The Use of Multiple Textual Forms in Distance Learning

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INTRODUCTION Distance learning courses generally comprise a range of textual materials such as a set text, audio materials, a printed study guide and on-line material. This approach reflects a shift in distance education from an almost exclusive focus on print materials, to a position where text-based instruction is supplemented by other sources for learning. The trend is towards using multiple sources for learning, which provide the learner with the possibility of selecting and accessing material in a textual form which accords with their learning preferences. Thus, course developers may incorporate a range of delivery media into distance learning packages which include varying forms of text, audiotapes, videotapes and computer-based materials.

Much research in distance education centres on the nature of instructional materials, the process of course development and support devices within texts. For example, Rowntree (1994) focuses on evaluating and customising materials, Henry (1994) argues for a project-based approach in distance learning, Lockwood (1994) highlights the importance of tutorial-in-print, reflective action guides and dialogue in self-instructional texts, and Valcke, Martens, Poelmans and Daal (1993) have carried out a number of studies to investigate the role played by embedded support devices in text. In an article critiquing options for course design, Lawless (1994) argues that there has been a shift in the treatment of subject matter in distance courses from what he calls the basic model to the 'developed' learning course model. In the basic model, students move in a linear fashion from one teaching text to the next, and the material is in the form of a printed guide bound in one or more volumes. Such courses, Lawless points out, suit students who study on commuter trains, but as a model have limited use since a range of elements and media are considered desirable, and often necessary, to teach most subjects. The wide-ranging or 'developed' model for a distance learning course is one in which a range of media is included to complement the teaching texts or units, which may still remain the main teaching element. Media used may include television, audio-cassettes, computers, textbooks and specially prepared readers.

The growth in multimedia learning has been quite central to developments in distance learning; the term 'multimedia' originated from the field of distance education and was used to describe the delivery of courses via text, television, radio, telephone and so on. In a discussion of multimedia, Bates (1993) notes that in distance education the four most important media are text, audio, television and computing. More than one technology can be used to carry each medium, so, the audio medium can be carried by audiocassettes, radio and telephone, for example. More recently, the term 'multimedia' has come to refer to material used at workstations and delivered through CD-ROM, or hard disk, which contain text in both print and audio-visual forms. Mayer (1997) argues that multimedia learning occurs when students receive information presented in more than one mode, and learners construct and co-ordinate multiple representations of material.

Where student perceptions of delivery media

have been investigated in distance education, they have tended to be in studies which have isolated a single delivery medium, and have elicited student views of the effectiveness of learning in that context. For example, Daugherty and Funke (1998) examined student perceptions of web-based instruction, and reported increased motivation, and access to current, global content as key advantages. What is also needed, to complement such studies, is to examine student perceptions of the role and attributes of a range of media which, now, typically, comprise the 'developed' learning course model in distance education, referred to earlier by Lawless.

The focus of this research is the use of multiple learning sources, which also involve multiple media. A number of questions prompted the investigation, including: Are these modes simply alternative delivery devices, or do they each offer particular features to the learner in terms of ways of accessing and processing content and developing skills? What do students perceive as the functions of the different learning sources (e.g. print, audio and video materials)? What learning paths do students negotiate through the different components of a course? The study reported here provides a framework through which to analyse the textual forms students are exposed to in a course. The textual forms which individually and in combination are the focus of the research, include those as part of the course package, and those which are chosen and accessed by the learner. The interest is in student perspectives of the different texts they access and combine to form learning paths in the course.

TEXT, INTERTEXTUALITY, TEXTUAL FORMS

It is important to define key terms for this study: firstly the notion of text. A text is often thought of as written discourse in print form. However, what constitutes a text has come to be seen as any unit, linguistic or non-linguistic, which performs the function of information or meaning transfer for an individual. This notion of text, consistent with the approach of Kristeva (reported in Moi,

1986), Bloome and Egan-Robertson and others, emphasises that it is the point at which individuals engage with and access such units that they become texts; in other words, it is individuals who create text. Furthermore, what is a text for some may not be a text for others, and the relationship between texts is not a given but something constructed by an individual. This latter point relates to the idea of *intertextuality*, namely that individuals make links between texts, transfer meaning from one textual form to another, and create *intertexts*.

One way in which to think of texts is in terms of the textual forms they take: oral, written and visual. This is a fairly rudimentary distinction, but useful for a study of students who are using multiple texts to develop oral and written skills in a language. It is consistent with the sensory modality aspect of multimedia highlighted by Mayer (1997) who draws a distinction between 'multi' referring to the **delivery media** (thus text in a book vs. text in a computer), to the **presentation mode** (for example a drawing vs. a statement) and to the **sensory modality** (thus print vs. spoken word). This tripartite model could serve as the basis for a fine-grained analysis of the components in a section of a multimedia course and the contribution of micro-aspects of text to learning; though such an approach will not be pursued in this study. However, Mayer's category of sensory modality is useful as a means of identifying features of the different textual forms in a course, and can be applied here.

THE STUDY

This study focuses on the functions and uses of different textual forms available to learners in a naturalistic setting of a distance foreign language course at the tertiary level. The main textual forms of the course comprise five physically distinct entities (see Table 1): videotape, audiotape, textbook, workbook (all purchased from the publisher) and study guide (developed by the course tutor for the distance learner).

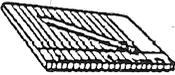It was considered important to gain an understanding of how the tutor and students

TEXTUAL FORM	SENSORY MODALITY
Workbook	Print
Textbook	Print
Audio Cassette	Audio
Video	Visual/Audio
Study Guide	Print

Table 1: Textual forms

conceptualised the sources and referred to them. Discussions revealed that the terms for textual forms appearing in Table 1 were used by students and could thus be adopted in the study.

Distance students in an introductory Spanish course were invited to take part in a two-stage investigation of what was broadly called 'Texts for Learning Spanish'. Ethical procedures were followed, in approaches to students, the gaining of informed consent, and the maintenance of anonymity and confidentiality. It was emphasised to students that participation in the study was voluntary, and did not form part of the assessment of the course. The researcher and research assistant were not involved in teaching the course. Thirty-one students participated in stage one of the study, reported here, and 27 students participated in stage two.

The instrument chosen to gather data was a self-report postal questionnaire, consisting of ranking items, open-ended questions and semi-structured questions. The questionnaire format was chosen largely because it is a feasible means of gaining responses from a range of students distant from the university. It was administered to students during week three of a 12 week semester. The use of multiple textual forms was investigated from a variety of perspectives which can be classified as:

a. primary vs. secondary sources
b. preferences for initial input
c. intertextual links
d. time allocation
e. source evaluation

A second questionnaire, referred to earlier, was administered during week 10 of the semester, and included questions relating to affective aspects of the use of multiple sources. The remainder of the article presents findings and discussion related to the five areas outlined above.

PRIMARY VS. SECONDARY SOURCES
As the first stage of finding out which textual forms students considered to be

principal sources for learning, and which were considered to be supplementary or auxiliary sources, students were asked to reflect on the use they made of different texts to develop their knowledge of Spanish. They then categorised the sources as primary or secondary in terms of their experience: primary sources were defined as key sources for learning, while secondary sources were those used less frequently, or consulted occasionally. Thus the focus was on which texts learners viewed as central sources for learning, and which were judged to be more peripheral.

Analysis of student responses revealed that proportionately more texts were classified as primary sources (97 instances) than secondary sources (59 instances). There was remarkable consistency between students in their evaluations of the study guide, videotape and textbook as key texts, and the dictionary (optional) as a secondary text. Evaluations of the workbook and audiotape were the most variable: students were divided over which of these they considered to be a primary source, and which a secondary source (see Table 2). The patterns of responses indicate that primary sources are the study guide, videotape and textbook and then either the workbook or the audiotape. The secondary sources were typically the dictionary, either the workbook or the audiotape, and, in a few cases, either the textbook or the videotape. The study guide was the one source which almost no students regarded as a secondary source.

The results suggest that the material compiled by the course co-ordinator as a study guide was consistently judged to be central to the course, more so than any of the other commercially published sources. This may be consistent with prior findings that components of the course relating to assessment are, for many students, judged to be 'the course'. Further discussion relating to this point will be taken up later in the article. It was also evident that several students did use other sources for learning beyond the course materials, but that such sources were mostly judged to be secondary. Nine students used the following as secondary sources, outside the course materials: language CDs, a computer-based course, a vocabulary text, music tapes, the internet, conversation classes, family members, and another introductory published course. Four students mentioned using Spanish speakers, a Spanish grammar and Spanish verb tables as primary sources which they located for themselves.

INITIAL INPUT: STUDENT PREFERENCES

When students are learning in an environment of multiple textual forms, they have a number of options as to the preferred textual form for initial input. In this course, consisting of 13 units, students can provide initial input for themselves through print (study guide, textbook, workbook), audio (audio cassette) or visual/oral forms (videotape). Thus, a number of learner-controlled options exist. It was expected, at the outset of the study, that students would develop a preferred mode for orienting themselves to a new unit. Students were asked about how they provided input for themselves as they embarked on a new unit. Specifically, they were asked which of the textual forms they preferred to use: videotape, audiotape, textbook, workbook, study guide. In addition

Table 2. Response frequencies for primary and secondary sources

	STUDY GUIDE	VIDEOTAPE	TEXTBOOK	WORKBOOK	AUDIOTAPE	DICTIONARY
Primary	24	22	20	14	12	5
Secondary	1	5	6	11	16	20

they were asked to elaborate on how they made use of that text, to provide themselves with the initial input: in other words, the function of the initial input derived from the source. Thus the focus was on the preliminary stage at which the student is turning to the new material for the first time.

Responses of students revealed two distinct preferences: the video (16 students) and study guide (15 students) were identified as the main initial textual forms (see Figure 1). Among the remaining six students, three chose the textbook, two the audiotape and one the workbook. Thus students had access to verbal and visual modes, and approximately half chose a visual orientation, through the video. Those who chose to orient themselves to the new material verbally, accessed the unit using print-based sources, mostly through the study guide, and in a few cases through the textbook and the workbook. The choice of aural input (the audio tape) appeared to be motivated by pragmatic concerns: the two students who chose this mode stated that it was the only form of input they could use while driving to and from work.
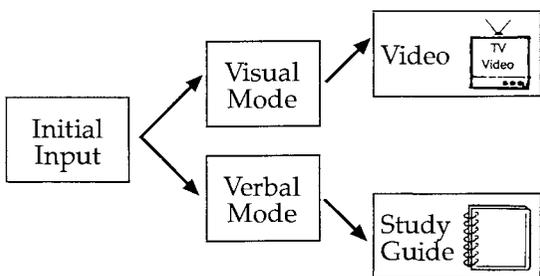

Figure 1: Preferred textual forms for initial input

The visual and verbal orientations to the new material appeared to function in different ways. The students who chose a visual orientation through the video emphasised that they gained a sense of context, which they referred to as 'the background', 'the layout of the unit', 'a broad impression of what we are about to learn'. Two secondary functions of the video were also mentioned. For some students the video enabled them to enter a 'Spanish' mental framework, as in:

> I watch the whole lesson on videotape without referring to any of the workbooks or other books and I talk along with the video. This puts me in 'Spanish' mode, so to speak, gets me warmed up, so to speak, and gives an overall context to what we are about to learn.

It was also reported that the video was helpful with pronunciation and the learning of phrases:

> With the video I get an idea of the layout of the lesson, familiarise myself with pronunciation, and learn some phrases. It's an accessible way to take in the beginning of the lesson and what comes after.

The accessibility of the video, referred to above, was a recurrent theme. The print-based sources, most notably the study guide, were used for more specific elements: vocabulary, grammar, and a sense of the amount of work required.

Thus students chose either print sources or visual sources to gain initial access to a new stage of learning. Both 'visualisers' and 'verbalisers' used their preferred mode to, in their words, 'gain an overview', 'familiarise myself with the unit'. However, the way they did this with the visual and verbal modes was different: the video served to orient students primarily in terms of context and general background, while print-based sources were used to gain a sense of the new learning required in terms of elements of the language, particularly vocabulary and grammar.

INTERTEXTUAL LINKS One further aspect of this study was to determine whether students tend to use sources in isolation during a study session, or whether they combine them and establish intertextual links. In other words, do students work with a single source or multiple sources at any one time? The following question was put to students:

In a single study session, do you use any of the following in conjunction with each other?

videotape/ audiotape/ textbook/ workbook/ study guide/ other

If so, which ones?

A total of 12 combinations of sources were reported by students: the most frequent of these were the videotape or audiotape in conjunction with the textbook, and the workbook or textbook in conjunction with the study guide (see Figure 2). This was consistent with earlier findings in which the text book and study guide were judged to be primary sources. What is evident also is that while the videotape was classified as a primary source, it was used as a stand-alone source only for initial input, and was used subsequently with the textbook. The textbook and study guide can be considered to be 'anchor texts' supplemented by other sources. Interestingly when the textbook is the anchor text, visual and aural sources (the videotape and/or the audio cassette) are the most frequent supplementary texts. When the study guide is the anchor text, other print-based sources are preferred as supplementary texts, namely the textbook and/or the workbook.
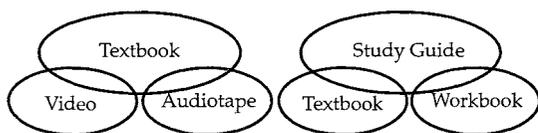

Figure 2: Intertextual links: the anchor texts and supplementary sources

Only one student in the sample stated that she allocated a single source to each study session; however, when she elaborated on her sequencing of work, it was evident that she did combine texts, but consciously foregrounded one textual form in each session. 'I tend to cover one source per session...I might spend a whole hour on the study guide.

I might spend a whole hour with the textbook and the audiotape. I usually work a lot with the study guide, then I also refer to the workbook.'

TIME One of the recurrent themes in studies of distance students is the time constraints they face, which, in turn, may impact on the time available for study and the way in which they can make use of the available sources. As part of understanding the ways in which diverse textual forms are used in the course, students were asked to indicate as a percentage the relative proportion of time they spent working with the videotape, audiotape, textbook, workbook, study guide and other sources.

SOURCES	MAXIMUM TIME	MINIMUM TIME	AVERAGE TIME
Study Guide	70%	30%	38%
Text Book	35%	20%	22%
Video	30%	15%	17%
Workbook	25%	15%	16%
Audio	15%	5%	6%
Other	8%	0%	1%

Figure 3: Time allocation to different sources

Results revealed a similar pattern across students, with the audiotape and dictionary and 'other sources' each used less than ten percent of the time. This is congruent with findings related to primary and secondary sources, with secondary sources judged consistently in terms of relative importance and time allocation. The study guide, textbook and videotape were the most frequently used sources, with the workbook occupying middle ground between frequently used and infrequently used sources. There was a wide range of response in relation to the proportion of time spent on the study guide: this ranged from 30 percent up to 70 percent. For other sources the band of variation was between 10 percent and 15 percent.

Why is it that the study guide attracts diverse student time allocations? One explanation arises from an earlier finding, namely that some students perceive the study guide, written by the course tutor, as 'the course', and allocate time accordingly. A related point is that the study guide was perceived as playing a key role in developing understanding of the language, of the forms encountered in other sources, and enabled the student to draw together other parts of the course:

> The study guide is informative and has everything that I need to know …I like the study guide approach to explaining …the study guide is really important for learning the written language with lots of repetition.

It is possible that students varied widely in the amount of explanation and knowledge about the language they needed, and also in the explicit focus on vocabulary and structures provided by the study guide, which differed from the other, more contextualised, 'language in use' sources. This last point is important: students varied in their views of what learning Spanish meant for them, whether it was gaining control of the spoken forms of the language, through the video, textbook, audiotape, or whether they wished to foreground the written form and knowledge about the language, which is provided mostly by the study guide.

WHICH SOURCES WORK BEST? As

a final question students were asked to appraise the sources, in terms of those which they found worked best for them in learning Spanish. Analysis of student responses revealed three main findings. Firstly, while students had readily classified and rated sources in earlier questions, there was an expressed reluctance to isolate and evaluate sources in terms of their overall quality and effectiveness. However, where 'best' sources were identified they tended to be the study guide, video and the textbook. Secondly, responses of students foregrounded the importance of multiple sources for language learning, because of their complementary nature:

> All sources work best for me because essentially they combine to help me study Spanish in writing, pronunciation and structural areas…The sources complement one another.

And at a more affective level, the 'relief' provided by multiple sources is highly valued:

> I like the study guide approach to explaining, but the visual relief from the printed word is welcome, in the form of the video, audiotape.

There was only one exception to the positive appraisal of multiple sources:

> I find it annoying that the material is spread over a wide variety of material as it takes a long time to find things.

Thirdly, students appeared to recognise the link between multiple sources, and diverse learning styles of individuals, as in:

> I think the multi-media approach (for distance education students) ought to satisfy all learning styles. The videotape and printed word support and reinforce each other.

Students also recognised the possibilities offered by multiple sources for developing new ways of working with the language:

> I tend to be a textbook sort of person, so using videotape has been a wonderful extension for me.

DISCUSSION AND CONCLUSION The

findings from this study highlight the kinds of decisions distance learners make in a learning environment characterised by multiple sources: they make decisions about the primacy of particular textual forms and the time they apportion to them, how they will use the different texts, the texts which suit their preference for initial input and the way they will combine sources. Multiple textual forms permit learners to access and process the language in several ways according to their needs and preferences. We have a picture of students actively selecting and co-ordinating different textual forms and multiple representations of language in order to develop a working control of the language. The ways in which they did this were at once

similar and disparate; at the macro level, a number of clear trends emerged (e.g. visual vs. verbal orientation for initial input), but more detailed investigation of how texts were processed revealed great variability. Students also identified the complementary nature of the sources; they could see where they all 'fit in' to the learning paths they established. While students did identify some sources as more useful than others, they saw each one as making a contribution to the learning process, and each as reinforcing the other. It was also clear that sources are used in conjunction with each other. Two key combinations were used: when the anchor text was the textbook, visual and aural material were the supplementary sources. When the study guide was the anchor text, other print-based sources were the preferred supplementary texts. One student talked about 'layering her knowledge' through the multiple sources; this provides an interesting image of students accessing sources at different points, thus creating text which accrues over time, creating a fuller picture. It was also clear that the different sources fulfilled different needs, both in terms of personal learning styles and task types; as one student stated, 'the sources complement one another, and you need all to satisfy your demands and questions'.

Results also suggest that students are comfortable with negotiating a learning path through the materials and the complex role of orchestrator of multiple textual forms. Students reported that each source required a different type of interaction and a different level of engagement, with the most marked contrast being between the visual forms and the print forms. The diverse demands of the texts were seen as providing variety, and different challenges, and as enhancing motivation and interest.

The study points to the advantages of adding multiple sources for learning to the traditionally strong emphasis in distance education on a print-based mode of instruction. The different textual forms can be seen as offering students more representations of the language in different sensory modalities. While this study did not explore the relationship between multiple sensory modalities and memory, there is ample evidence in previous work that, when compared with students who have only print or auditory texts in learning language, learners supplied with video materials understand and remember more (Rubin, 1990; Hanley, Herron and Cole, 1995; Secules, Herron and Tomasello, 1992). There were anecdotal references in the verbal reports of students to the facilitating effect of multiple sources on learning: a more fine-grained study of how students use multiple sources to learn language forms is a promising avenue for further research.

On the theoretical side, this study lends support for Mayer's generative theory of multimedia learning (Mayer, 1997; Mayer, Steinhoff, Bower and Mars, 1995) which posits that when learners are presented with material in different modes, they engage in three major processes: selecting, organising and integrating. Analysis of the reports of students revealed that they were actively engaged in managing numerous decisions about how to select and organise language forms, and how to integrate that learning with material in other sources.

The study points to the fact that distance learning through multiple textual forms is a highly complex endeavour, requiring the learner to continually create texts for him/herself by establishing connections between multiple sources, and integrating multiple representations of language forms. An understanding of how distance learners perceive and respond to the multiple sources which typically comprise a distance education course, is important for course designers, tutors and other professionals in the field of open and distance learning. Further research should focus on establishing theoretical frameworks as a basis for research into the use of multiple textual forms. A comparative study of the use of multiple textual forms by course developers, during the course design stage,

and subsequently by distance students who provide us with a deeper understanding of areas of convergence and divergence between the planned and actual use of course components. Finally, this research highlights the role of students, not as a consumers of a packaged course, but as course developers, creating texts and intertexts for themselves, as they engage with and transfer meaning from one textual form to another.

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