeper scope of study where the constraints in the Chinese school are being asked. With regard to this question, Participant 2 responded:

“The constraints could include the inadequate instructional materials related to the environmental themes, incompetency of teachers handling the subject matter and the lack of practices offered in this subject area for the students.”

The response from participant 2 focused specifically on the Chinese school’s syllabus where the study was conducted. Note that the school is an independent school that has insufficient materials (i.e. lesson plans that incorporate environmental themes). Participant 2 also emphasized the incompetency of teachers to teach environmental related subjects or topics. This is due to practices offered for this subject especially in English writing lessons are limited. Most Chinese independent school’s lesson plans are designed and created from a common framework that is being controlled and managed by the headquarters of the education board in China as in their principal syllabus centre. Environmental related subject matter is not
emphasized in their framework in the case of Chinese school, particularly in English Language courses. Teacher’s incompetency may also be a constraint because most teachers’ depth of knowledge in environment is limited as most of their qualifications revolves around teaching English as a Second Language (TESL) (Arias-Contreras & Moore, 2022) without integrating discussions on environmental topics.

The third question in this theme deals with the possible measure that can be anticipated by the participants in regards with Government intervention. The question aims to know from the participants the support the Government of Malaysia, particularly the Ministry of Education (MOE) provide to make changes in the curriculum, which Participant 2 suggested that:

“The MOE plays a pivotal role in providing the guidelines and tools required for the teaching of environmental education in schools.”

It is essential to have a policy for teaching environmental education in schools. Currently, environmental education is introduced as one out of 10 across curriculum elements in the Curriculum and Assessment Standard Document (Dokumen Standard Kurikulum dan Pentaksiran, DSKP). However, its implementation remains as an option. Teachers are given the authority to decide whether they would integrate the element in their teaching as well as the instruments and approaches if they decide to implement it. However, from this finding, it is believed that if the teachers are supported with appropriate guidelines and materials, they will commit to integrate environmental education in their future teachings more confidently.

Methods to incorporate environmental education in English writing

The interview with participants allows this research study to discuss the methods or ways to implement or incorporate environmental education in English writing. Participants were asked how environmental education can be best implemented in English writing classes and what could be the important elements to be included in the English writing module.

Some opinions involved essay topics related to the environment. By providing essay topics to students so that they can brainstorm the content ideas will be a good solution in incorporating environmental education. For example, topics related to effects of water pollution on society generates the tendency for students to brainstorm the content related to effects on society in general (Manahasa et al., 2021). A slight change in the essay topic, for instance, the effects of water pollution to aquatic creatures will drive a different content generation or brainstorming process. This will relate to improving critical thinking skills amongst students. Students will start to realize the importance of reducing water pollution towards not only the society but the living creatures in water, specifically.

The elements of environmental education can be inclusive of arising issues in the environment (Ardoin & Bowers, 2020) that we hear and see on a daily basis, general knowledge of water, air, noise and land pollution, the science behind measures taken to prevent pollution and deforestation, for instance. The elements not necessarily to be precise to environmental science topics but general knowledge on causes, effects, and measures taken for environmental control.

Apart from elements, the participants suggested that English writing lesson plans can include environmental elements of discussed content earlier. This diversifies the lesson plan content
for English writing for students. It is more interesting to see more topics to be discussed and written by students if the teachers have a comprehensive lesson plan having environmental elements in it.

**Conclusion**

The integration of environmental education in English writing lessons can be concluded with suggestions on how it can be implemented. Lesson plans are the most vital part of the English writing syllabus where environmental elements can be embedded into the learning outcomes or objectives. Lesson plans that indicate the environmental element into the learning outcomes can be used and practiced by teachers in educating students. The English teachers who teach in the Chinese school in this study prepare their own lesson plans according to the given format or guideline by the school’s education system. Anticipated learning objectives should be identified and analyzed by the teachers in prepping their lesson plans.

Constraints such as inadequate learning materials and incompetency of the subject matter should be addressed by the school as well as teachers who are willing to perceive a new educational topics related to environment. These constraints are to be solved with studies, reading or research that are relevant to environmental education. Teachers, in other words, are encouraged to be actively seeking additional knowledge in regard to English writing. Thereafter, they will be able to prepare an effective lesson plan for English writing classes.

The benefit of environmental education is always continuously evolving. Today’s knowledge on the environment will continue to grow to benefit the future in the form of knowledgeable students. It is essential for teachers to self-realize that environmental education to students should be a knowledge-based learning methodology. Based on discussion in this study, critical and creative thinking should be a vital part of the education process in the school. The 21st century learning skills may help the students to be creative and critical thinkers as when the teachers integrate on current environmental issues to the students. Also, teachers are to be able to instil critical thinking methodology to students when attempting to write essays related to the environment. The elements related to the environment should be deeply put into a critical thought process during the class activities.

In a nutshell, this study attempts to provide sufficient information to integrate environmental education in English writing. As such, perceptions of current situations are being discussed and analysed and the benefits of having environmental elements in English writing are identified. Constraints to the implementation are being identified and tackled while few methods are being discussed and highlighted to incorporate environmental education in English writing in the Chinese independent school.

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