

INTEGRATING INTERNET-BASED READING MATERIALS INTO THE FOREIGN LANGUAGE CURRICULUM: FROM TEACHER- TO STUDENT-CENTERED APPROACHES

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ABSTRACT

Whereas many educators enthusiastically embrace the use of Internet-based reading materials, little theoretical and empirical research exists that demonstrates how to make use of such practices in a sound pedagogical way. This article provides guidance to teachers and curriculum developers by describing three approaches to integrating Internet-based reading materials into a foreign language curriculum. The design of an Internet-based lesson is largely determined by a teacher's pedagogical approach, her/his technological expertise, and the students' language proficiency. In light of these factors, the approach to the pedagogical design of successful lessons falls along a continuum from being teacher-determined or teacher-facilitated to student-determined. In more detail, lesson designs may distinguish themselves in the following areas:

- the learning resources, that is, the topics and content, text type
- the scope of the learning environment, that is, the number of different sources (sites or links) to be integrated
- the learning tasks, that is, the ways in which the learners explore the reading materials, synthesize and assimilate what they have learned.
- the degree of teacher and learner involvement in determining the areas mentioned above

Based on concrete sample lessons, this article describes the strengths and challenges of each approach from a pedagogical, technological and designer's point of view.

INTRODUCTION

In recent years, the use of the World Wide Web (WWW) as a resource for language learning materials has gained increasing popularity among language teachers. As the Internet keeps expanding, listserves, newsletters, and even journal articles keep listing and pointing out potential Web sites that can be used in language learning. Furthermore, the literature on Web-based instruction reveals numerous personal accounts, informally collected student surveys, or occasionally some pilot studies on students' experiences using Internet-based resources (Brandl, 2002; Lee 1998; Osuna & Meskill, 1998; Warschauer, 2000). What still remain rare, however, are models and guidelines that are based on theoretical or empirical research findings to guide teachers and teacher trainers towards pedagogically sound practices. As Chun and Plass (2000) point out, "the use of networked environment for learning in general, and for second language acquisition in particular, raises many questions regarding the design of these environments that differ from the traditional design of text-based and stand-alone systems" (p. 152).

This article focuses on the exploration of authentic materials as available on the WWW in primary visual and verbal/textual modes. I will concentrate on the interpretive mode of communication, or reading skills, as this is, besides writing, currently one of the two best suited to the Web.¹ In particular, I will present three different approaches to using Internet-based resources, discuss the rationale for each design based on empirical and theoretical research, and furthermore include a short description of technological skills involved. The article concludes with a list of guidelines to provide further guidance in the implementation of Internet-based lessons.

DEVELOPING INTERNET-BASED READING LESSONS: TOWARDS A SOUND PEDAGOGICAL RATIONALE AND DESIGN

The Internet as a resource can enrich and expand language instruction. There are numerous reasons in favor of integrating the Internet into a language curriculum.

Chun and Plass (2000, p. 161) mention general capabilities of features of the WWW that have the potential to enhance language learning. These are a) the universal availability of authentic materials, b) the communication capabilities through networking, c) the multimedia capabilities, and d) the nonlinear (hypermedia) structure of the information. The most compelling reason is definitely the convenience in accessing and obtaining an endless supply of authentic materials in target languages. The WWW has brought the world to the fingertips of each learner. Applying the WWW to foreign language teaching also provides the opportunity to meet the Standards in several ways (Walz, 1998): "Competence in more than one language and culture enables people to gain access to additional bodies of knowledge; ... all students learn in a variety of ways and settings; ... language and culture education incorporate effective technologies; and using the Web is consistent with learning theories about learning to read authentic materials" (p. 104).

As pointed out by the rationale above, there are numerous convincing arguments in favor of integrating Internet-based materials into a foreign language curriculum. At the same time, several arguments can be made that ask for a more cautious approach when using the Internet. The Internet is not an ideal way of delivering instruction, and there are numerous challenges to overcome.

First, there are still many limitations on interactivity and bandwidth. Second, the hyper-linked structure and presentation of information on the Internet may easily cause students to get lost. Third, we have no control over the quality and accuracy of the contents of the information. In other words, the use of the Internet resources completely depends on reader judgment, which presupposes solid language proficiency and critical reading skills. Fourth, little theoretical and empirical research actually exists that demonstrates how to make use of Internet-based materials or how to design tasks that allow the learners to explore these materials and yield expected learning outcomes. In the same vein, little is known about students' attitudes towards the integration of Web-based readings in the foreign language curriculum.

FROM TEACHER TO STUDENT-CENTERED APPROACHES

An important principle of communicative language teaching is the use of authentic materials. A great deal of research has been conducted on how to integrate such materials along with pedagogically well-designed reading tasks into the foreign language curriculum (for a review of selected readings on design of reading lessons see Grellet, 1981; Lee & VanPatten, 1995; Omaggio-Hadley, 2001). As Omaggio-Hadley points out, the design of appropriate comprehension tasks for written discourse becomes a function of text type, the purpose for which the comprehender is reading, and the background information and language proficiency skills the reader brings to the text. In general, instructional strategies that have been suggested constitute a combination of bottom-up, top-down, and interactive approaches that guide the learner to approach the processing and decoding of a text from different perspectives (for a review see Omaggio-Hadley, 2001; Grellet, 1981). Such instructional practices by-and-large can be applied most successfully in a text-specific approach, in which the instructor guides the learners through a text, matching text and reading tasks with the proficiency level and needs of the students. Undoubtedly, there are many pedagogical justifications for this approach.

In principal, the approach to task and lesson design of Internet-based reading materials should follow the same guidelines suggested in the literature on reading methodology. Needless to say, the open-ended structure of the Internet limits the possibility of a text-specific and interactive teacher-student approach. Furthermore, the use of the Internet as a learning environment requires some technological skills and

knowledge. This raises the question on how to take full advantage of the vast amount of Internet resources. In particular, what technological skills are necessary and how can learning tasks be designed that make Internet-based resources accessible to the learners.

By-and-large, little empirical Internet-based research exists that provides us with clear guidelines. Furstenberg (1997) suggests student tasks should "exploit the associative nature of hypertext or hypermedia so that students can collaboratively discover and construct new connections, which they combine in a coherent whole" (p. 24). She sees the role of the instructor or Web designer as that of designing "tasks that enable students to tell us what they have seen, learned, or understood and that enable students to work collaboratively to create valid arguments, contexts, and stories that they can support, illustrate, and justify" (p. 24). An effective way to engage foreign language (FL) students in an active-interactive reading process is also to have them write about what they read. Writing about one's reading experience seems to facilitate reading comprehension and leads to the discovery of the different factors that intervene in the reading process (Martínez-Lage, 1995; Zamel, 1992). Warshauer (1997) recommends that computer-mediated communication activities be experiential and goal-oriented, and that tasks be consistent with principles of situated learning (i.e., that learners engage in meaningful tasks and solve meaningful problems that are of interest to the learners and can also be applied in multiple contexts). Such principles in activity design also need to apply to the use and exploration of Internet-based resources.

The findings of a recent study by Osuna and Meskill (1998) provide support for Warshauer's recommendations. Their research involved the piloting of five Spanish language activities for which they used the Internet. The activities consisted of planning a family trip to Madrid, describing photos from Argentina, comparing the Universidad Autónoma de México to the students' own college, finding places for leisure activities in Chile, and creating an authentic Mexican meal. They assessed 13 learners' perceptions of their experiences in terms of both language and cultural learning, as well as their attitudes towards the medium. Based on the results, their subjects enjoyed these activities and believed that their language and cultural knowledge increased quite a bit. An interpretation of their data suggests that the subjects assessed those tasks that engaged them in real-world activities highest, as it was in particular the case with the creation of an authentic Mexican meal, and least so with the description of photos from Argentina.

Considering the variety of factors (e.g., curricular goals, pedagogical issues, learner needs, student proficiency levels, the hypertext-based structure of the Internet, technological and design issues) that influence the decision whether and how to use the Internet, I propose three different types of lesson designs that lend themselves well to integrate Internet-based resources into a foreign language learning curriculum. The three lesson designs are based on the degree of teacher and student involvement in determining the content (choice and selection of topics and Internet-based materials), the scope of the learning environment (number of different sources: sites or links), and the learning processes and tasks (ways of exploring the reading materials). In other words, the design of such lessons may distinguish themselves ranging from being very teacher-centered, where teachers take a central role in controlling content and learning tasks (see [Appendix A](#)), to being very student-centered. In the latter, the teacher's roles vary from being a facilitator, designer, and guide (see [Appendix B](#)) to a resource person (see [Appendix C](#)). Moving from a teacher-centered to a student-centered approach assigns the learners an increasing role in taking charge of their own learning. It promotes the development of learner independence and autonomy, and thus follows principles of communicative language learning (Omaggio, 2001).

When shifting from teacher-centered to student-centered designs, the students' levels of proficiency play an increasing pivotal role that also need to be taken into account. The learners need to have a minimal functional proficiency that allows them to explore an open-ended environment as the Internet without the intervention of an instructor. Nevertheless, the degree of teacher and student involvement in making

decisions regarding the choice of resources, the scope of learning environment, and comprehension tasks closely correspond to the learner's level of language expertise.

In the following section, I will present three different approaches to lesson design, two of which are teacher-centered, and the third taking a student-centered approach. I will demonstrate how lessons can be configured varying in their degree of teacher guidance and involvement, learner autonomy, and authentic exploration of Internet-based materials. For each approach, I will discuss its strengths and challenges from a pedagogical, designer, and technological point of view.

APPROACH 1: TEACHER-DETERMINED LESSONS

Pedagogical Perspectives

The reading lesson in [Appendix A](#) demonstrates an example of a teacher-centered approach to providing reading instruction online. The reading activities and materials of this approach are comparable to the computer as an online electronic workbook. The teacher prescreens and selects reading materials or cultural readings from Internet-based or other resources, designs comprehension activities, and makes them available through his/her Web page. The pedagogical strength of this approach lies in the text-specific approach to exploring authentic cultural (textual or images) resources. By pre-selecting and preparing the readings, the instructor tailors the contents and tasks to the students' proficiency level. He/she scaffolds the reading tasks by guiding the learners through the texts. The tasks are designed to support the reader's comprehension process focusing on textual, linguistic and cultural features.

Depending on the text, the reader's background and proficiency level, guided reading instruction, in particular in form of management strategies and comprehension checks, has its pedagogical strength at all levels of instruction. As Cobb and Stevens (1996) point out, "Second language readers may not have automated one or more of the component processes of reading in the second language, such as word decoding and recognition, resulting in working memory overload and diversion of attention away from the construction of a text model. Or, at a higher processing level, readers may not be familiar with semantic or discourse schemata specific to the culture of the second language, so that they have no preactivated scaffolding to help them summarize and organize the details of the incoming text, and quickly face overload" (p.122). Furthermore, in particular at beginning levels, the text-specific approach to reading allows the instructor to support the second language readers in decoding and recognition of vocabulary, for example, by providing specific word glosses and word recognition training. As some scholars argue, glosses, rather than distraction readers, ensure more fluent reading of the selection and enhance comprehension of a text (Davis, 1989; Martínez-Lage, 1997).

The approach to reading instruction in the example above is nothing new, and one might ask the question, what are the actual advantages of the Internet-based reading activities over the reading activities based on authentic printed resources. There are benefits that are unquestionable to both instructors and students, which make such application worthwhile. Reading is a silent process that is best done individually. The learners get to explore authentic reading materials outside of class at their own pace. This frees up classroom time that can be spent more effectively getting students involved in communicative language learning activities. Furthermore, depending on the instructional program design, students' answers may be automatically tallied and forwarded to the instructor. The strongest argument, however, for providing online reading might be that the online environment allows one to take advantage of a vast amount of images and the hypermedia functions to attach text and images to a particular text.

A great deal of research exists that supports the use of images in a variety of ways. For example, visual aids have been found effective as advance organizers, because they help to build background knowledge pertinent to the target text and facilitate the contextualization of what is being read (Omaggio, 1979). Pictorial cues can also increase comprehension of a reading passage, in particular with low proficiency readers (Hudson, 1982). Cultural images can function to enrich a text. They can be used by instructors to

"catch students' attention, capitalize on natural curiosity and encourage student prediction by asking how the illustrations might relate to the text" (Barnett, 1989, p. 117). Furthermore, the use of visual imagery aids allows for providing concrete images of unfamiliar words. Such instructional practices not only support the learning process of new vocabulary (Kellogg & Howe, 1971), but also enhance incidental learning of vocabulary (Chun & Plass, 1996).

In conclusion, depending on text type and reading tasks, this approach lends itself for all levels of instruction. Students' responses to reading tasks are limited by the capacity of authoring packages, which at its best allow for automatic tailoring of true/false, matching, or multi-choice answers. Any open-ended student response that goes beyond one-word answers requires the intervention of an instructor to assess the students' work.

Technological Considerations

The development of reading lessons as demonstrated in this approach may be time consuming and cumbersome. To create such activities, skills and expertise in language pedagogy, instructional design, and some programming are required. The latter may include experience with HTML editors, HTML or Internet-based authoring packages such as Half-Baked Software,² or WebCT. Other technological skills such as the use of scanners and graphic programs are recommended. The use of Internet-based resources may also require copyright clearance in many instances.

APPROACH 2: TEACHER-FACILITATED LESSONS

Pedagogical Perspectives

Internet-based reading activities that have gained most wide-spread attention and popularity among language teachers and students are those in which the instructor provides a set of learning tasks that engage the learners in exploring reading materials in their authentic environments. Based on the example presented in [Appendix B](#), the approach to this type of Internet-reading lessons can be simply described in the following way. The instructor determines a particular topic and set of goals for his lesson, such as exploring German cities, or Mexican restaurants. The teacher prescreens and selects a set of sites to ensure its contents are appropriate for their pedagogical goals. Through a particular task design, the instructor facilitates the students' reading process and guides the learners to explore a variety of pre-selected resources, thus providing a clear goal to be accomplished by the students. Furthermore, the tasks are designed so "they are not so broad that students wander aimlessly through the material yet open enough to provide multiple paths, outcomes, and interpretations, which can form the basis for subsequent classroom interaction" (Furstenberg, 1997, p. 24). In this way, the teacher controls the navigational scope and the number and kind of Internet sites that the students access. Despite the restriction, the learner has some autonomy as the tasks provide the learner a choice in the sites he or she accesses and explores. Task types usually include comparisons, gathering factual information, descriptions, and short summaries. The outcome of the student assignments is clearly defined, but open-ended. The teacher's role can best be described as a guide and facilitator. The students follow the teacher's lead but get to explore the contents themselves.

The approach to integrating Internet-based resources in a foreign language curriculum as outlined above can be supported by many arguments. One major difference between lesson type 1 and 2 above has to do with the degree of control of the reading process, in other words, how the learners are to approach the reading text. Although plenty of arguments speak in favor of a structured and guided approach to decoding a text, ultimately students need to learn this by themselves. There is some evidence that students who rely excessively on instructional help are not learning as much as those who try to solve problems themselves. Pederson (1986), for example, demonstrated differences in cognitive processing between students who had access to help on their reading comprehension to those who did not. "The results indicate that passage-unavailable treatment always resulted in comparatively higher comprehension rate

than occurred in counterpart passage-available treatment regardless of the level of question or level of verbal ability" (p. 39). In other words, "greater benefit was derived from the subjects' being aware that they were required to do all their processing of the text prior to viewing the question" (p. 38; cited in Cobb & Stevens, 1996, p. 133).

The approach to exploring information in a nonlinear (hypermedia) structure on the Web may have additional potential to enhance students' reading skills. Spiro and Jehng (1990), for instance, suggest that the design of hypertexts should be based on a "cognitive flexibility theory," allowing the reader to access information in various sequences and to return to the same place on different occasions, coming from different directions. A central claim of the theory is that revisiting the same material, in rearranged contexts and from different conceptual perspectives, aids in advanced knowledge acquisition" (cited in Chun & Plass, 2000, p. 163). For example, many learners have the tendency to approach and read a text linearly rather than holistically. In this way, they often fail to draw inferences from outside the context as one might be expected to do when reading a text (Cobb & Stevens, 1996). The hypertext organization of information on the Internet that asks them to jump around between texts, may thus help them with the development of more holistic strategies. This structure and the access to immediate information presented by difference sources (e.g., news topics, or newspaper ads) also allows for comparisons of texts, which can teach students to become critical readers (Walz, 2001). As also suggested by the recent National Standards (1999), the objective of foreign language learning should be to teach students how to read critically on their own, especially with the Internet, which often involves independent reading (Walz, 2001).

Above, I have pointed out several arguments in favor of integrating authentic materials from the Web, in particular with regard to the availability of and access to non-linear resources. Yet, the abundance of information and the hypertext and hypermedia environment can be detrimental if not controlled or if little guidance is provided.

Common problems that students may encounter in hypermedia environments as the Web include difficulties in navigation and cognitive overload. The literature provides numerous accounts of students' complaints about Web-based learning activities, including taking too long to accomplish, getting lost, and feeling overwhelmed (M. Bansleben [personal communication], January 30, 2002; Lee, 1998; [Osuna & Meskill, 1998](#)). The potential source of cognitive overload and navigational problems is the structure of the hypermedia environment of the Internet itself. Each time students navigate from one hyper-linked site to the next, they encounter new information within an unfamiliar environment. In addition, there is the burden of the language that requires learner to decode not only the different structure of the information, but the basic vocabulary and syntax of the text itself (Chun & Plass, 2000). When pre-screening and selecting sites and designing exploration tasks, instructors need to pay special attention to the linguistic complexity and cognitive processes involved in processing the instructional materials. As pointed out above, through a clearly focused task design and carefully chosen sites, the instructor can control the navigational scope that helps the learners from getting lost or overwhelmed.

A teacher-facilitated approach has the highest potential, especially with learners at the beginning and intermediate level, or when the exploration of the selected materials no longer requires a close intervention by the instructor to ensure the comprehension process. Furthermore, as the open-ended structure of this type of lesson design makes the students' answers less predictable than in a text-specific approach, the instructor must be prepared for a wide variety of student answers. Therefore, it is recommended that some assessment criteria be in place to indicate how students are evaluated. Being able to estimate and control students' time on task makes this approach well suited for short-term assignments to be integrated in any curriculum at the intermediate level and above.

Technological Considerations

The development and preparation of teacher-facilitated, Internet-based lessons as described in this approach is fairly minimal. The pre-screening and selection process of the Internet sites may constitute the most time-consuming part, which makes knowledge about search engines and how to use them imperative. Usually the Web sites run by the individual American Associations of Language Teachers³ (e.g., the American Association of Teachers of French) list the most popular search engines and a list of resources particular to their languages. As far as technological skills are concerned, however, this makes the approach integrating Internet-based materials the most attractive approach for the intermediate foreign language classroom. Some experience with an HTML editing program is required if instructions and activities are to be provided online, although most word processors allow for the translation of a text file into an HTML document. An alternative strategy to provide instructions and learning tasks online is to make this information available by means of a worksheet.

One of the drawbacks of using authentic sites is that the instructor needs to keep track of the functionality of the links. URL addresses constantly change and sites do disappear. Therefore, it is recommended that alternative sites be provided, in case some sites are no longer accessible.

APPROACH 3: LEARNER-DETERMINED LESSONS

Pedagogical Perspectives

Learner-determined lessons follow an approach to integrating Internet-based resources that is entirely learner-centered. As seen from the examples in [Appendix C](#), the learners determine the topics, reading materials, and the way they go about exploring the readings themselves. They decide on the process and the product, formulate the goals, identify Internet-based resources, and make a decision on how the outcomes should be evaluated. In this way, the students take on the roles of self-directed and autonomous learners, and take full charge and responsibility for their outcomes. The teacher only gets involved in the role of a facilitator offering support and guidance throughout the process as much as necessary. Types of assessment may include teacher-, self-, or group-assessment. Assessment of learner outcomes may be teacher-directed or student-determined. Examples are short writing assignments, essays, or mini-projects or presentations that show the students' analytical and interpretative skills of cultural readings and texts. Students may also document the process and stages of their projects through diaries or maintaining a portfolio.

Internet-based projects can be carried out intensively over a short period of time or extended over a few weeks. Generally speaking, this approach of integrating Internet-based materials lends itself to long-term assignments with intermediate and advanced language learners in the target language. For integration at the beginner's level, the exploration of cultural readings may have to take place in the students' L1.

This approach is based on the theory of project-based learning. Its benefits have been described at various places. For example, Stoller (1997) summarizes some of the pedagogical advantages in the following way:

- 1) Project work focuses on content learning rather than on specific language targets. Real-world subject matter and topics of interest to students can become central to projects.
- 2) Project work is student-centered, though the teacher plays a major role in offering support and guidance throughout the process.
- 3) Project work is cooperative rather than competitive. Students can work on their own, in small groups, or as a class to complete a project, sharing resources, ideas, and expertise along the way.
- 4) Project work leads to the authentic integration of skills and processing of information from varied sources, mirroring real-life tasks.

- 5) Project work culminates in an end product (e.g., an oral presentation, a poster session, a bulletin board display, a report, or a stage performance) that can be shared with others, giving the project a real purpose. The value of the project, however, lies not just in the final product but also in the process of working towards the end point. Thus, project work has both a process and product orientation, and provides students with opportunities to focus on fluency and accuracy at different project-work stages.
- 6) Project work is potentially motivating, stimulating, empowering, and challenging. It usually results in building student confidence, self-esteem, and autonomy as well as improving students' language skills, content learning, and cognitive abilities.

Project-oriented work embraces principles of learning that are promoted by various theories, approaches, and philosophies of learning. For example, project learning is in accordance with the principles of communicative language learning (Omaggio-Hadley, 2001). Students apply their knowledge in real-life situations by exploring authentic materials. The learning activities resemble real-world tasks. The students strive for an end product, whose goal they accomplish by collaborating with their peers in order to ultimately share what they have achieved with others.

Project-oriented work also lies at the heart of autonomy in language learning. As Holec (1981) claims, autonomy is the "ability to take charge of one's learning" which is a skill "to be acquired by 'natural' means or in a systematic, deliberate way." According to Holec, learners alone are responsible for deciding what is to be learned, when, how, in what order, and by what means. It is also their responsibility to set their own goals and measure the degree to which they have been effective in attaining them. In other words, a project-oriented approach provides the passage towards these goals. The students learn about the decision-making process about topics and content, about learning and the management of it (Legutke & Thomas, 1991).

The major strength of this approach lies in its constructivist approach to learning. According to Chun & Plass (2000), "Constructivist approaches to learning advocate allowing learners not only to interact directly with information to be learned, but also to add their own information and construct their own relationships" (p. 160). Learning is seen as a process in which the learner is cognitively involved in seeking answers, making generalizations, and testing the hypotheses they have generated. By taking a major role in planning and negotiating course content, the students become active contributors to their language learning rather than being passive recipients of knowledge.

An Internet-based approach to project learning also lends itself well to the teaching of specific skills required to conduct research. For example, Gaspar (1998) used McKenzie's (1995) "Iterative Research Cycle" consisting of the different stages of the research process with her advanced language students. These stages are

- Questioning -- Decide what information is lacking or what problem needs solving.
- Planning -- Develop a strategy to efficiently locate valid information.
- Gathering -- Locate the best sources, Internet and other, and collect needed information.
- Sifting -- Select from what was found that information most pertinent to the research question.
- Synthesizing -- Sort the information into a meaningful pattern.
- Evaluating -- Assess progress in answering the research question, and if needed, return to the first step in this cycle (cited in Gaspar, 1998, p. 72).

Such an instructional practice underscores and supports the development of higher-order thinking skills like "synthesizing" and "evaluating" which students need when conducting research. As Gaspar (1998) notes, students must be able to sort through the myriad of information available seeking out only that, which is pertinent to the project at hand.

The use of the Internet for research purposes requires a variety of searching skills. It asks for knowledge of different search engines and how they work, such as whether they are case sensitive or not. Furthermore, it assumes the user has some information-seeking skills. Fidel et al. (1999) showed that being somewhat knowledgeable of the topic being searched is necessary for learning how to search the Web, and that being somewhat knowledgeable about Web searching is necessary for exploring new topics. It is often assumed that, because most adolescent learners are familiar with searching the Internet, they know how to do so effectively. Several studies which have investigated students' searching behavior have found that students are often lacking searching skills (Fidel, et al.1999; Nahl & Harada, 1996; Neuman, 1993). In conclusion of their findings, most of these researchers agree and recommend the need for formal training in Web searching, for teachers and students alike. Fidel et al. points to "the need for training beyond the technical competencies required for Web searching, and thus emphasize the importance of integrating information-seeking skills into the curriculum" (p. 34).

The open-ended approach to exploring Internet-based resources requires language learners to have a solid foundation in their language proficiency skills. This makes the project-based approach most appropriate for intermediate and advanced language learners. The exploration of such Internet-based materials or readings is best assigned in stages on a long-term basis. Similar to a teacher-facilitated approach, the open-ended structure of a student's product makes the assessment process subjective and time consuming. Therefore, assessment rubrics are recommended to indicate how a student's product is evaluated.

Technological Considerations

The technological skills required to implement this approach are minimal. If the teacher is to provide guidance to his/her students on searching the Internet, then knowledge about Web browsers, search engines and their effective use are indispensable.

INSTRUCTIONAL GUIDELINES

In the section above, I have provided a pedagogical rationale of three different approaches to using an online environment to explore Internet-based resources. I have discussed pedagogical issues such as the degree of teacher-centeredness, learner control of contents and learning processes, level of proficiency, the scope of Internet resources, and text types that need to guide the design of Internet-based reading lessons and task design (see [Table 1](#) for overview). In the next section, I will conclude with a set of guidelines summarizing those pedagogical and instructional design issues that need to be considered during the planning and development process of any of the three approaches to lesson design.

Table 1. Overview of Pedagogical and Instructional Design Issues

	Teacher -centered approaches						Student -centered approaches		
	1. Teacher-determined			2. Teacher-facilitated			3. Student-determined		
	high	medium	low	high	medium	low	high	medium	low
<i>Pedagogical issues</i>									
Degree of teacher-centeredness	X				X				X
Instructor's control of contents, learning tasks, and processes	X				X				X
Potential anticipation of student answers by instructor	X				X				X
Learner autonomy (contents, Web environment and process)			X		X		X		
Potential use for cooperative learning			X		X		X		
<i>Development</i>									
Degree of pedagogical expertise (development of reading tasks, e.g., comprehension and text management strategies)	X				X				X
Preparation time (e.g., choice of materials, pre-screening materials)	X					X			X
Degree of technological expertise (e.g., HTML programming, Web design)		X				X			X
<i>Preparation of students</i>									
Need for students' level of proficiency in using the Internet (e.g., doing Internet search)			X		X		X		

Teacher-Centered Approaches

This section provides a set of guidelines pointing out pedagogical and instructional design issues that need be taking into account to avoid some of the pitfalls and to make the learning activity a successful experience for the learner.

Does the design of your reading lesson justify the use of its medium, that is, do the learning tasks take full advantage of the potential of the medium?

Needless to say, asking students to fulfill learning tasks online should entail pedagogical advantages to the learner and the instructor. Otherwise, it may be difficult to justify the development time and potential challenges that are involved in using this medium. The decision of having student do Internet-based activities should be based on a clear rationale that justifies its use. For example, are students to explore at least two or three different sites and/or multimedia resources. Do students have a choice in selecting the content? If a print out of an Internet-based resource can be made and used in the classroom, sending students online may not be the best instructional practice.

Are the reading materials and learning tasks appropriate for the students' level of proficiency?

As Walz (2001) reminds us, "To make the critical reading of authentic texts from the Internet feasible for students at the lower levels of proficiency, independent readings as well as those with pedagogical

support must have tasks aimed at the reader's level" (p. 1202). As a general guideline, text type, reading tasks and the learner's level of proficiency are criteria that need to be taken into account in the approach to and choice of contents of Internet-based reading resources.

Do the activities engage the learners in real-world and meaningful tasks as well as in a variety of skills (e.g., communicative, reading, cultural explorations, writing)?

As pointed out above in Osuna and Meskill's (1998) study, students feel more engaged when the purpose of their tasks simulate real-world tasks. The exploration for any available multimedia resources should also have a purpose and be associated with a meaningful task. For example, instead of having students provide general descriptions of images or photos, asking them to identify specific cultural aspects and compare them to their own cultural background makes a task more purposeful and focused, and thus enhances their awareness and understanding of cultural differences.

How do students demonstrate what they have learned?

There are many instructional practices to assess what students have learned. Traditional examples include true-false types, matching, comprehension questions, filling in charts, summaries, comparisons, reactions to the texts, comments, and so forth. By and large, they depend on the approach, the type of materials and texts, and the students' level of proficiency. Furthermore, as the use of the open-ended structure of the Internet lends itself in particular well to make use of authentic exploratory tasks, the students' assessment can be based on the degree and quality of the fulfillment of these tasks. Examples may include a presentation of an end product, such as a report, a description of an itinerary, a food menu, and a prepared meal. The presentations can also be easily integrated into the classroom. In this way, students can exchange and compare information with each other, while getting engaged in the application of oral communicative skills. At the same time, this allows the teacher to further clarify or follow up on linguistic and cultural issues.

Are all the instructions clearly stated?

Not only is it easy to get lost, but also stuck in a hypertext environment. This often has to do with lack of instructions or dysfunctional hyperlinks that one encounters when surfing the Internet. Therefore, precise instructions are necessary on how to navigate or what navigational path to take when exploring Internet sites. Ask yourself, when students navigate between sites, do they know what to do and how to return to your home page? Are precise instructions or examples provided, online or on a worksheet, telling students what to do?

Are all the hyper links functional?

URL addresses change and sites often disappear. One strategy to guarantee functionality is to thoroughly test your own lesson making sure all URL addresses are correctly stated and the sites and links work when you access them. Another strategy is to provide alternative sites, in case some sites are no longer available.

Student-Centered Approaches

Are your students prepared to do project-oriented work?

Provide clear guidelines to your students on the process and nature of project-oriented work. You may allow your students to select their own topic, materials, end product, and form of assessment. This does not mean that the instructor becomes redundant. On the contrary, the teacher plays an important role, that of a guide and coach. At the same time, the students may be required to follow a certain timeline and other stipulations built into the projects. That means, students need to know when it is important to consult with their teacher. They need to have a clear understanding of the procedures and any rules.

Are your students familiar with the process on how to conduct research?

The preparation phase for project learning may also include information on the process of conducting research. As suggested by Gaspar (1998), a useful model to teach might be McKenzie's "Iterative Research Cycle" consisting of questioning, planning, gathering, sifting, synthesizing, and evaluating. Despite the open-ended nature and student-centered approach, it most likely is necessary to provide examples and models of student projects to demonstrate on how to go about planning and conducting projects that result in entirely different end products.

Do the students know how to search the Internet?

Internet-based project learning involves gathering and identifying information. This requires knowledge about how to use search engines. Most students are familiar with the basics of using Web browser (e.g., Internet Explorer or Netscape) search engines. In the last few years, however, search engines have become more sophisticated allowing searches to be specified, for example, based on foreign languages or multimedia contents. Students may require additional training in the use of such features as well as information-seeking skills in general.

CONCLUSION

At the beginning of this article, I raised the question regarding the design of reading-based learning activities for Web-based environments that differ from the design of text-based or multimedia stand-alone systems. In response, I have presented three different approaches to lesson design that engage foreign language learners in developing reading skills by exploring authentic Internet-based materials. None of these examples is absolute, that is to say, different variations of lessons may fall at different places along a continuum from being teacher-determined or -facilitated to student-determined. They may vary in areas such as the choice of the learning materials, the scope of the learning environment, the learning process, and the degree of teacher guidance. In this sense, the sample lessons provide teachers with general direction in the design process.

There is no doubt, the vast amount of authentic resources on the Internet provides learners an opportunity to immerse themselves in a plethora of cultural readings. Yet, to make the integration of WWW-based activities a successful learning experience, it requires effective organization and presentation of that information. The use of the WWW for delivery of reading instruction or the integration of Internet-based readings needs to go beyond what the teacher can offer in the classroom to justify its use. The decision, whether and how to use it, must be based on a clear pedagogical rationale, while technological and developmental issues need to be carefully considered.

APPENDIX A. SAMPLE OF TEACHER-DETERMINED LESSON⁴

(clicking on an image links you to a translation)



You are going to read about work and leisure in Germany. Then do Aufgaben 1-3.
 1. Find the appropriate meanings of German key words.
 2. Read a text and determine if statements based on this text are true or false.
 3. Analyze two diagrams.
 Hand the print-out to your instructor.

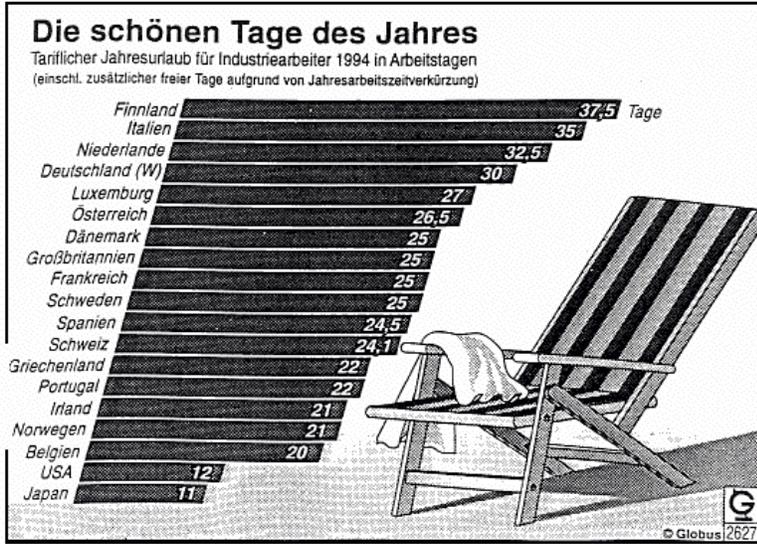
Arbeit und Freizeit

Aufgabe 1. Was bedeuten die folgenden Wörter? Sehen Sie in Ihrem Wörterbuch nach.

Aufgabe 2. Lesen Sie den folgenden Text und machen Sie dann die Übung.

<p>Interview mit Otto Müller.</p> <p>Frage: Und nun eine Frage zum Thema Arbeit. Bei uns sagt man: "Die Deutschen arbeiten viel." Stimmt das?</p> <p>Müller: Teils - teils. Die Arbeitsleistung ist zwar ständig gestiegen, aber die Arbeitszeit ist in den letzten Jahren immer mehr zurück- gegangen. Ein Achtstundentag und die 40-Stunden-Woche sind überall normal. Man arbeitet sogar schon weniger als vierzig Stunden. Ja, die Gewerkschaften fordern sogar noch weitere Arbeitszeitverkürzungen.</p> <p>Frage: Interessant! Und wie sieht es mit dem Urlaub aus?</p> <p>Müller: Der beträgt heute durchschnittlich sechs Wochen. Dazu kommen noch die gesetzlichen Feiertage. Und davon haben wir mehr als andere Länder.</p> <p>Frage: Ach, dann arbeiten die Deutschen ja gar nicht so viel!</p> <p>Müller: Für die Arbeitszeit ist das sicher richtig. International gesehen arbeiten wir sogar weniger als andere. Bei uns hat sich die Einstellung zur Arbeit verändert. Viele Deutsche sehen in der Arbeit nicht mehr den einzigen Sinn des Lebens.</p>	<p>work output, increased</p> <p>less than unions, demand</p> <p>on an average, added to that, legal</p> <p>attitude changed only purpose</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------





[FrontPage Save Results Component]

Name

Aufgabe 1. Was bedeuten die folgenden Wörter? Sehen Sie in Ihrem Wörterbuch nach.

die Freizeit	<input type="text"/>
der Urlaub	<input type="text"/>
die Ferien	<input type="text"/>
der Feiertag	<input type="text"/>
der Feierabend	<input type="text"/>

Aufgabe 2: Sie lesen den Text. Sind die folgenden Sätze richtig oder falsch?

	richtig	falsch
1. Die Deutschen arbeiten immer weniger.	<input type="checkbox"/>	<input type="checkbox"/>
2. Sie arbeiten 40 Stunden in der Woche.	<input type="checkbox"/>	<input type="checkbox"/>
3. Sie haben sechs Wochen Urlaub	<input type="checkbox"/>	<input type="checkbox"/>
4. Die Feiertage sind aber schon ein Teil von dem Urlaub.	<input type="checkbox"/>	<input type="checkbox"/>
5. In Deutschland arbeitet man weniger als in anderen Ländern	<input type="checkbox"/>	<input type="checkbox"/>
6. Die Deutschen leben, um zu (in order to) arbeiten.	<input type="checkbox"/>	<input type="checkbox"/>

Aufgabe 3: Wie viele Stunden arbeiten die Menschen? Wie lange haben sie Ferien? Sehen Sie sich die Bilder an. Vergleichen Sie die Situation in den USA und in Deutschland. Schreiben Sie einen Absatz (paragraph) auf englisch.

Reset

TRANSLATION OF ITEMS IN APPENDIX A

You are going to read about work and leisure in Germany.
Then do tasks 1-3.

1. Find the appropriate meanings of German key words.
2. Read a text and determine if statements based on this text are true or false.
3. Analyze two diagrams.

Hand the print-out to your instructor.

Work and Leisure

Task 1: What do the following words mean? Look up the words in your dictionary (see contents of bottom half of split screen below).

Task 2: Read the following text and then do the exercise.

Interview with Otto Müller:

Question: Let me ask you a question regarding the topic of work. It is said: "The Germans work a lot." Is this true?

Müller: Yes and no. The *work output* has been continuously *increasing*, whereas the working hours have been getting fewer in the last few years. An eight-hour day and a forty-hour week are normal everywhere. Some work even less than 40 hours. Yes, the *unions* ask for even more reductions of work.

Question: Interesting. And, what about vacation?

Müller: Vacation consists on an average of six weeks. In addition, there are state holidays. And we have more of these than other countries.

Question: Well, then the Germans don't work so much.

Müller: Regarding work hours, this is correct. From an international point of view, we work less than other countries. Our *attitude* towards work has *changed*. Many Germans do not consider work the only purpose of life.

NOTE: *Italicized words* are glossed in the German text.

Task 1: What do the following words mean? Look them up in your dictionary.

Leisure time; vacation; school holiday; holiday; closing time (time to stop work)

Task 2: You are reading the text. Are the following statements true or false?

- | | | |
|---------------------------------------------------------|------|-------|
| 1. The Germans keep working less. | True | False |
| 2. They work 40 hours per week. | True | False |
| 3. They have six weeks of vacation. | True | False |
| 4. The holidays are part of their vacation. | True | False |
| 5. People work less in Germany than in other countries. | True | False |
| 6. Germans live to work. | True | False |

Task 3: **How many hours do the people work? How long is their vacation? Look at the pictures. Compare the situation in Germany with the USA. Write a short paragraph in English.**

APPENDIX B. SAMPLE OF TEACHER-FACILITATED LESSONS

(clicking on "hot" text links you to a translation)

Example 1: La Comida Mexicana⁵**Part one:**

In pairs, explore the following site of the restaurant Danubio in Mexico. Look at the menu card (click on **carta**) and answer the following questions. **Note:** *Try to speak only Spanish as you navigate the sights and answer the questions with your partner. You have about 10 minutes to complete this task.*

- 1) ¿Cuánta cuesta el helado en el restaurante Danubio? _____
- 2) ¿Cuánta cuesta el postre más barato? ¿Cuánta cuesta el postre más caro? _____
- 3) ¿Qué son las horas del restaurante Danubio? _____
- 4) ¿Puedes tomar un capuchino en el Restaurante Danubio? _____

Now visit Retablo, another restaurant in Mexico and see what kind of food is served there. Click on **Menu** to access the menu card.

- 1) ¿Qué son las horas del restaurante del Retablo? _____
- 2) En la carta de El Retablo, ¿hay "seafood"? ¿Sí o no? ¿Qué palabra usa aquí para "seafood"? _____
- 3) ¿Cuánta cuesta el postre más barato? ¿Cuánta cuesta el postre más caro? _____

***Part two* Actividad: "Vamos a comer"**

Están en vacaciones en México y tú y tu amigo/a solamente tienen dinero para una sola cena afuera. Tienen que comparar los precios de los dos restaurantes y decidir si van a comer en el D. F. esta semana o en Chihuahua la semana que viene. Probablemente van a comer el sábado, a las nueve o diez de la noche.

Tu amigo/a quiere comer sopa, pescado y un postre. También siempre quiere tomar un refresco y un café. Es necesario que el o ella coma y tome estas cosas. Tú puedes comer lo que quieras pero tienes hambre también!

Juntos Uds. tienen 210 pesos. Ya gastaron todo tu dinero.

Recuerden que hay que dejar una propina también. ¿Qué van a comer y tomar? Hay varias opciones pero tienen que planear y escoger el restaurante más barato, y la comida menos cara para que los dos puedan comer ¿no?

Escriben la comida y los refrescos que quieren debajo.

COMIDA (Danubio) _____

COMIDA (Retablo) _____

REFRESCOS (Danubio) (ej. Refresco = \$10.00) _____

REFRESCOS (Retablo) _____

¿Es posible comer en El Danubio con \$210 pesos? Sí No

¿En el Retablo? Sí No

¿Cuál de los dos prefieren Uds.? ¿Por qué? _____

Example 2: Exploring German Cities⁶

Visit one of the following cities and fill out the chart below. Be prepared to share your findings with other students of your group. When finished, print out your answers. Use the back button of your browser to move back and forth between the city homepage and this activity.

- A. Berlin
- B. Dresden
- C. Hamburg
- D. Leipzig
- E. München

Die Stadt _____	Vorteile	Nachteile
Sehenswürdigkeiten (Museen, usw.)		
Klima/Wetter		
Sport/Fitness/Freizeit		
Einkaufen (wo?, was?)		
Hotels/andere Unterkünfte (wie teuer?, wo?)		
Zahl der Bevölkerung		
Verkehrsmittel (welche?, wie teuer?)		
Unterhaltung (Kino, Karneval, usw.)		
Restaurants/Gaststätten (welche?, wie teuer?, wie viele?, was kann man da essen?)		

TRANSLATION OF ITEMS IN APPENDIX B**The Mexican Meal****Part one**

In pairs, explore the following site of the restaurant Danubio in Mexico. Look at the menu card (click on **carta**) and answer the following questions. ****Note: Try to speak only Spanish as you navigate the sights and answer the questions with your partner.**** You have about 10 minutes to complete this task.

- 1) How much does ice cream cost in the restaurant Danubio? _____
- 2) How much does the cheapest dessert cost? How much is the most expensive? _____
- 3) When is the restaurant open? _____
- 4) Do they have cappuccino on the menu? _____

Now visit Retablo, another restaurant in Mexico and see what kind of food is served there. Click on **Menu** to access the menu card.

- 1) When is the restaurant open? _____
- 2) Do they serve "seafood"? If yes, what word do they use for "seafood"? _____
- 3) How much does the cheapest dessert cost? How much is the most expensive? _____

***Part two* ACTIVIDAD: "VAMOS A COMER"**

You are on vacation in Mexico, and you and your friend have enough money to go out for dinner for only one meal. You need to compare the prices of the two restaurants and decide if you are going to eat out in

D.F. this week or in Chihuahua the following week. Probably you will go out to eat on Saturday night at 9 or 10 in the evening.]

Your friend wants to eat soup, fish and dessert. You also want to have a soft drink or coffee. It is necessary that he or she eats and drinks these things. You can eat whatever you want, but you are also hungry.

Together you have 210 pesos. You already spent all your money.

Remember that you need to leave a tip as well. What are you going to eat and drink? There are a variety options, but you need to plan and select the cheapest restaurant, and the least expensive meal so both of you can eat.

Below, describe the meal and drinks that you want.

meal (Danubio) _____

meal (Retablo) _____

drinks (Danubio) (e.g. drink = \$10.00) _____

drinks (Retablo) _____

Is it possible to eat with \$210 pesos in the restaurant El Danubio? Yes No

Is it possible to eat with \$210 pesos in the restaurant Retablo? Yes No

Which of the two do you prefer? Why? _____

Example 2: Exploring German Cities

Visit one of the following cities and fill out the chart below. Be prepared to share your findings with other students of your group. When finished, print out your answers. Use the back button of your browser to move back and forth between the city homepage and this activity.

- A. Berlin
- B. Dresden
- C. Hamburg
- D. Leipzig
- E. München

City _____	advantages	disadvantages
sightseeing (museums, etc.)		
climate/weather		
sports, leisure time		
shopping (where?, what?)		
hotels, other accommodations, price, location		
size of population		
transportation (kind, and how expensive)		
entertainment (movie theaters, etc.)		
restaurants (kind, how expensive, how many, what can you eat there?)		

APPENDIX C. SAMPLE OF LEARNER-DETERMINED PROJECTS

The following examples and short descriptions of student projects are adapted from Christine Gaspar (1998, p. 73). Following the principles of project-oriented learning, students make their own choices of the end product. Thus, the examples of student projects demonstrate the exploration of Internet-based resources including text-based and multimedia information.

The subsequent 7-minute presentations (with 3 minutes allowed for questions) were as diverse as the students themselves and ranged from

- a simulated tour of the Loire Valley chateaux;
- a report on the political platforms of prominent French politicians;
- a presentation of the Roland Garros tennis championship (known in the U.S. as the French Open) including an up-to-the minute posting of each player's standing and information on the day's matches;
- a description of the various geographical regions of France; to
- a multi-media extravaganza treating the life and music of the Canadian singer, Céline Dion.

The incorporation of multi-media accompaniments elicited much enthusiasm on the part of both the presenters and their audience. For instance, the presentation of the Roland Garros tennis tournament was enhanced by images of the courts, the players, and their latest tournament standing, all of which were downloaded right before class from the Internet. With regard to the presentation on the singer, Céline Dion, the class was treated to a Powerpoint demonstration that assembled -- in a visually appealing manner -- information including the life of the singer, a discography, and a vocabulary list of musical terms (which was followed by a short in-class quiz!). Nevertheless, even though sound files of Dion's songs were in fact available on the Net, the presenters chose instead to work from a tape player for better volume.

In another advanced-level course, the members of the class tracked the daily developments in the 1995 French presidential campaign. Students successfully assembled and presented biographical information and sketches of each candidate's professional life, the main concerns of the constituencies, and the latest statistical data and interpretations gleaned from the various media, including daily satellite viewings of French news broadcasts. Much valuable information came from the Internet and included not only textual and visual materials, but also one-on-one participation in discussion groups with French voters.

NOTES

1. There are many other ways of using the WWW as well, such as for synchronous or asynchronous communication and delivery of audio and video-based materials. Until limitations on interactivity and bandwidth have improved, such applications will not become common practice in the standard language classroom.
2. *Half-Baked Software* (1999) is produced by M. Holmes and S. Arnell at the University of Victoria.
3. Internet resources promoted through the AATs can be found on the following Web sites: [American Association of Teachers of French](#), [American Association of Teachers of German](#), and [American Association of Teachers of Spanish & Portuguese](#).
4. Source -- M. Bansleben, Department of Germanics, University of Washington.
5. This lesson was designed by Sharon O'Keefe as part of her class project in TEP 589 at the University of Washington in 1998.
6. This lesson was designed by Donna Hood as part of her class project in TEP 589 at the University of Washington in 1998.

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