Climate Change Exposition Reading Materials for Senior High School Textbook: Students’ Needs Analysis

Geyereni Maretika Noto1, Sofendi2, Rita Inderawati3, Hartono4, Ratu Ilma Indra Putri5

1 Singapore Indonesian School (SIS) Palembang, South Sumatera Province, Indonesia; geyereni@gmail.com
2 English Education Study Program, Faculty of Teachers Training and Education, Universitas Sriwijaya, Indonesia; sofendi@unsri.ac.id
3 English Education Study Program, Faculty of Teachers Training and Education, Universitas Sriwijaya, Indonesia; rita_inderawati@fkip.unsri.ac.id
4 Chemistry Education Study Program, Faculty of Teacher Training and Education, Universitas Sriwijaya, Indonesia; hartono@fkip.unsri.ac.id
5 Mathematics Education Study Program, Faculty of Teacher Training and Education, Universitas Sriwijaya, Indonesia; ratu.ilma@gmail.com

ARTICLE INFO

Keywords:
English reading materials in SMA; Climate change; Need analysis

ABSTRACT

This research intends to dig out the Senior High School students’ needs in English reading materials development based on climate change material revised by students', and teachers' views. The data were obtained by applying a questionnaire and semi-structured interviews. The data are described both quantitatively and qualitatively. The outcomes of the need analysis represent that: 1) English is important to students’ future careers, (2) students’ English proficiency is at the beginner level, 3) students still get some hardship in writing skills, 4) the type of text needed is an exposition text, 5) it has connected between English reading materials and the content subject materials, 6) students still run short of awareness about climate change material, 7) There is still the limitation of climate change as the English reading materials, 8) two major causes for connecting climate change material into educational materials are to increase the awareness of students. As a consequence of the needs, it is important to develop supplementary exposition reading materials by connecting climate change which fit the students’ English proficiency and can help out their study program.

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Corresponding Author:
Rita Inderawati
English Education Study Program, Faculty of Teachers Training and Education, Universitas Sriwijaya, Indonesia; rita_inderawati@fkip.unsri.ac.id
1. INTRODUCTION

Investigate by Organisation for Economic Co-operation and Improvement (OECD) (Witoelar. R 2020). Presents to Climate Alter Intuction by raising mindfulness and advancing information and advancement, instruction is a fundamental component and a catalyst for reacting to worldwide climate alter. Its significance has been progressively highlighted at the worldwide level.

In expansion, the changing climate is caused by worldwide warming and influences the climate by counting changes in precipitation and temperature designs causing surges and dry spells; warm waves that cause impacts such as fire and extraordinary dry spells; social impacts through influences on employment and expanded frequency of malady; and financial impacts such as the decay of efficiency and foundation harm. Each nation and living beings on the soil endure these conditions.

The geographic areas and social financial conditions of creating nations are as of now helpless to a few unsettling influences such as surges, avalanches, tidal waves, dry season, and woodland fires. In addition, most of these nations have constrained assets and capacity to reply to the characteristic catastrophes and the impacts of climate alter. In the rule, an adjustment program ought to be in line with the programs to attain economic advancement.

It influences all components of the instruction framework – which incorporate, among others, enactment, approach, back, educational module, educator instruction, instruction, learning, appraisal, school administration and framework – and considers learning as a deep-rooted preparation taking put in different settings. In this framework, Climate Change Education (CCE) (The United Nations Educational 2022) cultivates an understanding of the complexities and interconnection of the different challenges postured by climate alter. More particularly, CCE advances learning around the causes and impacts of climate alter as well as conceivable reactions, giving a cross-curricular and multidisciplinary point of view. To advance the climate alter instruction, it is pivotal to reinforce teachers’ and educators’ capacities to provide exact data and coordinated nearby substances. This incorporates expanding their understanding of climate and maintainability issues as well as making a difference in creating the vital aptitudes and giving them academic back. Moreover, instructors and teachers require committed materials to back their learning exercises on climate alter. Cases of important materials incorporate manuals, teachers’ asset guides, lesson plans and preparing modules, but the books, cartoons and recordings (to title a number) direct, rouse and engage understudies.

In expansion, proficiency in perusing aptitudes is one of the aptitudes that got to be considered as well as emphasized. Understudies can pick up more data to clarify their aptitudes, such as being direct, by perusing. In like manner, instructors confront numerous challenges in advancing understudy competence and empowering them to study since of a deficiency of openings that meet their needs and interface. As a result, understudies must have got to perusing materials important to their subjects and interface. If the substance does not meet the students’ measures, the educators will have to make unused fabric (Elviana 2020; Mahbub 2018; Mukundan 2016). Teachers must be able to plan, alter, and adjust instructing materials based on instructing and learning targets and understudy characteristics, as set out in National Education Regulation No. 16 of 2017 (Government Regulation of Indonesia. 2017), relating to teachers’ professional competence. The materials instructed in SMA ought to be planned or created suitably to satisfy the students’ needs. Giving materials for perusing in instructing English in SMA can be coordinated with the information of the substance subjects. The information instructed in English is almost science, innovation, craftsmanship, culture, and humanities, which is reliable with the centre competence of the English subject of the 2013 educational modules.

Experts examine the requirements for understudies to memorize English more straightforwardly in their areas, which leads them to create English education materials for senior
tall school understudies. Other nations have moreover attempted an assortment of needs acknowledgment studies (Bedoya 2015; Chetsadanuswat 2018). These discoveries highlight the esteem of performing a needs audit while creating measures, course readings, or guidelines materials. Desires examination may clarify students’ challenges, the skill or abilities required, or the education procedures to be used—other than, the discoveries of the consideration of needs. Think about will be the foremost significant thing to consider to fulfill the desires of students. Other things or instruments can be adjusted or modified to be utilized for the improvement of materials (Tomlinson 2012). By lessening, including, supplanting, altering, and including the significance of the book for each understudy, educational program adjustment makes strides the substance to improve or make it more reasonable for certain sorts of learners. To begin with and vital thing to do some time recently creating the materials is to do a need analysis (Checaria 2021; Inderawati 2021; Octaviana 2021; Rahimah 2021; Septiana 2020; Sopian 2019; Susanti 2017). According to (Brown 2009) required examination implies the method of gathering data approximately the wants of a certain bunch in industry or instruction. It implies that, at SMA, it is the action of picking up data on almost the students’ needs in learning based on their think about the program. Besides, (Brown 2009) portrays nine sorts of dialects that require examination. They are (a) target circumstance examination (TSA), which bargains with the data on the dialect prerequisites that learners must meet when learning a dialect. It centres on the students’ reason or necessities in learning a dialect, (b) lack investigation which considers the students’ current needs and needs and their target circumstances insufficiencies or needs, (c) show circumstance investigation (PSA) which centres on the existing capability, information, qualities and shortcomings of the students, (d) learning-oriented examination which takes the see that the requirements (in terms of syllabus, substance, educating strategy, materials and others) ought to be arranged in other countries such as (Alsamadani 2017; Bedoya 2015; Chetsadanuswat 2018; Hamlan 2015; Ibrahim 2016; Kayaoglu 2016; Lee 2016; Wu 2018). Their examinations appear to be the need and unavoidable work of the required examination in orchestrating information, planning reading material, or creating educational materials. They require investigation can recognize the issue that the understudies are confronting, the information or aptitudes that are required, or the instructing strategy that ought to be utilized. Besides, the result of the required investigation can be the most point that had to be considered to meet the requirements of the students (Azizah et al. 2021; Herawati 2020; Octaviana 2021; Tenridinanti 2021).

Besides, teachers and teachers require committed materials to back their learning exercises on climate alter creating climate alter-based expressive perusing materials can be a way to extend their information as well as to empower their mindfulness of the presence of climate to alter and offer assistance them socially proficient. Instruction for Maintainable Advancement program, UNESCO has been working to create instruction for a more central and obvious portion of the universal reaction to climate alter. Instruction is vital to advancing climate activity. It makes a difference if individuals get it and address the impacts of the climate emergency, enabling them with the information, aptitudes, values and states of mind required to act as specialists of alter.

In expansion, the utilisation of climate change-based material is highly recommended by UNESCO, the number of climate change-based materials is still limited in Indonesia; indeed numerous schools still lack English textbooks containing climate change material. According to (Tomlinson 2012) instructing materials are anything that can be utilized to help understudies in their studies. Moreover, (Maley 2016) clarifies that fabric instruction is required to offer more instructive points of view for case basic considering, life abilities, citizenship, worldwide issues, cross-cultural understanding, and more. Within the educational programs, materials are considered as one of the imperative components within the instructing and learning handle since materials are the information which the understudies ought to learn. As a result, it is critical to coordinate climate alter into education materials. Since there are right
now no instructing materials containing climate alteration the substance, the advancement of educating materials containing climate alteration substances is considered essential.

Based on the clarifications over, the analysts got to conduct the required investigation think about related to the students’ needs in progress, as the earlier organize of creating English piece perusing climate alteration materials understudies of SMA. The students’ needs investigation conduct included TSA, insufficiency examination, PSA, and technique examination. This requires investigation centers into the requirements of SMA understudies and an English educator. Hence, the objective of this inquiry is to portray the points of view of understudies, and educators on the students’ needs in English perusing materials as a result of climate change. The presentation ought to briefly put the consideration in a wide setting and highlight why it is vital. It ought to characterize the reason for the work and its noteworthiness. The current state of the inquiry field ought to be checked carefully, and key publications cited. If it’s not too much trouble highlight questionable and separate speculations when vital. At long last, briefly specify the most point of the work and highlight the vital ones. References should be cited as (Aleks and Cichocka 2016; Hidayat, R., & Khalika 2019; Ibrahim 2016; Ikhwan 2019; Madjid 2002; Marchlewksa, M., Cichocka, A., Łozowski, F., Görsk, P., & Winiewski 2019; Miller, A. E., & Josephs 2009; Rahamdina 2019; Rakhmat 1989; Sopian 2019).

2. METHODS

This study is a kind of development research. (Akker 1999). Development research is a research type that purpose to design a product for certain purposes. There are fundamental stages in development research that are proposed by (Akker 1999), analysis, design, evaluation and revision. The participants of this study are eleventh-grade students, and 1 English teacher at an SMA Srijaya Negara Palembang. This school has two study programs, they are science and social class. There are 3 science classes and 4 social classes. Purposive sampling is the sampling technique that uses in this study. The sampling is eleventh-grade students of science class 1, the total number of the students is 35 students, 13 students are male and the rest, 22 students are female. and 1 English teacher at an SMA Srijaya Negara Palembang.

The data got through a questionnaire and semi-structured interviews. The questionnaire is given to the students and comprises 25 questions. The questions classified into Targett Situationn Analysis (TSAa), deficiencyy analysis, Presentt Situation Analysisss (PSAA), and strategyy analysisy. The interview is conducted with one English teacher particularly related to teaching English in SMA, the existing English readingg materials, and thee utilizee of climate change in developing English readingg materials.

The information is analyzed both quantitatively and qualitatively. The quantitative method is used to assess thee dataa obtained from theee questionnaire whereas the qualitative method is utilized to interpret and describee thee information got from the interviewed. Qualitative methodd looks for to comprehend a given research issue or topicc from the point of view of the locals populationn it includes. This study uses highly structured methods such as questionnaires that consist of 25 questions about climate change material for 35 eleventh-grade students of science class 1 at SMA Srijaya Negara Palembang. For qualitative method is particularly effective in obtaining culturally specific information about the values, opinions, behaviours, and social contexts of specific populations. Semi-structured methods by using interviews are also used in this study. This method describes individual experiences, and the interaction between the researcher and the participant, and she is an English teacher at SMA Srijaya Negara Palembang. There are 10 openn-endeddd questionss, participant can respond in her own words, and these respondss tendd to bmoree complex than essentially “yes” orr “noo”. Participant has the chance to reply moree elaborately and in more detail about climate change material.
3. FINDINGS AND DISCUSSION

3.1 FINDINGS

This study got data from the students’ views were related to the students’ needs in TSAA, deficiency analysis, PSAA, and strategy analysis. The data showed in this paper were the highest percentage of the students’ views off each question in the questionnaire. The finding is shown in this figure 1.

In Target Situation Analysis (TSA) was considered about the students’ necessities, general intention, and expectations in learning English. The fundamental reason for learning English was the students expected that they can communicate properly using English in verbal communication in the future workplace (76.5%). Then in Deficiency analysis, this part concerned the students’ current wants and needs and their target situation deficiencies or lacks. The data about the students’ current demands and needs concerning the topics or input for reading. The students choose the topic that they needed to be about climate change 82.4% of the students gave a positive response that it was important. And next, the students’ perspectives on connecting topics that were related to climate change for reading were intended to assist them in some ways. 60.3% of students concerned that connecting climate change in English reading materials were able to encourage their cultural awareness and improve their English capability in reading skills. Climate change’s aspect which the students required to be connected into English reading materials, most of the students (76.5%) were necessary to learn about climate change concerning the environment. Managing with the lack of the students, they discovered some complexities with reading skills in learning. The students met some complexities in reading skills. Understanding specific words were categorized as the most difficult skill (66.2%).

In Present Situation Analysis (PSA.) centred on the present students’ proficiency in English, the materials learned, and the local cultural knowledge of the students. The data about the students’ perspectives on their English proficiency is almost all students (73.5%) confessed that their current English proficiency was at the beginner level. And next, 63.2% of students assumed that their current proficiency in comprehending the reading text was good enough. From the data obtained, it is looked forward that the developed reading materials can gain the student’s English proficiency, particularly in reading skills to a higher level as needed to support their careers in the future. And then in the strategy analysis, this part showed the students’ preferences in learning reading. The data obtained present that 38.2% of students preferred to comprehend the text by translating.
3.2 DISCUSSION

The students’ needs viewed by the students

The data received from the students’ views were concerning the students’ needs in TSAA, deficiency analysis, PSAA, and strategic analysis. The data showed this paper was the highest percentage of the students’ views off each question in the questionnaire.

Target Situation Analysis (TSA)

This part was focused on the students’ necessities, general intentions, and expectations inn learning English. The data obtained can be shown in Table 11.

<table>
<thead>
<tr>
<th>No</th>
<th>Question / Statement</th>
<th>Students’ view</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The importance of learning English</td>
<td>To help me communicate with other people.</td>
<td>41.2%</td>
</tr>
<tr>
<td>2</td>
<td>The students’ expectations of learning English</td>
<td>To communicate using English in verbal communication in the future workplace</td>
<td>76.5%</td>
</tr>
<tr>
<td>3</td>
<td>The language used for students’ career</td>
<td>To do verbal communication with colleagues or tourists</td>
<td>67.6%</td>
</tr>
<tr>
<td>4</td>
<td>The English proficiency level for students’ career</td>
<td>Advance</td>
<td>63.2%</td>
</tr>
</tbody>
</table>

From Table 11, the fundamental reason for learning English was to help the students communicate with other people (41.2%). It was similar to the core competence off the English subject off the 2013 curriculum that is represented by knowledge taught in English about science, technology, art, culture, and humanities. After, the students hoped that they can communicate fluently using English in verbal communication in the future workplace (76.5%). Most of them wanted by learning English they were able to communicate with colleagues or tourists (67.6%). That is the reason why their English proficiency should be at advanced stages to help their career (63.2%). As the outcome, for the students can communicate verbally, particularly with tourists, they needed to be knowledgeable about a variety of topics, one of which was climate change. They required to describe and reveal their knowledge, ideas, and opinions the domestic tourists even those from overseas as one of their jobs in the future. One attempt to prepare knowing about climate change was by providing it in reading material. As expressed (The United Nations Educational 2022) declared the UNN Decade of Education for Sustainable Development (DESDD) (David Selby 2013) confirms that one of the key action themes of the decade is climate change. It suggests learning methodologies for encouraging critical thinking, and problem-solving skills, such as guessing cases impressing both natural and human ecosystem and acting on these in collaborative ways. ESDD serves an place for many shapes of education.

Deficiency analysis

This section took into consideration the students’ recent requests and demands and their objective conditions deficiencies or lackss. The data about the students’ recent requests and demands about the topics or input for reading are presented in Table 2.

According to the questionnaire result, 66.2% of students desired the topic of climate change in reading materials. It could be considered that the students believed that the topic can help and increases their knowledge. It could be shown that 66.2% of the students wanted texts about authentic materials about climate change, which may simply be discovered in daily life such as (newspapers, recipes, brochures, advertisements, and others). It was seen that 61.8% of students considered connecting topics that were in relation to the common knowledge of students’ study programme for reading, was important. In addition, other topics that they also needed were climate change. 82.4%
of the students shared a good response and it was important. It is similar to Article 6 of the UNN Framework Convention on Climate Change (United Nations 2007) recommends Parties to promote, develop and implement educational, training and public awareness programs on climate change and its effects. Climate Change Education by increasing awareness and promoting knowledge and skill development, education is an important part and a catalyst for responding to global climate change.

Table 2. The students’ perspectives on current wants and needs

<table>
<thead>
<tr>
<th>No</th>
<th>Question / Statement</th>
<th>Students’ view</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Topic desired by students in learning reading</td>
<td>Climate change</td>
<td>66.2%</td>
</tr>
<tr>
<td>2.</td>
<td>Students’ desired input for reading</td>
<td>Authentic materials about climate change can easily be found in everyday life (for example newspapers, recipes, brochures, advertisements, and others)</td>
<td>66.2%</td>
</tr>
<tr>
<td>3.</td>
<td>Integrating topics that were related to the common knowledge of students’ study programs for reading</td>
<td>Important</td>
<td>61.8%</td>
</tr>
<tr>
<td>4.</td>
<td>Integrating topics that were related to climate change for reading</td>
<td>Important</td>
<td>82.4%</td>
</tr>
</tbody>
</table>

After that, the students’ perspective of integrating topics that were related to climate change for reading was to assist them for some reasons, as presented in figure 1.

From figure 1, most of the students considered that integrating climate change into reading materials can increase their knowledge about it (42.6%). Then, 23.5% of students believed the reading materials based on climate change might help their skills in their study. 60.3% of students took into consideration that integrating climate change in English reading materials can promote their cultural awareness and increase their English proficiency in reading skills. Another reason was urging motivation in learning English (39.7%). 44.1% of students considered that it can create them grasp the texts. It may be because the students have earlier knowledge about climate change, and are attracted attention and common with the reading materials.

It is similar to the description of (Cooper 1988) about the prior knowledge which is as the fundamental experience of the students is a necessary factor in the reading process. It assists the student to build a comprehending of the reading text. (Mukundan 2016) define that if there is no interest in reading, there will be little or no reading activities as from the reader should more delighted to read the topics that are about personal interests. Accordingly, preparing reading materials that are appropriate for the student’s interests will encourage them in reading, and finally, can sharpen their proficiency in reading skills. The international community admits the importance of education and training to address climate change. The UNN Framework Convention on Climate Change, the Paris Agreement and the associated Action for Climate Empowerment (ACEE) agenda (United Nations 2007) appeal governments to train, empower and take part in all stakeholders and major teams on policies and actions relating to climate change. Education is important part of the global response to climate change. It supports people know and sign the effect of global warming, enhances “climate literacy” among young generation, enhances changes in their behaviours and manner and assists them adjust to climate change-related trends.
The aspects of climate change that the students needed to be integrated into English reading materials can be shown in figure 2.

From the figure, most of the students (76.5%) were necessary to study about climate change concerning the environment, climate (61.8%), and earth (55.9%). The other aspects of climate change that they need were extreme weather (50%), temperature (39.7%) and the greenhouse effect (19.1%). The data obtained might be fundamental about climate change that could be integrated into the development of the reading materials. These sectors of climate change refer to the long-period changes in global temperatures and other characteristics of the atmosphere. Comprehending and addressing climate change are serious to EPAA’s task of keeping human wellbeing and the environment. EPAA tracks and informs greenhouse gas emissions impact science and does to minimize emissions to combat climate change.

Regarding with the lack of the students, they discovered some difficulties in reading skills in learning. The data shown in figure 3 show the difficulties encountered by the students.

From the figure, the students dealt some difficulties in reading skills. Understanding specific words were taken as the most difficult skill (66.2%). After that comprehend the main idea (14.7%), concluding cause and effect (7.4%). The other difficulties were comprehending the detailed information (5.9%) and managing the sequent order or event (4.4%), and the least difficulty was others (1.5%). Therefore, it was prompted that in developing the reading materials, the aspects of reading comprehension should be taken into account aside from the content of the reading
materialss. (Ascend Smart Intervention 2019) explains there are several factors of reading comprehension that ought to be taught and learned; main idea, detail, references, cause and effect, inference, sequence, and vocabulary.

![Figure 3. Students’ difficulties in reading skill](image)

**Present Situation Analysis (PSA)**

This section concentrated on the present students’ proficiency in English, the materials learnt, and the local cultural knowledge of the students. The data about the students’ perspective on their English proficiency is presented in Table 3. Most of students (73.5%) confessed that their current English proficiency was at the beginner level. Then, 63.2% of students assessed that their current proficiency in comprehending the reading text was good enough. From the data acquired, it is looked forward that the developed reading materials may increase the student's English proficiency, particularly in reading skills, to a higher level as needed to help their careers in the future.

<table>
<thead>
<tr>
<th>Noo</th>
<th>Question / Statement</th>
<th>Students’ view</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Students’ current proficiency level in English</td>
<td>Beginner</td>
<td>73.5%</td>
</tr>
<tr>
<td>2</td>
<td>Students’ current proficiency in Good enough comprehending the reading text</td>
<td>Good enough</td>
<td>63.2%</td>
</tr>
</tbody>
</table>

The students’ perspective on the existing reading materials learnt or prepared at school may be shown from the data provided in Table 4. The stage of the reading text in English coursebooks used was regarded quite easy by 61.8% of the students. Though, 77.9% of students believed that the topics were interesting; 50% of students felt that the type of text generally discovered or learnt in learning English was descriptive text. 54.5% of students revealed that occasionally English teachers prepared reading materials or texts and the questions related to the general knowledge of students’ study program for reading. Meanwhile, 47.1% of students said that English teachers sometimes prepared reading materials or texts and the questions about climate change for reading. It might be resumed that the students sometimes had the reading material related to their own local culture.
The existing materials learned and provided

<table>
<thead>
<tr>
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<th>Students’ view</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The difficulty level of reading texts in the English coursebook</td>
<td>Quite easy</td>
<td>61.8 %</td>
</tr>
<tr>
<td>2</td>
<td>The topics of reading texts in the English coursebook</td>
<td>Interesting</td>
<td>77.9 %</td>
</tr>
<tr>
<td>3</td>
<td>The kind of text commonly found or learned in learning English</td>
<td>Descriptive</td>
<td>50 %</td>
</tr>
<tr>
<td>4</td>
<td>The frequency of English teachers provided reading materials or texts and the questions related to the general knowledge of students' study program for reading</td>
<td>Sometimes</td>
<td>54.5 %</td>
</tr>
<tr>
<td>5</td>
<td>The frequency of English teachers provided reading materials or texts and the questions related to climate change for reading</td>
<td>Sometimes</td>
<td>47.1 %</td>
</tr>
</tbody>
</table>

The students’ perspectives on their recent knowledge about climate change can be shown from the data ready in table 5.

47.1% of students assessed that their knowledge about climate change was enough. The factors of climate change that the students are familiar most were about the environment (25.2 %). 48.5% of students mentioned that they found out the climate change only from online media. 31.3 % of the students just found the climate change in their area and the closer regions. Then, 48.5% of them acknowledged that their knowledge about climate change was just about common information. Based on the data collected, it was clear that providing climate change to the students’ descriptive reading materials in learning was needed.

Table 5. The students’ climate change knowledge

<table>
<thead>
<tr>
<th>No</th>
<th>Question / Statement</th>
<th>Students’ view</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Students’ knowledge about climate change</td>
<td>Enough</td>
<td>47.1 %</td>
</tr>
<tr>
<td>2</td>
<td>The aspects of climate change that the students know</td>
<td>Environment</td>
<td>25.2 %</td>
</tr>
<tr>
<td>3</td>
<td>The way students know about climate change</td>
<td>Online media</td>
<td>48.5 %</td>
</tr>
<tr>
<td>4</td>
<td>The scope of climate change that the students know</td>
<td>In the students’ place and the closer districts</td>
<td>31.3 %</td>
</tr>
<tr>
<td>5</td>
<td>The students’ knowledge level of climate change</td>
<td>Common information</td>
<td>48.5 %</td>
</tr>
</tbody>
</table>

Based on the students’ views on their knowledge about climate change, there were various things that the students regarded they might do to maintain and expand climate change. The actions that the students might do are presented in figure 4.
Figure 4. The students’ actions in maintaining climate change. Increasing knowledge and comprehending of climate change (blue), applying how to prevent climate change in everyday life (red), taking an active role in preventing climate change (yellow), and promoting prevent climate change in the region or abroad (green).

Based on the data got, 48.5% of students might increase and understand climate change, apply how to prevent climate change in everyday life (33.8% students), take an active role in preventing climate change (14.7%), and promoting prevent climate change the region or abroad (2.9%).

The data presented that the students possessed the intent to understand more and maintain their climate change. Therefore, developing climate change-based descriptive reading materials should be a pathway to enhance their knowledge as well boost their awareness of the presence of climate change, and help them culturally literate. Education for Sustainable Development programme, UNESCO has been performing to create education a baser and seen side of the international reaction to climate change. Education is fundamental to urging climate action. It assists people knows and addresses the effects of the climate crisis, supporting them with the knowledge, abilities, values and manners needed to step in as agents of change.

Strategy analysis

This section showed the students’ choices in learning reading. The data acquired are seen in figure 5. The figure indicates that 38.2% of students selected to grasp the text by translating. Another pathways of learning reading were 19.1% of students choose to read and reply the questions about the passage personally and talk about the content of the passage in a group (17.6% of students.). Afterwards, 13.2% of students have attracted attention in reading loudly with proper pronunciation, and intonation, and 11.8% of students have arrested attention to analyzing novelty vocabulary based on the context, and the students’ choice in learning reading might be reflected as the strategy to assist them to learn.
The students’ needs observed by the English teacher

Based on the outcome of the interview with one English teacher, she had her thought that English Subject was important for passing the exam as well. As helping the students’ career in the future. The teacher truly accepted and stated:

“The goals of English subject are appropriate for the needs of the curriculum, and the English subject is necessary to help the content subjects. Since graduating, they will Possess a work based on their area of study thus, they must be able to use it. English.”

Nevertheless, the teacher felt that the topics available were not suitable as most of them were still common.

To cope with this condition the English teacher attempted to find additional topics for reading by using the ESP. books, another commercial books, or picking up the materials on the internet. As expressed by the teacher:

“I apply the book. From the government and a commercial one. I also find the topics on the internet too.”

Nowadays, teachers only the materials from the additional books or the internet immediately or adjust the topics. They did not adjust or develop additional reading materials for samples connected to the common knowledge of content subjects. All the teachers owned a readiness to adjust or develop suitable reading materials. Nevertheless, she dealt with some matters. The teacher said most of the cause was concerned to time.

“I possessed a very strict timetable in teaching and I occasionally possessed other duties at school. Thus, I didn’t have much time for development teaching materials and I have not been convinced about the setting or the reading materials might be well or suitable with the students.”

These problematic aspects were also faced by other English teachers in developing English materials. Syamsinar and Jabu (2015) established a study concerning the matters in professional competence dealt with the senior school. English teachers, informed one of the discovering was the teacher faced problems in developing materials creatively as the deficiency of references, the English knowledge was still possible about the common ones, and because of the teacher’s competence. (Metboki 2018) who conducted problems obstructing the student teachers in developing ELT materials uncovered the issues were the deficiency of fundamental notions about what and the way to develop ELT materials were suitable to be necessary for the students and the deficiency of time.

By the students’ English ability, the teacher assessed it was at the beginner level, some students’ reading proficiency was good enough and some of them were still less. In terms of reading materials, the teacher mentioned the reading passages are given in the course books were complicated for the students to comprehend. Afterwards, the English teachers common that the general difficulties dealt with the students in reading were in terms of vocabulary and understanding of the passage such as the main idea and detailed information. As stated by the teacher:
"The unfamiliar vocabulary is the common issue that dealt with the students. They are necessary to check it in the dictionary or use the google translate application first. In understanding the passage, the students were necessary to be instructed. It relies on their comprehension of the vocabulary in the text."

Most of the usual typed of reading passages are taught was descriptive text, another one as narrative, procedure, and exposition texts.

The English teachers accepted that combining specific topics were connected to the common knowledge of students’ study program for reading was important. There are just limited reading materials equipped with reading comprehension tests about climate change that might fulfill the students’ needs and appropriate their reading level. It was similar to the matter the integration topics that were connected to climate change for reading. As stated..., the English teachers:

"Though the reading materials delivered that related to climate change is limited but it must be given the materials connected to the climate change. This topic is a real situation, we can find it the real life. The students have to know about the definition of climate change, the cause of it and how to prevent it and many more."

The aspects of climate change suggested were related to extreme weather, climate, earth, environment, temperature and greenhouse effect. Research from the IPCC (Intergovernmental Panel on Climate Change) (Witoelar. R 2020) sums up the intensity of a changing the climate in the past. 150 years has developed consequence of human activities and interference (anthropogenic interference) in universal, regional, national wide and local levels. The fundamental human interference is the over-development and utilisation of fossils fuels both. Petroleum and coal, also forest transformation and uncontrolled land use change that dismissed Green House. Gasses (GHGG) emissions into the atmosphere.

CONCLUSION

The English reading materials for senior high students might encourage their needs in English. Firstly, the materials might not face the students’ needs it is necessary to develop the materials. One of them is by connecting climate change to reading materials for the students. The main thing that has to be conducted is doing need analysis. By doing need analysis, there will be more information acquired. It might about the needs, wants, deficiency of studies, and the choice in the learning way of the students. That information may be grounded concern in developing. English materials. According to the outcome of the need analysis of this study, English is important to students’ future careers, students’ English proficiency is at the beginner level and students face some difficulties in writing skills. There is a need of connecting English reading materials with the materials of the content subjects by the reason of the students still deficiency knowledge about climate change material, the type of text needed is an exposition text, and afterwards there are limited existing English reading materials that are connected with climate change. It is recommended to develop supplementary exposition reading materials by integrating climate change that suitable the students’ English proficiency and assists the students’ needs. The main reason for integrating climate change material into education materials is to increase the knowledge of students.

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