

Evaluating Basic Grammar Projects, Using the SAMR Model¹

(La evaluación de proyectos de Gramática Básica según el modelo SAMR)

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ABSTRACT

The research evaluates the projects assigned in two basic grammar courses of the English teaching majors, at Universidad Nacional in Costa Rica, using the SAMR framework for evaluating learning activities that implemented Information and Communication Technologies. First, the relevance of the use of these projects is presented. Second, the SAMR framework is explained. Third, the six different projects are discussed and evaluated according to the SAMR framework, taking into consideration the students' perceptions. Recommendations are given regarding the use of technology to learn grammatical structures.

RESUMEN

Se analizan proyectos efectuados en dos cursos básicos de gramática para las carreras de enseñanza del inglés, en la Universidad Nacional de Costa Rica, mediante el modelo SAMR para la evaluación de actividades de

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aprendizaje que se valen de tecnologías de la información y la comunicación. En primer lugar, se refiere a la pertinencia del uso de este tipo de proyecto; en segundo lugar, se describe y explica tal modelo; y en tercer lugar se analizan los proyectos llevados a cabo con base en el modelo, teniendo en cuenta la percepción del estudiantado. Se dan recomendaciones en cuanto al uso de la tecnología para el aprendizaje de estructuras gramaticales.

Palabras clave: enseñanza del inglés como lengua extranjera, gramática básica, actividades de aprendizaje, modelo SAMR.

Keywords: teaching English as a foreign language, basic grammar, learning activities, SAMR model

Introduction

The Universidad Nacional (Costa Rica) offers three Bachelors in English as a Foreign Language, two of which have an emphasis in Education: 1. the Teaching of English in Elementary School (BEI I-II, Spanish acronym), and 2. the Teaching of English in High School (BEI, Spanish acronym). In these two majors, students are required to take five grammar courses that differ in names but contain essentially the same content for each level. The first two courses are taken in the first year in an integrated skills course where grammar is covered along with other skills such as speaking, listening, writing and reading. In the second year, the students take a basic grammar course in the first semester: Basic Grammar (for the BEI) or Grammar I (for the BEI I-II). In the second semester of the same year, the students take Intermediate Grammar (BEI) and Grammar II (BEI I-II). In their third year, they take Advanced Grammar (BEI) and Grammar III (BEI I-II); see table 1. These are the only grammar courses students take during their majors, and in the case of the BEI students, these courses are intended to prepare them for courses on Linguistics, Morphology and Syntax.

Table 1. Distribution of the grammar courses

	First Semester	Second Semester
First year	Integrated English I	Integrated English II
Second year	Basic Grammar or Grammar I	Intermediate Grammar or Grammar II
Third year	Advanced Grammar or Grammar III	

Having been appointed to teach the basic grammar course during the first semester of 2016, the researchers discussed different alternatives while planning the course. They were looking for ways to complement the methodology and evaluation since in previous grammar courses written tests had usually been applied for assessment, and the methodology relied on the instructor's explanation, complemented by written practice in class. Although limitations such as time to cover all the topics and to practice the grammar structures in the different skills were an issue, new ideas flourished in the discussion. A selection of projects was designed to evaluate students' grammar knowledge, in a way that could transform how this subject was being taught. Some of these ideas were influenced by the ELT + IT Workshop given by Michael Krauss in the Literature School at the end of 2015. He referred to the use of Information Technologies in the English Language Teaching process. Among all the different tools and strategies, the researchers were interested in the SAMR model developed by Ruben Puentedura (mentioned below) to analyze the projects designed by the professors of the course.

This paper aims to analyze the projects implemented in the Basic Grammar and Grammar I courses with the SAMR model, associating each project with the framework regarding the use of technology in the language learning process. In this process the students were the main achievers in the accomplishment of the objectives of each assignment.

Relevance of Implementing of Grammar Projects with ICTs

The relevance of implementing ICTs in the classroom as put forth by Kathy Schrock “is to transform learning experiences so they result in higher levels of achievement for students.”⁴ Therefore, the researchers based the implementation of technology on the possibility of changing the way the grammar course had been taught in the past in terms of the methodology and summative evaluation. It was considered that the use of technology would be meaningful to motivate students in the learning process since the idea was innovative in a course such as grammar. This statement is supported by a study carried out by Rafool et al., who states that “students prefer to learn while using technology,” and that “students as a whole, were more engaged while working with the technology tasks.”⁵

In the methodology and evaluation of the course the researchers integrated the use of ICTs for students to learn and analyze the grammar structures by designing tasks in which the form and function of the structures studied during the semester were applied to create a significant learning environment that would connect the subject matter with students’ motivation to use technology. By integrating technology in the class, the tasks would correspond to the preference of the students to learn with the contribution of technology. However, wanting to study the connection between the use of technology and the grammar learning process, the researchers adopted a model—SAMR—to associate technology with projects designed for the course and evaluate them.

4 Kathy Schrock, “SAMR and Bloom’s,” Kathy Schrock’s Guide to Everything, July 27, 2016, <<http://www.schrockguide.net/samr.html>>.

5 Beth Rafool, Erin Sullivan, and Adel Al-Bataineh, “Integrating Technology into the Classroom,” *International Journal of Technology, Knowledge & Society* 8.1 (2012) 57-72. DOI: <https://doi.org/10.18848/1832-3669/CGP/v08i01/56265>

The SAMR Framework

The name of the SAMR framework or model is based on the acronym formed by the first letter of each of the four levels that describe the use of technology in the learning environment: *Substitution*, *Augmentation*, *Modification*, and *Redefinition*. It is intended to be used to evaluate projects and activities to enhance students' learning outcomes. It was created by Ruben Puentedura, founder and president of the consulting firm Hippasus, to select, use, and evaluate technology in education. Danae Romrell et al. describe the model to be "intended to encourage educators to significantly enhance the quality of education provided via technology."⁶ Kathy Schrock states that "SAMR is a model designed to help educators infuse technology into teaching and learning."⁷ The model's purpose is to help teachers and professors design, create and implement learning activities which make use of technology, to transform and improve the learning experience for students. The model makes it possible to classify the cognitive levels applied in each learning activity paired to a specific level in the framework which has a form of a ladder. Puentedura notes that the use of technology also shifts, and moves from an action of enhancing the learning experience to that of transforming the experience. Accordingly, the thinking skills will also shift as the levels move up from *Substitution* to *Redefinition*.

Puentedura pairs the levels of *Substitution* and *Augmentation* with the lower levels of Bloom's revised taxonomy, such as Remembering, Understanding and Applying; the levels of *Modification* and *Redefinition* are then paired with Bloom's higher levels such as Analyzing, Evaluating and Creating.

6 Danae Romrell, Lisa C. Kidder and Emma Wood, "The SAMR Model as a Framework for Evaluating mLearning," *Journal of Asynchronous Learning Networks* 18.2 (2014) 79-93 (82). DOI: <https://doi.org/10.24059/olj.v18i2.435>

7 Schrock.

Puentedura sees benefits in pairing the SAMR model with Bloom's taxonomy:

This coupling of the SAMR model and Bloom's Taxonomy has several desirable outcomes: the already-familiar drive to reach the upper levels of Bloom's Taxonomy now also acts as a drive to reach the upper levels of SAMR; the approach outlines a clear set of steps that help guide the introduction of technology in the classroom; finally, the approach helps avoid pitfalls of self-deception—i.e., assuming that a particular task is at a higher level in either the Bloom or SAMR sense than it actually is.⁸

Nonetheless, he adds that the association is not necessary, but it can be proved to be beneficial to educators who are beginning to implement technology use in learning activities.

Based on the research carried out for this paper, the investigators exemplify language learning activities that implement technology and are paired with the SAMR model. In the *Substitution* level, technology is used as a direct substitute for other non-digital learning tools or elements without any real functional change. The intended audience of a project implemented in this level can be either the professor or the whole class. For example, a *PowerPoint* presentation may be prepared where in the past the text of a reading comprehension presentation about a short story would have been written by hand. An in-class worksheet practice or pop quiz that was dictated and handwritten is now done using a word processor. In both examples, the only participants in the interaction are the professor and the students.

In the *Augmentation* level, technology provides a substitute for other learning tools or elements with functional improvement; that is, the once non-digital lesson is enhanced by technology but not fully changed by it. The intended audience for this level is still the professor

8 Ruben Puentedura, "SAMR and Bloom's Taxonomy: Assembling the Puzzle," *Common Sense Education*, July 27, 2016, <<https://www.common sense.org/education/blog/samr-and-blooms-taxonomy-assembling-the-puzzle>>.

and the class. One example is when students do an online practice provided by the professor through *Google Forms* or a grammar practice found on a website. With this type of implementation of technology, students can receive immediate or almost immediate feedback from the instructor or the website. Previously, the professor handed out paper worksheets that the students had to complete by hand and return to the professor to be checked manually, commented on and graded. Another example is when a professor checks a digital essay sent by a student using the “comments” and the “track-change” commands in a word processor document. The learning activities remain the same, but by allowing the professor and the students to utilize more functions of a digital tool, the technological components have added an enhanced function that could not have been done before.

In the *Modification* level, technology allows the task or learning activity to be redesigned significantly, where the digital components imply the integration of different tools. This level enables the instructor to remain as the intended audience, but students can collaborate online and create products to share with the class. For example, students can practice their speaking skills and record themselves through audio or video. After they feel the presentation is perfected, they upload their best version for the professor and the rest of the class. Another example is to take a short story or novel and have students use online digital tools to create a comic strip to demonstrate the accomplishment of a certain learning objective, such as character analysis, historical background, or others.

In the *Redefinition* level, technology allows for the creation of tasks, projects or learning activities that could not have been done without it. The level of collaboration between students and the number of digital tools they can use also increases. Another characteristic of this level is that the products created can be shared publicly and be used by others. Therefore, the professor and the class are no longer the sole intended audience at this level. For example, students can create a video based on their research on a specific topic such as food

by making a cooking show. Students prepare vocabulary, ingredients, and then create the script of the show and decide on the technological tools required to produce it. Later, students record the video; at the end if necessary, they edit it, and upload the video on YouTube, share it and receive feedback from the professor, the class, and potentially from others around the world who watch the video. Without technology, this task could not have been done.

Analysis of the Grammar Projects

Each of the researchers implemented three grammar projects in their courses. For the BEI I-II grammar course, the projects included a forum, a video and a presentation of an imaginary trip to the Colorado Grand Canyon. For the BEI, they included the IGP, the ChatWrite and the Creative Activity.

Short Story Forum

The objective of the forum was to analyze grammatical structures such as nouns, articles, pronouns, prepositions, and simple, compound and complex sentences. The project was done in groups of 4 or 5 students. Each student was assigned one or two structures. The professor handed out a short story to each group; all the members of the group had to read it and identify all the structures that had been assigned to each person. The instructor then created a forum for each story in the Virtual Classroom where the students would have to post the initial topic or thread depending on the structure, and their group members would reply and continue with the thread. Each member had to reply through the different threads at least three times, and include a reflection on the lesson learned from the story.

Based on the SAMR model, the forum activity corresponds to the *Modification* level because it proposes the redesign of a task using technology. For the technological level, what could have been done and presented with a written report was redesigned in a way that

students had to post their analysis in a forum in a virtual environment, and their peers gave feedback through the thread of answers. Therefore, all the students needed to know how to use and reply to a forum. This activity was meaningful for the students because the nature of the forum allowed them to interact with the rest of the group on the different topics of grammatical structures that had been studied in class beforehand. The analysis of a specific structure was done by one student, and then the other members of the group provided feedback. Thus, it was a student-centered activity because the students were able to write comments and correct each other based on the specific task. The activity of analyzing grammatical structures in a given text was transformed by the use of technology, and it was viewed by the members of the class from a different perspective (that is, through the forum).

According to the revised version of Bloom's Taxonomy, the activity of the forum corresponds specifically to three cognitive levels: Applying, Analyzing, and Evaluating. The Applying level is present because the students are applying the knowledge acquired in class to be able to do the activity. The Analyzing level is also present, and it is probably the main cognitive skill, because it corresponds to the objective of the task, which was to analyze a given structure in the text. Finally, the Evaluating level is present through the feedback provided by their peers as they evaluate and build on their classmates' analysis.

Finally, although this activity could not have been done without using a technological tool (the forum) in a virtual environment, the students still did not carry out creative tasks (such as writing sentences using the structures in questions, according to Bloom's level of Creating). Also, the intended audience of this task was solely the professor who had to check the interactions among the threads of the forum and each student's analysis. The rest of the class could read the forum for each group, but the forum was restricted to the members of the class.

News Article Video

The second activity consisted of creating a video presentation to classify the verbs found in a news article by interpreting their meaning in relation to their tense and aspect. The project was done in groups of 4 students. The professor gave each group a current and relevant news article from a well-known online publication. The students had to read the article, identify all the verbs with their tense and aspect, and create an organized list based on the paragraph order. They handed in a written report with all the verbs identified in the article with the given requirements, but for the video, they chose from fifteen to twenty sentences containing verbs with a variety of tenses and aspects studied in class. In the video, the students explained the meaning and usage of the chosen sentences and corresponding verb forms. All the students decided to use *Powtoons* to create their videos, though it was their first time using this particular tool.

This activity belongs to the *Augmentation* level of the SAMR model. The technology used (that is, making a video presentation using *Powtoons*) enhanced the task given to the students by substituting the medium in which the information was presented. *Powtoons* is a more demanding tool than a *PowerPoint* presentation because in each slide the students had to fit in each slide the information necessary to explain each verb, the animations provided by the tool, and in most cases their own recorded voice explaining the verbs presented. Therefore, the students were challenged to use a new digital tool to describe the verb forms studied in class in an alternative form.

According to Bloom's Revised Taxonomy, the video presentation corresponds to the level of Understanding since the students had to recognize and identify the different verb tenses, aspects, and their usage to accomplish the task of making the video. The students understood the theoretical background behind each tense and used the explanations provided in the textbook to form their presentation.

Another reason why this activity belongs to the second level of the SAMR model is that the audience was limited to the professor for

evaluation purposes, and it did not involve feedback from the rest of their classmates or an outside audience.

Imaginary Voyage Presentation

For the third activity, groups of 2 to 4 students had to access a website which elicited an imaginary voyage to the Colorado Grand Canyon. The website provided them with a certain amount of money, a choice between travelling during spring break or summer vacations, and several options for transportation, accommodation, and recreational activities. As the students made their selections, the amount of money and days allotted for the trip would decrease accordingly. The objective of this project was to think of original conditional sentences using the events from the trip as a source of inspiration. They had to create a presentation which included the following three aspects: a summary of the decisions they made during this imaginary trip, three sentences for each conditional type and wish form, and a final reflection on why conditional sentences are important. Although the students had the option of using any type of digital presentation, all the groups chose to work with *PowerPoint*.

This project corresponds to the *Modification* level of the SAMR model. Mark Anderson proposes in his flowchart on SAMR that at the *Modification* level a task “most likely involves integration of multiple applications.”⁹ This is reflected in the activity with the use of the website for the imaginary trip and the presentation tool. The conditional sentences were based on the interaction generated from the website, and they were transcribed in a digital presentation which included images and pictures related to the setting and activities. The students negotiated among themselves on how they would use their imaginary money and time to consolidate a definite plan for their trip; their learning was transformed and enriched by solving and taking part in the decision-making process. They captured their experience

9 Mark Anderson, “SAMR for purposeful use of educational technology,” ICTEvangelist, July 30, 2016, <<http://ictevangelist.com/wp-content/uploads/2013/03/SAMR-flow-chart.pdf>>.

with the imaginary trip and created original conditional sentences with a digital presentation tool, where they included animations and illustrations or photographs to bring their imaginary experience to life. Consequently, the task of creating conditional sentences was significantly redesigned with the help of technology.

Regarding Bloom's Taxonomy, this activity is coupled with the levels of Analyzing, Applying and Evaluating. First, the students negotiated their trip, and decided on a specific set of choices and activities; this involved analyzing and examining options, setting up a sequence of events, and deciding on a particular plan. Second, they demonstrated their knowledge of conditional sentences and wish forms by writing their sentences based on the imaginary events of the trip, thus applying, practicing and producing a specific grammatical structure. Third, they had to assess their knowledge on conditional sentences to conclude and evaluate the importance of such structure in language.

Above all, this activity is placed in the *Modification* level because the intended audience is the instructor, as the groups did not share their presentations with their peers or in other public environments.

Integrated Grammar Project

The purpose of the Integrated Grammar Project (IGP) was to identify, in an authentic text such as an audio or written article, the grammar structures studied in the course. The work was to be done in pairs and students had to follow requirements to complete the task. First, the students' assignment was to use a color code on the text to identify the structures studied in class. In addition, they had to group the examples of each structure and copy them on a chart. After that, on the same chart, they had to write an additional example using their own ideas, words, and the structure identified.

Based on the SAMR Framework, this activity can be placed in the *Augmentation* level because by incorporating digital tools such as the Web to find an article and applying their knowledge of search engines,

the students are improving on an activity which could have been done without the use of technology. They had to use the word processor to copy the text and paste the article into another document so that they could work on it by using commands to highlight to the structures, and insert a table to copy the sentences into it. Finally, they uploaded the IGP into Edmodo's academic network to be graded by the professor. As Anderson stated in his flowchart of SAMR for the purposeful use of educational technology, its application in the *Augmentation* level is a "direct tool substitute with functional improvement."¹⁰ Hence, the basic grammar students complied with this description since they upgraded the activity by using search engines, and several tools in the word processor. They also embedded the project in the academic network. The students technologically enhanced the work by using digital tools. This activity is also framed in the *Augmentation* level because the intended audience is the professor. The rest of the class did not have access to comment on it, nor was the activity made public.

The IGP can also be associated with Bloom's Revised Taxonomy in the levels of Understanding and Application because after the students studied and understood the structures in class, they identified them in various types of authentic texts such as songs and written texts. The learners applied their knowledge of the topic by writing their own examples of the grammar structure.

ChatWrite

The ChatWrite consisted of a chat that the students opened using tools such as *Today's Meet* or *WhatsApp*. In this chat, the students were free to communicate and exchange their thoughts on a topic related to the course they were taking at that moment in the School of Education at the Universidad Nacional. Therefore, many students talked about the observations they were doing and the mini practice they had to carry out in one of their courses. During the span

¹⁰ Anderson.

of a week, they chatted in groups of three students. The following week, the students sent the chat to their emails then transcribed them using a word processor. They worked on the transcript, inserting comments to identify the grammar structures since this was the main purpose of the activity. In addition, the students could also make corrections of errors they had made during the conversation. In the third week, the students sent the document to the academic network for evaluation purposes.

This activity is framed in the *Modification* level according to the SAMR model for three reasons. The first is because the use of technology transforms the activity. The majority of the class used a mobile device (in this case, their own cell phones) to chat with their classmates from different places. Only one group used an application called *Today's Meet* which had to be accessed from a computer. By using a mobile social application such as *WhatsApp*, the students were able to accomplish the task because the digital tool allowed them to interact in real time with other students. The activity could not have been done as designed without applying technology. Moreover, the students made use of the word processor by transforming the conversation into a document they could make comments and corrections on it. Finally, the students unloaded the activity in *Edmodo* for the professor to evaluate. According to Anderson, the task was designed to bring transformational learning opportunities with the use of technologies as it was “very likely to have involved online collaboration with peers.”¹¹ The activity is modified by using technology and in this case by the students’ interaction.

The ChatWrite activity can also be placed in Bloom’s Revised Taxonomy in the stages of Application, Analysis and Evaluation. Regarding the Application level, students tried to apply their knowledge of the grammar structures learned in the class when they were chatting with their classmates. Moreover, they were analyzing the structures

11 Anderson.

of the conversation they held in the chat by categorizing them based on the content studied in class. Finally, the activity is also framed in the cognitive level of Evaluation since students chose the tense, vocabulary, expressions, and register they wanted to use for this activity based on their linguistic abilities to communicate effectively. Regarding the intended audience, the activity was designed for class purposes. Only the professor and the small group had access to the project during its development and evaluation.

Creative Activity

In pairs, students designed an activity using a technological tool to transform the knowledge of a grammar structure studied in the course into a project that would demonstrate the acquisition of the structure. The procedure followed was to visit a web site called “teachertrainingvideos.com” and become acquainted with the tools presented in the site. This page contains tutorials to learn how to, for example, construct a Web page or a presentation in *VideoScribe*, which is a tool to create presentations where the students have to talk, choose images according to the content and background music. These components are placed in this application to make a video. Students had to apply their creativity to design a presentation of the grammar structure using one of those tools with the purpose of explaining the structure and its use creatively. They were assigned a date to embed the project in the academic network *Edmodo*; or as was the case for some students, they could upload the presentation in *YouTube* for everyone to see.

Based on the SAMR framework, the creative activity is placed under the *Redefinition* stage since the students are creating a new task that cannot be done without technology. Karen Ward states that this type of task:

requires students to create new ideas, thoughts, understandings, projects, or products; students share these with others (either in class,

across campus, in the community, or with others around the world). Students use online tools to display the results of their work, to compare results, and to develop deeper levels of understanding. Students have a regular ‘voice’ in developing the classroom learning culture.¹²

To complete this project, the students chose a technological tool based on their preferences and possibilities because they had to become acquainted with it to be able to explain the grammatical use of the structure with their own strategies and examples. With their partner, the students had to negotiate and plan the content to be included in the tool, create their own language examples, and learn to use the digital tool to make the presentation. Once the project was finished, the students embedded the activity in the academic social network *Edmodo* for evaluation purposes and for the class to see it and comment on it. Some students had to upload the activity because the tool they chose required it, and then embed the link in *Edmodo*. By redefining the task, the students ventured into a project that was innovative for them and which could not have been done without the use of technology. It also exposed them to technology with applications and digital tools that enabled them to create this project and perhaps others in the future.

According to Bloom’s Revised Taxonomy, for the accomplishment of this project, the students were asked to evaluate and create an activity using ICTs. The students were evaluating their knowledge regarding the grammar structure to come up with the explanation of the form and function and examples of their own to create the project using a technological tool to transform the learning outcomes. The rest of class had the opportunity to see the work of their classmates and to comment on it; moreover, the task also goes beyond the limits of the classroom because the uploaded projects |can be accessed by anyone.

12 Karen Ward, “Levels of Implementation-SAMR,” *Laptops and Learning*, August 5, 2016, <<https://sites.google.com/site/laptopsandlearning/21st-century-teaching-learning/levels-of-implementation>>.

In fact, in the future, the students can make use of these projects when they teach English.

Table 2 summarizes how the grammar projects implemented during two basic grammar courses in the first semester of 2016 were associated with the SAMR framework designed by Ruben Puentedura. There are no projects in the *Substitution* level. Two activities are placed in the *Augmentation* level in which technology was used to improve and enhance the learning process. In the *Modification* level, three activities were redesigned with the contribution of technology. The *Redefinition* level includes the Creative Activity, and it is associated with the transformation of the task since the activity could not have been done without the use of ICTs.

Table 2. Summary of the Basic Grammar projects within the SAMR framework

<i>Substitution</i>	<i>Augmentation</i>	<i>Modification</i>	<i>Redefinition</i>
–None	–News Article Video –Integrated Grammar Project	–Short Story Forum –Imaginary Voyage Presentation –ChatWrite	–Creative Activity

Students' Perceptions of the Projects

At the end of the semester, the students were asked to respond to a survey about their perceptions of the impact that the projects had on their understanding of the grammatical structures. The first item was presented as follows:

How well did (name of the project) help you to understand the grammatical structures studied in class?

1. Very much 2. Somewhat 3. Not so much 4. Not at all

Another aspect was the way in which the projects contributed to the understanding of the grammar structure. In this question, the researchers explained the stages of the SAMR model by providing a brief description of what each level implied. Although the students were not previously acquainted with the explanation of each level, and how they were paired with the activities, the researchers wanted to explore their perception of the use of technology by choosing all the options they considered applied in this question. That question was structured as follows:

In what way?

- a. To present the structures studied in class in another format or layout.*
- b. To improve the learning of the structure studied in class through new/other technological tools.*
- c. To redesign the presentation of the structure, using technology to enhance the learning outcome.*
- d. To create, with the use of technology, new learning activities that improve the acquisition of knowledge of the structure studied in class.*

The last question was to rate the overall evaluation for each project taking into account the rubrics designed to grade their performance, as seen below:

How was the overall evaluation in the (name of the project) perceived by you?

1. Appropriate 2. Good 3. Fair 4. Poor

At the end of the survey, the students were also given the opportunity to write a free comment related to the projects.

The results of this survey are presented below by indicating the students' point of view about these four questions. The information is displayed in tables showing the percentages of the answers. In one of the courses of Basic Grammar (BEI I-II), 16 students enrolled, and all of them responded to the survey. For the other course, Basic Grammar (BEI), 21 students responded to the survey. Originally, 22 students had enrolled in the course, but one of them dropped out.

Regarding the Short Story Forum (see table 3), 9 of 16 students considered that the project helped them *very much* in the understanding of the grammatical structures studied in class, while 6 responded that it helped them *somewhat*, and 1 student chose *not so much*. In their perception of how the project contributed to their understanding of the structures, paired with the SAMR levels, 10 students chose option *b*: *To improve the learning of the structure studied in class through new/ other technological tools*. This option referred to the *Augmentation* level, but the researchers had assigned the level of *Modification* (option *c*) to this project. None of the students chose option *c*, but 1 chose option *a*, and 5 option *d*. Finally, 5 students thought the evaluation for this project was *appropriate*, 7 thought it was *good*, 3 thought it was *fair*, and one declined to answer.

Though the Short Story Forum project was perceived by the students to be in another SAMR level, rather than as the researcher had placed it, the majority (56.25%) of them pointed out that it had helped them understand the topics covered in class. Concerning the evaluation, 43.5% of the students perceived it as *good*.

Table 3. Students' perception of the Short Story Forum

BEI I-II – Short Story Forum							
<i>How well did the Short Story Forum help you understand the grammatical structures studied in class?</i>							
<i>1. Very much</i>		<i>2. Somewhat</i>		<i>3. Not so much</i>		<i>4. Not at all</i>	
56.3%		37.5%		6.3%		---	
<i>In what way?</i>							
<i>a. To present the structures studied in class in another format or layout.</i>		<i>b. To improve the learning of the structure studied in class through new/other technological tools.</i>		<i>c. To redesign the presentation of the structure, using technology, to enhance the learning outcome.</i>		<i>d. To create, using technology, new learning activities that improve the acquisition of knowledge of the structure studied in class.</i>	
Yes 6.3%	No 93.7%	Yes 62.5%	No 37.5%	Yes 6.3%	No 93.7%	Yes 31.3%	No 68.7%
<i>How was the overall evaluation for the Short Story Forum perceived by you?</i>							
<i>1. Appropriate</i>		<i>2. Good</i>		<i>3. Fair</i>		<i>4. Poor</i>	
6.3%		62.5%		---		31.3%	

For the News Article Video (see table 4), 6 students thought that this project helped them *very much* in their understanding of the grammatical structures studied in class, while 7 that thought it helped them *somewhat*, and 3 opted for *not so much*. That means that half of the students (that is, 8) believed that this project helped them *improve the learning of the structure studied in class through new/other technological tools* (option *b*), thus linking the project to the *Augmentation* level, as expected by the researchers. The other students' perceptions were distributed among the other levels. Finally, 10 students viewed the evaluation of this project as *appropriate*, 4 as *good* and 2 as *fair*.

Table 4. Students' perception of the News Article Video

BEI I-II – News Article Video							
<i>How well did the News Article Video help you in the understanding of the grammatical structures studied in class?</i>							
<i>1. Very much</i>		<i>2. Somewhat</i>		<i>3. Not so much</i>		<i>4. Not at all</i>	
37.5%		43.8%		18.8%		---	
<i>In what way?</i>							
<i>a. To present the structures studied in class in another format or layout.</i>		<i>b. To improve the learning of the structure studied in class through new/other technological tools.</i>		<i>c. To redesign the presentation of the structure, using technology, to enhance the learning outcome.</i>		<i>d. To create, using technology, new learning activities that improve the acquisition of knowledge of the structure studied in class.</i>	
Yes 12.5%	No 87.5%	Yes 50%	No 50%	Yes 18.8%	No 81.2%	Yes 25%	No 75%
<i>How was the overall evaluation for the News Article Video perceived by you?</i>							
<i>1. Appropriate</i>		<i>2. Good</i>		<i>3. Fair</i>		<i>4. Poor</i>	
62.5%		25%		12.5%		---	

Regarding the students' perception of the Imaginary Voyage Presentation (see table 5), 9 of them thought this project helped them *very much* in the understanding of the grammatical structure, while 4 thought it helped them *somewhat*, 3 responded *not so much*, and 2 students did not answer this question. Regarding the project's pairing with the SAMR model, 5 students perceived that this project helped them *redesign the presentation of the structure, through the use of technology, to enhance the learning outcome* (option c), the one that the researchers had paired with the *Modification* level. The rest of the students divided their opinion between the other levels. Finally, 3 students thought the evaluation was *appropriate*, 5 chose *good*, 2 chose *fair*, and 6 students did not answer this question.

Table 5. Students' perception of the Imaginary Voyage Presentation

BEI I-II – Imaginary Voyage Presentation							
<i>How well did the Imaginary Voyage Presentation help you in the understanding of the grammatical structures studied in class?</i>							
<i>1. Very much</i>		<i>2. Somewhat</i>		<i>3. Not so much</i>		<i>4. Not at all</i>	
56.3%		25%		18.8%		---	
<i>In what way?</i>							
<i>a. To present the structures studied in class in another format or layout.</i>		<i>b. To improve the learning of the structure studied in class using new/other technological tools.</i>		<i>c. To redesign the presentation of the structure, using technology, to enhance the learning outcome.</i>		<i>d. To create, using technology, new learning activities that improve the acquisition of knowledge of the structure studied in class.</i>	
Yes 21.4%	No 78.6%	Yes 14.3%	No 85.7%	Yes 35.7%	No 64.3%	Yes 28.6%	No 71.4%
<i>How was the overall evaluation in the Imaginary Voyage Presentation perceived by you?</i>							
<i>1. Appropriate</i>		<i>2. Good</i>		<i>3. Fair</i>		<i>4. Poor</i>	
18.8%		31.3%		12.5%		---	

In regard to the IGP (see table 6), 20 students considered that it helped them understand the grammatical structure *very much*, and 1 student responded *somewhat*. Moreover, the way in which the project helped them understand the structure varies in number, since students were able to mark all the possible options. However, there is a noticeable pattern with the option *b* which is “*To improve the learning of the structure studied in class through new/other technological tools.*” This option was chosen by 16 students, that is 76.2%. Indeed, the researchers placed the IGP in the *Augmentation* level which corresponds to the description in letter *b*. Concerning the evaluation of the IGP, 15 students considered the evaluation as *appropriate* and 6 students rated it as *good*.

Table 6. Students' perception of the IGP

BEI – IGP							
<i>How well did the IPG help you in the understanding of the grammatical structures studied in class?</i>							
<i>1. Very much</i>		<i>2. Somewhat</i>		<i>3. Not so much</i>		<i>4. Not at all</i>	
95.2%		4.8%		---		---	
<i>In what way?</i>							
<i>a. To present the structures studied in class in another format or layout.</i>		<i>b. To improve the learning of the structure studied in class through new/other technological tools.</i>		<i>c. To redesign the presentation of the structure, through the use of technology, to enhance the learning outcome.</i>		<i>d. To create, using technology, new learning activities that improve the acquisition of knowledge of the structure studied in class.</i>	
Yes 38.1%	No 61.9%	Yes 76.2%	No 23.8%	Yes 19.1%	No 80.9%	Yes 52.4%	No 47.6%
<i>How was the overall evaluation in the IGP perceived by you?</i>							
<i>1. Appropriate</i>		<i>2. Good</i>		<i>3. Fair</i>		<i>4. Poor</i>	
71.4%		28.5%		---		---	

As for the ChatWrite (see table 7), 16 students considered this activity helped them *very much* in their understanding of the grammar structure, 4 students rated it as *somewhat*, and 1 student chose *not so much*.

It is interesting to observe how the students classified this activity regarding the SAMR model since only 5 students thought the activity redesigned the presentation of the structure through the use of technology to enhance the learning outcome (the *Modification* level). However, 15 students classified the activity of the chat using their cellphone and the application of *WhatsApp*, in the *Augmentation* level. The ChatWrite was more demanding for the students considering they had to use their cellphones to carry out the chat, then download the chat into their word processors, and then analyze the structures using

some commands from the word processor. For that reason, the activity was placed in the *Modification* level. In addition, 16 students perceived the evaluation as *appropriate* and 5 students believed it was *good*.

Table 7. Students' perception of the ChatWrite

BEI – ChatWrite							
<i>How well did the ChatWrite help you in the understanding of the grammatical structures studied in class?</i>							
<i>1. Very much</i>		<i>2. Somewhat</i>		<i>3. Not so much</i>		<i>4. Not at all</i>	
76.2%		19.0%		4.8%		---	
<i>In what way?</i>							
<i>a. To present the structures studied in class in another format or layout.</i>		<i>b. To improve the learning of the structure studied in class through new/other technological tools.</i>		<i>c. To redesign the presentation of the structure, through the use of technology, to enhance the learning outcome.</i>		<i>d. To create, with the use of technology, new learning activities that improve the acquisition of knowledge of the structure studied in class.</i>	
Yes 55%	No 45%	Yes 75%	No 25%	Yes 25%	No 75%	Yes 35%	No 65%
<i>How was the overall evaluation in the ChatWrite perceived by you?</i>							
<i>1. Appropriate</i>		<i>2. Good</i>		<i>3. Fair</i>		<i>4. Poor</i>	
76.2%		23.8%		---		---	

Regarding the students' perception of the Creative Activity (see table 8), 13 students considered that this activity have helped them *very much* in the understanding of the grammatical structures whereas 8 students pointed out that it helped them *somewhat* in that process. As to how the activity helped them, 16 students (76.2%) marked option *c*, which resembles the *Redefinition* level (*To create, with the use of technology, new learning activities that improve the acquisition of knowledge of the structure studied in class*). It can be inferred that

the students classified the activity in the level corresponding to the researchers' study. Moreover, the students rated the evaluation of the project as follows: 13 (61.9%) considered that the evaluation was *appropriate*, 7 (33.3%) responded that it was *good*, and 1 (4.7%) thought it was *fair*.

Table 8. Students' perception of the Creative Activity

BEI – Creative Activity							
<i>How well did the Creative Activity help you in the understanding of the grammatical structures studied in class?</i>							
<i>1. Very much</i>		<i>2. Somewhat</i>		<i>3. Not so much</i>		<i>4. Not at all</i>	
61.9%		38.1%		---		---	
<i>In what way?</i>							
<i>a. To present the structures studied in class in another format or layout.</i>		<i>b. To improve the learning of the structure studied in class through new/other technological tools.</i>		<i>c. To redesign the presentation of the structure, through the use of technology, to enhance the learning outcome.</i>		<i>d. To create, using technology, new learning activities that improve the acquisition of knowledge of the structure studied in class.</i>	
Yes 38.1%	No 61.9%	Yes 47.6%	No 52.4%	Yes 33.3%	No 66.6%	Yes 72.2%	No 23.8%
<i>How was the overall evaluation in the Creative Activity perceived by you?</i>							
<i>1. Appropriate</i>		<i>2. Good</i>		<i>3. Fair</i>		<i>4. Poor</i>	
61.9%		33.3%		4.7%		---	

A total of 37 students were enrolled in the two Basic Grammar courses. With reference to the open question in which the students were given the opportunity to write comments on specific projects, only 25 students responded to the last question and 12 declined. The comments can be grouped into three categories: positive remarks, negative remarks and recommendations. In the positive category, 13 students referred to the projects. Certain key words were repeated

throughout the comments, such as *helpful*, *useful*, *nice*, *practice*, *interesting*, *understanding*, *apply*, and *knowledge*. This appears to indicate that the projects implemented had a positive impact on the students' learning and understanding of the grammatical structures studied in class.

Seven students made negative remarks about the projects: 4 of those students referred to the IGP by mentioning the difficulty of finding the structures in the articles used, and 1 referred to writing their own examples using the structures as an activity that unnecessary. Another pointed out that he/she did not understand the guidelines of the Creative Activity. Finally, one student mentioned that these activities are time consuming and that the percentage assigned in the final grade was very low. These comments will help the researchers improve the guidelines for future projects so that the students will understand them more easily.

Concerning the recommendations, the comments made by three students aimed at the importance of explaining the use of new digital tools, such as *PowToons*, to create the digital presentations the students used for the News Article Video. These comments are very relevant for future activities, since office hours can be used to alleviate this concern.

Concluding Remarks and Recommendations

The SAMR model appears to be beneficial once each level is fully understood and the user can feel comfortable debating whether a certain activity belongs to a specific level or to another. This model associates the activities carried out in the learning process with the use of technology; an association that was once taken for granted because the need to make such a connection is fairly recent as is the model. The SAMR model also pairs each of its levels with the major domains of learning in Bloom's Taxonomy, to increase its validity and credibility as the latter was created in the 1950s and revised in 2001.

The projects discussed in this paper were planned without considering the SAMR model beforehand because at the time of the design of the projects, the researchers' only objective was to go beyond the traditional methodology and use the resources the students had at hand, such as their phones and computers, since these devices are already part of their everyday life. As a consequence, in the process of implementing the assignments, the researchers were prompted to analyze the role of technology and the connection between the activities' goals and language acquisition. Therefore, it is advisable to plan projects or assignments that make use of technology applying the SAMR model to evaluate how they would move from the Enhancement area (*Substitution* and *Augmentation*) to the Transformation area (*Modification* and *Redefinition*). Planning with the SAMR model does not mean that all the assignments should belong to the Transformation area because the different cognitive skills need to be addressed at different points of the learning process. Therefore, some tasks might require Remembering, Understanding and Applying, while others will require Analyzing, Evaluating, and Creating, domains from Bloom's Revised Taxonomy which are coupled with the SAMR levels.

Implementing technology in grammar projects also lessens the gap in the students' computer literacy. In the six projects implemented, the students were given digital tools, apps and software, the majority of which were new for them. It can be said that in most cases, this was their first contact with some of the tools used in the projects. With these projects, the students were shown a world of technology that they could adapt to their needs and reality as students and future teachers. In addition, the technology they had to use helped them understand the learning process, and enabled them to become familiar with activities and situations which they will be part of as future educators of children and adolescents.

However, concerning the implementation of grammar projects which make use of ICTs, it is important to devote a certain number of office hours to students who require help to learn how the tools that

can or will be used for each project. Depending on the timeline for activities proposed by the professor, there might not be enough time during class to explain how a certain device, app, or software works, or there is not enough time to experiment and practice before the due date of the projects. Indeed, students can become frustrated if they feel uncomfortable with technology. This can lead to tasks where the tool is not used in its full potential. From the experience that the students had with the projects, some of them felt overwhelmed by *Powtoons*, and some admitted on never having participated in a forum before. If these situations had been rectified beforehand, the outcome of the projects, or the attitude towards the projects might have been different.

The researchers faced the limitation of not knowing at what point the use of technology should be included in the summative evaluation of the projects, or whether the evaluation should only contemplate content. This is because aspects such as illustrations, transitions, special effects, types of font, and others according to the tool, are inherent to the task described in the guidelines. In the current syllabus, the use of specific technological tools is not included among the objectives of the course, since the latter are only related to the study of grammatical structures. The researchers recommend keeping track of the students' projects by meeting individually with them, or asking for drafts of the projects to see how they are advancing, and leaving the use of technology out of evaluation criteria.

Another limitation for the implementation of these projects is that the researchers are not experts in the use of ICTs. They learned about the basic aspects beforehand, to explain the task and analyze possible final outcomes. However, much of the learning happened along with that of the students as they asked questions, described limitations and made comments about the tools. Despite any situation that might have arisen, the researchers followed the advice given by Michael Krauss when he recommended not to take the lack of computer literacy as a setback because students are more prone to feel

at ease with technology, and with time the professors can also learn along with the students.

The researchers have concluded that the use of the SAMR model requires further analysis because technology changes constantly: new apps and software become available every day, and students constantly want to have and use the latest tools. Therefore, if the model is to be taken into account for future project planning, it should be included in the courses' methodology, whereas on this occasion the researchers made use of the SAMR model after the implementation of the projects.

After reviewing the students' perceptions and comments about the projects, the researchers can conclude that overall this was a positive experience to complement the course with activities that made use of technology in the learning and understanding of the grammatical structures studied in class, to enhance their knowledge in a way different from what had been the norm in previous years. Considering the results of this initial study, the researchers are interested in learning more about the application of the SAMR model with the tasks designed in the course and they hope to continue researching more about this topic and implementing SAMR in the future.

As a final thought, it is important to note that the SAMR model can be used for any subject or topic, not only for language learning or grammar, for that matter. As evidenced in Romrell, Kidder and Wood, the SAMR model was used for other educational environments such as nursing, marine biology, geomorphology, and architecture when courses used mobile devices in their activities.¹³ The use of this model is relevant and pertinent in many fields to identify how technology is applied in learning activities, and thus move from enhancing the experience to transforming it for higher learning outcomes.

13 Romrell, Kidder and Wood, 82.