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Strategies for integrating a situational framework for reading comprehension of digital academic texts

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Project Strategies for Achieving Competent Readers of Academic Texts. An interactive program of didactic intervention directed to teachers of basic education in the department of Quindio of the DiLeMa group of the University of Quindio.

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Abstract

This research is part of the project Strategies for achieving competent readers of academic texts. An interactive program of didactic intervention aimed at basic (primary school) teachers in the Quindío province, from the DiLeMa group the University of Quindio, who designed a virtual interactive package for the understanding of expositive-explanatory texts in hypermedia format, based on the constructive model. integrative of W. Kintsch and van Dijk (1978); the three levels of representation of W. Kintsch (1998), the expositive-explanatory text of T. Álvarez, the subtypes of Meyer's expositive -explanatory text (1984), and the Web 2.0. In addition, this article presents a panorama of research related to the reading of this kind of texts, using tools from the Moodle platform. The methodology is qualitative and hermeneutic-dialectic; for this, there were used three measurement instruments in order to arrive at the analysis of results, and at five conclusions as strategies that seek to qualify the situational framework in fifteen students.

Keywords: Reading comprehension, situational model, 2.0 web, expository-explanatory text.

Introduction

This article presents the results of the virtual course Reading Comprehension of Academic Texts[1] of the research proposal: *Strategies for Achieving Competent Readers of Academic Texts. An interactive didactic intervention program for elementary teachers in the Quindio department*[2] led by the DiLeMa research group (2010 and 2013) and, part of the poor performance in the comprehension of reading texts in the Saber performance test of the Quindío department. The interactive package addresses the reading comprehension of expository-explanatory texts in hypermedia format through the Moodle platform.

The importance of carrying out this project lies in the fact that the training of future teachers needs new instruments to guide the process of reading comprehension in the classroom, and, as ICTs have taken a place in them, it is necessary for the teacher to know how to include the use of hypermedia and physical formats in the classroom with the corresponding availability of teaching materials.

The above gives rise to the main intention of this article: to highlight the integration of the participants of the virtual course with the situational model: how much do they integrate the previous knowledge with the new one for the development of the activities proposed in the platform? In addition, to look for answers to the cognitive and metacognitive relationships when interacting with other students, teachers and multimedia media; and to promote individual reflection on the process of understanding in play with the author-reader-context.

Current state of virtual education

The relevance of a search for answers to the technological challenges proposed to education is highlighted. From there we can conclude that it is exposed to the constant cycles of change in the way it is taught within a classroom. The following are researches that have studied virtual education:

Cardona (2015); Bautista, Medina and Moreno (2014); Rodríguez, Vargas and Urueña (2014) ; Vargas (2013); Quintián (2011); Burin, Kahan, Irrazabal, and Saux, (2010) ; Salmerón, Kintsch and Cañas (2006) ; Riveros (2012); Valenzuela and Pérez (2013).

Between the current state of the subject and this study there are some converging points to be pointed out: in the first place, the b-learning methodology, which consists of a semi-presential interaction with students - precisely the method applied in Reading Comprehension of academic texts, although, in this article only the virtual performance is analyzed-. This is important, because it allows the teacher to interact face to face with the students, to clarify doubts regarding the course activities, to observe the performance and the team work.

Second, the active process of the student as a generator of knowledge in interaction with the previous. There, the teacher is the creator of the virtual environment and knowledge provoker and, the student is the user with academic purposes for the acquisition of communicative, humanistic, cognitive, metacognitive competences, among others.

Third, in line with the previous - closely linked - development of an autonomous and self-regulated learning capacity for the selection of what to learn, how, where and with whom through the network. It should be noted that precisely the intention of the research presented is to find the friendly side of virtuality, in favor of the teaching and learning of future teachers who will find in their classrooms digital natives who prefer graphic formats to text, that is, reading nodes and iconoverbal codes, while making application updates and make use of social networks as their main means of communication.

Conceptual aspects

The DiLeMa research group implemented in the virtual course, which is analyzed here, the constructive-integrative model of W. Kintsch and van Dijk (1978), the three levels of representation of Kintsch (1998), the expository-explicative text of T. Alvarez, the subtypes of the expository-explicative text of Meyer (1984) and the Web 2.0, which are explained below:

The Constructive-integrative Model starts from two types of representation: base text or local level of the text structure (microstructure, macrostructure and superstructure) and situational model (the reader integrates the previous knowledge through associative networks of interconnected nodes and builds a mental representation).

1. Access route to the course: www.virtual2.uniQuindio.edu.co. Option: Cursos>Universidad del Quindío>Facultades>Educación>Español y Literatura>CLTA (Comprensión Lectora de Textos Académicos).
2. This is in dialogue with other projects carried out by the group in this same thematic area: *Strategies for the understanding and production of expository-explanatory texts from a socio-cultural approach. A didactic proposal directed to teachers of fourth and fifth grade of basic education for the improvement of the lecto-critical competence of their students* (2007) and *Strategies for the comprehension and production of argumentative texts from a socio-cultural approach. A didactic proposal directed to teachers of basic education for the improvement of the reading and writing competence of their students* (2009).

Both allow the construction of new information and the integration of this with the existing in the working memory. This means that the reader constantly modifies knowledge (brain plasticity).

The three levels of representation correspond to an updating of the constructive-integrative model; they are the process of understanding a text through the *Surface Code*: superficial recognition of the syntactic structure of a sentence in which the reader highlights the obviousness of the article; *Base text or textual base*: semantic analysis of the text from the macro and microstructure to remember or summarize and *Situation model*: the reader achieves the integration between the base text and the previous knowledge in a mental scheme that allows the elaboration of a meaning.

For the text typology Camargo, Uribe and Caro quote T. Alvarez, an authority on this subject: "Any text whose main purpose is to express information or ideas with the intention of showing and explaining or making more understandable such information" (Camargo, Uribe and Caro, 2011:114).In other words, there is a close relationship between the text typology and the information it contains. In other words, there is a close union between the expository and the explanatory, one cannot pretend to expose a subject without explaining it. Therefore, the expository informs and transmits data in a hierarchical manner and the explanatory shows on an expository basis. Both are of a directive nature, since they act as a guide to extract important ideas and concepts. This type of text has some basic subtypes of organization according to Meyer (1984): problem-solution, cause-consequence, comparison-contrast, sequence and description.

With the rise of virtual teaching that has somehow transcended distance education, new tools have emerged that counteract the traditional concept of education. Now it is a matter of recognizing the fact that the ways of learning and their function are altered when tools such as *Web 2.0* are used.

This variety of web sites and applications allows you to consult, create and edit content: there the user goes from being a receiver to becoming a creator, with the possibility of expanding to other users as a knowledge manager. In addition, it combines a number of softwares such as wiki: collaborative creation in web page format; social networks; blogs; virtual private and free platforms. Among the last ones we can find Moodle; its model is called *E-Learning* (virtual training) in support of the ICT tools, although the B-Learning model (combination of classic and virtual pedagogical practices) can be used. It is structured from texts formed by nodes and links that trace reading paths -nonlinear- so that the reader can go deeper into the information regarding the topic and, with multimedia components such as graphics, audio, animation, video, among others. The possibility that it offers the reader is the flexibility to consult information through different routes and to control the rhythm of reading or study. In this regard, Alvarez states: "For a reader to be able to effectively use a hypermedia environment, he requires skills in searching and capturing information that are not normally acquired through reading texts in printed format" (Álvarez, 2005: 53).

The use of technological tools for academic purposes allows the creation of a network of didactic elements for effective learning. Somehow, part of the shortcomings of face-to-face education to fill those gaps with multimedia. Indeed, the importance of these means is the role played by the student: active and knowledge producer.

Methodology

The methodological process is structured from a qualitative approach, with the aim of analyzing a real problem of readers of expository-explanatory text, with the interaction of different activities that evidence the integration of previous knowledge with new knowledge. Besides, it follows the hermeneutic-dialectic method from Martínez Migueléz (2004), related to the observation and interpretation of data and discussion of the results thrown in the research process.

Research subjects

For the course *Reading comprehension of academic texts*, 15 students (nine women and six men between the ages of 20 and 50) enrolled in the academic space *Didactics of comprehension and production of functional texts* of the ninth semester of the degree in Spanish and Literature at the University of Quindio, directed by Professor Zahyra Camargo. The population had previous knowledge in terms of handling the Moodle platform and reading hypermedia. Also, previous knowledge in the different didactic and linguistic subjects included in the academic curriculum of the program.

This course lasted four weeks, from August 6 to September 3, 2014, and included: one unit of setting and three in which the following topics were dealt with: Text and its characteristics; reading comprehension processes and expository-explanatory text typology.

Measurements and instruments

For the purpose of this research, three activities were selected, carried out in different units, which are presented here as instruments. From there, we tried to evidence the situational model; that is, the way students integrate the previous with the new[3]: 0 item questionnaire after reading *The three levels of representation in Kintsch's last proposal* (1998). 2. Wiki of the text *El ornitorrinco* (The platypus) and 3. Presentation of examples for each subtype of expository-explanatory text according to Meyer (1984).

Results

The reading of hypermedia texts in the academy, as a working tool, is fundamental for the full development of skills in writing and reading; hence this project focuses on these two skills. In this section, the results of the three instruments are presented in a precise way:

Questionnaire: *The three levels of representation in Kintsch's last proposal* (1998)

For the first instrument, 5 out of 10 questions were chosen, corresponding to the matching format. These had a statement and three questions; in total there were 15 points or hits for all 5. For each of them there are three answer options to choose from: base text, situational model or surface code; main concepts of the reading. The text in a notational way exposes the three levels: the introduction mentions which they are and summarizes them. It then lists them, explains their components, and ends with a synthesis.

The questionnaire offered the option of answering correctly in several attempts; so, if in the first one they did not obtain all the hits, they repeated it. Therefore, it is not appropriate to examine the last one, because they could read the text again, meditate on the questions and possible answers; this in a way does not allow observing the degree of reading comprehension at first hand, designed to strengthen the identification of the main concepts.

To achieve the objective of the activity - to answer all the questions correctly - the reading comprehension is the main instrument of the student to face non-literal postulates, but that do require the metacognition of the concepts exposed there.

To explain Figure 1, a rule of three is made for each subject and the sum of these percentages divided by 15 (subjects) gives an overall average of the activity. So, if 15 correct answers correspond to 100%, the # of correct answers for each subject is X %:

The questionnaire activity had a 57.2% (table 1) of success in the matching answers, which corresponds to an average performance; all this is presented with the exception of subject 9 who obtained 100% of the questions in the first attempt of the questionnaire, from which it is deduced, the situational framework in this participant managed to evidence the full comprehension of reading and the resolution of problems related to the subject, in the same way it evidences metacognitive strategies and long term memory. Unfortunately, the absence of participants 6 and 8 did not favor a better overall performance in the activity.

As the spirit of the activity sought to strengthen levels of ownership - hence the possibility of several attempts - the group achieved all the right answers after the last one, thanks even to the feedback given, with messages like *Try again! All right! Please check the document! Something is wrong! Be careful. Check the document well*, etc.

Wiki: *El ornitorrinco*

For the Wiki instrument, the students carried out a group activity from the text *El ornitorrinco*, in which they applied the three levels of representation of the questionnaire activity for the elaboration of questions addressed to children from 5th grade. The Moodle platform allows each student to see the contribution to the activity or globally the step by step of the statements produced. Therefore, a table is elaborated to know who participated in the activity; if those who participated included questions (these first two points are included in table 2) and if these corresponded to the level of representation (second part of the result).

3. In articulation with this text, Johana Andrea Ordoñez Ruiz carried out the research *Analysis of concept maps and summaries for the understanding of explanatory-explanatory texts through the Moodle platform, in teachers in training at the University of Quindio*; this project focuses on analyzing the base text of the constructive-integrative model.

Figure 1. Questionnaire of the three levels of representation

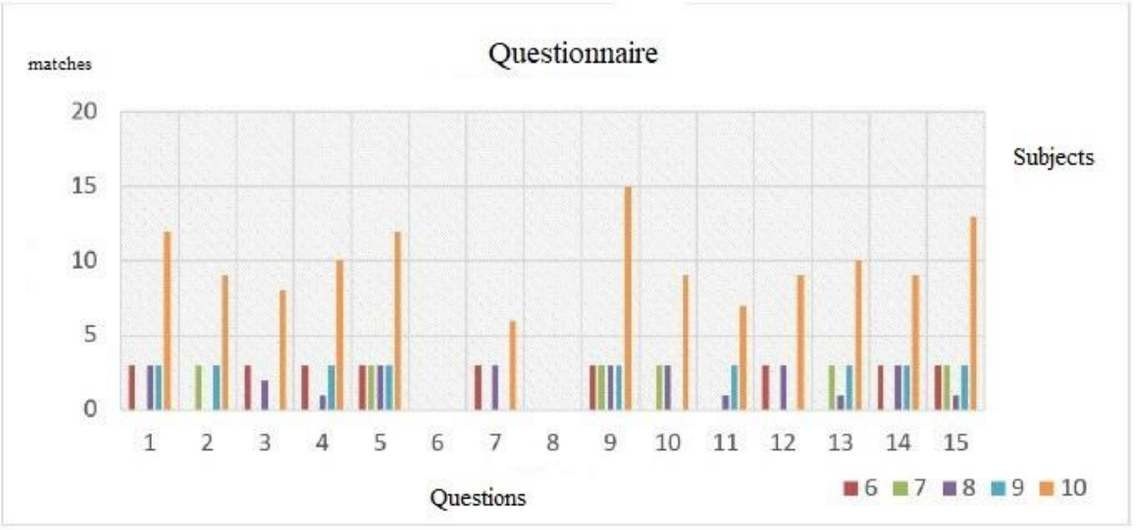

Table 1. Percentage of participation per student in the questionnaire

Subjects	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Correct Answers	12	9	8	10	12	0	6	0	15	9	7	9	10	9	13	129
%	80%	60%	53%	66.60%	80%	0%	40%	0%	100%	60%	46.60%	60%	66.60%	60%	86.60%	57.20%

Table 2. Student participation in the Wiki

Subject	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Participation	Y	Y	N	Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y
Questions	Y	Y	N	Y	Y	N	Y	Y	Y	N	N	Y	Y	Y	Y

According to table 2, subjects 3, 6 and 11 did not participate or include questions and among the remaining 12 they carried out the activity. In total, they wrote 41: 13 *Surface Code*, 12 *Base Text* and 16 *Situational Model*.

It is considered that the final result of the Wiki lacked review, editing and feedback of the 41 questions, as Kintsch says in *The role of knowledge in the understanding of discourse: A model of construction-integration*: "one reasonably expects to be able to answer questions about it, remember it or summarize it, verify what is said about it, paraphrase it, and so on" [our translation] (Kintsch, 1996:71).

First, in general, as far as the notational level is concerned, there is no coordination to list each one of the questions, they are preceded by the closing of parentheses, comma, period or hyphen and some do not begin with a capital letter; there is no accentuation or question marks in others: (por que [*why*]), (qué utiliza como filtro el ornitorrinco?[*what does the platypus use as a filter?*]). Second, in Surface Code there are 3 repeated; if they are re-edited there are 10 left. Third, in Base Text only 5 correspond to the level itself; of the remaining one is for situational model. Fourth, in Situational Model 4 correspond to base text, one to surface code and another is discarded. Finally, from the wiki activity there are 30 questions in the three levels of representation that respond to the model and propitiate in the students a complete process of reading comprehension.

Examples of sub-types of expository-explanatory text

In the third point of measurements and instruments, exposition of examples for each subtype, a first figure is presented (2) to determine how many texts were sent by the students: 60 per 12 subjects (5 per each), with the variable of 3 subjects who did not send the activity (2, 3, and 5) (Figure 2).

For the second part of the result, table 3 answers the question: do the 60 texts correspond to the proposed subtype?; for this purpose, the comments made by professor Zahyra Camargo to the students regarding the proposal of the consultations sent are taken into account, as well as the characteristics proposed by Meyer (1984) in each of the subtypes.

If the three subjects who did not present the activity (2, 3 and 5) are discarded, there would be 12 active participants and the total of subtypes in percentages are: Problem-solution 58.3%, cause-consequence 75%, comparison-contrast 66.6%, sequence 41.6% and description 41.6%; the last two subtypes were the ones that presented the greatest difficulty in understanding characteristics and logical connectors, keys to understanding the difference between sequence and description according to Meyer (1984).

In the total analysis of texts per student we have the following results: 0% for subjects 2, 3 and 5 who did not present the activity; 0% for subject 7 who did not coincide with any subtype because in the examples presented there were other sequences, they were very long and not in accordance with the level of basic education; 20% for subjects 10 and 14 who were correct in one subtype, for the first descriptive and for the second cause-consequence; 40% for subject 15 who matched only two (cause-consequence and comparison-contrast); 60% for subject 4 in problem-solution, sequence and description, 8 and 13 in problem-solution, cause-consequence and comparison-contrast; 80% for those who matched 4 subtypes: 1 (except problem-solution), 6 (except sequence), 9 and 11 (except description); and, 100% for the only subject who coincided in all the subtypes, 12. Consequently, an overall average of 56.6% of correct texts.

The three previous instruments reveal the implications between the relationship of digital texts and the face-to-face reader in the conjugation of metacognitive competence. These enhanced the participants' long-term memory, since the questionnaire, the wiki and the subtypes followed the theoretical readings.

In reference to the performance in the Wiki instrument, which exceeded the percentage of receptivity, one could infer an important performance in the comprehension focused on the situational model; the reader elaborated a mental image of the text content, made inferences, questions and interpreted to achieve the realization of the activities thought in the collectivity.

The degree of commitment of the students to comply with the readings and corresponding activities did not differ from the proposal of the academic space *Didactic space of comprehension and production of functional texts*. For this reason, the objectives proposed in the three units of the course were established according to the capacity of the group. Moreover, if we take into account that this is a ninth semester subject in which, as a final work, a professional practice is carried out in an Educational Institution of the department, it becomes possible to achieve the proposed goals.

Figure 2. Number of subtypes submitted by students

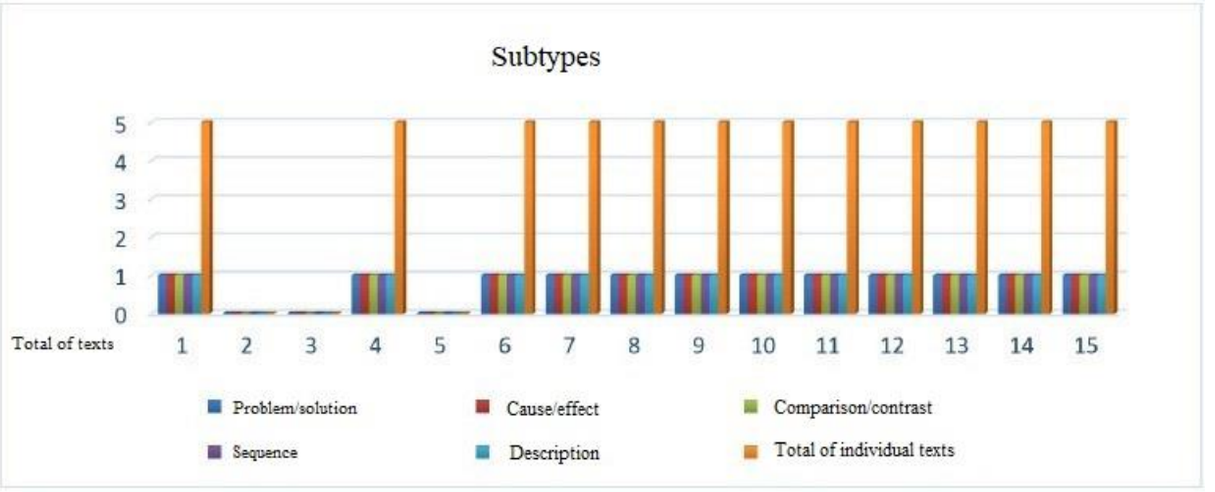

Table 3. Relevance of the text according to the subtype

Subject / Subtype	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total subtype	Subtype Percentage
Problem/ solution	Y	NA	NA	Y	NA	Y	N	Y	Y	N	Y	Y	Y	N	N	7	58.30%
Cause/ effect	Y	NA	NA	N	NA	Y	N	Y	Y	N	Y	Y	Y	Y	Y	9	75%
Comparison/ contrast	Y	NA	NA	N	NA	Y	N	Y	Y	N	Y	Y	Y	N	Y	8	66.60%
Sequence	Y	NA	NA	Y	NA	N	N	N	Y	N	Y	Y	N	N	N	5	41.60%
Description	Y	NA	NA	Y	NA	Y	N	N	N	Y	N	Y	N	N	N	5	41.60%
Total Student	4	0	0	3	0	4	0	3	4	1	4	5	3	1	2		
Student percentage	80%	0%	0%	60%	0%	80%	0%	60%	80%	20%	80%	100%	60%	20%	40%		

The measurement value is Y (YES): if the text is in accordance with the subtype and its characteristics. N (NO): if the text does not comply with the subtype. NA (Not Applicable): it does not apply because it did not present the activity.

The results show, perhaps, the lack of a better handling of multimedia tools and reading comprehension of hypermedia texts; in a certain way and not at all unfamiliar, it is difficult to adapt to an electronic text: the reader cannot scratch, write ideas in the margins, highlight, make asterisks, among others; contrary to the printed one. From this point of view, the results of the three instruments are encouraging to continue with a work of this type, although none of the three have exceeded 80% of the hits; in some way, the percentages are positive in terms of measuring the interaction of the situational model with hypermedia; in other words, the platform helps with the development of the model of understanding in the active construction of knowledge, through digital strategies and collaborative feedback activities; therefore, teamwork enhances information synthesis capabilities, so that it remains in the long-term memory.

Conclusions

To close, this article provides the academic field of teachers in training or active, 5 strategies for the immediate projection of teaching through Web 2.0. These basically answer the question raised at the beginning of this writing: How much do they integrate the previous knowledge with the new one for the development of the activities proposed in the platform? The following are listed to facilitate reading:

Teacher: mediator in virtual teaching

The teacher has a preponderant role in virtual teaching, since he or she is in charge of designing tools and working materials for the students. Without a teacher who controls the activities by means of mediation, it would be very difficult to conceive of virtual teaching: it is not ruled out that a student may consult and learn on the net by himself, but who is the one who uploads the information to the virtual platforms?

In the case of the course *Reading comprehension of academic texts* of the Moodle platform of the University of Quindio, the teacher in charge Miguel Angel Caro Lopera designed the units and contents, explained each activity, answered the doubts in the forum, gave feedback on each exercise and established a communicative contact with the students. Hence, the teacher is responsible for promoting teaching through reflection to awaken critical thinking, promote autonomy in learning and indicate reading routes.

It is important to point out that in the academic environment, virtual education opens the possibilities of being integral teachers in the classroom, who do not only stay with traditional didactic models; on the contrary, they look for the updating of pedagogical knowledge that allows the integration of other types of technological tools in the daily work.

As mentioned by Unigarro (2001) in *Educación virtual: encuentro formativo en el ciberespacio*, it is not only a matter of: "changing the printed book for the electronic one, the board for the internet or the chalk for the keyboard" [our translation] (p.12), but of searching for pedagogical and didactic methods so that students really learn educational contents within an integrating social context.

Student: active-constructive learner

In the current conception, the student has an active role in the construction of his own learning; it is he who elaborates cognitive and metacognitive processes according to his goals and work strategies. In the course of the platform, here analyzed, the students modeled their learning from the feedback of their own peers or teacher; for example, in the promotion of the forums as a stimulus to areas of close development:

Students' comments in the forum of units 1 and 3

Taking into account my concept of text, I believe that Francisco can complement his definition, because I think it is worth bearing in mind that any intention to communicate can be a text. J.G.D. [our translation] (Taken from Unit 1).

Good evening, fellow Leonardo Fabio. I would like to highlight the emphasis you place on the information that allows us to understand the functions and characteristics of the expository-explanatory text, as well as the concerns that revolve around the exercise of this in the academic environment. However, I think you have left out an important detail about the materialization of this textual typology, since you do not mention that it also occurs through various written genres. A.E.A. [our translation] (Taken from Unit 3).

Response to comments in Table 4

The students expressed doubts about the activities developed by their classmates, so that in that constructive process, those who were recommended something, corrected it in their exercises:

For the first comment the student sends the corrected text in which the observation follows.

For the second, I did miss it. Thanks for the observation.

As a link, between the previous strategy and this one there is a vital point of convergence for effective communication between the parties: dialogical encounter between teacher-student and student-student as proposed by the guidelines of the University of Quindio (2011). This dialogue is the channel for sharing knowledge and experiences that surround an asynchronous communicative act (communication without time being the same for those who are participating): present in the forums of questions, coffee, internal messages, activities, among others. The communicative act implies a capacity, on the part of the student or teacher, to understand the message and another to respond correctly to the intention of the message.

Similarly, within the dialogue, collaboration and cooperation are implicit for a teaching and learning process as a competence that articulates and classifies concepts or ideas that contribute to the performance of a group involved in the same activity. This leads to mention the constructivist perspective focused on the participation of peers in the construction of knowledge from which others have contributed.

Autonomy: self-regulation in learning

This leads to self-regulation, defined as: "An active process in which students establish the objectives that guide their learning, trying to monitor, regulate and control their cognition, motivation and behavior with the intention of achieving them" (Rosario et al, 2010: 68) referred to in *Self-regulated learning through the Moodle virtual platform.*

The 15 participants achieve an interesting detachment process, in terms of the risks of correcting one another in the process of assimilation and accommodation of the course. Likewise, risks are noted in the proposal of questions in the wiki. Thus, learn self-regulation not as an instantaneous achievement; on the contrary, it needs an evident training in the four weeks.

If there is an active channel of communication and interrelationship between the parties, the objective of education - achieving the autonomy of the student to learn - will reach the goal, since, according to Valenzuela Zambrano and Pérez (2013) self-regulation involves six activities: 1. Setting goals. 2. Self-monitoring. 3. Self-evaluation. 4. Implementing work strategies. 5. Having a planning time. 6. Look for help; aspects that empower students to build knowledge.

The presence of a teacher who promotes self-regulation based on active and constant processes is necessary for students to process the transformation from the passive to the active; although in the digital natives a degree of autonomy has been developed in the way they observe virtuality, this does not directly mean that this autonomy is based on constructive learning.

Connection: learning nodes

The connection is directly linked to learning nodes, networks that form a structure, which can also be understood as routes or channels; from these the student or user tries to interpret them to adapt to the unique academic content. Virtual education achieves its full development when some provide the information and others receive it and, between both, build the knowledge.

As it is well known, platforms, blogs, web pages, among others, are interactive content media designed by teachers and assimilated by students; the information contained is not linear, but countless Virtual Learning Objects (VLOs) are connected to each other. From this perspective, the virtual tools or applications become flexible environments of easy understanding for the reader or user who is guided by the routes.

These nodes connected with other virtual ones, connected with the knowledge of the reader, with the culture, the context, the school, the art, the printed books, managed to impact the teaching and learning processes of the 15 subjects. They connected the previous knowledge about the concept of text, exposition-explanation typology and formulation of questions, to join them to the activities proposed and indicated in the measurement instruments, in such a way that: "the capacity to synthesize and recognize connections and patterns is a valuable skill in the digital era" (Universidad del Quindío, 2011, p.14).

Articulation: virtuality of reading and writing

Writing, the predominant means of communication in interactive platforms or programs, and reading, which is fundamental for understanding, play a vital role in these processes, since "competencies are not built from nothing; they are built from something that already exists" (Unigarro, 2001:76), that is, from the pre-knowledge that comes from the culture, from the context and, even more, they allow them to be educated and trained. Therefore, within virtual education, reading and writing cannot be isolated; they are one; one depends on the other to establish virtual communication.

If the reader has self-regulation and autonomy in the selection of how and what to learn, in the same way he or she will have the criteria to select what reading to do, if it is coherent or of interest as Salmerón, Kintsch and Cañas (2006) point out in Reading strategies and prior knowledge in learning from hypertext. The first one has a reading order in thematic or coherent sequence and the second one varies according to the reader's interest.

Prospectives

To close the cycle, the contract between teacher and student mediated by virtual platforms allows the generation of individual objectives in compliance with the teaching-learning as the central axis of virtual education. Although some achieve self-regulation there will be others who just start the process; the issue starts from the teacher's own interest in training and designing interactive content, so that others achieve autonomy. The challenge is to understand the Siemens connectivity paradigm (2010): assimilate it and propose new strategies that promote the situational model.

To value the role of each one in the construction of society or educational community, community of thinkers and creators of virtual environments based on reality to promote the improvement of reading comprehension, academic dialogue, respect for ways of thinking, teamwork and collaboration.

Thus, teachers in training will be able to visualize the applicability of multimedia resources regularly in their chairs, so that the package of interactive modules strengthens the reading competence of expository-explanatory academic texts, those closest to the population of teachers and students within the field of virtual education, from the challenge of integrating the situational framework to the processes of reading and writing.

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