"'You've got mail!' It's Time to Start Grading!"

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The most effective learning environments meld traditional approaches and new approaches to facilitate learning of relevant content while addressing individual needs (National Educational Technology Standards for Students [NETSS] 2000: 5).

Technology as a Tool

In 2000, the International Society for Technology in Education (ISTE) released its ***National Educational Technology Standards for Students: Connecting Curriculum and Technology***. The impetus for the creation of these standards lies in the challenge that faces America's schools today: empowering children to function effectively in their future, "a future marked increasingly with change, information growth, and evolving technologies" (NETSS 2000: xi). Technology is recognized as a powerful tool with enormous potential to move us away from outdated educational systems to new systems that can provide learning opportunities for all. Although these technology standards are ostensibly written for PreK-12 levels, they are and should be equally relevant for and applicable to post-secondary level students and teachers.

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More daunting is the fact that if such standards are written for students, then teachers, too, must have a similar set of standards. Teachers are, after all, the mentors and role models for their students, and if students are expected to have to meet certain educational standards, so too must teachers. Such standards for teachers are now in place in many states. In early 2000, I completed and published a survey of all 50 states in which were included responses to the basic research question: Does your state require technology competencies for teachers for licensure or certification, regardless of the discipline taught?

Changing Times and New Learning Environments

Times have indeed changed, and continue to change. So has teaching. So have students. So have learning environments. Those educators who find themselves left behind in the dust are not quick to embrace (maybe simply to adapt to) change - whether this change is directed toward the teacher or toward the student. This hesitancy to be moved away from traditional practices (the move often seems more like being uprooted!) is understandable. Moving from a known to an unknown is often unsettling. The "known" is tradition: we have done it that way for many years and it seems to work.

Seems to? We cling to traditional teaching methods because, well ... just because. We have materials already prepared. Anything new will call for more preparation and more time. Are we convinced that this tradition has really been all that effective? Let's step back and look at traditional learning environments so that we might have a better perspective and relevant points of comparison for our subsequent examination of new learning environments. Here are some essential characteristics of our rooted traditions. Traditional learning environments ...

1. focus primarily on teacher-centered instruction;
2. appeal to single-sense stimulation;
3. involve a single-path progression;
4. use a single medium;
5. call for isolated work;
6. are essentially information delivery;
7. call for passive learning;
8. often focus on factual, knowledge-based learning;
9. call for reactive responses;
10. frequently appear in isolated, artificial contexts. (NETSS 2000:5)

Louis L'Amour, the famous writer of western stories, made the following astute observation:

> Men have never readily accepted new ideas. Our schools and general thinking are cluttered with beliefs long proved absurd by contemporary knowledge. Man has demonstrated over and over again that the last thing he wants is new ideas, even when they are desperately needed. Ideas are welcomed as long as they do not contradict theories on which scholarly reputations have been erected (1987: 175).

As the opening quotation states, however, "a truly effective

learning environment melds traditional approaches ***and*** [emphasis added] new approaches to facilitate learning ... while addressing individual needs" (NETSS 2000:5) There are occasions in which the traditional approach to learning is appropriate. Wilga Rivers refers to ***skill-getting*** and ***skill-using***: the former for presenting new information to the learner, the latter for affording realistic practice in communication (Rivers ***1975, 4-5***). The presentation of new material often calls for mechanical drill and practice that involves discrete-point activities (including quizzes), often referred to as "drill and kill;" for the teacher's introducing new concepts to the learners; for correction when errors are made to ensure learning what is appropriate and accurate from the outset. Let's ***not*** throw out the proverbial baby with the bath water.

"The integration of technology into teaching - in this case, into language teaching and learning in particular - provides a basic floor plan for new learning environments."

New learning environments, on the other hand, present us with many viable alternatives to tradition, because they

1. call for student-centered instruction;
2. take advantage of multisensory stimulation;
3. involve a multipath progression;
4. use multimedia;
5. engage students in collaborative work;
6. call for information exchange;
7. encourage active, exploratory, inquiry-based learn ing;
8. often require critical thinking and informed deci sion-making;
9. elicit proactive, planned action;
10. use authentic, real-world contexts (NETSS 2000: 5).

The integration of technology into teaching - in this case, into language teaching and learning in particular - provides a basic floor plan for new learning environments. Gilbert (2001: 28) asserts that the rapid doubling of the capacity of the microchip and the concomitant development of computer power help explain why educators "continue to live with an unending stream of attractive new technology options, which arrive faster than they can understand, evaluate, or assimilate - faster than their institutions can change." We might also add - faster than educators themselves can or are willing to change.

Stimuli for and Sources of the Project

Beginning in the fall semester of 1999, my colleagues in French and I began using a newly adopted textbook for our intermediate-level French course. One slight drawback to the text and

its ancillaries was the fact that the answers to written exercises appear in the back of the student workbook. This built-in "crib sheet" clearly obviated our using the workbook for homework practice and grades. For my own section of Intermediate French, I began to investigate other ways to encourage students to do their homework. The incentive of receiving grades on their homework should encourage students, because (1) homework can be done with the *textbook open;* (2) it should be relatively easy to get a good grade on essentially mechanical exercises; (3) they take written homework much more seriously than they do assignments like "Look over the next part of the chapter for tomorrow." If homework is to be written down, chances are it is to be handed in... and graded! So, this provided the "necessity stimulus" for the project.

Homework is a proven educational tool that encourages students to think about course material outside of the classroom. The Web is an effective mechanism for collecting homework and communicating with students. It is very common and effective for teachers to use homework to assign grades, monitor progress and to assess student understanding of course material.

Homework is also an important part of the feedback loop between teacher and students. Constructive comments on homework assignments provide students with feedback that forms the basis for additional learning opportunities (Braught et al. 1998, 49).

An article in *Syllabus: New Directions in Education Technology,* containing the quotation above, provided the germ of the source idea for the project. In the October 1998 issue of *Syllabus*, there appeared an article by Grant W. Braught, Priscilla W. Laws, and David Ward, all of Dickinson College, Carlisle, PA. The article is entitled "Collecting Homework on the Web." In their prototype project, Braught et al. had posted homework assignments for on-line physics homework assignments. Their homework system involved the use of CGI scripts, Javascript programs, and HTML pages to create and distribute homework assignments to various physics classes. The assignments included multiple-choice, short answer, and essay-type questions. Students retrieved their assignments, submitted the completed work, and viewed the results of previous assignments through individual, password protected course Web pages. Students had access to their grades, the instructor's answers, and comments from the grader. Grading could be performed

automatically for multiple-choice items (Braught et al. 1998: 50). I communicated with Braught by e-mail, seeking answers, suggestions, and guidance as I began to create my own version of Web-based homework.

In a subsequent e-mail message, Braught (1998) cautioned:

> I would suggest that you take a look at the programs that are commercially available to see if they will meet your needs before embarking on a project that has you developing both the software and the content! Many of the packages will allow you to do, to varying degrees, the things that we talk about in the article (none of the commercial packages are as focused on those uses as ours - but they have the advantage of being available now). Many of these systems (ours included) allow you to create the assignments by filling in Web-based forms - eliminating the need to know/learn HTML, JavaScript, or CGI programming.

Just what were the resources available to me at the time? I had examined in some detail the program called Hot Potatoes from the University of British Columbia. This software allows the user to create a series of exercises that include multiple-choice and cloze formats. The user can change the language in which the instructions appear (English is the default). The various software components of the program will give the student not only the correct answer to any missed item but also the student's score on that particular exercise/activity.

This was not exactly what I was looking for. In foreign language courses and activities, pure discrete-point items, i.e., items that have only one right answer, cannot account for the variety of responses that students often submit. I did not want to offer my students additional practice in the language for outside of the classroom. I did not particularly want automatic scoring since the score, in the case of Hot Potatoes, is tied to the "one right answer." Programs such as WebCT, WebBoard, and Blackboard offered much more than I was looking for, and in several cases, the learning curve was incredibly steep. I simply wanted a basic level of interactive work between teacher and student.

The system that offered the most flexibility, not only in the format of the homework assignment itself, but in the types of exercises that could be used, was available in FormMail, a

software program produced by Matt's Script Archive and available through the university's Information Services.

So, by coupling FormMail with a basic HTML program, it was relatively simple to create on-line homework tailored to fit a particular course.

Form-Based Exercises

The on-line homework project began in the spring semester of 1999 in an intermediate-level French class of 20 students. After learning the code needed to invoke FormMail -- a very simple program -- I began creating homework exercises modeled on similar exercises found in the students' lab manual/writing workbook. The homework pages were created using Adobe PageMill 3.0, which permits the creation of forms that include text areas (allowing multi-line responses); text fields (allowing one-line responses); pop-up fields (for choosing an answer from a series of suggested responses); radio buttons, and checkboxes, neither of which have been used to this point; a "submit" button (renamed ***Envoyez*** = "send") and a "reset" button (renamed ***Refaire*** = "redo"). The background image represents a legal pad: yellow background with blue horizontal lines and a double red line near the left margin. Each form, i.e., each homework activity, includes two obligatory fields: the student's name and the student's e-mail address. If either is left blank, the form will not be sent when the "Submit" button is clicked. These two fields are obligatory since they provide the instructor and FormMail vital information: the name of the person submitting the homework and that person's e-mail address, the latter used to reply (to correct, grade, and send back) to the author of the homework. (See Figure 1.)

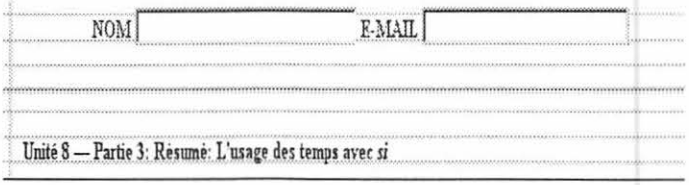


Figure 1. Required Fields.

The Bottom Line

The basic premise behind the creation of form-based homework was to offer students additional practice in the manipulation and use of structures and vocabulary studied in class. Through a variety of practice opportunities that address different media and different learning styles and multiple intelligences - paper-and-pencil work, e-mail, review of the

textbook; interpersonal, intrapersonal, verbal-linguistic, visual-spatial, logical-mathematical - this work should reinforce, if not increase, learning.[2] Students are encouraged to (1) review the subject matter studied in class that day, using their textbooks and class notes; (2) prepare the homework in the lab manual/workbook for exercises relevant to the subject matter studied [answers were available in the back of the workbook for immediate verification]; and (3) prepare the form-based homework that was to be submitted for correcting and grading.

Logistical Problems

"The basic premise behind the creation of form-based homework was to offer students additional practice in the manipulation and use of structures and vocabulary studied in class. Through a variety of practice opportunities that address different media and different learning styles and multiple intelligences - paper-and-pencil work, e-mail, review of the textbook; interpersonal, intrapersonal, verbal-linguistic, visual-spatial, logical-mathematical - this work should reinforce, if not increase, learning."

The original plan was to create at least one form-based homework activity for each grammar point discussed in the textbook. This listing of activities was to be posted on my Web page and accessed through a link from the on-line syllabus for that particular course (French 221). This would have proved to be quite unwieldy since each homework activity would require a separate Web page. Furthermore, and more importantly, there would be no control over when students would have access to any particular homework assignment or submit it. As a result, I added the following note to the course syllabus:

> *Note*: You must check your E-mail and my homepage daily - most of your homework will be submitted electronically and ***not*** on paper. Your homework assignments will be announced in class. Immediately after assignments are announced, I will post those exercises on my homepage. The homework exercises will be available ***only until the next class day***. The links to the homework will be removed shortly before the beginning of class on the day those assignments are due, and there will be no further opportunities for you to access them. It is ***strongly recommended*** that you print off a hard copy of your homework before you submit it. In this way, you will have a copy of the exercises and can verify the corrections when the graded homework is returned to you by E-mail.

It was then much simpler to add a table to the syllabus page for French 221 that included the location in the textbook of the particular chapter and section and the name of the exercise(s) that was/were assigned for the next class meeting and a direct link to those particular exercises. This format further allowed me total control over access to the homework and did not allow students the opportunity to "go browsing" through all of the homework assignments.

How to Keep Track of Student Homework

With the potential number of homework activities that would be received from each student and from the entire class [the very first on-line homework consisted of three exercises, each with 10 items, for a class of 21 students. I received 63 separate e-mail messages within 24 hours!], I first created a filter in my e-mail program (Eudora Pro). This filter then routed all incoming messages that contained "WWW Form Submission" in the Subject line to a mailbox named ***221 Homework***, thereby separating these homework assignments from other more routine e-mail.

Due to the sheer number of exercises, I created a page in a spreadsheet (QuattroPro), on which I record the grades for each homework assignment. Spreadsheets such as QuattroPro or Excel can be set up to automatically calculate the average score for each student.

Correction of Homework

Since many e-mail users do not have the ability to use stylized text (different fonts, pitch size, colors, different font characteristics - bold, underline, italics) an alternative means of correction had to be devised. When there is an error in a response, I use a 3-m rule (-) to indicate that anything to the right side of it indicates a correction for an error. Alternate answers can be put in parentheses. If there are several errors in the response, depending on the length of the response itself, the corrected text is simply retyped or individual words can be corrected and separated by diagonal slashes (/):

1. As-tu envoyé une lettre à tes parents récemment? [Have you sent a letter to your parents recently?]

Student Response: Oui, je la lui ai envoyée récemment - leur / en / ai envoyé ....

Upon receipt of a student's homework assignment, I reply to the message, and delete the first few lines of the original message (those lines that include the date and time). After making corrections as indicated above, I delete the last few lines on the page, leaving a dotted line under the last item in the assignment, below which I write the French word for "grade" (***note***) and the student's grade.

Students are encouraged to print off a copy of their homework that they are going to submit before they click on the "Submit" button (which I have relabeled ***Envoyez*** ("send")). This is important, since the corrections they receive contain only the

answers they submitted; the original stimulus sentence does not appear. This is to assure that the corrections that are made will, in turn, make sense to them.

As a final note on correction, it is of utmost importance that accuracy in spelling be taken into consideration. This includes the appropriate and correct use of accents and foreign characters.[3]

The Form of the Homework

Most of the homework assignments use text fields in which students write their responses, in the form of individual words or expressions or in complete sentences. Certain exercises include a table that contains some of the information for the context of the exercise. Some exercises use text areas that allow for lengthier responses. And several of the exercises include graphics. As we know, however, the overuse of graphics or extremely large graphics can seriously slow down the loading process, especially if the student is using a computer with a modem instead of a direct network connection. When students print off the completed homework in order to maintain a copy of the stimulus on which the activity is based, the background does not print.

What is the Instructor's Role?

There are multiple tasks that exist when such a homework system is set up for the first time. These tasks entail the creation of valid, meaningful drills: drills that work, both for the students and on the Web. (See Appendix A for a sample of on-line homework assignments that utilize a variety of formats.)

There is also an enormous amount of information that must be monitored, including the following:

- making an assignment and remembering the day on which it is due;
- making changes on the homepage to reflect the new assignment;
- activating and deactivating the appropriate links for assignments at the appropriate time. [NB: All exercises are already uploaded to the instructor's Web page; the links just need to be activated for the necessary homework assignments.]
- creating, reviewing, and revising exercises to keep them current, i.e., when the exercises are personalized

incorporating the names of students in the class for that semester;

- assuring that the language used in the exercises is correct and appropriate;
- making certain that corrections of student work are made appropriately and quickly, and that the grade for the homework is entered into the spreadsheet before the corrections are sent back to the student.

The turn-around time for correcting the assignments is of utmost importance - Students are given basically 24 hours in which to complete and submit their homework. The instructor should correct and grade the homework and return it to the sender just as quickly.

What Have Been the Results of Form-based Homework?

There are the inevitable computer complaints - "my hard drive ate my homework," "the server was down," "I didn't have access to my e-mail," etc. "Every time I click on the ***Envoyez*** ["send"] button, my homework was erased. I had to do it five times!!!" Students often hit the ***Envoyez*** button by mistake and send incomplete homework assignments - assignments that are graded and returned, only to find out that yet another copy/ version has been submitted. Students requested that the "redo" button (***Refaire***) be eliminated since they often hit it by mistake and erased their homework.

One key logistical problem is to remind students to make certain they have access to the most recent assignment,. They must clear the cache in their Web browserby clicking on "Refresh" in Internet Explorer and on "Reload" in Netscape Navigator; if not, they will continue to see old homework assignments.

Student Survey

A survey has now been given to two separate classes - the first class who experimented with form-based homework in 1998 and a similar class in the spring semester of 2001. The results and comments are quite interesting, and revealing. In fact, there is no significant difference between the responses of the students in the first group that used form-based homework and the Spring semester 2001 students' responses.

Fifteen of the questions on this survey used a Likert scale, with 1 = Completely disagree, 3 = Neutral, and 5 = Completely agree. These questions addressed four topics: page design, effectiveness of Web-based homework, general questions, and comments and recommendations. The results for each of these sections are discussed below.

Page Design

The four questions asked about page design were

1. The homework pages are easy to read.
2. It is easy to fill in the forms.
3. The background of the forms does not hinder my reading of the assignment.
4. The page layout does not slow down my completion of the assignments.

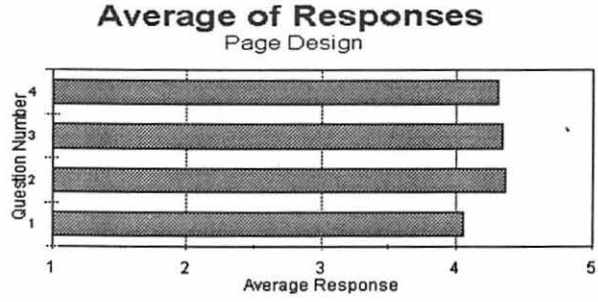


Figure 2. Average of Responses: Page Design

As can be noted, students (N = 36) are unanimous in their evaluation of the page design and layout. The legal pad background is not distracting and on-line reading is not considered difficult or an interference. Question 5 was a free response question and is therefore not included here.

Effectiveness of Web-based Homework

The next five questions involved the students' reaction to completing their homework assignments using Web-based homework vs. using the traditional lab manual/workbook ... or a combination of both. As mentioned earlier, since the answers to the lab manual/workbook are provided in the back of that manual, homework was neither made in the workbook nor collected and graded. Web-based homework, then, afforded the students additional assistance in learning the materials presented in the textbook, drilled on language tapes, practiced using in-class drills, and "rehearsed" in the traditional written portion of the workbook.

The five questions on the effectiveness of Web-based homework were

6. I feel that I have learned the material studied in class by completing the Web-based homework.
7. The time that it takes to do the Web-based home work is worth it.

8. Web-based homework is as effective as complet ing workbook exercises.
9. I think it takes longer to complete Web-based homework than if I were to complete the exercises in the workbook.
10. I just don't learn by doing computer-based work.

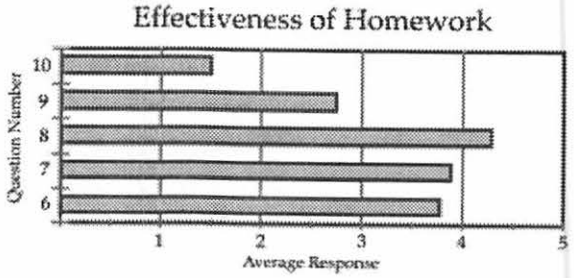


Figure 3. Average of Responses: Effectiveness of Homework

It is very interesting to note that in question 10, students indicate that they feel they learn using computer-mediated homework: 33 students disagree with the statement that they do not learn in this manner. In fact, in question 9, the majority disagrees that it takes longer to complete homework on the Web. Thirty-two out of 35 respondents (there was 1 No Response) agree or completely agree that Web-based homework is as effective [question 8]. Thirty-four out of 36 respondents feel that the time spent doing Web-based homework is worth it [question 7].

General Questions

It is in this category of questions that some of the most revealing reactions to Web-based homework are expressed. The six general questions include

11. I generally do the exercises in the workbook before I do the Web-based homework.
12. The Web-based assignments are equal in diffi culty to the workbook assignments.
13. It is basically a waste of time to do both sets of exercises - those in the workbook and those on the Web.
14. I think that Web-based homework is difficult be cause I just don't learn that way.
15. I have problems putting in the accent marks!
16. Hey! A lot of work for little payoff.

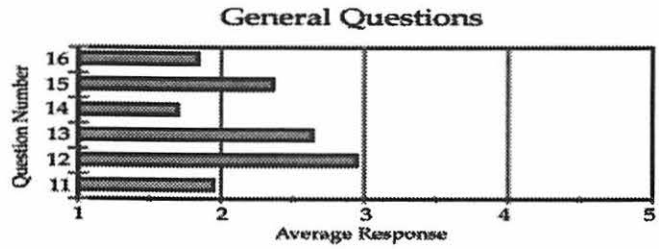


Figure 4. Average of Responses: General Questions

It is in this particular series of questions that students reveal how they work with the Web-based homework. Twenty-six of the 36 respondents indicate that they do not do the workbook exercises before completing the Web-based homework ... or their disagreeing with the statement in question 11 tacitly says that they do not consistently use their workbook. Yet in question 13, 19 out of 36 respondents do not feel that doing both sets of homework is a waste of time. While most students disagreed with the statement that they don't learn by doing computer-based work [question 10], 31 out of 36 indicate that this type of homework is difficult because they don't learn that way. Even more confusing, then, is the response to the final statement that this is a lot of work for little payoff, 29 respondents out of 36 disagree with that statement.

The most revealing statements, however, come from the students' comments and recommendations, the last four questions on the survey:

17. What are the positive features of Web-based home work?
18. What are the negative features of Web-based home work?
19. What changes would you recommend in the cur rent system of Web-based homework?
20. And these are my frank recommendations and suggestions for Web-based homework.

The survey, which was anonymous, allowed the students to be quite frank with their suggestions and recommendations throughout the survey, particularly on these last four questions.

The essential positive features about Web-based homework included the following:

- There is a quick turnaround time for corrections. "Feedback and response from the professor is almost instantaneous ... this instant gratification is a big plus."
- "The incentive to get the work in on time helps the work from not piling up for me. Coming home and turning on the computer became part of my daily routine."
- "It forces me to do the homework every night."
- Students are "made" to do homework that has just been covered in class, thereby reinforcing what they have just studied.
- The exercises are personalized, including the names (and certain foibles) of students.
- They are easy to do and not too long.
- The homework can be done from anywhere there is access to a computer.
- Students indicate that Web-based homework makes them more conscious of the use of accents.

Their feedback on the negative aspects of this Web-based homework are equally enlightening. Several of the problems are inherent with the use of forms - the fact that if you accidentally hit the Submit [*Envoyez*] button, the work is sent immediately. Similarly, when students accidentally hit the Redo button [*Refaire*], they erased their homework. They immediately requested that the ***Refaire*** button be eliminated! Another primary negative is that when the homework is corrected and sent back, the student has no record of the stimulus questions to which s/he had written the responses. They have requested that there be an additional opportunity to look over their answers before they submit them, with access to the stimulus questions ***and*** their answers at the same time, and also that they be able to print off that particular page. It has been explained that this is a feature that would have to be written in CGI script and that there is currently no one at the institution who can make such a change in the basic FormMail coding.

At the beginning of the project, students requested that there be at least one model sentence for each homework exercise so that they would know just what they were expected to do. This change was made very quickly.

Additional students comments include

- "If I don't have time, I'm forced to do it." [Author's question: This is a problem??]
- "Typing mistakes lower your grade. It makes you think differently because you are typing too."

This latter comment is very interesting, because there is no way, when correcting the students' homework, to know if the mistake is a simple slip - a mistake that would be corrected if the student were given sufficient time to check the work over - or an error - a mistake that indicates a lack of knowledge. While it can be assumed that many errors are in fact typographical in nature, it is impossible to be certain. Students simply must be careful in submitting their homework ... just as professors must be careful in correcting them.

- Unfortunately, we're not a totally computer-literate society. [While this might be true, I do not see this as a serious negative drawback to Web-based homework either.]
- It is, for the most part, formulaic, i.e., follow the model. It is also not used enough to be effective in reinforcing a foreign language."
- "You can't see the whole page."

Most of the changes that students recommend have already been made - removing the Redo button, adding model sentences. Some would like to see a special key that automatically put in the accent marks (wouldn't we all?!). One student recommends grading the homework for completion and not for correctness. The rationale is that "As long as you make an effort you should get a good grade. When a lot of people make a mistake on a certain problem, it's obvious that concept needs further clarification." One student urges to "Update the actual program itself; it's out-dated [sic] and there are improvements to be made," but there are no further suggestions.

- "The questions should be less formulaic, perhaps more open-ended questions or composition-type responses could be included to help stretch our minds and vocabulary. Let's face it - in real discussion, we don't speak in cut-and-paste sentences."
- "Add an e-mail reminder 48 hours before it's due." [N.B. In most cases the assignment is made on one class-day and the homework is due before the class meeting the very next day.]

- "Make it optional and allow students to print it out and turn it in handwritten."

Finally, the students offer their frank suggestions and recommendations:

"The glamour and glitz that technology can easily offer do not indicate effective teaching or learning techniques and devices."

- "Continue the program; its future is bright."
- "Grade easier [sic]!"
- "Since the homework is Web-based and the tests are not, maybe the tests need to be Web-based as well?"
- "Continue it, but do not take off for silly typing mistakes, because if we were to write it out, those mistakes would not occur." (Oh?)
- "Get rid of the workbook and assign Web-work nightly. Students are more likely to do the work and we would have one less book to purchase."
- "My only recommendation is that the page that shows with our answers, it would be nice if it showed the questions too, that way we would know right away if we got it right or not."
- "Keep it. It works well and is a good supplement."

Conclusion

The use of Web-based homework is indeed promising. Yes, there are always bugs to be worked out, ways to make it more efficient and more effective. The glamour and glitz that technology can easily offer do not indicate effective teaching or learning techniques and devices. This project, once in place, i.e., with exercises written to correlate with the textbook, has continued to prove effective for six semesters with a different group of students every semester. It is through their input that changes have been made in the format of Web-based homework. Certain exercises are updated each semester to ensure that they are timely and personalized for the current class that is using it, but the basic format of the exercises remains the same. Web-based homework makes stuTdents keep up with daily assignments. Even when they cannot attend class - for whatever the reason - homework is usually submitted. Once students realize that a zero is the grade for homework that has not been submitted and that the link to the day's homework assignment is active and visible for only 24 hours as a rule, they have additional motivation or an extra "incentive" to do the homework.

Web-based homework is not simply fun and games. It is not simply *more* work to be done - for the student *or* for the instructor. It came from a need to provide students with additional practice outside of the classroom, practice that could be submitted

and graded. Yet, there have been additional payoffs using the basic template for Web-based homework. During the fall 2000 semester of an intermediate-level French class, my students read a novel, *La Planète des singes* [*Planet of the Apes*]. To ensure that they were doing their reading assignments of 25-35 pages per night, I had them complete Web-based homework on the next day's assignment. Questions began with very discrete-point responses (the questions were asked in French and students responded in French), such as "How many individuals made the trip? What were their names? What were their professions?" As we moved further through the text, questions became more open-ended and called for more divergent answers. For example, "Give a brief description of the government on Soror." "Here is Ulysses' hypothesis in Chapter 4 (Part III). Does it resemble his original hypothesis that we read in the First Part, Chapter 11 (page 57)? Explain the differences." "What is the surprise in the last chapter? Does this surprise change your interpretation and your reading of the book?"

Quite surprisingly, as the students wrote longer and less teacher-controlled answers, the better their writing became, even at the intermediate level of study. Web-based homework cannot be recognized as true writing, in the sense of the creation of compositions and essays; it resembles more closely spoken language, just as e-mail does. The basic syntactic rules are quite often suspended ... or ignored. Yet, the fear of making a mistake in front of peers is removed. Those students who are not willing speakers in class tend to respond more freely when they can write their answer. This appears to be borne out in my own quite limited experience mentioned above. There are several chapters in the 1997 ACTFL Foreign Language Education Series volume, *Technology-Enhanced Language Learning* (Bush and Terry 1997) and in the 1997 AAUSC Issues in Language Program Direction annual volume, *New Ways of Learning and Teaching: Focus on Technology and Foreign Language Education* (Muyskens 1997) that eloquently address the role that technology can and should play in creating a new, effective learning environment for our students.

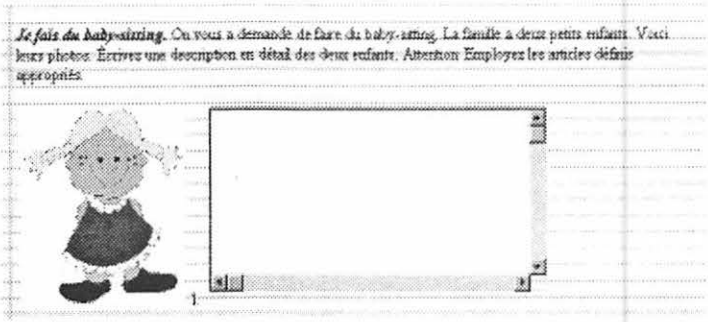
Endnotes

1. The entire survey can be viewed as an HTML document and, in PDF format, can be printed off at *http://www.richmond.edu/~terry/Survey/start.html*
2. See Marjorie Hall Haley's on-line research study, "Multiple Intelligences," *http://gse.gmu.edu/research/mirs;* and Howard Gardner (1993) Frames of Mind: The Theory of Multiple Intelligences. New York: Basic Books.
3. It is common knowledge that word processing programs

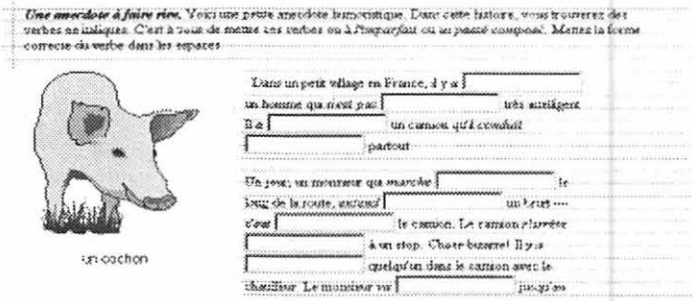
give access to foreign character sets. Microsoft Windows itself allows the keyboard to be redefined to that of another language, however it does rearrange the locations of the keys. A Macintosh provides easier access to these foreign characters. The reassignment of keys in Windows or using a Macintosh will allow the student to insert foreign characters in e-mail and in Web pages. The use of extended ASCII codes is a rather ineffective, cumbersome way to insert the characters: ALT + 130 = é, for example. Since the homework assignments are Web-based, and since I insist on the correct use of foreign characters and accent marks, I located a very inexpensive shareware program for PCs, 3-D Keyboard (version 2.52-32-bit), that can be ordered from http://www.fingertipsoft.com. Once installed, this program remains resident and can always be on top, at least until the keystroke combinations for the various foreign characters are learned. The user positions the characters and accents according to personal preference. The program works with any other computer program as an overlay.

Appendix A
Sample Homework Formats

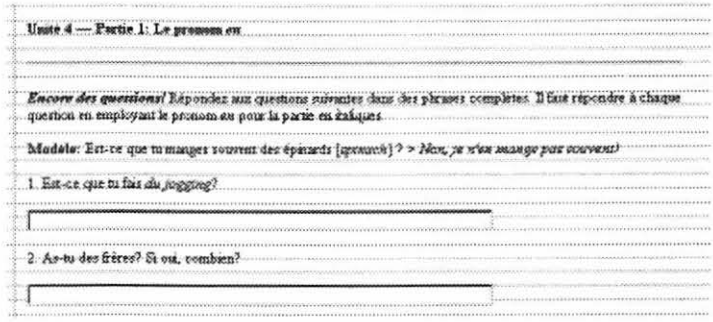
1. Graphic and Text Area



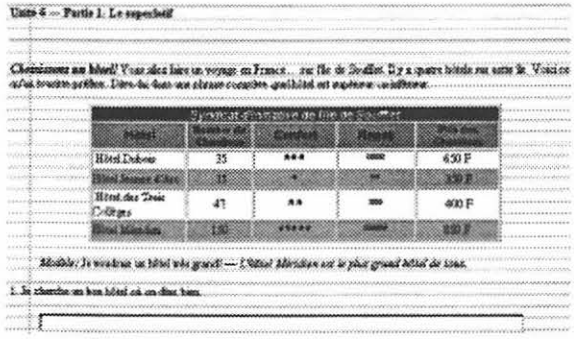
2. Graphic and Text Field



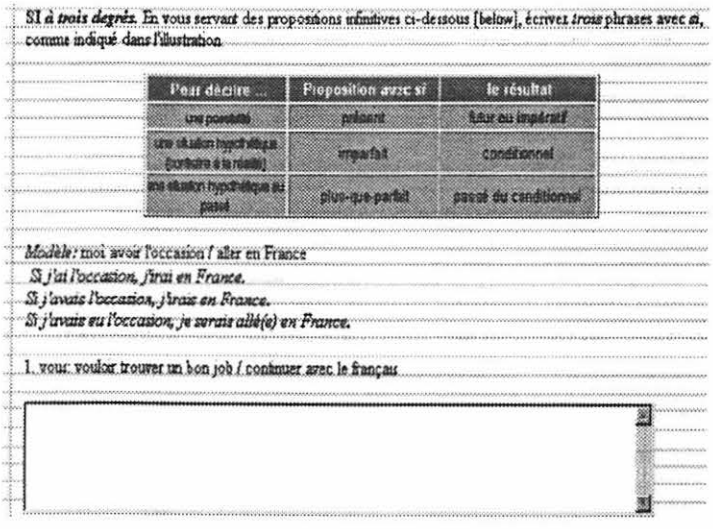
3.Text Fields



4.Text Fields and Table



5. Table and Text Area



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