# Designing L2 Reading Lab Courseware at the Intermediate Level 

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#### Abstract

Despite increasing attention on literacy-based approaches to foreign language instruction (e.g. Allen \& Dupuy, 2013; Barrette, Paesani, \& Vinall, 2010; Byrnes, 2005; Kern, 2004; Magnan, Murphy, \& Sahakyan, 2014) the communicative approach's emphasis on oral proficiency continues to shadow reading practices. Although research findings commonly report that extensive reading (pleasure reading) promotes L2 development (Al-Homoud \& Schmitt 2009; Day, 2015; Mason \& Krashen, 1997), instructors have reported that they do not include these reading practices in the curriculum due to budgetary constraints on reading resources, lack of instructional time, and concern over the complex coordination of reading resources (Macalister, 2010). The purpose of this paper is to respond to instructor concerns by demonstrating the creation of a free courseware model-informed by research findings on extensive reading and intensive reading-for developing third-semester Spanish students' L2 reading skills and proficiency. This study reports on the process of designing a free courseware model (using Hot Potatoes) by: (1) estimating the amount of reading that students could complete in one semester within the time span of a three-credit course, 2) estimating the average length of the reading passages in the modules, and 3) estimating the number of reading-comprehension activity items associated with each passage. This process for infusing intentional L2 reading into the curriculum can be implemented across languages and instructional levels.


Key words: Digital literacy, L2 reading, extensive reading, intensive reading.

## Background

Underdeveloped reading fluency and vocabulary are two of the reasons why students experience so much difficulty when they reach upper-division L2 courses, whose content and structure are articulated around literacy-based tasks (Barrette, Paesani, \& Vinall, 2010; Kern 2004; Magnan, Murphy, \& Sahakyan, 2014). By the time students begin to take upper-division content courses, they often have not had enough exposure to reading in order to automate the processing of vocabulary or to be able to read groups of words at once, which is a crucial process that facilitates reading comprehension (Hosenfeld, 1977). In a case study, Godev (2011) provides evidence that instructors may overestimate the vocabulary size of learners of Spanish enrolled in third-year courses of advanced conversation and composition. It is likely that overestimation, not only of learners' vocabulary size but also of other aspects of reading proficiency (e.g., ability to process morphological and syntactical elements, and general reading speed), may be affecting curricular decisions in upper-division
content courses to the detriment of learners. Instructors' overestimations of students' reading proficiency is also discussed by Vanderplank (2008), who points out the gap between the level of difficulty of what students are asked to read and their actual language proficiency.

In my personal experience, a student in third-semester-Spanish ${ }^{1}$ once asked me how her reading proficiency level in Spanish compared to that of a native speaker in terms of school grade level. The type of information the student needed was not a proficiency description according to the ACTFL Guidelines. Rather, she was seeking a specific type of comparison that required more fine-grained performance assessment criteria. Her question prompted me to research the criteria that are used to assess school grade-level reading proficiency in the native language (L1). In order to assess school grade-level reading proficiency in the L1, researchers use tangible criteria that can be quantified, such as reading fluency, which is defined as a function of the speed of reading words correctly in terms of words per minute when reading aloud (Hudson, Lane, \& Pullen, 2005). This measure is noteworthy when assessing L1 reading proficiency because it has been established that the speed of reading aloud correlates with levels of reading comprehension (Kim, Petscher, Schatschneider, \& Foorman, 2010; Wise, et al., 2010). While second language (L2) reading research has not yet led to the fine-grained measuring that is commonplace in L1 reading assessment, there is some compelling evidence that suggests that the reading aloud rate in the L2 may be a predictor of reading comprehension level (Pretorius \& Spaull, 2016).

In observing readers' fluency, L1 researchers (e.g. Grabe, 2004; Swaffar, Arens, \& Byrnes, 1991) acknowledge that reading competence is in part a function of readers' fluency and also a function of the characteristics of the text that may render a given text more or less accessible (i.e., readable) to readers. Text readability levels depend on characteristics such as lexical density, number of words in a sentence, discourse organization, and topic and abstraction level in relation to the target reader's cognitive development (Kintsch \& Vipond, 2014). Accordingly, text readability is a factor that also needs to be taken into account in L2 reading.

After a number of ad-hoc experiments with third-semester L2 Spanish students, I estimated the average reading fluency to be somewhere between that of a L1 third- and fourth-grader, as their oral reading rate was approximately 95-102 words per minute. This finding, coupled with the need for some curricular initiatives undertaken by the Department of Languages and Culture Studies at the University of North Carolina at Charlotte, led to the idea of creating a courseware to develop Spanish reading proficiency for students who had previously completed two semesters of Spanish. The courseware was to be used in a $100 \%$ online course (see syllabus in Appendix A).

The aim of the present article is threefold: 1) To describe the characteristics of a third-semester Spanish reading lab courseware that was created as a stand-alone collection of forty (40) reading modules, each including a $300-400$-word reading passage, a multiple-choice task, a fill-in-the-blanks task, and a crossword; 2) to provide insight on the decisions that shaped the final courseware content; and 3) to bring attention to L2 professionals that instructional technology now makes it possible to create a reading lab component, thus extending the classroom by creating the long overdue counterpart of the listening lab.

## Literature Review

There is substantive evidence in the literature about the positive effects of L2 extensive reading (ER)—reading for pleasure or for information when those purposes are driven by the readers themselves (Al-Homoud \& Schmitt 2009; Day, 2015; Mason \& Krashen, 1997) as opposed to a syllabus. ER reading is characterized by large amounts of reading and has been shown to yield a variety of positive effects on measures of attitude towards reading in L2 and fluency (Mathewson, 1994). Yamashita (2013), building on the work by Day and Bamford (2002) and Mathewson (1994), tested the effect of ER on four attitude variables-feelings of comfort, anxiety, perception of intellectual value, and perception of practical value. The results from comparing the pre-test and post-test on these measures showed positive results on all measures except for perception of practical value. These results notwithstanding, Yamashita cautioned that her results need to be interpreted in light of the limitations arising from the small population sample. She also remarked that ER needs to be carefully balanced with intensive reading (IR), that is, close reading aimed at directing attention to linguistic features of the text, depending on the particular circumstances of the learning environment, and learners' language proficiency as well as learning style. Other research findings (Al-Homoud \& Schmitt, 2009) have revealed ER to be more effective to develop fluency. In a ten-week study, Al-Homoud and Schmitt (2009) randomly assigned students to either the ER group or the IR group. The ER group outperformed the IR group on fluency, measured in number of words per minute while reading three different passages silently. Day (2015) pointed out the need to adapt ER according to the specific circumstances of each program. Accordingly, he revised the ten ER principles articulated by Day and Bamford (2002) to acknowledge that ER does not have to be an all-or-nothing reading pedagogy, as different implementations may suit different programs. In this vein, he stated that for certain programs or purposes a blend of ER and IR may be more beneficial for learners than either ER or IR alone. The state of affairs regarding the status of ER at US institutions of higher education appears similar to what Macalister (2010) described regarding New Zealand's universities, that the implementation of ER in the instruction of English as L2 remains rare. Macalister surveyed university instructors in New Zealand to find out about instructors' attitudes towards ER. His surveys revealed that, while instructors perceive ER as beneficial for L2 development, its implementation is regarded as difficult because it requires a bigger budget for reading resources, more instructional time, and a complex coordination of reading resources, which also involves more time on the part of the instructors. Some instructors also regard ER as a type of activity that is difficult to assess, and some fear that allocating in-class time to silent reading, one of the hallmarks of ER, may be perceived negatively by students and administrators because teaching and learning are not clearly or measurably mediated by the teacher.

As in New Zealand, L2 language programs at US institutions of higher education commonly approach reading instruction within the framework of IR. Nation (2001) and $\operatorname{Cobb}(2007,2008)$ point out the benefits that learners may derive from having their attention directed to textual features, whether vocabulary, syntax or discourse organization, which is the type of close reading that characterizes IR. Wil-
liams (1986) remarked that effectiveness of an IR course depends on reading tasks that "approximate to cognitive reality" (Williams, 1986, p. 44) when a text is used as a linguistic object. In other words, when the purpose of an activity is linguistic analysis as opposed to only general reading comprehension, the activity that guides the analysis has to be designed in accordance with how cognitive structures operate. He articulated this and other principles with English as a Second Language in mind, but they may be extended to teaching reading in Spanish as a foreign language as well.

The present work seeks to contribute to the findings from ER and IR research and to inform the current turn in the profession to literacy-based approaches to foreign language instruction (Allen \& Dupuy, 2013; Barrette, Paesani, \& Vinall, 2010; Byrnes, 2005; Kern, 2004; Magnan, Murphy \& Sahakyan, 2014). There is a need to address the concerns and constraints instructors have reported about the inclusion of L2 readings into the foreign language. The purpose of this study was to explore the inclusion of systematic reading into the FL curriculum by: 1) Estimating the amount of reading that students could complete in one semester within the time span of a three-credit course; 2) estimating the average length of the reading passages in the modules; and 3) estimating the number of reading-comprehension activity items associated with each passage. The additional variables considered in the creation of the courseware were qualitative considerations, such as: 1) Type of text genre, 2) text topics, 3) type of comprehension elicited by the reading-comprehension questions, and 4) language of the multiple-choice question prompts.

## Methodology

In the fall of 2010, the University of North Carolina at Charlotte decided to move forward with offering a distance learning reading course for third-semester Spanish. The creation of this course ultimately resulted in the development of the courseware that made it possible to offer the course online in an asynchronous format. This study reports on the processes involved in creating a distance learning program for a third-semester Spanish course intended to promote L2 proficiency with intensive readings. This course is currently offered as an elective.

The criteria adopted to select the authoring software and to determine the number of modules are detailed below in Part I, under the section Procedures and Materials. Under the same section, in Part II, are the details on how the courseware content was created. The data described below come from three sources: 1) Eight undergraduate students who volunteered to complete a partial reading module in spring 2012 after they had completed their second-semester Spanish course; 2) a midterm survey administered in a pilot course, enrolling 25 students, that was offered in summer 2012; and 3) end-of-semester student evaluations from fall 2012 to date.

## Participants

The creation of the courseware content involved the participation of a team of four colleagues and the assistance of five graduate students. The team of four colleagues assisted the researcher with editing the readings that were adapted by the researcher as well as editing the reading activities that were authored by the researcher. The graduate students assisted with testing the performance of the activities in the courseware.

In the spring of 2012, after the completion of a second-semester face-to-face Spanish course, eight students ${ }^{2}$ of varying abilities volunteered to participate in the online completion of both a reading passage and two reading comprehension interactive tasks (see Appendix B) in an attempt to establish a baseline for estimating the average time it would take to complete a reading module. Two of the students had received a grade of A , two had received a grade of B , two a grade of C , and two a grade of $D$. The students were aged 20-24. Five of them were female and three were male. Their grades were assumed to represent different populations with regards to levels of general language achievement in the course. This information was used to design a course that went live in the fall of 2012.

In summer 2012, the courseware was piloted in a class that enrolled 25 students. These students were surveyed mid-semester to assess student satisfaction with the course (See Appendix C).

## Procedures and Materials

## PART 1: Determining the Authoring Software and the Number of Modules

## Software

One key element in the process of designing the courseware was to identify the type of software that would offer the features necessary to display reading passages with texts flagged in different ways to show mouse rollover glosses and to display different activity formats, such as multiple-choice questions, cloze texts, and crosswords. The capability of providing automated feedback was also a desirable feature as well as the capability of automatically populating assignment scores into the Moodle online gradebook. Therefore, Hot Potatoes, a cost-free authoring software suite, met the needs of the courseware that was ultimately designed.

## Estimating time on task

The eight initial volunteer students completed the reading of a 289 -word passage, a 23 -question multiple-choice task, and a fill-in-the-blanks task where the reading passage showed 18 blanks and a word bank (see Appendix B). The researcher noted the amount of time they took to complete the tasks and the times logged were used as baseline information in order to estimate the average amount of time students would be expected to allocate to the completion of a reading module (which includes a 300-400-word reading passage, a multiple-choice task with 25-35 questions, a fill-in-the-blanks task with some 15 items, and a crossword with some 15 items). Table 1 shows the time in minutes that students spent in completing the reading and both the multiple-choice ( 23 items) and cloze ( 18 items) tasks. The average time on each item was calculated by dividing the time on task by the number of items, that is, 41 items.

Table 1
Time-on-task estimates. Completion of reading and two tasks

| Students* | Time on Task (minutes) | Average Time on Each Item <br> (minutes) |
| :--- | :--- | :--- |
| A1 | 40 | 1 |
| A2 | 48 | 1.17 |
| B1 | 61 | 1.48 |
| B2 | 59 | 1.43 |
| C1 | 60 | 1.46 |
| C2 | 58 | 1.41 |
| D1 | 75 | 1.82 |
| D2 | 93 | 2.26 |
|  |  | 1.5 |
| Average | 62 |  |

* The letters stand for the letter grade students received in second-semester first-year Spanish. Numbers 1 and 2 next to the letters stand for student 1 and student 2.

None of the students achieved a perfect score when completing the two tasks. Therefore, it was estimated that in a real situation students would have to spend an additional 15-30 minutes, or 20-40\% of the total time of the first attempt, if they wanted to repeat the activities to improve their score. This estimate was based on the average time of 1.5 minutes (see Table 1) that participants took to complete an item and the number of items that needed re-doing. Completing either a multiple-choice or cloze item took an average of 1.5 minutes, which was calculated by averaging the time each participant spent on each item as a function of the number of minutes each took to complete the reading as well as both tasks divided by 41 items. These 41 items are the combined total of 23 multiple-choice items and 18 cloze items. The group missed an average of 8 items, or $20 \%$ of the 41 items. It was estimated that redoing these 8 items would take 12 minutes at 1.5 minutes per item. Because there is variability across students and how they may interact with different materials in the courseware, the additional time of 12 minutes was used as a baseline to overestimate in favor of the students who may need more time and therefore that additional time was established at 15-30 minutes.

Table 2
Estimating time to re-do items

| Students | Number of Items Needing <br> Re-doing | Projected Time on Re-doing <br> Items (minutes) |
| :--- | :--- | :--- |
| A1 | 4 | 6 |
| A2 | 7 | 10.5 |
| B1 | 5 | 7.5 |


| B2 | 8 | 12 |
| :--- | :--- | :--- |
| C1 | 8 | 12 |
| C2 | 9 | 13.5 |
| D1 | 11 | 16.5 |
| D2 | 12 | 18.7 |
| Average | 8 | $12^{*}$ |

* This figure was used as a baseline for the estimate of 15-30 minutes to re-do items.

By averaging the time on task measurements shown on Table 1, adding ten minutes for students to complete the additional crossword task that was not included in the original estimation, and adding an additional fifteen minutes in consideration of student efforts to re-do some activities to improve their score, it was estimated that students would need approximately 86 minutes to complete each module (the reading passage, multiple-choice task, cloze task, and crossword task). In a real course, it was reasoned, students would have to review and study the work they complete every week in order to prepare for the quizzes and final exam. This estimated study time would add about one hour per module (reading plus the three tasks-multi-ple-choice, fill-in-the-blanks, and crossword). The final calculation of the amount of time that students would spend working on each module was estimated at 147 minutes, that is, about two and a half hours. The estimates described here are summarized in Table 3.

Table 3
Average time on task per module

| Estimated Item | Time on Task per Module (minutes) |
| :--- | :--- |
| Reading plus two tasks | 62 |
| Crossword task | 10 |
| Repeating to improve score | 15 |
| Studying for quizzes | 60 |
| Total | 147 |

## PART II: Defining the characteristics of the modules

Based on the aforementioned findings of the study we proceeded to create 40 modules. Each module comprises four elements: (1) 300-400-words reading passage, (2) a multiple-choice task that includes some 25-35 questions about the reading passage, (3) one fill-in-the-blanks task that focuses students' attention on approximately fifteen (15) expressions from the reading passage, and (4) a crossword task that draws students' attention to another set of some fifteen (15) expressions from the reading passage. Students complete the 40 modules at a pace of three modules per week. The reading passages were modified to simplify some of the vocabulary and syntax and to enhance the discourse structure. Mouse rollover glosses with English translations were included for a selection of lexical items within each reading passage (see Ap-
pendix B). The reading passages were accompanied by read-aloud files that were generated by the voice-recognition software Speak Aloud. The titles of the modules as well as the weeks of the semester associated with them are shown in Appendix A.

The topics of the modules relate to fields of liberal arts and science, namely, anthropology/archeology, biology, political science, philosophy, chemistry, communications, Africana studies, religious studies, criminal justice, psychology, history, and sociology (see the course syllabus in Appendix A). The genre of the readings, focused mainly on academic prose about general information, was intended to facilitate learners' reading comprehension due to the high frequency of cognates to reduce student inferencing, which is a cognitively demanding process (Bengeleil \& Paribakht, 2004; Bialystok, 1981).

The three tasks associated with each module were designed to elicit a variety of levels of comprehension and to emulate the repetitive and circular nature of readertext interaction as it occurs in real life reading events (Irwin, 1991). The activities are structured so that learners focus on global comprehension, comprehension of word endings, vocabulary, relationship among words, and experience vocabulary development by connecting vocabulary from the text to lexical items outside the text. English was also used in instructions and question stems in order to ensure that the language of the instructions would not become an obstacle for students to complete the tasks. The students can see the reading passage while completing the tasks.

The total number of running words that make up the collection of forty readings is 12,600 . Out of the total number of running words, some 2,500 words are different words. This calculation was made with the aid of a software program called Textalyzer. The program recognizes as a word any sequence of characters bound by a space at the beginning and at the end of the sequence of characters. The program processes words from the same family as different words. For instance, escuela and its plural form escuelas are processed by the program as two different words. The collection of readings has a desirably low lexical density of $20 \%$, as the lower the lexical density of a text the easier it is to read (Kemper, Jackson, Cheung, \& Anagnopoulos, 1993). Therefore, as far as lexical density is concerned, the texts pose a manageable challenge for third-semester Spanish readers. Out of the body of 2,500 different words, 525 (21\%) come from Latin roots that are also present in English and they are semantically similar to their Spanish counterparts, that is, they are cognates. This is an advantage for student populations whose L1 is English, which is the case more often than not at the institution where the reading courseware was created. The vocabulary in the collection of texts also meets the objective of being representative of the 5,000 most frequently used words in the language (Davis, 2006), which are believed to be necessary for L2 readers to be functional (Nation, 2001).

The length of the sentences, which averages 23 words per sentence, falls out of the range of 15-20 words that is recommended for English non-specialized texts targeting native-speaker readers of English (Cutts, 2013). However, Spanish is usually wordier than English because of its syntactic characteristics (Cantos \& Sánchez, 2011). Expressing an idea in a Spanish sentence may take on average five more words than in English. Therefore a 23-word sentence in Spanish is considered appropriate for a text addressed to a general audience. Table 4 summarizes the aforementioned quantitative descriptions of the texts in the courseware.
Table 4
Quantitative characteristics of the reading corpus

| Estimated Item | Quantity |
| :--- | ---: |
| Number of words | 12,600 |
| Number of different words | 2,500 |
| Lexical density | $20 \%$ |
| Cognates | 525 |
| Non-cognates that are highly frequent | 820 |
| Words that need effort to learn | 1,155 |
| Words in a sentence | 23 |

The creation of this course relied on both objective measures and pedagogical intuition stemming from having taught a face-to-face third-semester reading course for a number of years. While appealing to intuition may seem lacking in methodological rigor, expertise is a complex cognitive construct recognized by psychologists as resulting from learning by observation or other means (Chi, 2011; Ericsson, Charness, Feltovich, \& Hoffman, 2006; Hogarth, 2001).

## The Role of the Instructor

The instructor's role in this course, which enrolls 150 students per section ${ }^{3}$, is that of a coach to the students and advisor to the courseware author team so the team may make improvements as needed. As a coach, the instructor has to answer questions promptly, monitor students' weekly performance and make personal contact with both students who need a nudge and those who deserve to be praised about their progress so they continue to keep up their good performance. The reiterated deadline reminders that instructors post to the class forum are key to the students' successful time management. Since the Moodle online grade book gets automatically populated with grades as students submit their assignments, instructors' interaction with the grade book is limited to observing students' progress, and calculating and reporting midterm and final course grades. The automation of grading is the feature of the course that makes it possible for an instructor to attend to the instructional demands of having up to 150 students enrolled in one section.

## Students' Perceptions of the Course

The students who participated in the pilot course of summer 2012 were surveyed mid-semester. The results of this survey (Appendix C) show high levels of satisfaction about the quality of instruction and the perception that the instructional material, that is, the courseware, was useful to understand grammar and learn vocabulary. Subsequent student evaluations have been consistently positive since. On average, $90-95 \%$ of the students rate the course as excellent, good, or fair. Students' perception, as reported in comments, is that they have a tangible feeling of having improved their Spanish skills. Some students have also reported gaining confidence in their ability to continue to work on their other language skills and have success-
fully continued with subsequent Spanish courses after completing the third-semester reading course.

## Discussion

Reading in a second language at the third-semester level is more complex than often assumed. Students at this level still have a limited target-language vocabulary, which greatly impairs their reading comprehension (Laufer, 1997; Qian, 2002). However, carefully crafted reading materials can facilitate the reading process as well as vocabulary acquisition (Grabe, 2004; Huang \& Liou, 2007; Jiang \& Kuehn, 2001; Upton \& Lee-Thompson, 2001). The courseware that was created as a stand-alone collection of 40 modules to deliver a third-semester Spanish for reading course was designed taking into account what is already known about L2 reading to date as well as the lexical and writing systems that English and Spanish share. Although English and Spanish belong to different language families, Germanic and Romance respectively, the two languages use the same alphabet and have a shared corpus of approximately 14,000 words with similar spelling and meaning in both languages (Thomas, Nash, Thomas, \& Richmond, 2006). These shared characteristics can work to the advantage of the L2 reader.

The courseware was designed with the goal of giving students repeated opportunities to encounter vocabulary items and structures, as re-encountering vocabulary items and structures repeatedly enhances the reading process (Kuhn, 2005). For example, Appendix B shows three ways in which students' attention is directed to the expression "campo de estudio." Students first encounter this expression with the mouse rollover gloss in the reading passage. They then have to process the same expression a second time in multiple-choice item \#1. Finally, they see the expression for the third time in the cloze activity.

As can be observed in the syllabus (Appendix A), the course has a strong tie to the following World-readiness Standards as defined by the National Standards Collaborative Board (2015): The Interpretive Communication standard, which is defined as "Learners understand, interpret, and analyze what is heard, read, or viewed on a variety of topics." The work of the students is $100 \%$ focused on reading. It also integrates the Making Connections standard, which is defined as "Learners build, reinforce, and expand their knowledge of other disciplines while using the language to develop critical thinking and to solve problems creatively." All the reading material deals with topics that students study within the fields of liberal arts and sciences. The course has a strong tie to the Language Comparisons standard, which is defined as "Learners use the language to investigate, explain, and reflect on the nature of language through comparisons of the language studied and their own." The online activities provide many opportunities for students to reflect on patterns such as how in English and Spanish a suffix is used to form adverbs. For instance, "-ly" is added to "certain" to form the adverb "certainly" in English. Likewise, "-mente" is added to the feminine form of "cierto" to form the adverb "ciertamente" in Spanish. Lastly, the positive student feedback since the course was first taught in fall 2012 offers a perspective of the course that is worth considering, especially in light of the fact that this course is an elective course with consistent high enrollment.

## Limitations and Directions for Future Research

The design of the courseware model presented here focuses mainly on the tenets of intensive reading. However, because the courseware design was not informed by measures of learning gains, it remains to be determined to what extent the courseware may promote reading fluency. Furthermore, additional investigation is needed to compare how reading fluency levels resulting from completing the course compare to gains occurring under extensive reading conditions such as those reported by Al-Homoud and Schmitt (2009). Furthermore, in addition to reading fluency, it also remains to be determined how learning gains in areas such as vocabulary or general reading comprehension compare when students complete the course described here as opposed to when they complete the course in a face-to-face environment.

## Concluding Comments

As the demand for online instruction increases, so will the need for the creation of courseware that meets L2 instructional goals (Allen \& Dupuy, 2013; Barrette, Paesani, \& Vinall, 2010; Byrnes, 2005; Kern, 2004; Magnan, Murphy \& Sahakyan, 2014). L2 reading instruction in Spanish as well as in other foreign languages lags behind English as L2 (E/L2), as reading courses are systematically integrated in E/ L2 programs taught inside and outside English-speaking geographical areas. Reading courseware provides an option to address reading instruction systematically as stand-alone material for self-paced online courses or as a supplement to hybrid, also called blended, courses. Such courseware will give learners the advantage of engaging in reading and gaining awareness of textual linguistic features, which may have an overall positive impact on other language skills.

Even in the best of circumstances, where instructors are knowledgeable of reading processes as well as the pedagogy that may guide students to engage those processes, time constraints are often a hindrance to the implementation of reading instruction in courses that have to cover grammar, the three other skills, and culture. The consequence of having to compartmentalize time is that the time on task allocated to reading is often insufficient to develop reading skills. Courseware may assist instructional and learning goals by motivating students to stay on task when they have to work independently, for instance, when they have to complete homework.

Time on task is one of the challenges of learning a language in input-poor environments, that is, outside the geographical areas where the target language is the vehicle of communication. As previously mentioned, the attention given to the development of listening comprehension in the L2 has yet to be replicated in its counterpart receptive skill, reading. Surely technological advances can do for L 2 reading development what audiocassette tapes did for the development of L2 listening skills in the past. Then, when digitalization of listening material replaced analog audio, L2 listening pedagogy continued to move forward while reading continued lagging behind, even though reading pedagogy could have benefited as well. The opportunities that digitalization offers can now make it possible to bring the integration of reading instruction at the same level of listening instruction. The reading courseware presented here can help make it possible for instructors to integrate the notion of a "reading lab" into the dynamics of instruction as it has been done with the "listening lab" since the audio cassette tape era.

Upper-division L2 courses are usually organized around literacy-based tasks, which require significant levels of reading fluency and vocabulary development. In order to be able to read academic texts with the level of comfort that allows learners to extract meaning and learn information, students need to know about 95\% of the vocabulary in the text, with less than one unknown word or expression for every twenty words (Nation, 2001). For fiction texts, Hsueh-Chao and Nation (2000) found that the English vocabulary needed to achieve adequate comprehension is around $98 \%$. To achieve this vocabulary coverage learners have to command a vocabulary size of some 4000 word families words for academic texts and probably higher for reading fiction (Davis, 2005; Nation, 2001).

In order to provide a learning environment that facilitates vocabulary acquisition and reading skills development to prepare students for the literacy-dependent tasks of upper-division courses, researchers and instructors may find it useful to implement some form of a "reading lab." As a pedagogical component, creating interactive-rich reading lab courseware is now within the reach of instructors and it could be integrated in a L2 program as early as the first year, thereby extending the exposure to the language and offering development opportunities of a skill that has been difficult to integrate in language programs to date.

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## Acknowledgements

The courseware and the course associated with it became a reality thanks to colleagues and students who, in one way or another, supported my efforts to innovate the Spanish curriculum by offering Spanish for Reading as an elective online course. I would like to recognize the support provided by the following people: Emily Kristoff and Maria Elizabeth Mahaffey, who co-authored with me a sizable portion of the courseware contents; Shaun Stone, who has taught the course several times and has provided invaluable feedback on the content and behavior of the courseware; the undergraduate students who volunteered to complete a partial reading module; and the graduate students who tested the reading modules. I would also like to thank the UNC Charlotte's Office of Distance Education for the financial support it provided and the Center for Teaching and Learning for the instructional design support.

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## Appendix A

UNC Charlotte SPAN 2200: Spanish for Reading<br>SPRING 2014 SYLLABUS

Instructor:
Office Hours (face to face): T \& R 11:00 am-12:00 pm, 05:45 pm-06:45 pm, and by appt.
Virtual Office Hours Via Skype also available by appointment
E-mail:

## 1) COMMUNICATION

1.1. Any questions regarding the contents of the class need to be posted in the Moodle forum. Your instructor will respond to forum messages within 48 hours on Monday through Friday between 9:00am and 5:00pm.
1.2. Email communication needs to be used only for consultations regarding personal matters. Your instructor will respond to emails within 48 hours on Monday through Friday between 9:00am and 5:00pm.
2) REQUIRED MATERIALS
2.1. Bilingual Dictionary
2.2. Web Browser
2.3. Reliable Internet Connection

## 3) PREREQUISITE

Prerequisite: SPAN 1202 or equivalent. This class is recommended for students whose major requires a foreign language course at the 2000-level. Please verify language requirement with your major department. This class does not fulfill any Spanish major or minor requirement.

## 4) OBJECTIVES

4.1. Expand your Spanish vocabulary.
4.2. Recognize language structure patterns.
4.3. Learn how to use a bilingual dictionary.
4.4. Become aware of reading strategies that can compensate for shortcomings of your Spanish knowledge.
4.5. Become a more fluent reader of Spanish texts about liberal arts topics.

## 5) ONLINE READINGS AND ACTIVITIES

The online readings and activities need to be accessed directly from the Moodle course. They need to be completed gradually throughout the week when the work is due. You can make as many attempts as you'd like within the week when the assignment needs to be completed. Only your highest score will be factored in your course grade. The thorough and gradual completion of this work is essential to ensure good performance in the timed online
quizzes and final exam. Work completed past the due date/time will not be accepted. All readings and activities will continue to be available only for review past the due date/time.

## 6) EXAM / QUIZZES

There will be 4 online quizzes, plus a final exam. The material included in exams and quizzes will come from the online readings and their corresponding online activities. The online quizzes are timed and they are designed assuming that the students have completed the online readings and activities thoroughly. The quizzes and final exam need to be completed without the aid of dictionaries or any other materials outside of the quiz itself. The online quizzes and final exam need to be accessed from the Moodle course.

## 7) FINAL EXAM

The final exam will include a selection of the online activities completed throughout the semester. $40 \%$ of the questions will be related to the last eight readings of the semester and $60 \%$ of the questions will be related to the rest of the material covered throughout the semester.

| 8) GRADING SCALE | 9) GRADING SYSTEM |
| :--- | :--- |
| A 90-100 | Online Activities 45\% |
| B 80-89 | Online Quizzes $25 \%$ |
| C 70-79 | Online Final Exam 30\% |
| D 60-69 |  |

## 10) HONOR CODE

[PLACEHOLDER FOR DEPARTMENT NAME] complies with the [PLACEHODER FOR UNIVERSITY NAME] Code of Student Academic Integrity. It is your responsibility to know and observe the requirements of this code. Please refer to the full code: [PLACEHOLDER FOR URL]

## 11) DISABILITY SERVICES

Students with documented disabilities who require accommodations in this class should access services as soon as possible through [PLACEHOLDER FOR UNIVERSITY NAME] Office of Disability Services in [PLACEHOLDER LOCATION], web page [PLACEHOLDER FOR URL]

## 12) USEFUL WEB SITES

Moodle Technical Support: [PLACEHOLDER FOR URL]

## FREQUENTLY ASKED QUESTIONS

1. How much time do I need allocate to this class?

Completing the work for this course will require an average of six (6) to nine (9) hours per week throughout the term. This is equivalent to the time that needs to be allocated to a face-to-face class in a regular semester.
2. How much reading do I need to do each week?

Each week you will read 3 excerpts of some 300 words each. Therefore, every week you will read some 900 words.
3. Do I need to write in Spanish?

YES, at the word level.

## 4. Do I need to speak Spanish?

NO
5. Do I need to have listening comprehension skills?

NO
6. Do I need to know grammar?

YES. Understanding the information contained in word endings and in the word order is a must in order to comprehend a written text.
7. Do I need to know how to sound out a reading passage?

YES. Reading fluency is connected to being able to sound out phrases silently and out loud.
8. How can I learn to sound out a reading passage?

Listening to the sound files.
9. What will tests and quizzes be like?

The quizzes and final exam will be made up of a selection of the online exercises assigned weekly.
10. What will be the format of the daily assignments?

They will include: 1) multiple-choice, 2) true/false, 3) word-level fill in the blanks, and 4. crosswords.
11. Will we have pop quizzes?

NO
12. What kind of text genre will be emphasized?

The emphasis will be on expository texts on topics regarding general science, arts and humanities.
13. What will I get out of this class?

YOU WILL: 1. expand your Spanish vocabulary, 2. learn how to use a bilingual dictionary, 3. become aware of reading strategies that can compensate for shortcomings of your Spanish knowledge, and 4. become a more fluent reader of Spanish.

## 14. How many words will I read in this course?

The word count of all the readings combined amounts to about 12,600 words. If you were a fluent reader of Spanish, this number of words would amount to one hour of reading (NOTE: A fluent reader is able to read non-technical texts at an average of 200-250 words per minute).

## 15. How long will it take me to complete each reading along with the corresponding activities?

It may take you some two (2) or three (3) hours. Since you have to complete 40 readings and their corresponding activities, you will be engaged in reading and reading-related activities for a total of some 80 to 126 hours depending on your current reading competence.

## 16. How does this course compare to a similar face-to-face course in terms of time dedication?

The estimated time to complete this course successfully is exactly the same as for a face-toface course. A student in a face-to- face course is expected to attend 42 hours of classes and to allocate 84 hours to homework. The combination of class instruction time and homework time amounts to 126 hours per class per semester.

## CALENDAR OF THE MATERIAL, QUIZZES, FINAL EXAM, AND DEADLINES

## NOTE FOR READERS

The English translations next to each of the Spanish titles below have been added for the reader's convenience. Those translations do not appear in the syllabus that the students receive.

## Week \#1. January 8-10

Introducción a la antropología (Introduction to Anthropology)
Introducción a la arqueología (Introduction to Archeology)
Week \#2. January 13-17
NOTE: The last day to drop/add is Friday, January 17
Biografía de Hiram Bingham (Biography of Hiram Bingham)
La arqueología y la cultura (Archeology and Culture)
¿Qué es la biología? (What is Biology?)
Week \#3. January 20-24
El genoma humano (Human Genome)
Las termitas y su poder energético (Termites and Their Energetic Power)
El descubrimiento de la célula (The Discovery of the Cell)

## Week \#4. January 27-31

¿Qué es la ciencia política? (What Is Political Science?)
La evolución de las normas internacionales de los derechos humanos (The Evolution of Human Rights International Regulations)

## QUIZ \#1 ON January 31 (ANY TIME between 01:00AM-11:00PM)

## Week \#5. February 3-7

La libertad de información (Information Freedom)
Nicolás Maquiavelo (Niccolo Machiavelli)
¿Qué es la filosofía? (What Is Philosophy?)
Week \#6. February 10-14
Leviatán (The Leviathan)
"Yo soy yo y mi circunstancia" ("I Am I and My Circumstances")
Jacques Derrida (Jacques Derrida)

## Week \#7. February 17-21

Seis cosas que quizá no sepa sobre la aspirina (Six Things that Perhaps You May not Know about Aspirin)
¡Camarero, hay acrilamida en mi plato! (Waiter, There Is Acrylamide on My Plate!)
QUIZ \#2 ON February 21 (ANY TIME between 01:00AM-11:00PM)
Week \#8. February 24-28
La química y la cocina (Chemistry and Cooking)
El vinagre y sus usos (Vinegar and What It Is Used for)
¿Qué estudian las ciencias de la comunicación? (What Do Communication Science Study?)

## Week \#9. March 10-14

El lado humano de internet (The Human Side to the Internet)
Globalización y comunicación (Globalization and Communication)
Harold Dwight Lasswell (Harold Dwight Lasswell)
Week \#10. March 17-21
¿Qué son los estudios africanos? (What Is African Studies?)
Migración africana (African Migration)
QUIZ \#3 ON March 21 (ANY TIME between 01:00AM-11:00PM)

## Week \#11. March 24-28

NOTE: The last day to withdraw with a grade of W is Wednesday, March 26
España y África, cada vez más cerca (Spain and Africa, Closer and Closer) Religiones africanas en las Américas (African Religions in the American Continent)
¿Qué es la criminología? (What Is Criminology?)

## Week \#12. March 31-April 4

Psicología y criminalidad (Psychology and Crime)
Técnicas para establecer la identidad (Techniques to Establish a Person's Identity)
La tierra de los convictos (The Land of Convicts)
Week \#13. April 7-11
La leyenda de El Dorado (EI Dorado Legend)
200 años de democracia (200 Years of Democracy)
QUIZ \#4 ON April 11 (ANY TIME between 01:00AM-11:00PM)

## Week \#14. April 14-18

La Constitución de los Estados Unidos (The Constitution of the United States)
Eleanor Roosevelt, la Primera Dama del Mundo (Eleanor Roosevelt, the First Lady of the World)
¿Qué es la sociología? (What Is Sociology?)
Week \#15. April 21-25
La asimilación cultural (Cultural Assimilation)
Las redes sociales (Social Media)
Maximilian Carl Emil Weber (Maximilian Carl Emil Weber)
FINAL EXAM ON MAY 9 (ANY TIME between 01:00AM-11:00PM)

## Appendix B

## Reading and Reading Tasks Instrument for Estimating Time on Task

[NOTE 1: The text is flagged with numbers within square brackets. These numbers are used in the reading comprehension questions to direct the reader's attention to specific ideas within the text. The material shown in this appendix was presented to the students in interactive online format.]
[NOTE 2: The English translation of the reading is at the end of this appendix.]

## ¿Qué es la criminología?

[1] La criminología es un campo de estudio interdisciplinario ya que los temas que estudia pueden ser parte de los temas que estudia la sociología, la antropología, el derecho o la psicología. [2] En 1885, Rafael Garofalo, profesor italiano de derecho, estableció el uso del término "criminología", que posteriormente fue popularizado por el antropólogo francés Paul Topinard.
[3] El objeto del estudio de la criminología se centra en cuatro elementos: el crimen o delito, el delincuente o criminal, la víctima y el control social. [4] La palabra "delito" deriva del verbo latino "delinquere", que significa abandonar, apartarse del buen camino, alejarse del sendero señalado por la ley.
[5] Existen tres tipos de criminología: científica, aplicada, y analítica. [6] La criminología científica estudia los conceptos, teorías y métodos que se utilizan en la investigación del crimen. [7] La criminología aplicada estudia los resultados de la criminología científica con el propósito de revisar la formulación de las leyes vigentes y las regulaciones de los centros penitenciarios.
[8] La criminología analítica estudia los métodos, teorías y prácticas de la criminología con el propósito de determinar su validez. [9] El predominio de un tipo $\underline{u}$ otro en cada país depende de una variedad de circunstancias. [10] El desarrollo de la criminología se relaciona con el desarrollo socioeconómico y el régimen político de un país. [11] La criminología raramente florece en países con regímenes políticos antidemocrático o inestables.
[12] La criminología, como ciencia, debe utilizar el método científico. [13] Los métodos que se utilizan están clasificados en dos grupos, métodos sociológicos y métodos antropológicos. [14] Entre los métodos sociológicos se encuentran la encuesta y el estudio de caso. [15] Entre los métodos antropológicos se encuentra la biometría, que trata de encontrar las causas biológicas y psicológicas que se asocian con el crimen.
[Source: Adapted from Servicio de Documentación SECCIF (2008) Clases y funciones de la criminología. Quadernos de criminología 0: 23-30 and http://es.wikipedia.org/wiki/Criminolog\�\�a]

1. In idea [1], the phrase "un campo de estudio" means
2. a field of study
3. a study camp
4. the study of camping
5. Scan ideas [1] and [2]. How many words feature the ending "-ologí""?
6. 3
7. 4
8. 5
9. Idea [1] implies that an interdisciplinary field of study can relate to other fields of study at the same time.
10. true
11. false
12. Observe the use of the word "temas" in idea [1]. Which of the following words can be paired with temas?
13. el
14. las
15. $\operatorname{los}$
16. Which of the following most resembles the use of the word "los" in the phrase "los temas" that appears in idea [1]?
17. los calcetines
18. los problemas
19. los juegos
20. Idea [1] supports the notion that criminology and sociology are concerned with completely different themes?
21. true
22. false
23. Look up the word "posteriormente" in idea [2]. This word means?
24. earlier
25. later
26. posthumous
27. Based on idea [2], Rafael Garofalo was a professor of
28. law
29. criminology
30. anthropology
31. Idea [2] states that Rafael Garofalo
32. established anthropology
33. established the term criminology
34. was more popular than Paul Topinard
35. Idea [3] states that the study of criminology is centered on $\qquad$ .
36. socializing
37. social control
38. society
39. Idea [4] states that the term "delito" comes from
40. abandonar
41. delinquere
42. apartarse
43. These two words in idea [4] are synonyms.
44. palabra, delito
45. camino, sendero
46. delito, latino
47. In idea [7], "centros penitenciarios" means.
48. juvenile detention center
49. prison
50. community center
51. Idea [8] states that analytical criminology studies the methods, theories, and practices of criminology in order to determine its validity.
52. true
53. false
54. The word " $u$ " in idea [9] is a synonym with
55. e
56. o
57. y
58. The phrase "un tipo u otro" in idea [9] refers back to
59. the three types of criminology
60. the types of laws and theories
61. the regulation of the penitentiary centers
62. Idea [10] states that the development of criminology in a country is related to its
63. political development
64. democratic development
65. socioeconomic development
66. According to idea [11], in which type of government is criminology most likely to thrive?
67. a dictatorial government
68. a post revolutionary government
69. a democratic government
70. Idea [12] states that criminology does not utilize the scientific method.
71. true
72. false
73. In idea [14], "encuesta" means
74. cost
75. poll
76. clue
77. According to idea [15], $\qquad$ tries to find the biological and psychological causes associated with a crime.
78. biometrics
79. anthropology
80. psychology
81. Idea [15] states that sociological methods study the biological and psychological causes associated with crime.
82. true
83. false
84. In idea [15], the word "que" in the phrase "que trata de encontrar" refers to
85. biometría
86. métodos
87. causas

## ¿Qué es la criminología?

Fill in all the gaps, then press "Check" to check your answers. Use the "Hint" button to get a free letter if an answer is giving you trouble. You can also click on the "[?]" button to get a clue. Note that you will lose points if you ask for hints or clues, but you may re-do the activity as many times as you'd like to improve your score.

## alejarse antropólogo aplicada campo centros crimen criminología debe delito derecho desarrollo encontrar encuesta florece métodos país revisar temas

La criminología es un $\square$ de estudio interdisciplinario ya que los temas que estudia pueden ser parte de los $\square$ que estudia la sociología, la antropología, el derecho o la psicología. En 1885, Rafael Garofalo, profesor italiano de $\square$, estableció el uso del término criminología, que posteriormente fue popularizado por el $\square$ francés Paul Topinard.

El objeto de estudio de la criminología se centra en cuatro elementos: el crimen o delito, el delincuente o criminal, la víctima y el control social. La palabra $\square$ deriva del verbo latino "delinquere", que significa abandonar, apartarse del buen camino, $\square$ del sendero señalado por la ley.

Existen tres tipos de criminología: científica, ए, y analítica. La criminología científica estudia los conceptos, teorías y métodos que se utilizan en la investigación del $\square$. . La criminología aplicada estudia los resultados de la criminología científica con el propósito de $\square$ la formulación de las leyes y las regulaciones de los $\square$ penitenciarios. La criminología analítica estudia los métodos, teorías y prácticas de la $\square$ con el propósito de determinar su validez. El predominio de un tipo u otro en cada $\square$ depende de una variedad de circunstancias. El desarrollo de la criminología se relaciona con el $\Gamma$ socioeconómico y el régimen político de un país. La criminología raramente $\square$ en países con regímenes políticos antidemocráticos o inestables.

La criminología, como ciencia, utilizar el método científico. Los métodos que se utilizan están clasificados en dos grupos, $\square$ sociológicos y métodos antropológicos. Entre los métodos sociológicos se encuentran la $\square$ y el estudio de caso. Entre los métodos antropológicos se encuentra la biometría, que trata de $\square$ las causas biológicas y psicológicas que se asocian con el crimen.

## Translation of the Reading ${ }^{4}$

What is criminology?
[1] Criminology is an interdisciplinary field of study, as it is concerned with issues that may be also of interest to sociology, anthropology, law or psychology. [2] In 1885, Rafael Garofalo, an Italian law professor, established the use of the term "criminology," which later was popularized by French anthropologist Paul Topinard.
[3] The object of study of criminology focuses on four elements: the crime or offense against the law, the offender or criminal, the victim and the social control. [4] The word "delito (offense)" derives from the Latin verb "delinquere," which means to abandon, stray way from the good path, to move away from the path established by the law.
[5] There exist three types of criminology: scientific, applied, and analytic. [6] Scientific criminology studies concepts, theories and methods that are utilized in crime investigations. [7] Applied criminology studies the results produced by scientific criminology in order to revise the laws in force and regulations concerning penitentiary centers. [8] Analytical criminology studies the methods, theories and practice used in criminology in order to determine their validity. [9] The predominance of one or another type in each country depends on a variety of circumstances. [10] The development of criminology relates to the socioeconomic development and the political regime of a country. [11] Criminology rarely prospers in anti-democratic or unstable political regimes.
[12] Criminology, as a science, must use the scientific method. [13] The methods used are categorized in two groups, sociological methods and anthropological methods. [14] Among the sociological methods we find polling and the case study. [15] Among the anthropological methods we find biometry, which tries to find the biological and psychological causes that are associated to crime.

## Appendix C

Midterm Survey Results
Second Summer 2012
The midterm survey was opened on July 18 and closed on July 29. It was announced twice and Moodle reminded students of the survey through the course calendar. The completion of the survey was voluntary and the identity of the students was kept anonymous. Seventeen (17) students out of 25 completed the survey. The results below are rounded up to the closest whole number. The green cells display positive results regarding the information elicited.

| Questions | Agree or Strongly Agree | Disagree or Strongly Disagree |
| :---: | :---: | :---: |
| 1) The way online activities are used in this course does not provide quality instruction. | $\begin{gathered} 6 \% \\ \text { (1 out of 17) } \end{gathered}$ | $\begin{gathered} 94 \% \\ \text { (16 out of } 17) \end{gathered}$ |
| 2) The online activities help me to understand the grammar. | $\begin{gathered} 76 \% \\ \text { (13 out of 17) } \end{gathered}$ | $\begin{gathered} 24 \% \\ \text { (4 out of 17) } \end{gathered}$ |
| 3) The online activities do not help me to learn vocabulary. | $\begin{gathered} 18 \% \\ \text { (3 out of 17) } \end{gathered}$ | $\begin{gathered} 82 \% \\ \text { (14 out of } 17 \text { ) } \end{gathered}$ |
| 4) I miss having face-toface contact with my instructor. | $\begin{gathered} 12 \% \\ (2 \text { out of } 17) \end{gathered}$ | $\begin{gathered} 88 \% \\ (15 \text { out of } 17) \end{gathered}$ |
| 5) I would not recommend this course to others. | $\begin{gathered} 6 \% \\ (1 \text { out of } 17) \end{gathered}$ | $\begin{gathered} 94 \% \\ \text { (16 out of 17) } \end{gathered}$ |
| 6) I enjoy the reading material. | $\begin{gathered} 65 \% \\ \text { (11 out of 17) } \end{gathered}$ | $\begin{gathered} 35 \% \\ \text { (6 out of 17) } \end{gathered}$ |
| 7) I like how my instructor manages the class. | $\begin{gathered} 82 \% \\ \text { (14 out of 17) } \end{gathered}$ | $\begin{gathered} 18 \% \\ \text { (3 out of 17) } \end{gathered}$ |


[^0]:    Endnotes
    ${ }^{1}$ One semester of foreign language in college in the US is often considered equivalent to one year in US high schools.
    ${ }^{2}$ The eight students completed their second-semester Spanish course with an instructor who was not involved in the research project discussed here. First- and second-semester Spanish fulfill a foreign language requirement for students who have not studied three years of a foreign language in high school.
    ${ }^{3}$ One section of this course is offered per semester.
    ${ }^{4}$ The translation of the reading is included here for the reader's convenience. This translation is not part of the module.

