

REVIEW OF *TESOROS: A MULTIMEDIA-BASED SPANISH COURSE ON CD-ROM*

Title	<i>Tesoros: A Multimedia-Based Spanish Course on CD-ROM.</i>
Platforms	Windows 95/98 Macintosh: System 7.5 or later.
System requirements	Windows: Pentium 100 MHz processor; 16 MB of RAM; 640 x 480 256-color display; 8x CD-ROM drive; SoundBlaster compatible sound card with microphone and speakers Macintosh: PowerPC 100 MHz processor; 16 MB of RAM; 640 x 480 256-color display; 8x CD-ROM drive; microphone and speakers
Publisher	McGraw-Hill Companies PO Box 182605 Columbus, OH 43218-2605 Phone: 1-800-262-4729 (students) Phone: 1-800-338-3987 (instructors) Fax: 1-614-759-3644 E-mail: customer.service@mcgraw-hill.com
Support offered	Customer service: http://www.mhhe.com/catalogs/cust_serv/
Target language	Spanish.
Target audience	Introductory level.
Price	Stand-alone set of 5 CD-ROMs: \$45 Institutional lab pack (10 sets of 5 CD-ROMs): \$320 Site license: Contact your local McGraw-Hill representative http://www.mhhe.com/catalogs/rep/
ISBN	0-07-234220-X

Reviewed by Joseph Collentine, Northern Arizona University

Tesoros is an introductory multimedia Spanish course on five CD-ROMs. It forms the core of a larger package that includes a textbook and a workbook/laboratory manual which is appropriate for self-study or classroom-based learners. According to the accompanying information booklet (p. 1), *Tesoros* "offers students the opportunity to explore Spanish through an intriguing story line" and it "contains many interactive task-based activities." The narrative-based curriculum centers around a detective who searches for a hidden treasure located somewhere in the Spanish-speaking world, a plot element which takes users to a myriad of countries. The student plays the detective's assistant, completing a number of tasks that are meant to help the sleuth find the hidden treasure.

Each of the 16 lessons is organized around a multimedia episode of the story. First, students view and listen to a comic-strip-like episode. To understand the content of an episode, students can roll their mouse over a caption to hear an audio-recording of the dialogue.



Figure 1. Story episode

Double-clicking on any frame in the episode opens a window with the dialogue transcribed and hyperlinked to information about lexical and grammatical features (see Figure 2).

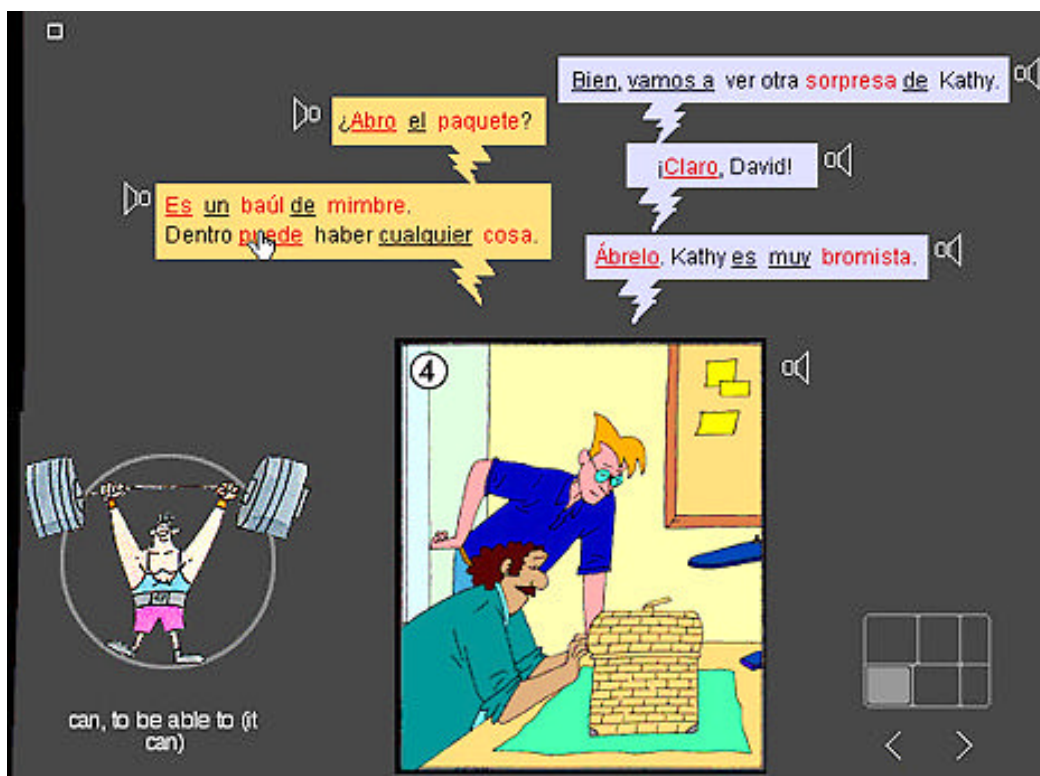
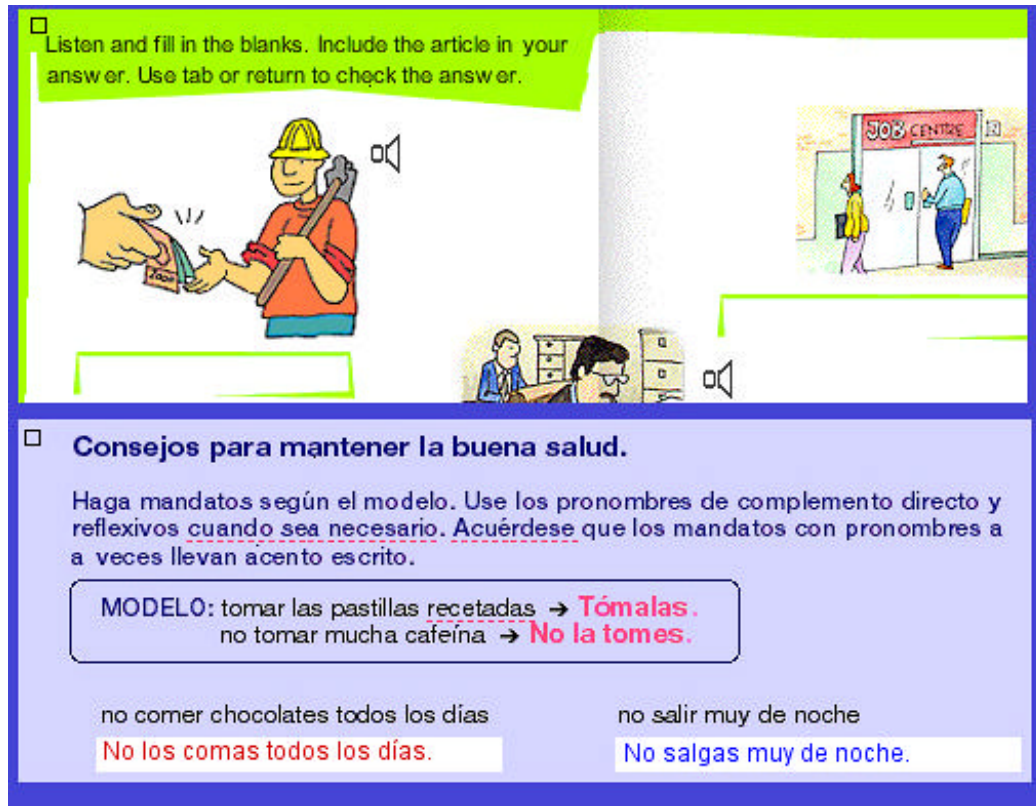


Figure 2. Dialogue with hyperlinks to lexical and grammatical information.

Learners then complete a series of tasks assigned by the detective, who requires them to compose e-mails and record biographical information about certain characters. Learners must also recreate portions of the episode's dialogue by means of a drag-and-drop activity. Subsequently, the student reads and listens to a list of vocabulary items related to the episode. Various activities are designed to help the learner retain these lexical items. Finally, each lesson ends with a grammar explanation and accompanying exercises.



Listen and fill in the blanks. Include the article in your answer. Use tab or return to check the answer.

Consejos para mantener la buena salud.

Haga mandatos según el modelo. Use los pronombres de complemento directo y reflexivos cuando sea necesario. Acuérdese que los mandatos con pronombres a veces llevan acento escrito.

MODELO: tomar las pastillas recetadas → **Tómalas.**
no tomar mucha cafeína → **No la tomes.**

no comer chocolates todos los días
No los comas todos los días.

no salir muy de noche
No salgas muy de noche.

Figure 3. Vocabulary and grammar activities.

Lafford (2001) recently reviewed the *Tesoros* package for *CALICO*, concentrating on the extent to which *Tesoros* is compatible with what are presumed to be effective computer-assisted language learning (CALL) design features. Lafford's thorough and insightful assessment concludes that *Tesoros* is compatible with about half of the multimedia design features that Chapelle (1998) argues will create fruitful conditions for second language acquisition (SLA).

Chapelle's features are motivated by interactionist SLA research, which posits that the acquisition of linguistic phenomena is facilitated by *negotiating for meaning*. The perspective on learning taken by *Tesoros*' designers is somewhat broader, since it appears to be more informed by cultural and social psychological theories of learning. Using a mystery story as the foundation for the course is consistent with one thesis of cultural psychology: that the narrative is an effective tool with which to foster knowledge acquisition (Bruner, 1996). *Tesoros*' designers also attempt to engage Spanish learners in task-based activities, which reflects the increasing acceptance of the social psychological thesis that instruction should encourage knowledge acquisition through "situated cognition" (Brown, Collins, & Duguid, 1989). Finally, although *Tesoros* does not include any of the currently available technologies that allow learners to negotiate messages with either fellow students or their instructors (e.g., chat rooms), the designers demonstrate an awareness of recent CALL discussions on the need for materials to provide so-called "interactive software features" that give learners frequent feedback and that affect a non-linear experience (see Labour, 2001).

TESOROS' USE OF THE NARRATIVE AS A CURRICULAR FOUNDATION

Narratives whose content constitutes a central and unifying theme within a given curriculum represent a key factor in facilitating knowledge acquisition since they provide a cognitively efficient mechanism around which learners can build new knowledge about culture and language (Bruner, 1996). Activities that involve learners' episodic memory and cognitive "scripts" (e.g., advanced organizers) facilitate the acquisition process because they add new memories to related, rather than isolated, bits of information (McLaughlin, 1987). To be sure, the Open University's MENO project ([Multimedia, Education, and Narrative Organization](#)) has specifically researched the facilitative effects of narratives on learning in multimedia environments. Because computer-based materials can overload the novice with data (e.g., links, stimuli), the use of narrative as a curricular cornerstone can be particularly beneficial in this medium, as narratives provide an anchor with which to integrate new information. Technology-based Spanish FL materials have embraced the potential benefits of the narrative since the introduction of *Destinos*, a video-based introductory course, and more recently with the McGraw-Hill/Annenberg/CPB *Nuevos Destinos* project. Other groundbreaking FL projects include *French in Action* and *A la rencontre de Philippe*.

Tesoros effectively uses its story line as a unifying theme when providing opportunities for learners to develop their lexical and grammatical abilities. Most linguistic structures (e.g., vocabulary, grammatical phenomena) are introduced through the comic-strip episodes, and hyperlinks encourage students to seek the definitions of unknown words and grammar explanations. However, even though one of the learner's duties is to study cultural information about the country in which each episode takes place, *Tesoros* does not adequately integrate this cultural information in the narrative. While the CD-ROM and Web links provide a plethora of social, historical, literary, and musical information about any given place, the materials do not clearly specify task demands that might require the learner to seek specific information. *Tesoros* would have done well to provide activities requiring learners to conjecture about some of the places that the detective might visit in a given country, what the detective might see and eat, and important people that could provide information or even clues to the treasure's whereabouts. Thus, teachers using *Tesoros* in courses will likely want to design such activities. In future versions of this software, portions of the narrative's development could be contingent on the user's interaction with cultural materials. For instance, a student might choose from a selection of songs to buy, and that music might form the background music for some subsequent situation; or, a work of art that the learner enjoyed might "mysteriously" reappear in a subsequent episode.

TESOROS AS A SOURCE FOR ENCOURAGING LEARNING THROUGH SITUATED COGNITION

Situated cognition is a theory of social psychology asserting that knowledge acquisition results not only from abstract explanations of concepts but also from experiencing how that knowledge is useful in real-world problem solving (Brown et al., 1989; see also Salaberry, 1996). Within the fields of second- and foreign-language acquisition, pedagogues have spoken of the need to involve learners in task-based activities, or assignments where learners employ the target language while working towards some non-linguistic goal (Crookes & Gass, 1993; Long, 1997, Nunan, 1989). Students role play, derive a solution for some dilemma, and make choices about how to achieve a goal.

Some of *Tesoros*' task-based activities reflect these stipulations, since learners must use Spanish communicatively in the role of a detective's assistant who needs to gather and organize clues. Each chapter requires learners to complete various tasks based on the accompanying episode. For example, writing tasks require students to use Spanish to uncover and maintain biographical information about the story's participants and correspond with the detective via (simulated) e-mail. It is questionable whether some activities labeled "tasks" will truly involve learners in situated cognition. For example, one duty that

the detective assigns his assistant involves the recreation of a portion of each episode's dialogue. Students complete a drag-and-drop activity, matching written segments with their place in the episode's dialogue. Yet, while recreating the content of a conversation is reasonably authentic detective work (to the extent that detectives often take notes on what they have heard or observed), *Tesoros* does not make clear the non-linguistic (i.e., the situational) purpose of such a task. Future versions of the software could ask students to act somehow on the information in the dialogue. For instance, if the detective needed to know the whereabouts of a person possessing an important clue, the application could prompt the learner to get that information from the dialogue. The student might then need to write a note reporting the person's whereabouts. Alternatively, an input-oriented activity might require the learner to choose between one of several possible notes to send to the detective. Finally, one of the learners' designated "tasks" is not, by definition, task-based at all; it simply requires learners to record and listen to sentences that they repeat from the episode.

TESOROS' INTERACTIVE SOFTWARE FEATURES

An important CALL design issue as of late is the extent to which an application is "interactive." *Tesoros'* principal author, Robert Blake, has raised concerns about the accuracy of software marketing that claims to give students an interactive experience (Blake, 1999). Given that this program does not allow users to exchange information either between two people (e.g., in a chat room environment) or between a user and the software (e.g., via some sort of Natural LanguageProcessing technology), in all likelihood, *Tesoros'* authors do not mean to equate "interactive task-based activities" with interpersonal interaction. From a software engineering perspective, Labour (2001) asserts that there are two important factors by which to assess an instructional application's degree of interactivity: a) the frequency and the variety of comprehension checks (e.g., Cloze exercises, multiple choice questions, open-ended questions); b) the degree to which students can explore content in a non-linear fashion. *Tesoros* does provide a non-linear experience; yet, the comprehension checks could be more engaging.

Concerning comprehension checks, *Tesoros* relies heavily on discrete-point types of exercises that require mostly one-word answers and that entail matching tasks (i.e., drag-and-drop exercises). For instance, several grammar activities prompt students to write sentences employing a targeted structure (e.g., the copula). Erroneous or problematic portions of the learner's text automatically change to green. For the most part, however, the comprehension checks do not provide the level of linguistic interactivity that the Macromedia Director authoring environment in which *Tesoros* was created could support. As one who authors pedagogical materials in Director (see Collentine, 2000), this reviewer believes that the software designers have not taken advantage of the algorithms that the Director API and its Lingo scripting language offer language instruction.

Director contains numerous built-in [string operations](#) that parse simple and complex phrases. For instance, an activity might require a learner to pose questions to a character in the story, targeting the use of interrogatives. With a high degree of reliability, code such as that shown in [Figure 4](#) could check the learner's response to see if it contains the appropriate interrogative.

```
if word 1 of userResponse = "Cuándo" then
    --CALL ROUTINE THAT PROVIDES THE ANSWER TO THE USER'S QUESTION.
else
    alert "Please re-write or rephrase the question!"
end if
```

Figure 4. String operations checking for presence of interrogative.

Similarly, a linguist and a software engineer could collaborate to capitalize on various string operations to examine whether a particular verb appears in a user response (i.e., whether the response contains the targeted semantic information) and then whether that verb appears in the correct form. For example, the

code shown in Figure 5 employs Lingo to examine a user's entire response to a question prompting the use of *dormir* (to sleep). Specifically, it employs built in methods such as "the number of words in STRING," "STRING contains STRING," and "offset STRING1, STRING2" (where the result is the character position of STRING1 within STRING2) to determine whether the learner's utterance has a form of *dormir* and whether it is inflectionally appropriate. It would not be difficult for an engineer to make this code re-usable (i.e., convert it so that it takes parameters representing certain segments of any verb, such as is stem and its inflection).

```

on mouseUp
  set isVerbInResponse to 0
  set userResponse to (the text of member "inputTextField")
  repeat with i = 1 to (the number of words in userResponse)
    set currentWord to (word i of userResponse)
    if (currentWord contains "d") and (currentWord contains "rm") then
      if offset("d", currentWord) < offset("rm", currentWord) then
        if currentWord = "durmió" then
          alert "You have used the correct form of the verb DORMIR"
        else
          alert "You have used DORMIR, but something is wrong with it"
        end if
      end if
      exit repeat
    end if
  end if
end repeat
end mouseUp

```

Figure 5. String operations checking for presence and accuracy of *dormir*

Regarding linearity, *Tesoros* allows students to move freely within the various chapters of the story and within the various scenes of an episode. Here students can explore in detail a wide variety of forms found within the narrative's dialogue. With any number of mouse events, learners can retrieve "graphic" glosses of unknown numerous vocabulary items in the dialogue (i.e., in the form of drawings). Users can also click on a grammatical form, whereupon they see a "reference card" that reveals the grammatical paradigm to which the form belongs and any other related forms. For example, if a student clicks *te* (the second-person, singular, direct-object pronoun), a list of direct-object pronouns appears. These forms are not translated into English. Superficially, this design feature might seem like a shortcoming. Yet, this approach is likely to lead learners to consider the semantic value or grammatical features of terms that they might already know within a paradigm (e.g., a learner may already know what *me* -- the first-person form -- represents). Perhaps by deductive efforts the learner will discern the meaning and/or function of *te*. What will likely be frustrating for some learners, however, is that these reference cards do not contain links to parts of the software application where learners can access full lessons on the referenced grammatical item (e.g., a grammar lesson treating direct-object pronouns).

SUMMARY

The *Tesoros* CD-ROM package resides on a solid foundation of learning theory and materials design. The multimedia materials, in concert with *Tesoros*' print materials and any teacher-specific tasks, will provide learners with opportunities to develop their knowledge of the Hispanic world and the Spanish language in an engaging fashion. Furthermore, the interface and the application's software features allow for an interactive experience. At the same time, *Tesoros* is testimony to the need for commercial educational software to exploit more fully the tools that authoring environments offer. The designers would do well to include specific tasks based on the cultural information provided. Additionally, in future versions of this courseware, the inclusion of more task-based activities that parallel real-world demands and linguistic interactions that take full advantage of Director's built-in string-parsing operations would likely provide learners with a more beneficial experience.

ABOUT THE REVIEWER

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REFERENCES

- Blake, R. (1999). Nuevos destinos: A CD-ROM for advanced beginning Spanish. *CALICO Journal*, 17(1), 9-24.
- Brown, J. S., Collins, A., & Duguid, S. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32-42.
- Bruner, J. S. (1996). *The culture of education*. Cambridge, MA: Harvard University Press.
- Chapelle, C. (1998). Multimedia CALL: Lessons to be learned from research on instructed SLA. *Language Learning & Technology*, 2(1), 22-34. Retrieved November 15, 2001, from <http://lt.msu.edu/vol2num1/article1/index.html>.
- Collentine, J. (2000). Insights into the construction of grammatical knowledge provided by user-behavior tracking technologies. *Language Learning & Technology*, 3(2), 44-57. Retrieved November 15, 2001, from <http://lt.msu.edu/vol3num2/collentine/index.html>.
- Crookes, G., & Gass, S. (Eds.). (1993). *Tasks and language learning: Integrating theory & practice*. Clevedon, UK: Multilingual Matters.
- Labour, M. (2001) Social constructivism and CALL: Evaluating some interactive features of network-based authoring tools. *ReCall*, 13(1), 32-46.
- Lafford, P. (2001). *Tesoros* review. *The CALICO Review*. Retrieved November 15, 2001, from <http://astro.temple.edu/~jburston/CALICO/review/tesoros00.htm>.
- Long, M. H. (1997). *Focus on form in task-based language teaching*. Retrieved November 15, 2001, from <http://www.mhhe.com/socscience/foreignlang/conf/first.htm>.
- McLaughlin, B. (1987). *Theories of second language learning*. London: Edward Arnold.
- Nunan, D. (1989). *Designing tasks for the communicative classroom*. Cambridge, UK: Cambridge University Press.
- Salaberry, R. (1996). A theoretical foundation for the development of pedagogical tasks in computer mediated communication. *CALICO Journal*, 14(1), 5-36.