Strategic Language Learning: Doctoral NNS Students Write in an L2 with ICT Tools

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Abstract
Strategic learning has been studied extensively in first and second language (L1, L2) acquisition and it is an issue that concerns methodology, didactics and pedagogy in general. This session deals with the theories behind strategic language learning and examples on the strategic use of ICT by non native speakers (NNS) of English in a class of doctoral students who developed academic writing.
Knowledge develops at the same time as the human being does. Similarly, a learner develops as he makes progress in education. In this scenario learners require to become aware of the strategies to succeed. Strategies may act and develop simultaneously and fluently among the participants in a community: teachers, students, and social contexts. When considering instructional design, strategies do not constitute isolated instances; they constitute a didactic choice. When considering the capacity to codify the experience of the world through language, strategies constitute cognitive and socio-cultural knowledge. My proposed theory of strategic learning is inspired by the following fields:
1) Information Processing Theory as a foundation to understand language and thought processes,
2) The dimensions of literacy (linguistic, cognitive, socio-cultural and developmental),
3) Communicative Competence; and 4) Strategic knowledge. The theories may help teachers decide how to investigate language acquisition and understand what they could do and enrich their practices. See, for instance: Oxford (2013) who offers models for conducting research on strategies.

The presentation will be illustrated with the syllabus of a course for interpreting and elaborating scientific texts in an L2 in which tools like Wordle™, Text-to-speech, reference generators, templates, and Ted.com among others allowed Spanish speaking doctoral students, with an A2-B1 level, to prepare papers and presentations in English to disseminate their research.

Introduction
ICT provide a toolbox for many scholars to facilitate their work and for disseminating it in the form of publications. The education of doctoral students in Colombia requires them to demonstrate an upper intermediate level of proficiency (B2 in the CEFR). This serves the purpose of consulting scientific literature and of enabling them to circulate their research in broader communities. The graduate school in which this author work offers a course in learning the L2 strategically (Castillo, 2014) in which ICT tools aid them become efficient readers and writers. It has been observed that the content, procedures and tools covered in this course for NNS of English transfer to reading and writing in L1 such as the rhetorical organization of academic genres and subgenres, on-line reference generators and others.

This paper touches upon issues in L2 acquisition, pedagogy and ICT. It opens with a brief theoretical framework; it presents the syllabus used in the pedagogical innovation and it closes with a discussion of some samples of the doctoral students’ work that illustrate the use of strategic language learning and of ICT.

Theoretical framework
The study of Strategic Language Learning is motivated by 1) Information Processing Theory 2) The dimensions of literacy, 3) Communicative Competence; and 4) Strategic knowledge. Information processing theory tells us that strategy use allows us to move bits of data from short term memory to long term memory, and once the data is stored it can be put to use to carry out a task. It also distinguishes between declarative knowledge, procedural knowledge and strategic knowledge (Castillo, 2014, Ch.2).

In the dimensions of literacy (Kucer, 2005) goes beyond information processing theory arguing that language acts as a schema or script that allows humans to select the available information to understand a text. Recognizing the need to deal with the grammatical and lexical aspects of discourse Kucer explains how “various text types, genres, and text structures [that] make up another system of language which works as a larger context that can function as internal and external
motivations for the construction of meaning" (Zhang, 2005). Literacy as situated cultural practice constitutes a contribution to understand it as a construction by a group and for a group to serve individual and societal needs. Kucer's developmental dimension enlightens how people learn through language and grow as individuals through language as well. The views on learning, on language and on language learning serve as foundations of the course syllabus.

Communicative competence theory also nourishes this proposal. The capacity to understand and use academic language to communicate aspects of their field contributes to the doctoral students' meaningful learning of the L2. The table below illustrates how each communicative area contributes to communicative competence.

<table>
<thead>
<tr>
<th>Linguistic</th>
<th>Strategic</th>
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<tbody>
<tr>
<td>Understanding and using:</td>
<td>Using techniques to:</td>
</tr>
<tr>
<td>- vocabulary</td>
<td>- overcome language gaps</td>
</tr>
<tr>
<td>- language conventions (grammar, punctuation and spelling)</td>
<td>- plan and assess the effectiveness of communication</td>
</tr>
<tr>
<td>- syntax (e.g., sentence structure)</td>
<td>- achieve conversational fluency</td>
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<table>
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<tr>
<th>Communicative Competence</th>
<th>Discourse</th>
</tr>
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<tr>
<td>The ability to understand and use language effectively to communicate in authentic social and school environments</td>
<td></td>
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<table>
<thead>
<tr>
<th>Socio-linguistic</th>
<th>Strategic</th>
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<tr>
<td>Having awareness of:</td>
<td>Understanding how ideas are connected through:</td>
</tr>
<tr>
<td>- socioculture of language (e.g., formality, politeness, directness)</td>
<td>- patterns of organization</td>
</tr>
<tr>
<td>- nonverbal behaviours</td>
<td>- discourse and transitional devices</td>
</tr>
<tr>
<td>- cultural references (e.g., idioms, expressions, background knowledge)</td>
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Table 1. Contribution of each communicative area to communicative competence
From website: Supporting English Language learners

These areas were taken into account in the course to support the interpretation of academic texts and support the expression of their research interests and attempts to provide an understanding of the language subordinated to an understanding of the situation. The students were taught to communicate in their immediate academic environment to prepare them for other environments in which they need to act in the L2. The strategic area was enhanced with the use of use ICT to cope with the problems of low language proficiency.

Strategic knowledge theory contributes to understanding how humans learn. This theory stresses the use of diverse mechanisms to process information. It argues that individuals learn to switch gears for solving a problem using knowledge, experience, tools and for deciding when to best work alone or with others. In other words: “Being able to apply what is known to problem-solving situations reveals strategic competence,” see Castillo (2014 p. 29). For example, Wordle™ is used to get the gist of journal articles. It was also used as an editor to spot overuse of expressions. The wordle below comes from a NNS' paper on argumentation for chemistry teaching.

The theories briefly outlined above help make decisions on how to scaffold, sequence tasks, introduce aspects of language for building up the self-reliance of these learners that can be summed up in Fred Couples well know quote: “When you're prepared, you're more confident. When you have a strategy, you're more comfortable.”
The pedagogical innovation with iCT

For introducing Strategic Language Learning the use of detailed rubrics are important. For example, for Reviewing five research reports, the rubrics below help communicating with the audience, evaluating the concepts, and taking a stand vis-à-vis the topic.

Rubrics/ assessment criteria.  
Yes=1; Needs improvement: 0.5. No= 0.  
Scale 1/10 each

| Report published in or after 2009 in a refereed journal |  |
| Identification of title, author, publisher, database, Doi or link. |  |
| Introduction to orient the reader |  |
| Brief summary of the report. |  |
| Highlight (in yellow background) the population |  |
| Research method included |  |
| Results discussed |  |
| Connection to your research interest made |  |
| Language use (grammar, spelling, punctuation) |  |
| Critical stance taken: Dialog with authors and among authors |  |

Total Grade

In addition to rubrics, digital resources and tools are used: reference generators, templates, collocation dictionaries, Text-to-Speech and Ted.com, for instance. The content and the strategic knowledge gained allowed them to prepare papers and in English, and In this testimony:

Dear Rigoberto,  
Today I received the PDF version of my article “Are science teachers prepared to promote argumentation? A case study with pre-service teachers in Bogotá city” published on the journal Asia-Pacific Forum on Science Learning and Teaching, edited in Hong Kong. I wish to thank your support. Rigoberto without you, I could not have completed this paper. You encouraged and challenged me throughout my academic writing. You will find on page 16 special Acknowledgements.  
Best regards,

As for the study of the language, the mistakes made were displayed for ‘noticing’. See Appendix 2. The language was tuned to the needs detected.

The procedures, resources, and tools described hope to demonstrate that a working knowledge of the English language may open the doors to consulting literature and to write in English allowing doctoral NNS to participate in a broader academic community. ICT help solve the foreign language needs of future scholars. This experience is being replicated in the undergraduate TEFL teacher preparation program of the same university. Being a class of over 30 students, Moodle is being used to manage the course, to encourage peer editing and peer feedback.

References

Appendix 1: Course Syllabus

<table>
<thead>
<tr>
<th>SYLLABUS</th>
<th>PROFESOR DE LA UNIVERSIDAD: Rigoberto Castillo, Ph.D</th>
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<tbody>
<tr>
<td>Interpreting and writing scientific texts in English in the digital age. 2013 – III</td>
<td>GUEST LECTURER: Nicole Chartier</td>
</tr>
<tr>
<td>INSTITUCIÓN (Fulbright):</td>
<td>Number of credits: 2</td>
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**SUMMARY**
This course follows a strategic and developmental approach to L2 learning. (R. Castillo, 2014). The use of ICT tools that speed reading, writing and translating are emphasized. The course does not have a pre-requisite of English Language proficiency for it is geared towards strategy acquisition.

**DESCRIPTION**
There is no doubt of the prominent role of the English language in the scientific and academic world. By the same token ICTs have transformed the way we teach, we learn and interact with the scientific communities around the world. The course follows these premises: 1) reading and writing are developmental. As learners follow higher order processes they become more competent in problem solving and so would the quality of their products increase. 2) Expert readers and writers regularly use strategies, procedures, and processes that go through the stages of: generating ideas, organizing ideas, editing ideas, and revising ideas and procedures in search for cohesion and coherence.

**RATIONALE**
For covering literature in your field of study and research doctoral students require to integrate to their regular work consulting in other languages and familiarize themselves with procedures and ICT tools that will allow you quality contact with other scientific communities.

**GENERAL OBJECTIVES**
- Apply cognitive, metacognitive, and socio-affective strategies to cope with reading and writing in English.
- Apply critically ICT tools to develop their works of readers and writers of research.

**SPECIFIC OBJECTIVES**
- Identify and apply strategies of : a) decoding, b) cognition based both on the texts as on the context of use. c) cognitions such as planning and monitoring; and d) socio-affective such as self-confidence and a positive attitude.
- Use of scientific databases, and of resources such as writing resource centers, specialized websites, and tools that can be used for writing and for presenting.

**CONTENTS**
- Familiarization with the nature, organization of a range of genres of academic texts: abstracts, critical reviews, essays, research reports.
- Use ICT tools such as Wordle, Pecha Kucha, text-to-speech, reference generators y writing assistants on line, specialized website. and resources likeTed.com.

**METHODOLOGY:**
The course combines classroom and computer lab sessions. Academic readings and lectures will be used to illustrate the use of the English language. Strategic learning will be used for solving problem of interpretation and problems of composition of academic texts. The use of ICT shall support the production of original quality texts that will allow learners to interact with international scholars.

**Bibliography.**

Appendix 2. Sample of language study. Corpus from NNS writing.

PRACTICE ON GRAMMAR: NOTICING. Sept 2014

The sentences below were taken from your assignments. Circle the letter that indicates an error, and correct it.

1. The teacher bases the syllabus in the learners’ needs, taking into account the goals set.  
   A             B             C

2. So for that I want to link my point of view to the author’s one.  
   A             B             C

3. Creation in writing becomes significant at the moment of basing meaning on images.  
   A             B             C             D

4. With the information gives by Walker, I decided to search for the last report of tendencies about this issue around the world.  
   A             B             C

5. Many times we have said to our parents that we were sick to did not go to the school.  
   A             B             C

6. If Zimbardo’s thesis would have been consistent if he had taken more factors into ...  
   A             B             C