

Design of a Cybertask for Undergraduate Students: The Influence of Learning Styles on Task Completion

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Abstract. Learning styles play a significant role in language teaching and learning (Robertson & Nunn, 2013) in relation to task completion. During the past decade, numbers of studies have demonstrated the importance of learning styles in language learning (Pei-Shi, 2012); although little attention has been paid to the influence of learning styles on task completion (Girón-García, 2013). For the purpose of our present study, this work has been based upon the examination and description of a pedagogical activity (also called ‘Cybertask’) with a group of university students selected from the English Studies degree at ‘Universitat Jaume I’ (Spain). The results obtained lead us to suggest interesting concepts such as ‘Successful Task completion’, ‘Style-switching’, ‘Style-blending’, and ‘Learning trait’, which we may consider as relevant to teachers making learners more independent and more effective in their language learning process.

Keywords. Cybertask, learning styles, learning trait, successful task completion, style-switching, style-blending.

1. Introduction

Higher education in general, and undergraduate students in particular, face the challenge to deal with an environment in which both print and digital information meet. In this sense and due to technological advances, undergraduate students will probably need to learn how to manage different sources of information in the Internet through on-line tasks. Along this line, we cannot deny the potential of the Internet, since multimedia technology (i.e. images, videos, sound, etc.) makes of Internet the perfect vehicle of transmission for real language and culture. However, it is important to mention the growing relevance of cybergenres, which started to be a focus of attention with Shepherd and Watters (1998). The introduction of realia would become an important aspect to be taken into account, since realia are believed to be the most convenient kind of material to promote language learning due to their discursive and cultural context. Additionally, these aspects also afforded the opportunity to take into account learners’ strategies and their learning styles in order to make language learning more efficient and in order to produce a positive effect on learners’ language use (Wenden & Rubin, 1987; O’Malley & Chamot, 1990; Cohen, 1998).

The use of the Internet and the selection of materials for pedagogical purposes should be done from a critical pedagogical perspective in order to obtain effective results in the language learning classroom. For this reason, the materials used for on-line activities should be taken from real-life resources and not manipulated at all for pedagogical purposes. Along this line, the purpose of this paper is to show how students’ learning styles influence in their task completion considering students’ learning strategies and styles in each one of the activities proposed in an on-line task-based activity, also called ‘Cybertask’. I first examine students’ choice of learning strategies in each one of the activities proposed in the ‘Cybertask’. I then discuss the resources employed for the design of an on-line task-based activity that highlights the teaching of “new literacies”, empowerment in terms of learning to write, and metacognition and degree of autonomy. And finally, I show how the students’ choice of learning strategies and learning styles

affects in their successful task completion in the English Studies degree at 'Universitat Jaume I' (Spain).

2. Learning styles and students' choice of learning strategies in task completion

2.1. Introduction

Enormous changes have taken place in modern foreign language teaching and learning (Robertson & Nunn, 2013) over recent decades which have seen emphasis shifting towards learners and learning rather than on teachers and teaching. Following from this idea and as we have previously stated, further investigation has shown the significance of language learning strategies in order to make language learning more efficient and in order to produce a positive effect on learners' language use (Wenden & Rubin, 1987; O'Malley & Chamot, 1990; Cohen, 1998).

The attention given to learning strategies and learning styles arises from the need to show how successful learners have a whole range of available strategies to make language learning work for them and how they employ these strategies to process new information. Therefore, 'learning to learn' plays a very important role, since language strategies provide learners with what is necessary to make the most of their learning skills in order to manage their own learning. At this point, it is worth mentioning that 'learning how to learn' is also related to the term *adaptive learner*, a learner who is able to adapt his/her learning style according to the type of learning process and/or the type of task presented. But quite clearly, not all language learners use all learning strategies, since specific individual preferences may be understood in terms of individual learning styles (Reiss, 1981; Wesche, 1979).

2.2. Learning styles

Language learning styles and strategies are among the main factors that help determine how our students learn a second or foreign language. Students might use learning styles in the classroom setting in order to learn a subject or a foreign language. In this case, a student will show a specific type of behavior towards the language being learned, depending on his/her learning style. Furthermore, "*learning styles are the biologically and developmentally imposed set of characteristics that make the same teaching method wonderful for some and terrible for others*" (Dunn & Griggs, 1988: 3).

Following on from this idea we find pertinent highlighting the fact that an individual student may have different strategies belonging to different learning styles, if s/he faces different tasks or experiences (Villanueva & Navarro, 1997: 50). Thus, in this sense, there is no need to interpret neither learning styles nor cognitive styles as fixed behavioral schemes that predetermine students' behavior. In fact, learning styles are characterized by a set of learning strategies that correlate in a significant way; however this does not imply that the same learner cannot experience learning strategies belonging to different learning styles.

2.3. Students' choice of learning strategies

Both educators and language learners should be aware of the importance of learning strategies (Pei-Shi, 2012), since the adequate choice of some learning strategies facilitate the language learning process. The main idea is that learners should use those

learning strategies that (from their point of view) adapt better in their attempt to satisfy their learning needs depending on the type of task they face.

Among the many definitions found in the literature, we could probably mention that of researchers such as Scarcella and Oxford (1992), who define learning strategies as “*specific actions, behaviors, steps, or techniques – such as seeking out conversation partners, or giving oneself encouragement to tackle a difficult language task – used by students to enhance their own learning*” (1992: 63). When learners choose strategies that adapt to their learning style, these strategies become a set of tools that are necessary for language learning. Thus, there is general agreement that the use of learning strategies promotes learning, and that they constitute an important factor to be considered in the English as a Foreign Language (EFL) learning/teaching field.

Once strategies are identified, training and teaching to use good strategies should be carried out (Ellis & Sinclair, 1989; Poupore, 2008; Thurman, 2008). Thus, although learners have their own set of strategies, we deem it necessary to carry out some instruction on learning strategies. As a result of this instruction, learners are able to use a whole range of learning strategies and try to apply those ones that they consider that best adapt to their needs. But, we should bear in mind that learners will choose those strategies that fit better depending on the context, the task proposed, the learner’s age, etc. In fact, for the purpose of this work, depending on the task learners are faced with, they will choose a given learning strategy that best adapts for the purpose of that task. Bialystok, (1981) carried out some research on the relationship between types of task and learners’ language learning strategies choices. From that research, she found out that learners used different strategies according to the task requirement.

3. “The writing process”: A ‘Cybertask’ for the English Studies degree

3.1. Methodology

The design used for the purpose of the present study is a qualitative case study. The case studies in this work are based upon the examination and description of a pedagogical activity with 23 university students selected from the 1st and 4th year courses of the English Studies degree at ‘Universitat Jaume I’ (Spain) ; although due to their interesting learning profiles only 6 were taken into account. In the design, each student was assigned a computer in order to carry out the task. Although all the students gave their permission to use their data, an individual identification code was provided in order to safeguard their privacy. Furthermore, their learning style was taken into consideration (Styles Questionnaire).

The main instruments for our study have been (a) the ‘Cybertask: The Writing Process’, as the main instrument for research, and (b) a ‘Learning Styles Questionnaire’ (<http://www.giapel.uji.es/testestilos/Proyecto.html>). This test is conceived in such a way that the student is able to choose strategies that belong to different styles. These learning styles are grouped into eight different pairs: (1) Active vs. Thoughtful, (2) Inductive vs. Deductive, (3) Visual vs. Verbal, (4) Cooperative vs. Individualistic, (5) Synthetic vs. Analytic, (6) Dependent vs. Autonomous, (7) Emotional vs. Rational, and (8) Positive attitude towards ICT vs. Negative attitude towards ICT. In this questionnaire, students are given the opportunity to choose those statements in the ‘Learning Styles Questionnaire’ that characterise their personal learning profile. To determine students’ learning profile, the results obtained are shown in percentages that express procedural

tendencies and allow describing a learner's learning style with gradual and contextual criteria (Villanueva & Navarro, 1997). This questionnaire is designed so that within a multiple-choice set, a few questions indicate a variable and other questions the opposite variable. Finally, once the students have completed the test, the data are sent to a database management system.

We deem it necessary to mention that due to the relevance of the Cybertask proposed and Cybertasks as a proposal for the teaching-learning field, there is a need to focus on the following variables (see Table 1), which may have two variants:

Variable 1: Active / Thoughtful. Using the language actively *vs.* Thinking about the language first and then speak.

Variable 2: Synthetic / Analytic. Using several texts at the same time in order to get information *vs.* Analytical learners are also called sequential learners, because they like to take one piece of information at a time.

Variable 3: Inductive / Deductive. Guessing the rules of the language *vs.* Having the language rule beforehand and apply it later.

Variable 4: Autonomous / Dependent. Working on our own *vs.* Depending on other people to take responsibility for our work.

Variable 5: Positive attitude towards ICTs / Negative attitude towards ICTs.

3.2. The cybertask model

For the present study, we have decided to take into account an on-line activity, adapt it to the university context and we have called the result 'Cybertask'. Furthermore, in our own specific context, this design (a) promotes new literacy skills, and (b) makes the most out of such an activity for the development of language learning autonomy in ICT contexts. Apart from these, this Cybertask model includes other aims: on the one hand, the main learning aims of this Cybertask are the following:

- 1) Carry out an Internet search in order to gather information concerning the writing process.
- 2) Acquire new knowledge using some Internet links provided by the teacher.
- 3) Focus on meaning rather than on form or content, writing thus meaningful answers according to the students' objectives and depending on the activities proposed in the Cybertask.
- 4) Metalanguage: Think about our own language learning in order to learn how to guide it on our own.

On the other hand, the students' aims of this Cybertask are to complete a final task (activity 6), where they have to organize information in a graphic organizer in order to write an essay.

The Cybertask "The Writing Process" contains a total of six activities, as we illustrate in the digital version presented to the students in Figure 1 (Cybertask activities) below:

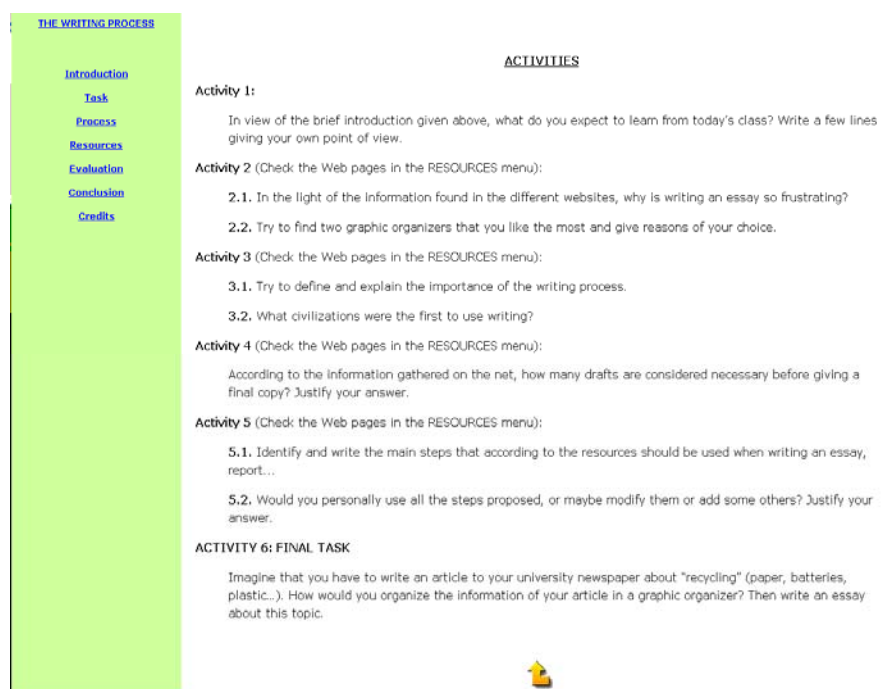


Figure 1. Cybertask activities.

Along this line, we will discuss the skills that have been involved in each of the activities of the Cybertask. These skills will help us justify the students' grade in each of the activities, and regarding the purpose of our present study, the results obtained in each of the activities will determine to what extent Learning Styles affect successful task completion. Along this line, we illustrate below the skills involved in each of the activities of the Cybertask (Girón-García, 2013: 214-222).

Activity 1: In view of the brief introduction given above, what do you expect to learn from today's class? Write a few lines giving your own point of view (5 points)

- Metalinguage refers to the use of language to make statements, thus, 'metalinguistic competence' looks at explaining how to transmit linguistic knowledge in order to learn how to learn.

- Previous knowledge is necessary to adjust the present knowledge to create/build new knowledge, that is, being able to relate new information to what we already know (background information).

Activity 2:

Activity 2.1. In the light of the information found in the different websites, why is writing an essay so frustrating? (5 points)

Cognitive strategies: how students apply certain cognitive strategies when they have to search information on the net.

Activity 2.2. Try to find two graphic organizers that you like the most and give reason of your choice (5 points)

- Learning awareness (cognitive and metacognitive awareness): Students are supposed to choose two graphic organizers, relating those graphics of their choice to their own way of schematizing the information. Accordingly, they have to imagine how they would use those graphics for a future writing.

- Autonomous, analytic and thoughtful learning abilities: With this activity, 'autonomous' learners are able to make decisions and justify them; analysis and thoughtful strategies are expected to be manifested because students with these profiles are supposed to obtain better results. Accordingly, analytic students choose details in

the information they find on the Web, and thoughtful students think and plan about the details of the information.

Activity 3:

Activity 3.1. Try to define and explain the importance of the writing process (5 points)

- Metalinguistic competence aims at ‘know how’ to use specific language concepts and expressions (in English).
- Synthetic capacity through ‘skimming’ and ‘scanning’ techniques. By ‘*skimming*’ we understand the ability to identify a topic or a piece of text and determine and remember central ideas or key words from general information. On the other hand, we refer to ‘*scanning*’ as a selective comprehension; in other words, look quickly over the information on the Web looking for specific words or expressions.

Activity 3.2. What civilizations were the first to use writing? (5 points)

- Synthetic capacity (‘scanning’): Students have to look for concrete information in order to answer this activity. This capacity would be related to analytic students, since this type of students prefer considering specific details.
- The thoughtful component is important to answer this activity because it determines the students’ capacity to find out in the Web pages proposed what information is necessary for them.

Activity 4: According to the information gathered on the net, how many drafts are considered necessary before giving a final copy? Justify your answer (5 points)

- The autonomous capacity would be related to a profile of student capable of making critical decisions (decision-making of their own learning).
- Thoughtful capacity: The student has to know how to justify his/her choice (amount of drafts that are considered necessary) to answer the activity.
- Synthetic capacity (‘scanning’): Students are expected to look for concrete information to answer this activity.

Activity 5:

Activity 5.1. Identify and write the main steps that according to the resources should be used when writing an essay, report... (5 points)

This activity requires developing the same strategies as in the previous activity, except for autonomous and thoughtful strategies.

Activity 5.2. Would you personally use all the steps proposed, or maybe modify them or add some others? Justify your answer (5 points)

- Active or Thoughtful attitude: The active attitude is related to the pragmatic approach of a specific writing task when students have to make decisions about the steps involved in the writing process. Nevertheless, the *thoughtful* component is important to determine if students add or modify some steps and why.
- Autonomous capacity: Students develop decision-making of their own learning because they have to give a critical opinion of their choice.
- Metalinguistic competence: Students have to be able to manage the specific terminology employed when they have to talk about the steps involved in the writing process.

Activity 6: Final Task (20 points). Imagine that you have to write an article for your university newspaper about “recycling” (paper, batteries, plastic...). How would you organize the information of your article in a graphic organizer? Then write an essay about this topic.

This activity does not demand reading comprehension skills; instead it involves writing an essay (writing production). This activity focuses on two features: schematizing and writing.

Graphic Organizer (5 points):

- Analytic profile: Students have to make plans and organizational schemas with the aim of using them in the essay task.
- Thoughtful attitude: This profile is necessary to complete a graphic organizer because students have to think about how to organize the information about “recycling” that they are going to use later to write their essay.
- Coherence between the Graphic Organizer and the Essay: There should be coherence between the information that students write in the graphic organizer they have chosen and the essay they have to write in the second part of this activity.

Essay (15 points):

- General text coherence and cohesion (5 points): *Coherence* is adequacy of the text and semantic consistency. On the other hand, to what *cohesion* is concerned, we can talk about textual organizers to cohere a text (between lines, sentences and paragraphs).
- Semantic-pragmatic coherence (5 points): Students have to write an essay about “recycling” bearing in mind the adequate vocabulary around this topic, correct grammar, spelling, and the genre used (“newspaper article”) for the purpose of this activity.
- New knowledge (5 points): Students are expected to create new information about “recycling”.

After the completion of this Cybertask, students think about their own knowledge. Furthermore, they are asked to complete a Self-Assessment Questionnaire where they can make comments on the Cybertask’s process and result.

3.3. Web resources

In the Cybertask proposed, we offer different link resources where we can distinguish different types of genres. The main reason for the selection of the following resources lies in the fact that they all have one feature in common, ‘authenticity’. Real-life materials are pivotal in students’ academic education at the university because the way they learn in the classroom will be reflected in their professional careers. Following, we offer a brief description of each of these Internet resources:

1- *Ten steps to write an essay (The American University in Cairo):*
<http://www1.aucegypt.edu/academic/writers/>

This Web page belongs to ‘The American University in Cairo’ (Egypt). The site offers information about the 10 steps students need to know to write an essay. Some of the steps offered in this page are: (1) Research, (2) Analysis, (3) Brainstorming, (4) Thesis, and (5) Outline... If students click on each one of these steps, they will have access to more developed information about the steps. This information will be useful to students in order answer Activity 5: Activity 5.1. “Identify and write the main steps that according to the resources should be used when writing an essay, report...” and Activity 5.2. “Would you personally use all the steps proposed, or maybe modify them or add some others? Justify your answer” (Cybertask). Furthermore, students can find the answer to Activity 2.1. “In the light of the information found in the different websites, why is writing an essay so frustrating?” (Cybertask).

2- *Ideas for teaching the writing process (Kimberly Steele):*
<http://www.kimskorner4teachertalk.com/writing/writingprocess/menu.html>

This Web page is a school site for teachers that offers ideas for teaching the writing process. Considering that it is a school site, the information it contains is presented

clearer and more concise. Although there are many models and criteria for writing, in this page there are only 5 steps included: (1) Prewriting, (2) Writing, (3) Revising, (4) Editing and Proofreading, and (5) Publishing. The reason why this page contains only 5 steps may be due to the features of this site: 'school site'.

To conclude, students carrying out the Cybertask will use this page in order to answer Activity 5 (Cybertask).

3- *The Purdue Online Writing Lab (OWL)*. (Purdue University, West Lafayette, Indiana): <http://owl.english.purdue.edu/>

This Web page belongs to 'Purdue University' (Lafayette, Indiana, USA) and it is the most complex page regarding the ten resources that we offered to students. Due to the complexity of this site, there is a "site map" that provides the different types of resources (with headings and subheadings) in order to find in an easier way the information students need. Although it is the most complex Web page proposed to complete the Cybertask, it is probably the most complete, and as far as students are concerned, the most useful resource not only for the Cybertask's objective, but also for their academic and professional careers.

Among the several information students can find we highlight the following: 'One-on-One Tutorials', 'Writing Workshops', 'Instructor Consultation', 'Email a Tutor'...

Finally, students may use the information gathered in this page to answer Activity 5 (Cybertask).

4- *The writing process* (Rutgers University, Camden, NJ): <http://wire.rutgers.edu/process.html>

The present Web page belongs to 'Rutgers University' (New Jersey, USA). Although the main page is that from the university, in this case, we did not want students to get lost in the information it offered, thus, we provided them the exact link to access the information that we were interested in having them identify. Therefore, the link is that of the 'Department on English' and it provides information about the writing process. Again, the different steps for the writing process are present: (1) Prewriting, (2) Planning, (3) Drafting, (4) Revising, and (5) Quick Check. By clicking on each of these steps, students have access to detailed description of each step, as well as examples and guidelines that help them in their writings.

For the purpose of the Cybertask, students find this resource useful to answer Activity 5 (Cybertask).

5- *The writing process (Univision Forum)*: <http://foro.univision.com/t5/Idioma-Inglés/The-Writing-Process/m-p/212040564>

Univision is a forum in Spanish, whose main aim is to comment on the process of writing in English language. People participating in this forum use both Spanish and English to communicate, thus, it is a resource of a great help especially for those people whose English level is not very good (probably with levels A1-A2).

As in every forum, students have the opportunity to express their opinions and feelings about the writing process, as well as enrich themselves from other people's comments.

6- *Writing (Annette Lamb and Larry Johnson)*: <http://42explore.com/writing.htm>

The 42explore 'Thematic Pathfinders for All Ages' is a Web page created by Annette Lamb and Larry Johnson (university teachers now teaching online courses at 'Indiana University-Indianapolis', USA). More specifically, the main Web page is www.42explore.com, which offers 'General Themes', 'Social Studies', and 'Science'... But if we click on 'Topic Index' (on top of the page) we have access to different topics. In this case we chose that of 'writing'. In this site students can find the answer to Activity 3.1. "Try to define and explain the importance of the writing process".

In addition, this site provides more Web pages about writing, but they are far more specific like 'fiction writing', 'parts of an essay', 'how to write an essay', 'kinds of essays', and so forth.

7- *The writing process (ORACLE ThinkQuest, Education Foundation):*
http://library.thinkquest.org/J001156/writing_process/writingprocess.htm

The Oracle Education Foundation is an organization that develops 'ThinkQuest', an online learning platform that helps students develop skills for the 21st Century like communication, critical thinking, and technology skills. With this resource, students solve real-life problems. Moreover, this organization gives access to its library: http://library.thinkquest.org/J001156/writing_process/writingprocess.htm. In this library, students are again provided with the steps they need to take in order to complete a quality piece of writing. In this case, the steps offered are the following: (1) Brainstorming, (2) Story Starters, (3) Graphic Organizers, (4) First Draft, (5) Revising, (6) Editing, and (7) Final Copy. By clicking on each step, students have access to detailed information on every step. Furthermore, if students click on 'Brainstorming' and then on 'Writing', they will be able to read about the different areas related to 'writing'. At this state, by clicking on 'History of Writing', students will find the answer to Activity 3.2. "What civilizations were the first to use writing?"

Returning to the main menu and clicking on the third step of writing 'Graphic Organizers', students will be provided with a wide range of graphics (cluster diagrams, charts, story maps, cause and effect diagrams, outlines...) that students will choose for the answer of Activity 2.2. "Try to find two graphic organizers that you like the most and give reasons of your choice" and Activity 6 "Imagine that you have to write an article to your university newspaper about "recycling" (paper, batteries, plastic...). How would you organize the information of your article in a graphic organizer? Then write an essay about this topic".

Finally, by clicking on the fourth step 'First Draft', students will not only read about what a first draft is, but also will find the answer to Activity 4 "According to the information gathered on the net, how many drafts are considered necessary before giving a final copy? Justify your answer".

8- *Writing (Lee's Summit R7 School District):*
<http://its.leesummit.k12.mo.us/writing.htm>

Lee's Summit is an organization that offers information and help on any domain, providing products and/or services. Lee's Summit is owned and operated by 'Hometown Solutions, LLC', a privately held company located in Lee's Summit (Missouri, USA).

Regarding the Cybertask's objectives, as researchers, we have given students the direct access to 'writing' in the link <http://its.leesummit.k12.mo.us/writing.htm> in order to go directly to the information under request. In this page, students find information about rubrics to assess writing, 10 steps to write a research paper, paragraph organizer (getting started, about paragraphs, how to write a paragraph, tips and techniques), writing ideas... Furthermore, a wide range of graphic organizers is provided, which are very useful to answer Activity 2.2. and Activity 6.

9- *Young authors' workshop. Resource Pages. (Barbara Larochelle, University of Alberta, Canada):* <http://www.planet.eon.net/~bplaroach/index.html>

This page was prepared by Barbara Larochelle as the final project for the course ED PSY 597 at the 'University of Alberta' (research public university in Canada). More pages are included inside the main page 'Young Authors' Workshop', and for questions, comments or suggestions about those pages, people can e-mail to Barbara Larochelle.

The page offers a table at the bottom with the links for that step of the writing process: (1) Ideas, (2) Writing, (3) Revising, (4) Editing, (5) Publishing, and (6) Teacher resources. By clicking on each step, students find a brief description of that step, as well more links to identify more ideas related to the step in question.

Apparently, this Web page is quite simple and it is easy to identify the information that students need to answer Activity 5 (Cybertask).

10- *The writing site* (Corporation for Educational Technology, Indiana Department of Education): <http://thewritingsite.org/>

This last resource is a blog called ‘The Writing Site’. It offers information on several categories like ‘Blog Writing’, ‘Book Writing’, ‘Business Writing’, ‘Essay Writing’, ‘Online Writing’, and ‘Writing Style’... By clicking on each of these categories, students find information that can use for Activity 6. For example, if students click on ‘Writing Style’, they can be provided with tenses in English grammar, some particularities of the English language like ‘Enquire vs. Inquire’, and so on.

Finally, all this information is useful for students in order to write the essay in the final task of the Cybertask (Activity 6).

All these links offered in the Cybertask are great resources for students, since they might contribute in their choice of some links depending on the students’ own objectives and preferences for the Cybertask completion. Furthermore, students should have their own criteria and creativity in their learning environment, and more specifically for the Cybertask completion. This feature is of paramount importance since learners create a personalised learning context depending on their learning style.

3.4. Learning styles results and discussion

In Table 1 (Learning Styles Results), we illustrate the different variables (see section 3.1) presented. Each variable describes each one of the pairs (composed of opposing values) of gradual tendencies that characterise the styles. These gradual tendencies do not exclude each other in each pair. In addition, the table reflects the number of students (6 case studies), which have obtained a high percentage in each of the values.

VARIABLES	VARIANTS (Learning Styles)	NUMBER OF STUDENTS	STUDENTS	RESULTS (Percentages)
V1	Active	5 students	al205270 al227924 al118216 al121323 al118191	100% 75% 75% 50% 75%
	Thoughtful	1 student	al074451	66.67%
V2	Synthetic	6 students	al205270 al227924 al118216 al121323 al074451 al118191	100% 66.67% 33.33% 66.67% 66.67% 100%
	Analytic	0 students		
V3	Inductive	5 students	al205270 al227924 al121323 al074451 al118191	100% 50% 25% 100% 50%
	Deductive	1 student	al118216	25%
V4	Dependent	3 students	al205270 al227924 al074451	66.67% 66.67% 100%
	Autonomous	3 students	al118216 al121323 al118191	100% 100% 66.67%
V5	(+) ICT	6 students	al205270 al227924 al118216 al121323 al074451 al118191	100% 100% 100% 33.33% 100% 100%
	(-) ICT	0 students		

Table 1. Learning Styles Results.

Regarding the results shown, (*RQ*) *To what extent do learning styles affect successful task completion?*

The analysis of the data may lead us to redefine the concept ‘Successful Task Completion’, since the conception of this term could present a certain degree of ambiguity if we take into consideration the variability of assessment criteria. Therefore, we need to define this term from both the Researcher and the Teacher’s point of view. Thus, for the Researcher, ‘Successful Task Completion’ is

(1) Students’ ability to deal with learning processes by means of managing different sources of information and selecting information,

(2) Students’ ability to synthesise and take decisions about the use of that information and their ability to build new knowledge in the process of answering the different activities,

(3) Students’ ability to reflect through a coherent discourse, which implies bearing in mind the process and not only the result of the task.

(4) Students’ use of cognitive strategies that are related to each one of the activities and the strategies that we expected to be applied or used.

(5) Students’ ability for discussion.

In view of the Teacher’s Assessment in our study we observed that the criteria followed by this Teacher were the following:

(1) The correlation between the students’ answer content and the expected content of the correct answers.

(2) The correct use of language with regards to grammar and lexicon.

In spite of the diverse perspectives some aspects are shared by these two points of view. Thus, for both the Researcher and the Teacher, ‘Successful Task Completion’ encompasses the following aspects:

(1) Students’ writing skills both in the activities and essay proposed (activity 6 in the Cybertask),

(2) Students’ ability to understand texts and answer the activities proposed.

These two points of view (Researcher’s and Teacher’s) do not contradict each other, but they are complementary, and allow us draw more precise conclusions.

In order to find relationships between learning styles and ‘Successful Task Completion’, we will translate into qualitative terms the result of the Teacher’s Assessment, adopting the following point scale and taking as a reference the maximum of 60 points in the Cybertask: (a) ‘Successful’ (40-60 points), (b) ‘Medium’ (20-40 points), and ‘Failure’ (0-20 points).

If we apply this scale to our case studies, we get that students *al121323* (42/60), *al205270* (40/60), *al118216* (41/60) and *al118191* (44/60) achieved a successful result in Cybertask completion. On the other hand, students *al074451* (38/60), and *al227924* (31/60), achieved a medium result in the Cybertask.

The aim of the present work has been to examine the extent to which learning styles affect successful task completion. The results concerning students’ learning styles in relation to their success in task completion revealed that we do not have to interpret learning styles as fixed behavioural schemes that predetermine their behaviour. In other words, a single subject may manifest some learning traits belonging, theoretically, to different learning styles. Our Cybertask has shown that students with different learning profiles may complete a Cybertask successfully following different paths. The literature on the topic (see section 2.2) assumes that we should not attach a particular learning style label to each student, since learning styles are characterised according to the more or less frequent use of a set of cognitive and pragmatic strategies related to different aspects of learning. In fact, and according to our research, it is the blending of some

learning style traits (active and synthetic; thoughtful, synthetic, and inductive; active and analytic; inductive, motivated, and dependent) that explains the personal approach to learning and depending on the demands of a particular activity.

4. Final conclusions

The intention of this research is to study the possible relationship between the learning styles of university students and how those styles affect in their task completion.

We can draw some conclusions related to the relationship between learning styles and task completion:

Some activities demanded ‘*style-switching*’. Given the fact that specific tasks require style-switching, we found out that students did not try to switch their learning styles into those ones that some of the tasks proposed demanded (see Section 3.1).

After our study, we are aware that we could establish a distinction between ‘*learning trait*’ and ‘*learning style*’, which may apparently refer to the same idea but are in fact different. We refer to a learning trait when for example; a student has traits in the active or thoughtful learning style. For this reason, we cannot talk about learning style in absolute terms, but we should instead talk in terms of learning style traits, which in combination with other traits may constitute complex learning profiles or ‘*style-blending*’. In other words, this combination of strategies is what we call blended learning profile, which has an influence on how students solve a given task. Style-blending can be defined as a combination, mixture or synthesis of strategies that characterize a particular student learning profile.

Finally, we have verified that the Teacher’s Assessment is a traditional teaching model that focuses on the result; on the other hand, as researchers, we have paid attention to the task realization process when this procedure demands certain strategies (induction, synthesis, risk-tasking...) from the meaningful knowledge and meaningful action points of view. Thus, we can propose that there exists a result’s assessment and a process’ assessment, which do not share a unique point of view but they are complementary. Therefore, regarding assessment, we should point out that the evaluation in each of the activities of the Cybertask consists of: (a) task process and (b) task result. The Researcher plays a crucial role in the task process, as s/he has to reflect on how to evaluate this procedure. On the other hand, the Teacher also plays an important role since it is his/her responsibility to grade the students’ results, although the lack of a qualitative analysis of student’s strategies and discourse might lead to a partial assessment.

5. References

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