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Inventario de metas de acción de aprendizaje para construir conocimientos basados en texto y tema

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An Inventory of Purpose-Built Learning Actions to Build Text-Based and Topic-Based Knowledge

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Abstract: This research is based on ESL reading comprehension. Its purpose is to identify which purpose-built learning actions for constructing text-based and topic-based knowledge first-semester students from the English Language Teaching Program at Universidad de Córdoba applied more often while reading. Data was gathered through a reading platform called knockWhy?, along with a reading activity in which students brought up purpose-built learning actions. After using the platform, the students answered a questionnaire in order to evaluate their experience and opinion about the platform's design. Results showed that students brought a significant amount of purpose-built learning actions, which mainly concerned textual-based knowledge, rather than topic-based. Results also revealed that students' experience with the platform and its design was significant when bringing up purpose-built learning actions.

Keywords: Reading Comprehension, Topic-Based Knowledge, Text-Based Knowledge, Purpose-Built Learning Actions, CALL (Computer-Assisted Language Learning).

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*Inventario de metas de acción
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Resumen: La investigación se basó en procesos de comprensión lectora en inglés como segunda lengua. Su propósito fue identificar cuáles son las metas de acción de aprendizaje para construir el conocimiento textual y temático que aplicaron más al leer los estudiantes de primer semestre de la Licenciatura en Inglés de la Universidad de Córdoba. Los datos se recolectaron luego de implementar una plataforma de lectura llamada knockWhy? En esta se encontraba una actividad lectora en la que los estudiantes debían plantear acciones propositivas de aprendizaje, un cuestionario aplicado a los estudiantes después de haber utilizado la plataforma para evaluar su experiencia y su opinión acerca del diseño. Los resultados revelaron que los estudiantes plantearon un número significativo de acciones de aprendizaje propositivas y que estas se basaron, en su mayoría, en conocimiento textual. Los resultados también revelaron que la experiencia de los estudiantes con la plataforma y su diseño fue significativa en el momento de plantear las acciones de aprendizaje propositivas.

Palabras clave: Comprensión lectora, conocimiento temático, conocimiento textual, propósitos de acción de aprendizaje, CALL (Asistencia de aprendizaje por computadora).



*Inventário de metas de ação de
aprendizagem para construir
conhecimentos baseados em texto
e tema*

Resumo: A pesquisa baseou-se em processos de compreensão de leitura em inglês como segunda língua. O objetivo foi identificar quais são as metas de ação de aprendizagem para construir o conhecimento textual e temático que os estudantes de primeiro semestre do programa de Licenciatura em Inglês da Universidade de Córdoba aplicaram com maior frequência durante a leitura. Os dados foram coletados após usar uma plataforma de leitura chamada knockWhy? A plataforma incluía uma atividade de leitura na qual os estudantes deviam propor ações de aprendizagem propositivas, um questionário aplicado aos alunos depois de usar a plataforma para avaliar a sua experiência e opinião sobre o desenho. Os resultados revelaram que os estudantes propuseram uma quantidade significativa de ações de aprendizagem propositivas baseadas principalmente no conhecimento textual. Os resultados também revelaram que a experiência dos estudantes com a plataforma e seu design foi significativa na hora de propor as ações de aprendizagem propositivas.

Palavras chave: compreensão de leitura, conhecimento temático, conhecimento textual, objetivos da ação de aprendizagem, CALL (Aprendizagem de línguas assistida por computador).

Introduction

Instead of reading to comprehend and to think critically, the principal goal for teachers, teacher-researchers and academic institutions should be to promote text-based and topic-based knowledges, since these two types of knowledge are necessary to respond to more demanding reading levels.

Although the above-mentioned knowledges are very important for students to perform well in more challenging academic reading levels, as well as for life-long learning, it seems that promoting them has been illusive, difficult, partially accomplished or even neglected, due to lack of time, training, dedication, and efforts to develop reading skills. Through this research proposal, we suggest that purpose-built learning actions, as part of a proactive reading awareness methodology, could be one of the basic strategies required to start promoting text-based and topic-based knowledge. Following purpose-built learning actions may be the cornerstone for readers to achieve more critical thinking processes. In this paper, purpose-built learning actions are identified through an educational platform as part of a Computer-Assisted Language Learning (CALL) proposal.

As part of the proactive reading awareness methodology, students may first choose to apply any of the cognitive strategies, which include: highlighting, underlining, and circling which are text-based reading constituents, and literal reading aspects, such as identifying unknown words, (including other linguistic aspects like grammar and pronunciation), key words, interesting information, and specific features (dates, names, colors, the characters' relationship, etc.). Later, students may be asked to select a "purpose-built learning action," such as using unknown words already identified in an essay. Following these steps, students may learn text-based

constituents while constructing topic-based knowledge through a plan of action or reinforcement activity—in this case, the essay.

The purpose of this exploratory research proposal is to identify the purpose-built learning actions that a group of 1st semester Grammar IA students, brings into their English reading comprehension processes to build both text-based and topic-based knowledge. Gaining knowledge on these two reading aspects may be of great importance for students to transcend to more demanding reading levels (e.g. the Inferential and Critical one).

Despite being an exploratory case study, it may implicitly influence and support the reading teaching-learning process. On one hand, this research proposal may provide students with knowledge on what reading strategies are besides the applied reading purposes and, more importantly, on how and why to apply those reading purposes functionally. On the other hand, it may show both students and teachers that purpose-built learning actions help students to construct text-based and topic-based knowledge both inside and outside the classroom.

In terms of student and teacher roles, the students' role is active while the teachers' role is more as facilitators. This is because the students' role is rooted on a constructivist perspective, since their "learning involves constructing, creating, inventing, and developing one's own knowledge and meaning. The role of teacher is a facilitator who provides information and organizes activities for learners to discover their own learning" (Liu & Chen, 2010, p. 65).

Constructivism may contribute to the students' reading processes because it can promote in students an inner necessity to write reading purposes and purpose-built learning actions in subsequent readings. Furthermore, it is the students who propose how to learn textual information and topic-based knowledge, not the teachers. Moreover, students' reading tendencies and written products could be used as readings in the educational platform. Based on these assumptions, our final results will be of great importance to support following investigations that may focus on them.

In this research proposal, data was gathered through the proposed educational platform and a questionnaire for the students. These two instruments helped to answer the core question: What purpose-built learning actions do students most frequently bring into reading when applying underlining, highlighting, and circling to build text-based and topic-based knowledge through the knockWhy? educational platform, and the

sub-question: What are students' options in terms of the platform design and their experience as a result of implementing it?

Methodology

Type of research and questions

A qualitative approach was applied in this research proposal, which refers to a case study as a research strategy since, in the words of Schramm, "it tries to illuminate a *decision* or set of decisions: why they were taken, how they were implemented, and with what results" (as cited in Yin, 2013, p.12; emphasis added).

This proposal was also an exploratory case study. One of the reasons is that the "purpose-built learning actions" to construct text-based reading awareness appears not to be classified before. No distinctive classification or clear results are found in literature. In the words of Yin, it was an exploratory case study because "it is used to explore those situations in which the intervention being evaluated has no clear, single set of outcomes" (as cited in Baxter & Jack, 2008, p. 548).

On the other hand, authors of this research informed, based on efforts and findings, that there is a misunderstanding in terms of how these cognitive strategies have been conceptualized and applied. In fact, both aspects have been presented from theory. This research demonstrated that these strategies are not conceptually divergent and interchangeable when bringing purpose-built processing actions into reading.

Along with this statement, another focus of interest was also considered, both on the students' reading experience while using the educational platform and on how the diagnosed purpose-built processing actions could support current and upcoming reading experiences. By drawing a direct correlation between the data gathered through the platform design and how students react to this educational platform, the cornerstone for the success of the present Computer-Assisted Language Learning proposal was represented. This correlation was found to be necessary since "technology itself isn't as important as how one chooses to use it *and feel about it*" (Jo, 2016; emphasis added). Based on these statements, one of the targets of our research was to answer the following question: *What purpose-built learning actions do*

students bring most into reading when applying underlining, highlighting, and circling to construct text-based and topic-based knowledge through the educational platform knockWhy?

In this research, not only were the purpose-built learning actions identified, but there was also a focus of interest on the students' experience towards the platform design and how the diagnosed reading purposes could support current and advent reading experiences. In the words of Reilly (2012), "teachers and schools need to understand the nature of this generation and adopt teaching strategies that work with them; otherwise, students will feel bored and learning will be minimized" (p. 5). That is why we considered of great interest to share the process of this research with other researchers. Taking this into account, a sub-question was considered based on claims suggesting that "CALL studies have fallen into the trap of attributing learning gains to the technology itself rather than to the way the technology is manipulated by learners to influence achievement" (Tai & Chen, 2015, p. 513): *What are students' attitudes in terms of the platform design and their experience as a result of implementing it?*

6

Content and participants

This research was carried out at the University of Córdoba, as part of the English Language Teaching Program. The university, which is also called Unicor or Unicórdoba, is a public, state, co-educational, research university located in the city of Montería, Colombia. Thirty first-semester students from Group A of the Grammar I subject of the English teaching program participated in this proposal.

Data collection procedures

Data was gathered through an educational platform to answer the core question and from a questionnaire filled in by students to respond to the sub-question. At the beginning, a semi-structure interview to the students was chosen to respond to one of the features of the sub-question, but we decided to change it to a questionnaire because we believed it would give us the opportunity to include more students and to analyze the data more easily. The data collection procedures and their purposes are explained below.

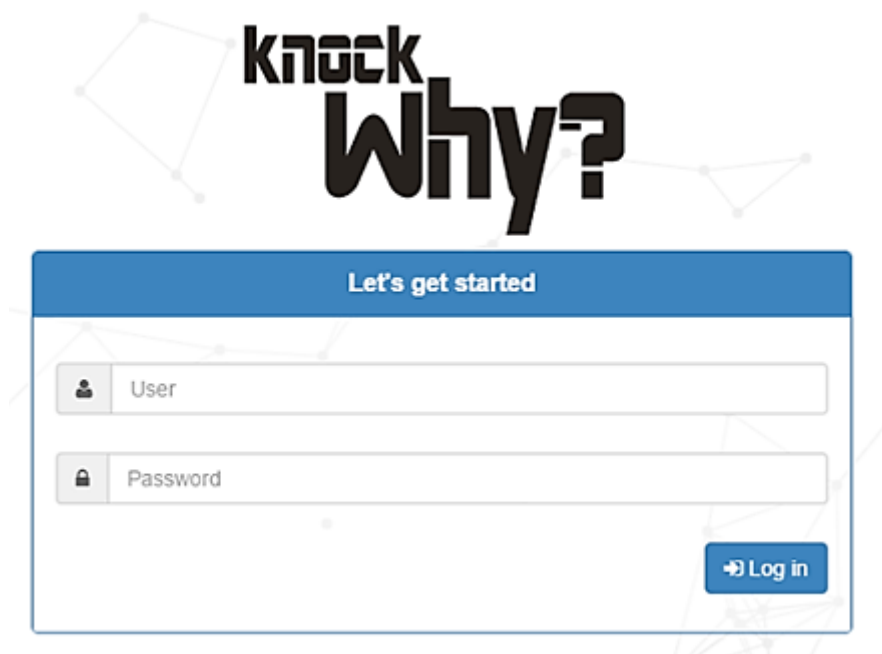
The educational platform

An educational platform offered new possibilities for monitoring and analyzing the user's experience in real time. Feedback was given immediately, when the teacher-researcher, teacher or the students themselves required it. The platform was used to gather information on the students' reading purposes and purpose-built learning actions when applying the cognitive reading strategies (i.e. highlighting, underlining, and circling).

In this section of the proposal, we will explain the sections of the platform (some screenshots), what the proactive reading awareness methodology is and how it functions, what purpose-built learning actions are, and how they are either written or chosen by students while reading, through the educational platform proposal.

First, the log-in (Figure 1); every student is given a username and a password. This is done not only to allow teachers and teacher-researchers to keep track of students' reading comprehension processes and performance, but also to let students themselves have access to this information.

Figure 1. Log-in



Source: Taken from the KnockWhy reading educational platform (2016).

A “Welcome” window to users appears next (Figure 2), which shows the name of the reading platform. Here, students click on the second icon in the vertical bar to activate the *Reading Activities*, as shown below.

Figure 2. Welcome message



Source: Taken from the KnockWhy reading educational platform (2016).

8

Figure 3. Reading activity

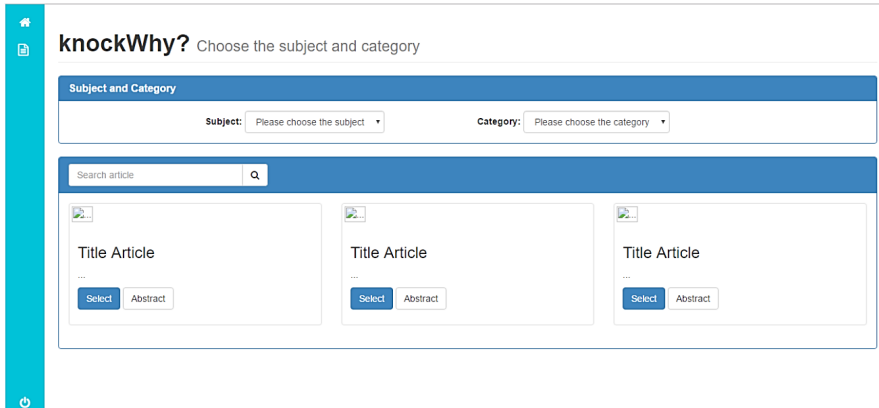


Source: Taken from the KnockWhy reading educational platform (2016).

Once the student clicks on the *Reading activities* icon (figures 3 and 4), they can choose the subject and the category they are interested in reading or were previously asked to select (e.g., Subject: English; and Category: Environmental problems). This suggests that not only English reading exercises can be assigned through this platform, but also exercises about

science, Spanish, technology, etc. However, it is also important to mention that reading about other subjects different from English is not a purpose in this research proposal.

Figure 4. Choosing subject and category

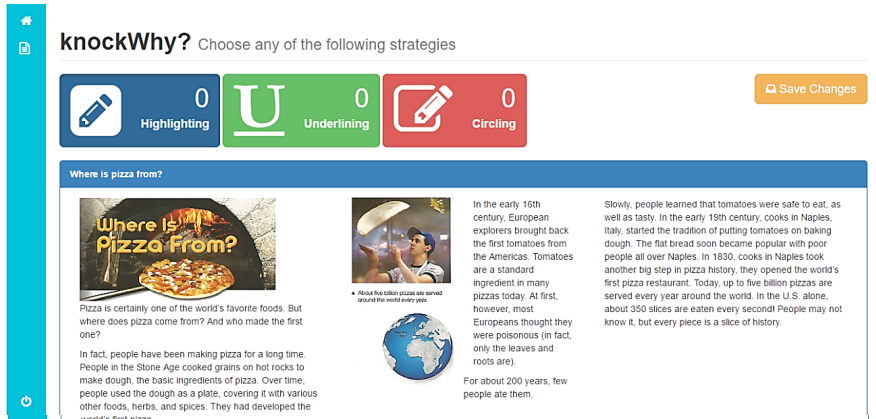


Source: Taken from the KnockWhy reading educational platform (2016).

When a student chooses the subject (English) and the category (environmental problems), the platform shows the articles the teacher has already uploaded, as shown in the picture above. Then, the student selects the article the teacher has indicated they may read. The student may choose either the full version of the article or the abstract, based on the teacher's instructions.

Once the students are in the reading section, they are asked to choose any of the reading cognitive strategies located above the reading exercise (Figure 5). Every time the student selects any of these strategies, a counter shows how many times every strategy has been used. Another important aspect of the reading exercise is its layout, which is very striking and captures the reader's attention. Furthermore, the platform may provide tabulated information about students' applied cognitive reading strategies along with the reading purposes and the identified text-based and topic-based knowledge, which is helpful for the teacher.

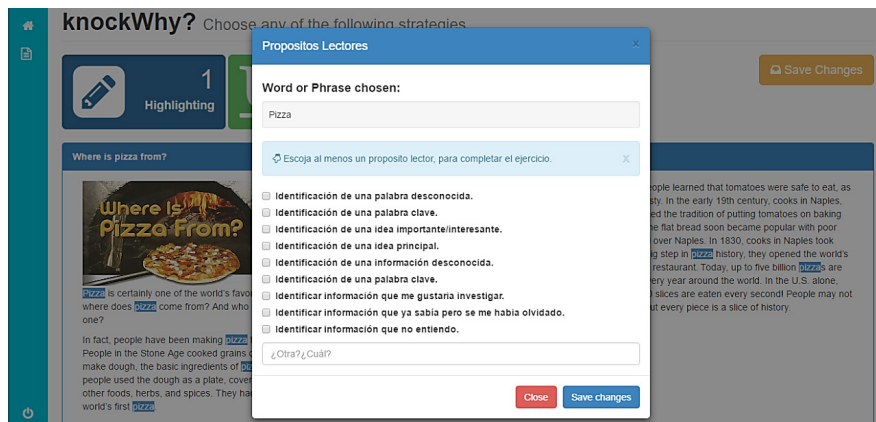
Figure 5. Cognitive reading strategies are given reading purposes



Source: Taken from the KnockWhy reading educational platform (2016).

Then, once the student has selected a word or phrase by choosing any of the cognitive strategies to point it, a new window automatically pops up so that the student checks the reading purpose on which their decision was based (for example, *identifying an unknown word*), as shown in Figure 6 below.

Figure 6. Choosing reading purpose



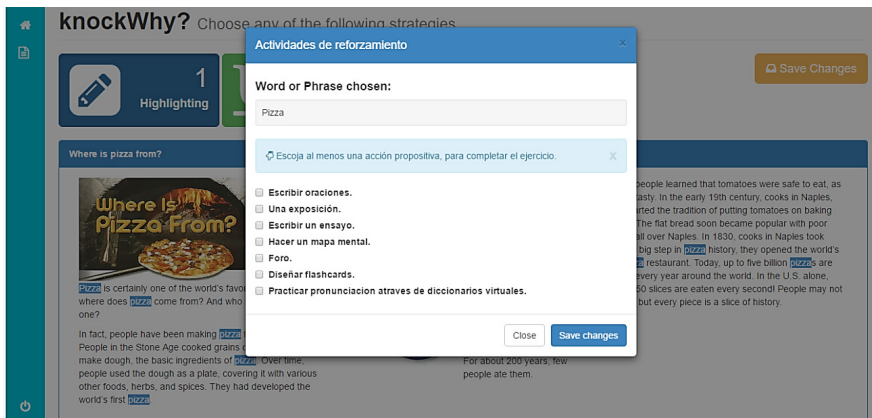
Source: Taken from the KnockWhy reading educational platform (2016).

Here, the student may choose the reading purpose they have in mind, which is based on this example: “identifying an unknown word.” This sort of methodological procedure is expected to promote an automatically

conscious reading behavior that students may apply in their subsequent readings. This window will appear every time the student identifies either a textual-based or topic-based component. It is important to mention that this modal window offers students the opportunity to suggest some others different reading purposes, with the option “Another one? Which one?” These can be considered by the teacher to be included in this modal window in the future.

Then, as soon as students have chosen one or several of the reading purposes listed, or even have written one of their own, and they are sure of their decision, a second window will automatically appear (Figure 7), which is labeled “Which activities do you propose to learn the identified information?” Here, the student proposes the reinforcement activities by choosing the ones they would like to work with. This methodological procedure is intended to ask students to give a learning context to the text-based and topic-based identified information while reading. In this section, the platform provides information about the reinforcement activities students propose to understand, comprehend, and learn both text-based and topic-based information. These activities could be done either in class or outside of class, and they are also expected to build on both of the above-mentioned types of knowledge.

Figure 7. Choosing reinforcement activities



Source: Taken from the KnockWhy reading educational platform (2016).

It is important to clarify that, even though the word *propose* is used to express that students come up with a reinforcement activity of their

own to learn text-based and topic-based knowledge, students ended up choosing one of the activities given in this modal window. Despite this, researchers still believe that students, and not the teachers, are the ones who decide which reinforcement activities are proposed to learn both types of knowledge. It is also important to mention that both the research team and engineers who designed the platform would have found it difficult to tabulate the students' reinforcement activities through a "Another one? Which one?" choice. That is why it was not included in this research. However, we expect to include this choice in future researches.

Next, students are given constant feedback of the entire reading process—in this case, the identification of the text-based and topic-based knowledge. This is possible considering that, when students hover over the information identified in the text, a modal window appears, providing them with the chosen or written reading purpose and the proposed reinforcement reading activity (Figure 8).

Figure 8. Pop up windows to show reading purposes and reinforment actions



Source: Taken from the KnockWhy reading educational platform (2016).

These methodological steps may allow students to reconsider their comprehension and learning of both text-based and topic-based knowledge, since they have a more active participation in their understanding and construction of these two types of knowledge. In this sense, it allows students to be more creative and critical thinkers, while teachers become in-class or out-class learning facilitators. However, as a learning facilitator, the teacher

may offer in-class and out-class learning opportunities for the development of the students' proposed reinforcement activities to construct text-based and topic-based knowledge.

To sum up, the cognitive strategies (highlighting, underlining, and circling) are applied to gather information (e.g., use the key words to identify what the general idea is) in order to respond to different reading-level subcategories (e.g., transcription, main idea, author's intent, separating facts from opinions, refuting false arguments, etc.), with the purpose of building both text-based and topic-based knowledge. Later, through the development of the purpose-built learning actions, students learn the information that has already been gathered when, for example, they prepare a short presentation or propose a debate. These three aspects of the proactive reading awareness may be the cornerstone for students to become critical thinkers. These aspects may support the transition of reading processes from a literal to inferential to critical reading comprehension. In order to do that, purpose-built learning actions are of primary importance for the teaching-learning process.

A questionnaire

Brace (2008) states:

The questionnaire is the medium of communication between the researcher and the subject, albeit sometimes administrated on the researcher's behalf by and interviewer. In the questionnaire, the researcher articulates the questions to which he or she wants to know the answers and, through the questionnaire, the subjects' answers are conveyed back to the researcher. (p. 4)

According to this, a questionnaire was used to gather both quantitative and qualitative data. The purpose of this instrument was to look at the basic attitudes and opinions of this particular group of students relating to the educational platform's design in terms of instructions given, layout, and the application of strategies while interacting with the platform.

To serve this purpose, the questionnaire applied had 9 questions. The first three questions were concerned with the platform's design. The other six questions were concerned with the students' experiences and opinions about some specific aspects of the platform while using it. For each question, the student could choose from different options, such as "yes or no;" "excellent, very good, good, regular, or bad;" or from a scale from 100 to



0 (100, 80, 60, 40, 20, or 0), depending on the question. The students also had the opportunity to express the reasons why they chose their answers (except for the third one). It is important to mention that this questionnaire was implemented only with part of the participants who had the experience of working with the platform (17 students from the initial 30), in order to facilitate tabulation of this data.

Data analysis

The information gathered through the application of the educational platform knockWhy? and the questionnaire applied to the students was arranged, analyzed, and reported while responding not only to the core research question and the sub-question, but also to the two research categories, identifying the purpose-built learning actions most often proposed by students and their attitudes and opinions of the platform design in terms of layout, instructions given, and the application of the cognitive strategies: highlighting, underlining, and circling.

14 ■ The information that the students chose in the modal window when selecting the reading purposes, plus the sort of chosen reinforcement activity proposed to learn the information selected from the text, determined the kind of knowledge students want to build, that is, either text-based or topic-based knowledge. Based on this last assumption, the data was analyzed on those results.

Findings

In this section of the research, findings of the core question and the sub question are sequentially presented. Findings on the core question are reported through a series of reports on the students' purpose-built learning actions. The students' reports on cognitive reading strategies, reading purposes (identified text-based and topic-based knowledge constituents), and reinforcement activities are presented first as findings while reading in English through the educational platform knockWhy? After that, results on a questionnaire applied after the use of the platform to evaluate different aspects of the students' attitudes towards its design and their experience while using it are presented after taking all the questions into account.

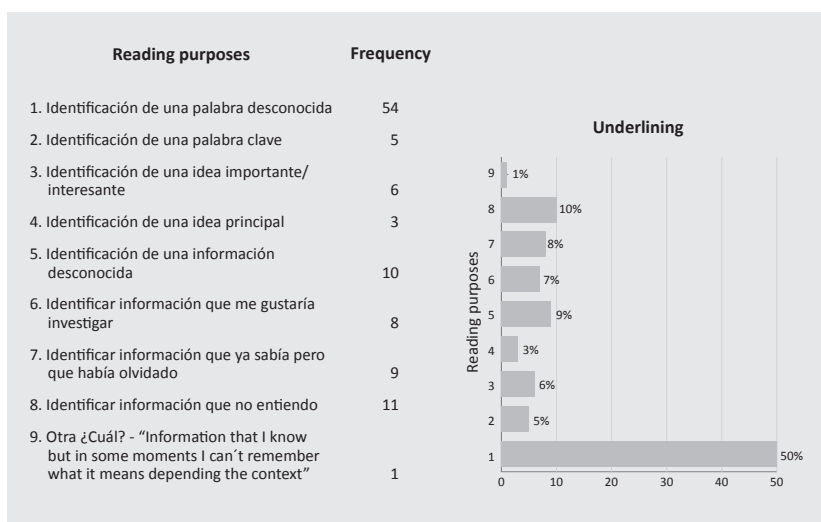
Purpose-built learning actions brought into reading when applying underlining, highlighting, and circling

Based on the theory that claims that purpose-built learning actions constituents are a cognitive reading strategy, as well as a reading purpose and a reinforcement activity, the following findings and reports will be presented in this same order, together with their corresponding selected words (text-based knowledge) and phrases (topic-based knowledge). It is worth mentioning that the figures presented to illustrate these reports were provided by the platform, and the format of their design depended entirely on it.

Most selected reading purpose to build text-based knowledge

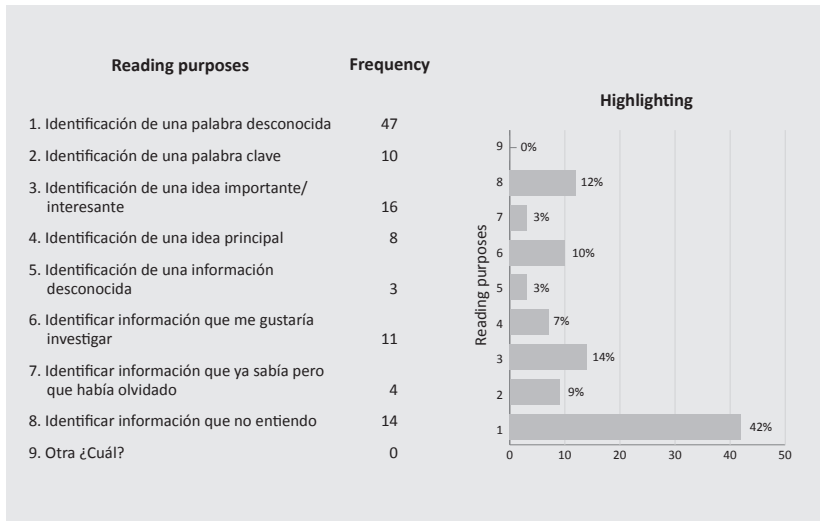
As shown in figures 9, 10 and 11, the most selected reading purpose was “Identifying an unknown word” when applying the three cognitive strategies (underlining, highlighting and circling). This information is very interesting because it shows the reading aspects (text-based knowledge) to which students will refer to or focus on as a further academic intention. In the words of Marshall, “annotations can be ‘procedural signals’ that indicate which sections of text require further study or ‘future attention’” (as cited in Podolsky & Soiferman, 2014, p. 4).

Figure 9. Reading purposes selected by students after applying the underlining cognitive reading strategy to selected words



Source: Taken from the KnockWhy reading educational platform (2016).

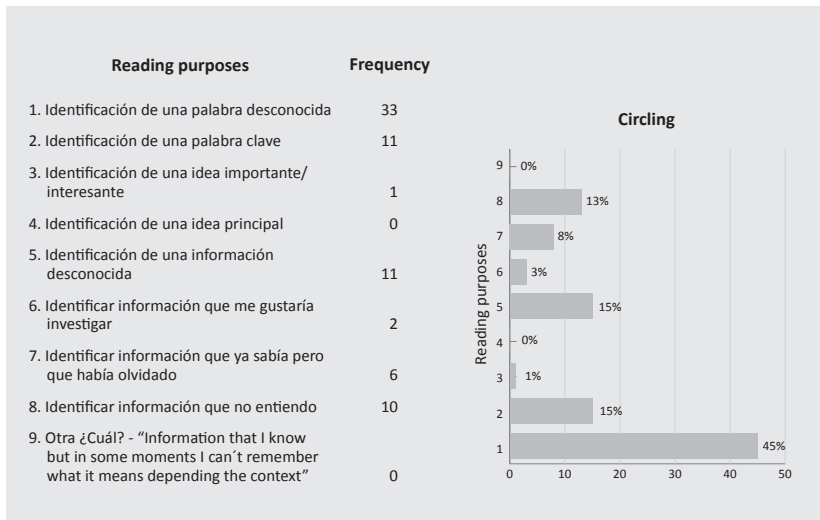
Figure 10. Reading purposes selected by students' after applying the highlighting cognitive reading strategy to selected words



Source: Taken from the KnockWhy reading educational platform (2016).

16

Figure 11. Reading purposes selected by students after applying the circling cognitive reading strategy to selected words

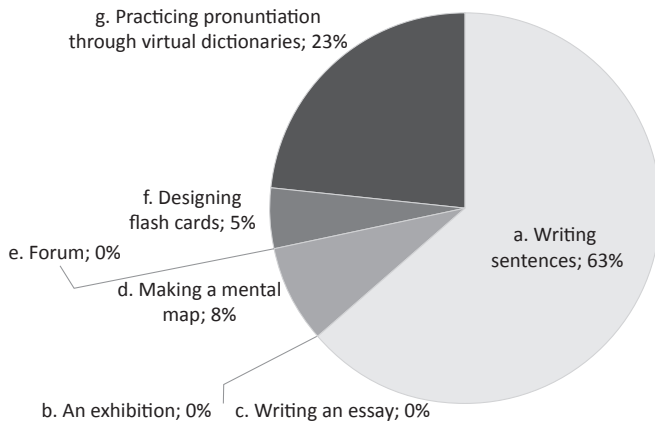


Source: Taken from the KnockWhy reading educational platform (2016).

Most proposed reinforcement activities and selected words to build text-based knowledge

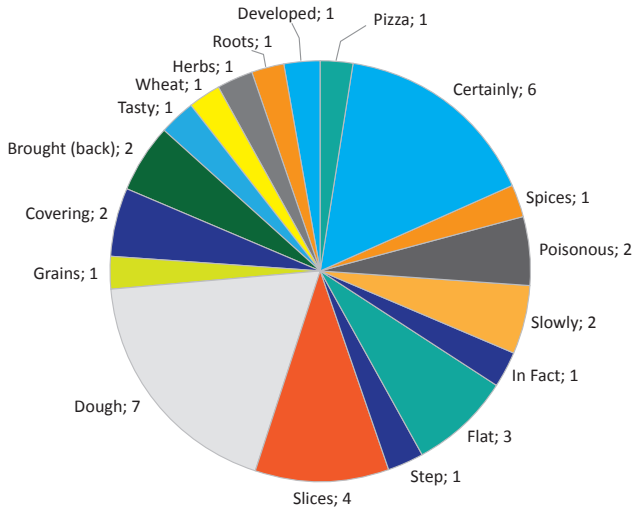
Results gathered in the application of the educational platform showed that the most proposed reinforcement activity by the students that selected the reading purpose “Identifying an unknown word” was “Writing sentences” when applying the cognitive reading strategies of underlining (Figure 12), highlighting (Figure 14), and circling (Figure 16). On the other hand, findings on the following reports show the words students identified from the reading by applying the cognitive reading strategies of underlining (Figure 13), highlighting (Figure 15), and circling (Figure 17) both aspects constitute text-based and topic-based knowledge. These reports show the text aspects students need or want to study in order to gain knowledge in these two aspects.

Figure 12. Reinforcement activities proposed by students through the students’ selected reading purpose: “Identifying an unknown word” after using underlining



Source: Taken from the KnockWhy reading educational platform (2016).

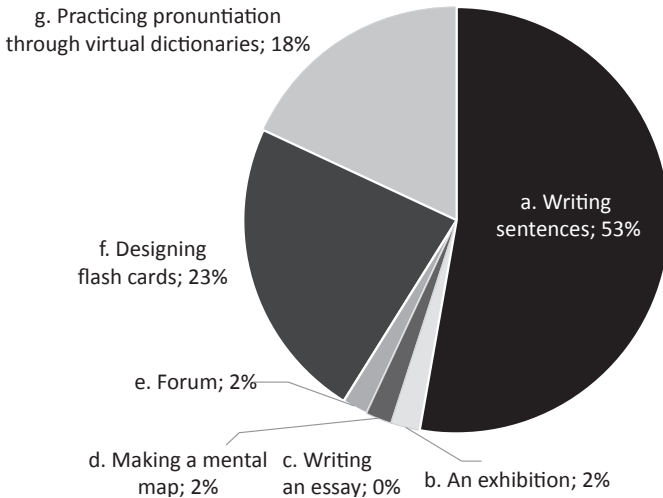
Figure 13. Words selected through the reinforcement activity proposed after using underlining



Source: Taken from the KnockWhy reading educational platform (2016).

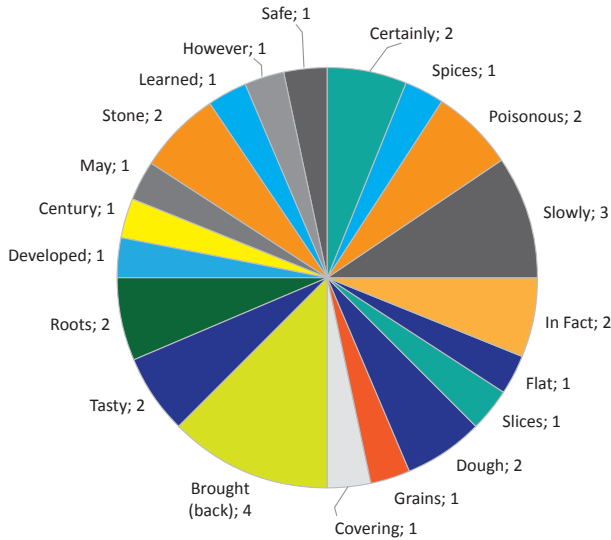
18

Figure 14. Reinforcement activities proposed by students from their selected reading purpose: “Identifying an unknown word” after using highlighting



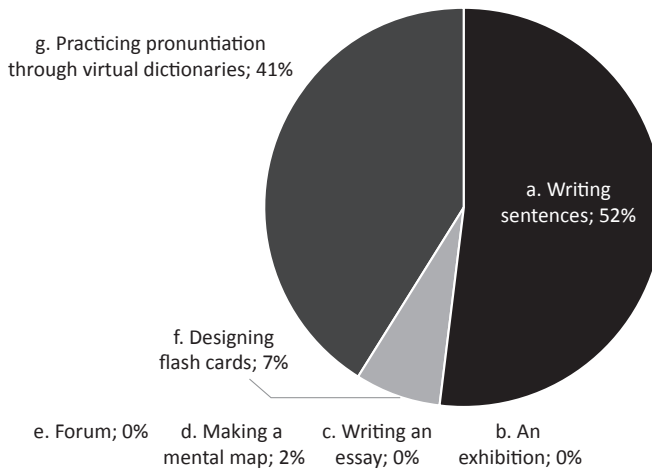
Source: Taken from the KnockWhy reading educational platform (2016).

Figure 15. Words selected from the proposed reinforcement activity after using highlighting



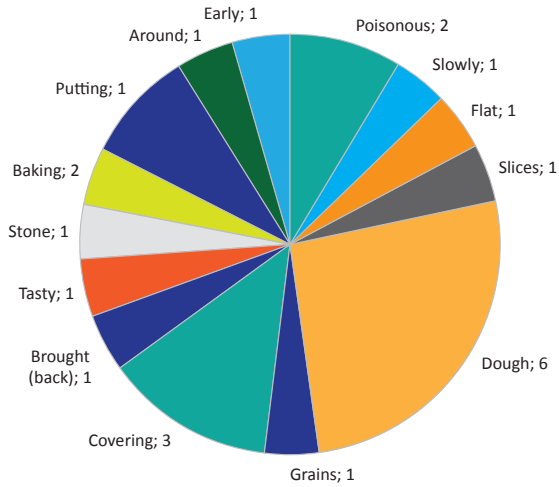
Source: Taken from the KnockWhy reading educational platform (2016).

Figure 16. Reinforcement activities proposed by students from their selected reading purpose: “Identifying an unknown word” after using circling



Source: Taken from the KnockWhy reading educational platform (2016).

Figure 17. Words selected from the reinforcement activity proposed after applying the circling cognitive reading strategy



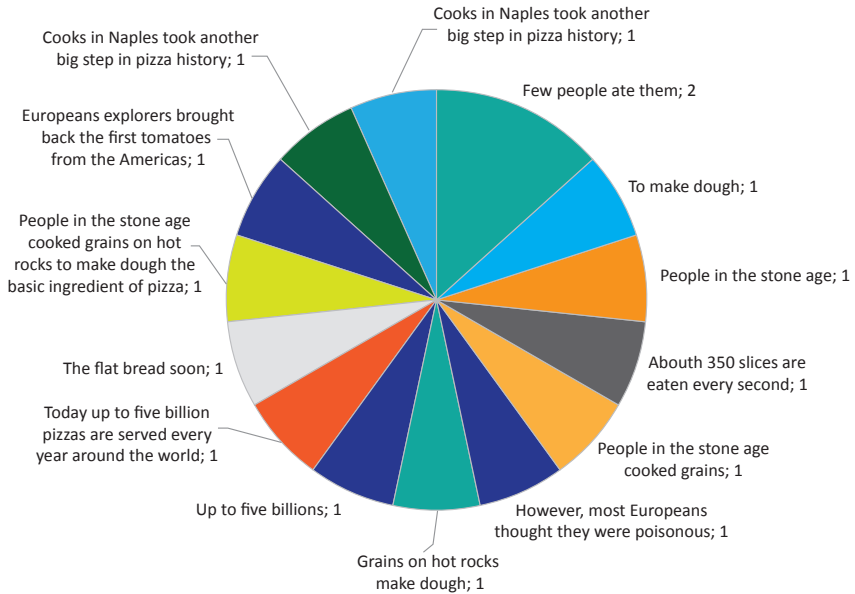
Source: Taken from the KnockWhy reading educational platform (2016).

Selected reading purposes to build topic-based knowledge

As it can be observed in Figure 18, there is no frequency on the phrases students selected, except for the sentence “few people ate them,” which was selected twice. For this reason, the report and the analysis on this subsection will be presented in a general way.

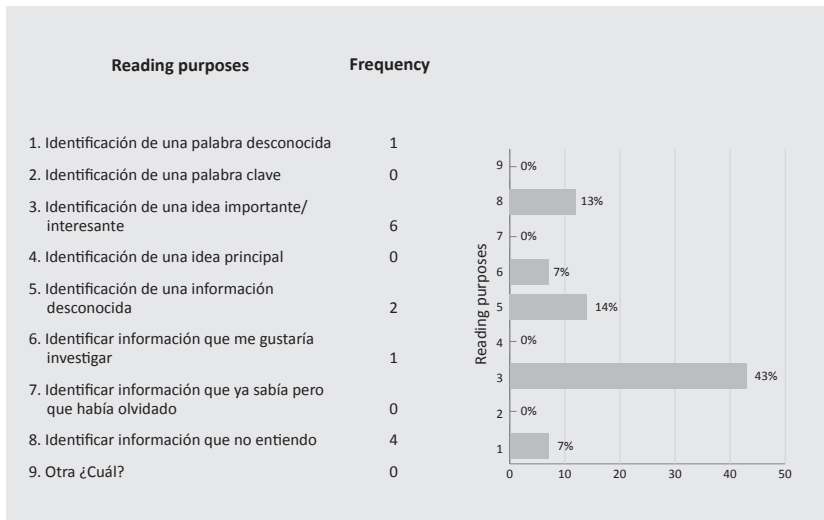
As shown in Figure 19, the reading purposes that reported more frequency on their selection were “Identifying an important/interesting idea,” “Identifying an unknown information,” and “Identifying information I don’t understand” when applying the three cognitive strategies (underlining, highlighting, and circling) to select phrases. Analysis of this information suggests that there is a very close relationship between the phrases they selected and the purposes they assigned to them, since they are related to topic-based aspects.

Figure 18. Phrases selected by students



Source: Taken from the KnockWhy reading educational platform (2016).

Figure 19. Reading purposes selected by students after applying the underlining, highlighting, and circling cognitive reading strategies to select phrases

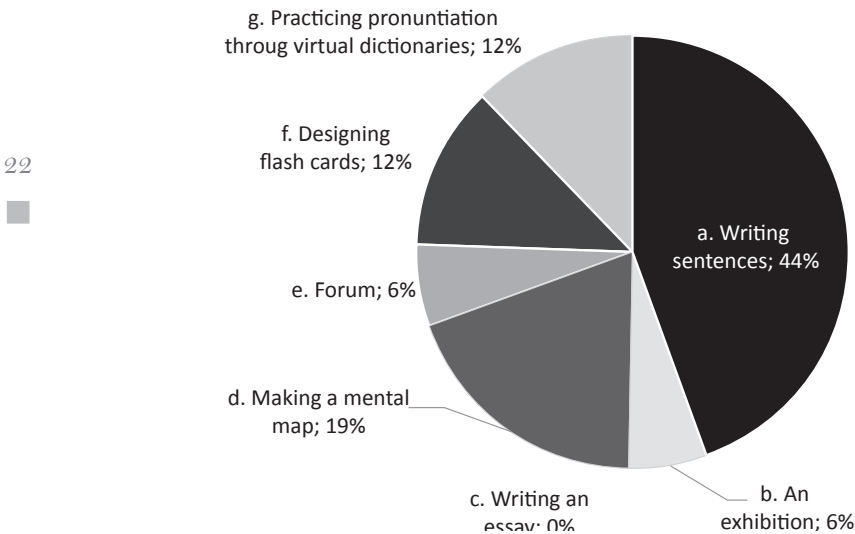


Source: Taken from the KnockWhy reading educational platform (2016).

Proposed reinforcement activities and selected phrases to build topic-based knowledge

Analysis of the results of the implementation of the reading assignment through the educational platform shows that there is no relationship between the most selected reading purpose presented in the previous sub-section and the most proposed activity, “Writing sentences,” as shown in Figure 20, in terms of the topic-based knowledge aspects that they wish to put into practice. However, more evidence is needed to support this.

Figure 20. Reinforcement activities proposed by students after applying the underlining, highlighting and circling cognitive reading strategies to select phrases



Source: Taken from the KnockWhy reading educational platform (2016).

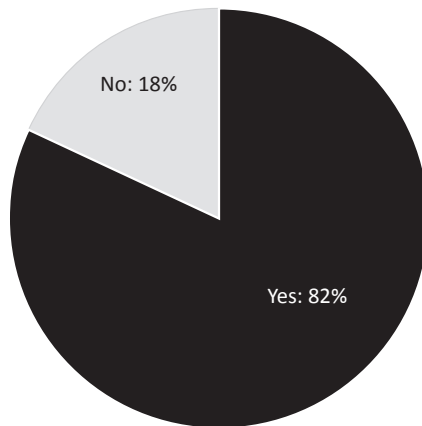
To conclude this sub-section, it can be said that the most proposed purpose-built learning action to build text-based knowledge was “Identifying an unknown word” as the most selected reading purpose, and “Writing sentences” was the most selected reinforcement activity. On the other hand, the most proposed purpose-built learning action to build topic-based knowledge was “Identifying an important/interesting idea” as the most selected reading purpose plus “Writing sentences” as the most selected reinforcement activity as well.

Students' attitudes regarding the platform's design and their experience as a result of implementing it

Students' attitudes regarding the platform design

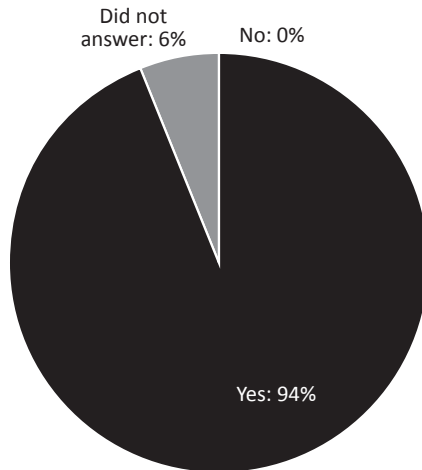
Analysis of the first three questions of the questionnaire, which deal with the students' opinion about the platform in terms of its design (layout, instructions, and the application of the three cognitive strategies), suggests that students found it very interesting. For example, when asking them if they believe the platform design is clear and engaging, one of the students who answered positively said "I think it is very attractive and interesting at first sight." However, there were some students that suggested that the platform should contain more colors in its design, as one student said "The colors and shapes do not express anything specific, something that draws my attention and that will make students want to keep using the webpage." Results on this specific question are presented in Figure 21 below.

Figure 21. Results for question 1: Do you think the platform's interface (design) is clear and draws the user's attention to use it?



Source: Taken from the KnockWhy reading educational platform (2016).

Figure 22. Results for question 2: Do you think the instructions given during the reading activity in the platform are clear?

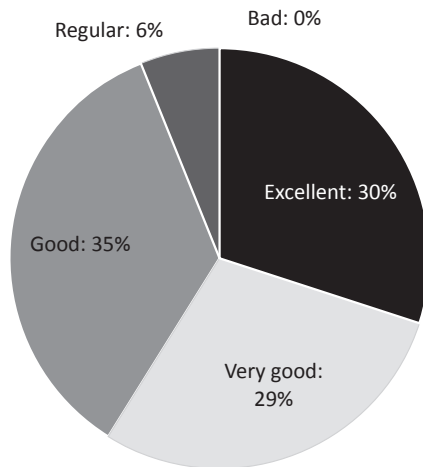


Source: Taken from the KnockWhy reading educational platform (2016).

24



Figure 23. Results for question 3: What do you think about the implementation and use of the strategies (highlighting, underlining and circling) when used in the text?



Source: Taken from the KnockWhy reading educational platform (2016).

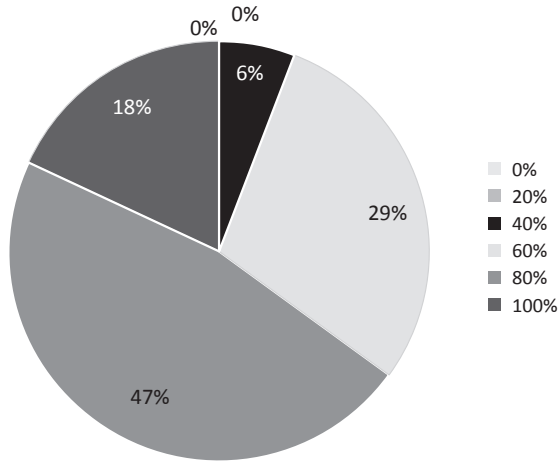
In terms of their opinion on how the instructions are presented, most of the students thought they were very clear. One of the students commented “Everything is explained in the best way, so that the student does not find it difficult to use it.” However, just one student said “It is not easy for us when it comes to technology.” This led us to believe that it would be a good idea to provide students with a previous training before using the platform. Results on these questions are presented in Figure 22 below.

Finally, in terms of the application of the three cognitive strategies while reading, most of the students found it good, as shown in the results of the third question (Figure 23). This information suggests that even though students’ perceptions are mostly positive, there might be some aspects according to students’ perceptions that may be considered to be improved.

Students’ experiences with using the platform

Analysis of the last six questions of the questionnaire, which deal with the students’ experience while using the platform (implementation of the three cognitive strategies, selection of reading purposes and reinforcement activities, its effectiveness to help students learn English, to promote reading comprehension in English, as a tool to perform reading assignments and the students’ general experience), suggests that students had a very good experience. For example, when asked how comfortable they felt during the selection of a word or phrase by applying any of the three cognitive strategies, in a scale from 0 to 100, most of the students selected 80 (Figure 24). Here, one of the students who selected this scale mentioned “Well, my brain would lean towards the more relevant information.” However, two students who chose 40 and 60 stated a similar negative experience, in that same order, “Because often we don’t know the meaning of the word and sometimes information is missing;” and “Because sometimes I don’t know the meaning of some words and I don’t know how to use them.” These two comments definitely show the difficulty that students face from having lack of linguistic components while reading and the need for learning them.

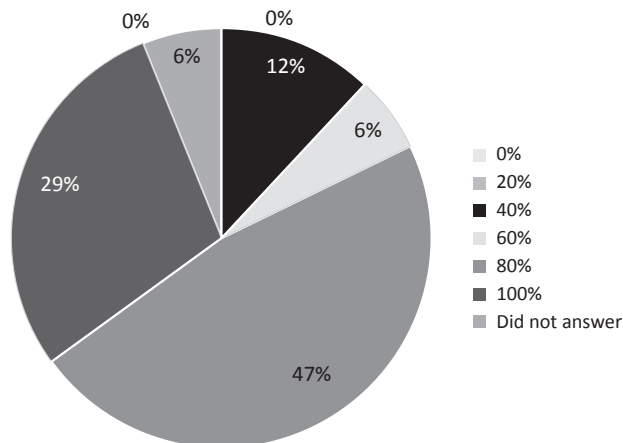
Figure 24. Results for question 4: On a scale from 0 to 100, how comfortable are you choosing a word or sentence using any of the cognitive strategies?



Source: Taken from the KnockWhy reading educational platform (2016).

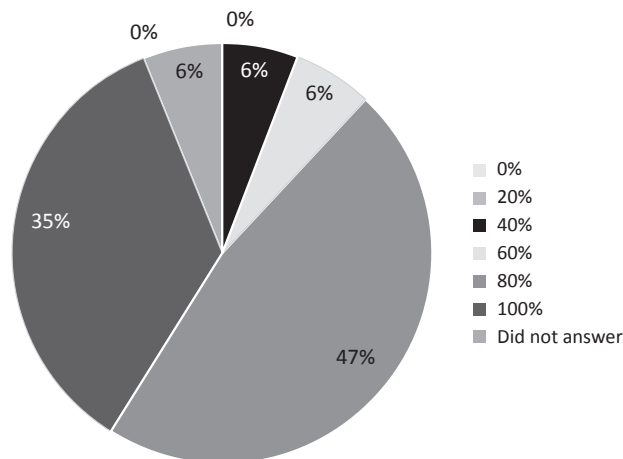
26 ■ On the other hand, results for the students' experience with choosing the reading purposes and reinforcement activities to learn any of the word or phrases previously selected showed that most considered it to be a very good experience. As shown in Figure 25, when asking them to choose from a scale from 0 to 100, most of them selected 80. One of these students stated "Because it will allow me to learn about the topic and develop skills in the future" This is a clear example of how helpful the platform is in terms of developing both text and topic-based knowledge, because it makes students aware of its importance.

Figure 25. Results for question 5: On a scale from 0 to 100, how comfortable are you choosing the reading purposes and reinforcement activities to learn any of the words or sentences you selected?



Source: Taken from the KnockWhy reading educational platform (2016).

Figure 26. Results for question 6: As a student, and on a scale from 0 to 100, do you think the platform encourages you to learn and analyze your knowledge in English?

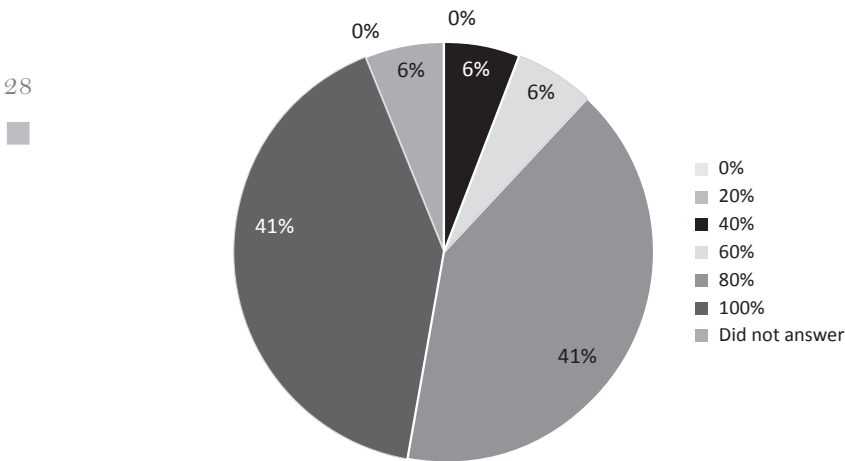


Source: Taken from the KnockWhy reading educational platform (2016). In terms of students' opinion about the platform's effectiveness to promote learning English, as shown in Figure 26, when asked to choose in a scale from 0 to 100, most of them chose 80. For example, some students stated "Because

we can find topics that help us to know more about this.” Another student stated “Yes, because it offers good learning strategies.” These two comments reveal students’ awareness of the importance of developing text and topic-based knowledge through learning strategies to learn English.

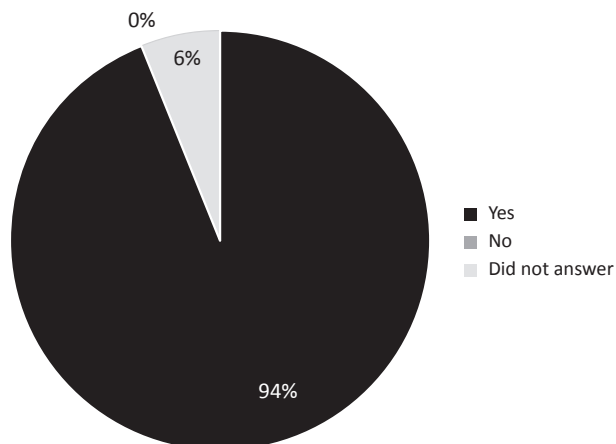
In terms of the students’ opinion about the platform effectiveness to promote reading comprehension in English, the results for this question (Figure 27) revealed that they consider the platform to be truly effective in this aspect. When asked to choose from a scale from 0 to 100, most of them chose 100 and 80. For example, one of the students said “Because you can select and study each word, which makes it easier to read.” This also reveals the students’ awareness of the importance of acquiring linguistic aspects to facilitate the process when reading in English.

Figure 27. Results for question 7: As a student, and on a scale from 0 to 100, do you think the platforms encourages reading comprehension in English?



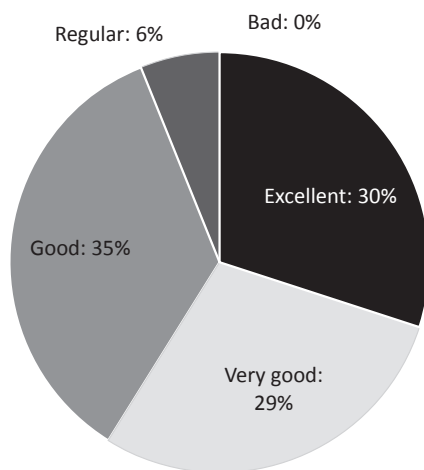
Source: Taken from the KnockWhy reading educational platform (2016).

Figure 28. Results for question 8: As a student, would you consider using the platform for your reading assignments?



Source: Taken from the KnockWhy reading educational platform (2016).

Figure 29. Results for question 9: Choose any of the following options to describe your experience as a user of the platform



Source: Taken from the KnockWhy reading educational platform (2016).

On the other hand, when asked if they would consider using the platform for reading assignments, all students answered in the affirmative except for two, who did not answer. For example, some students mentioned “Yes, because this would help me to improve my reading comprehension;”

and another student said “Because the order would help us to understand better.” The results for this question are presented below in Figure 28.

Finally, when asked to describe their general experience when using the platform, most of the students selected “good” and “excellent” (Figure 29). For example, one of the students said “I felt comfortable; I also enjoyed the reading and the strategies exercise is easy to learn.”

To conclude this sub-section, taking into account all students’ answers of the questionnaire, it can be said that they had a pretty good experience using the platform, although some of them suggested some changes to improve its design so the experience while using it could be more pleasant and the objective of acquiring text and topic-based knowledge can be achieved.

Discussion

In this chapter we will discuss the implications on findings for this research. Three main themes will be addressed: 1) the role of purpose-built learning actions through the implementation of the educational platform in terms of building text-based knowledge; 2) the role of purpose-built learning actions through the application of the educational platform in terms of building topic-based knowledge; and 3) the students’ experiences towards its implementations.

The findings of this study revealed that students mostly selected the reading purpose “Identifying an unknown word.” This evidence clearly suggests that students are interested in learning text-based knowledge (linguistic aspects). This tendency lies on the assumption that students are more likely to be interested in studying the language itself (vocabulary, pronunciation, grammar, and idioms) due to their current semester (1st semester). In terms of the sort of the most proposed reinforcement activity, “Writing sentences,” the students preferred to learn the information identified in the text through the most selected reading purpose. We believe that this proposed reinforcement activity was chosen mainly on the assumption that this kind of activity is easier for them to accomplish. Again, this choice may, in a way, reflect the semester they are currently in. Based on this last assumption, writing sentences would be the most appropriate reinforcement activity. However, more evidence is required, and this assumption could be the lead to further investigation.

On the other hand, findings revealed that, in terms of building topic-based knowledge, despite having students identified information in the text to build this knowledge, it was also true that it would not be possible to accomplish this, because the proposed reinforcement activities were not the appropriate ones to learn the signaled phases and the information beyond isolated words in the text to construct this knowledge. Based on the assumption that the reinforcement activity mostly proposed by students was “Writing sentences,” this reinforcement activity is intended to give context to learn text-based knowledge, and therefore, it does not develop topic-based knowledge. Again, this choice may respond to not knowing how to identify the sort of reinforcement activity to which each type of knowledge corresponds.

Finally, findings on the sub-questions revealed that students had a pleasant experience when using the platform. This is comparable to the results of a similar research conducted by Bekleyen and Yilmaz (2011), in which one of their purposes was to describe the students’ experiences while using CALL to improve their participants’ vocabulary level (linguistics aspects). In this regard, they stated “The findings indicated that the participants of the study had positive attitudes towards the use of computers in language teaching. (...) Namely, they found the use of computers in language teaching quite useful” (Bekleyen & Yilmaz, 2011). Most of our participants expressed that they felt engaged with the platform design and that it serves the purpose of promoting reading comprehension. However, some other students suggested a few improvements that will, of course, be taken into account in the future. This demonstrates that text-based and topic-based knowledge can be promoted through CALL.

Conclusions

This study was mainly concerned with what sort of purpose-built learning actions students could bring into reading while using an educational platform. This is very important because this information may be helpful for further investigations, which could turn into action studies to start meaningful contributions to the educational field. Another important aspect of this investigation relies on the consideration of students’ attitudes toward this proposal, due to the fact that they are the ones who will benefit most from it.

However, in terms of the students' most proposed purpose-built learning actions towards constructing topic-based knowledge, it was not possible to show supportive evidence for the development of that particular knowledge, despite being indicated in the text through the three cognitive reading strategies. It was discovered that the selected reading purposes and the proposed reinforcement activities did not match. For example, when students chose "Identify interested or important information" as a reading purpose, it was connected with the reinforcement activity "writing sentences." The chosen reinforcement activity to develop the identified information did not support its development. Taking into account this unexpected finding, it would be interesting to carry out further researches based on learning why students prefer writing sentences or designing flashcards instead of, for instance, writing essays, which, despite its slightly higher level of difficulty, it would strongly support the accomplishment of the development of topic-based knowledge. On the other hand, researches about the extent to which the students' answers may vary according to the semester they are in could be of great support for teachers letting students propose how they want to learn the information they have selected in the reading.

32



Using this platform in the classroom may support the students' reading processes in terms of teaching them how to read. It may also help students to read strategically while building knowledge constructively. For teachers, it may help them to investigate reading comprehension processes, introduce new topics, help students study the language itself (linguistic aspects), and promote skills development through the reinforcement activities. Before reading to comprehend and to think critically, students may be taught how to identify and gain text-based and topic-based knowledge. Gaining these two types of knowledge could be done through a proactive reading awareness methodology.

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