Article

Learners' Attitudes to Repetitious Exposure in Multimedia Listening Software

Vehbi Turel
The University of Bingol (Turkey)

vehbiturel @ yahoo.co.uk

Abstract

The positive effects of using different types of listening texts (i.e. audio, video) in listening enhancement as a part of foreign language learning are already well known (Turel 2004: 178-84, Tschirner 2001: 310, Ridgway 2000: 182, Borchardt 1999:10, Adair-Hauck et al. 1999: 273, 289, Peter 1994: 202, Hart 1992: 5). As multimedia enables us to combine and present different listening texts on the same digital computer platform more effectively, the same listening texts can be presented to language learners in different forms (Turel 2004: 129-38, Trinder 2002: 79, Heron et al. 2002: 37, Brett 1998: 81, Chanier 1996: 7, Ashward 1996: 80, Brett 1996: 204, Fox et al. 1992: 39, Leffa 1992: 66). In this research, the language learners were provided with listening texts in the form of audio-only and audio-visuals (i.e. audio + visuals, audio + animation, video-only, video + visuals). They were also provided with the opportunity of re-listening to the same audio-only with visuals and audio-visuals without visuals. This study investigated 45 autonomous intermediate and upper intermediate language learners' perceptions of the opportunity of re-listening to the same audio-only with visuals and audio-visuals without visuals through interactive multimedia listening software that aimed to enhance the listening skills of the participants. The results reveal that the language learners are in favour of re-listening to the same audio-only with visuals and audio-visuals without visuals. They believe that such an opportunity improves their listening skills and helps prepare them for the real world.

Keywords: Media types, multimedia, listening texts, repetitious exposure, language learning.

1. Introduction

When the available foreign language learning (FLL) software on the market is examined carefully, one sees that some of it provides language learners (LLs) with the opportunity of re-listening to the same listening texts (LTs) in different forms. For instance, in Beginning Kurmanji Kurdish (Turel 2011), Advanced Turkish (Turel 2010a), English for Business - Introduction to a Company (Brett 1994) and the other products in the same series, Beginning Turkish (Turel 2003) and Talk Now! Learning Turkish (Turel 2000), LLs can re-listen to the same video segments without visuals. It is important to find out and discuss what LLs think of such opportunities. Do they use such opportunities in the way they are supposed to? If not, how can their design be improved so that LLs use them to their benefit? It is not enough simply to present different LTs in multimedia listening software (MLS). What is more important is to present them effectively, which is "among the concerns often raised in the domain of CALL" (Al-Seghayer 2001: 203). None seems to have investigated LLs' attitudes towards the opportunity of re-listening to the same LTs in a different form. It was thought necessary to find out what LLs think of such

opportunities and explore how they can be designed more effectively, which is also a concern in the field of CALL (ibid). Presumably and probably rightly, it is due to these facts that De Ridder (2002: 183) states that " …although many things have been said about what can appear on screen, little is known about how it should appear and if the presentation influences in any way the amount of language assimilated by the user, and the quality of the information that has been acquired."

2. Repetitious exposure in multimedia learning software (MLS)

In general, LTs (i.e. audio and video, which are the main listening elements in many language courses), can be presented in different forms as different listening media types (i.e. audio-only, audio + visuals, audio + animation, video-only, video + visuals) in MLS. Each media type has its own role and impact in FLL (Tschirner 2001: 310; Nicholson and Ngai 1996: 32; Peter 1994: 202; Hart 1992: 5).

Providing different (listening) media types is particularly easy in a multimedia environment, as multimedia enables programmers to present and design them effectively (Soboleva and Tronenko 2002: 498; Herron et al. 2002: 37). For example, multimedia software can slow down communicative behaviour (i.e. the speech rate) and is able to highlight and focus on its various features (Tschirner 2001: 312-3; Zhao 1997: 57-8, 60). For example, as shown in Figures 1, 2, 4 and 5 below, the LLs' attention is drawn to different aspects of the aural texts through visuals, subtitles, instructions and links. Similarly, we can provide the opportunity of re-listening to (the same) material as video-only without visuals, audio-only with visuals, video-only with supplementary-visuals or audio with animations (Turel 2010b:1602-03, see also Figures 1 to 6 below). Such provision might benefit LLs in a variety of ways.

In order to encourage LLs to rely heavily only on what they hear (i.e. speech) and progress their listening skills, LLs can, for instance, be given the opportunity of re-listening to the same audio-visuals without the visuals at the post-listening stage (Figure 1). This is what the social learning (Robinson 1989:119-130; Bandura 1977) and the conditioning (Skinner 1953) theories of learning require us to do, as "repeated exposure to similar or parallel stimuli, with spaced practice over time, produces behaviour changes more effectively than do one-time learning trials" (Robinson 1991:164; Robinson 1989:119-133; Carroll 1977: 507). Such an opportunity can, additionally, enable LLs to (1) focus upon speech-only, (2) improve their acoustic channel (i.e. getting used to pronunciation, stress, intonation and different accents), (3) find out whether they can understand the same LTs without visuals and (4) see what kind of difficulties they might have when there are no visuals in real-life. They also prepare LLs for similar real life situations.

Figure 1. A sample of the material where the LLs can re-listen to the same audio-visuals without visuals at the post listening stage.

Similarly, LLs can also be provided with the opportunity of re-listening to the same audio-only with (supplementary) visuals or as video at different stages of listening (Figure 2). Such provision can enable LLs to further benefit from the positive aspects of visuals, which are already well-documented (Moreno and Mayer 2002: 156-63; Gyselinck et al. 2002: 675, 680; Al-Seghayer 2001: 203; Brett 1997: 46-7; Mueller 1980: 335-40). This is also what the dual-coding theory (Paivio 1986), noticing hypothesis (Robinson 1995; Schmidt 1990; Schmidt and Frota 1986) and the attention theory (Schmidt and Frota 1986; Schmidt 1990:133) require us to do. The underlying assumption is that one element that targets to teach one thing is presented using both verbal and visual elements (i.e. two elements), which can draw attention to salient features and provide more paths of recall. This can even expand limited working memory (human cognitive capacity), as the processing of information requires using both verbal and visual senses (Kalyuga 2000: 1). Such provision also provides LLs with repeated exposure, which is a requirement of the social learning (Robinson 1989:119-130; Bandura 1977) and the conditioning theories (Skinner 1953).

Figure 2. A sample of the material where the LLs can re-listen to the same audio-only as audio + visuals and as video.

In light of the literature review and building on previous research (Turel 2004: 38-211), this study, therefore, addressed the following research questions, which deal with the design of listening media types in MLS in the context of 'repetitious-exposure'.

1. Do autonomous intermediate and upper-intermediate language learners (AILLs) want to have the opportunity of re-listening to the same audio-visuals (i.e. audio + visuals, audio + animation, video-only, video + visuals) without visuals? In particular:
   - Is re-listening to the same audio-visuals without visuals useful?
   - Can re-listening to the same audio-visuals without visuals improve their hearing (acoustic) skills (i.e. help them get used to aural language)?
   - Can re-listening to the same audio-visuals without visuals improve their listening?
2. Do AILLs want to have the opportunity of re-listening to the same audio-only with visuals? In particular:
   - Is re-listening to the same audio-only with visuals useful?
   - Can re-listening to the same audio-only with visuals improve their listening? • Can re-listening to the same audio-only with visuals prepare them better for the real world?

3. The study

3.1. The aim of the study

The study represented an attempt to gather some empirical data to find out what LLs thought of the opportunity of re-listening to the same audio-only with visuals and audio-visuals without visuals in MLS that aimed to enhance their listening skills as a part of self-study FLL.

3.2. The participants

The participants were 45 non-native speaker (NNS) students (56% male, 44% female). They were all at intermediate and upper intermediate level in listening and were attending an intermediate course of general English. They had been tested, grouped and placed by the English Language Programme (ELP) units of the institution. To some extent, they were a ready-made group (i.e. clustered sampling) for the study in that they had already been tested and placed. In terms of their background, they could be considered heterogeneous, as they were from sixteen different nationalities and all were computer literate in that they had used computer for word processing or the Internet (Appendix 1).

3.3. The software

The software was an Intermediate Multi Media (IMM) application designed to develop and practise LLs' listening skills as well as to improve their listening development as a part of FLL. The software consisted of five units and most units were divided into several subsections. Each subsection (lesson) featured at least one video or audio clip, the length of which varied from 21 seconds to 2:59 minutes, and was made up of three gradual stages: the preparation stage, the while-listening stage and the post-listening stage. In total, the software contained around 20 minutes of video and 15 minutes of audio materials, which were authentic and could be presented in different forms. In terms of topics, the materials consist of different topics such as British Weddings, Polar Bear, Smoking I, Smoking II and Directions. While some video and audio clips were used as they were, the others were combined and presented as different media types. The materials were not just repeated over and over. Conversely, repeated exposure was across periods of time and involved multiple contexts each time. Therefore, not only did the accompanying comprehension tasks vary each time, but also the presented features of the materials changed (see Figure 2 above and 3 below). The different media types were:

Audio-only: More than three minutes of the LTs were initially presented as audio-only. Initially, the LLs were requested to listen to audio-only material and complete the accompanying comprehension tasks. Later, the LLs were requested to watch / listen to the same audio-only materials with (supplementary) visuals and complete the accompanying comprehension tasks. These were the default options and were intended to be compulsory. Finally, at the post listening stage, the LLs were presented with the same audio-only material in the form of THs (Talking Heads) video (Figure 2 above) without (supplementary) visuals. Additionally, the LLs were presented with the option of watching / listening to the same audio-only materials with subtitles.

Figure 3. A sample of audio-only as a media type.

Audio-visuals: The rest of the LTs were presented as audio-visuals in different forms either as audio + animation, audio + (supplementary) visuals, video (THs) + (supplementary) visuals or video-only.

Audio + animation: More than three minutes of audio-visuals were presented in the form of audio + animation. The animations were supplementary contextual. Audio + animation featured in one unit and consisted of ten different clips (Figure 4). The unit consisted of one lesson and the lesson consisted of four pages. On the first page, the objectives of the lesson and the importance of 'directions in FLL' were emphasised. The LLs were also requested to complete the pre-listening tasks. On the second page, as shown below (Figure 4), the LLs were requested to click on the place labels, and listen to the audio clips while following the 'animating ball'. On the third page, the LLs were provided with audio-only, and requested to listen to audio-only without the visual support (i.e. the animated ball) and find out the directions. On the fourth page, the LLs were requested to answer the pertinent questions and finally to listen with subtitles.

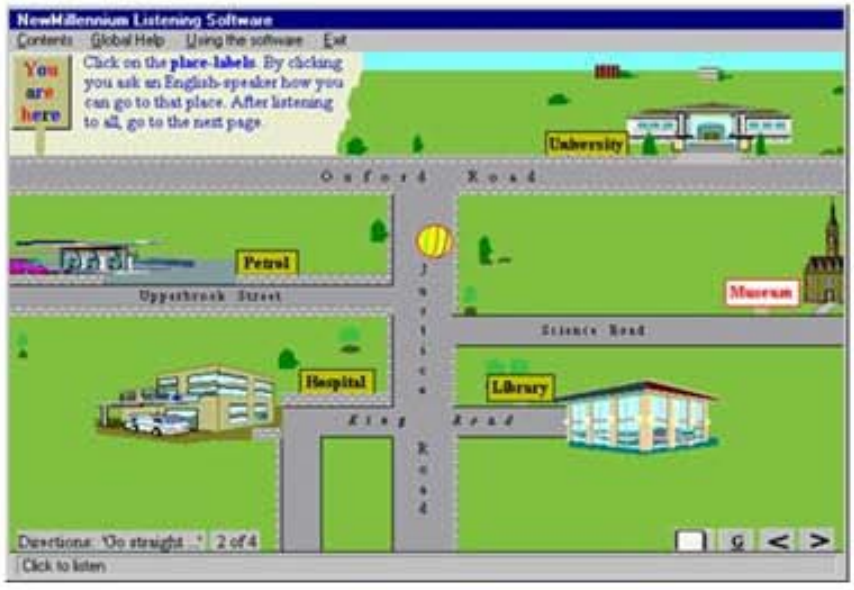

Figure 4. A sample of audio + animation as a media type.

Video (talking-heads - THs) + visuals: More than twelve minutes of audio-visuals were presented in the form of video (talking-heads - THs) + visuals (Figure 5) . The visuals

were supplementary contextual. Video (THs) + visuals featured in two units and consisted of 8 lessons. In total, it featured ten different clips, the length of which varied from 21 seconds to 02:59 minutes. In these lessons, the LLs were requested to complete the preparation exercises at the pre-listening stage (see Exercise 1 in Figure 5). Then, the LLs were requested to watch the video (THs) + visuals media types and answer the pertinent questions (see Exercise 2 in Figure 5). Later, they were encouraged to watch initially video (THs) + visuals without visuals, then with subtitles and lastly listen to it as audio-only (see suggestions in Figure 1 above).

Figure 5. A sample of video-THs+visuals as a media type.

Video-only: Eight minutes of audio-visuals were in the form of video-only. It featured in one unit and consisted of 8 lessons. It featured 10 different clips, the length of which varied from 18 to 93 seconds (Figure 6). In these lessons, the LLs were requested to complete the preparation exercises at the pre-listening stage. Then, the LLs were requested to watch the video-only media types and answer the pertinent questions (see, for example, Exercise 3 in Figure 6). Later, they were encouraged to watch initially with subtitles and lastly listen to it as audio-only.

Figure 6. A sample of video-only as a media-type.

In all cases of audio-visuals (i.e. audio + animation, audio + visuals, video-THs + visuals or video-only), the LLs were provided with the opportunity and encouraged to

re-listen to the same audio-visuals materials without visuals, if they wished to do so. It was not compulsory, and there were no accompanying comprehension tasks for them to complete (see also Turel 2010b:1602-03).

As a whole, each lesson was made up of three gradual stages. At each stage, a wide range of objectives were aimed to be achieved, as explained below:

At the pre-listening stage, the LLs were provided with a wide variety of tasks. Not only was the objective to prepare for the LTs, but also for the real world. Some were: working with a reading text; working with visuals; guessing (1) the order of topics, events or information, and (2) words; drawing attention to titles, the role of the speakers and their role in understanding LTs; drawing attention to words and their role in understanding LTs; requesting LLs to follow directions; activating LLs' knowledge about their own culture; and informing through provision of textual and audio/visual instructions on which strategies they needed to follow.

At the while-listening stage, the LLs were provided with exercises or tasks and LTs. LLs were mainly instructed to read the tasks firstly and then watch/listen to the LTs, and lastly answer the questions. The objective was to enable LLs to fully focus on the LTs. Additionally, LLs were occasionally requested to listen/watch and answer simultaneously. The aim was to prepare for the real world, where there are many cases in which we are supposed to listen and answer simultaneously. The main goals at this stage were: (1) to get the main message (main idea comprehension), not syntactical clues, of the LTs, (2) to help and guide to improve their listening skills, not to test (Ur 1992: 27), (3) to require them through provision of a wide range of tasks to implement effective while-listening strategies (O'Malley et al 1985b: 582-3, Bacon 1992a: 403), (4) to get detailed comprehension (deeper meaning), (5) to get full comprehension, (6) to distinguish factual argument from unsupported opinion, (7) to infer and identify the speaker's attitude, (8) to seek for specific information and (9) to follow instructions/a routine of a map and the like.

At the post-listening stage, the aim was (1) to focus on potential causes of failure, (2) to focus on certain features to which it was thought that LLs' attention was needed to be drawn to, (3) to enable the LLs to check to what extent they had understood, to draw attention to (4) syntax and (5) lexis and their role in understanding LTs, (6) to draw attention to strategies and elements, and their role in understanding LTs, (7) to draw attention to authentic features of the input and the like. Feedback was also available at all three stages, which was complementary and explanatory.

The assumption underlying the provision of different media types in different forms is that different aural texts have different strengths and aspects. Thus, different features of the aural texts can contribute to FLL in separate ways. For example, in terms of richness, it can be said that priority should be given to video - only (Adair-Hauck et al. 1999: 289), as (1) it features motion visuals, which is its strength in telling a story (Hart: 1992: 5). (2) Some feature the 'target world' (i.e. target culture, authentic settings, different accents, paralinguistic cues). Thus, the way the native speakers dress, act, smile, laugh, reject, eat and greet; facial expressions, body language and the like are all authentic. Not only do these permit LLs to witness the 'target world', but they also help LLs to better understand the target culture, language, life-style, cultural differences and the like (Tschirner 2001: 310, Adair-Hauck et al. 1999: 273, Nicholson and Ngai 1996: 36). These conditions are effective and necessary for FLL. As a result, LLs will acquire many things more quickly. Regarding the role of video in interactive multi media (IMM) software, Peter (1994: 202) says that "...the main conclusions... about the role of video in multimedia are [...] that video is a rich medium that can be included in a program...". In the same way, if target LLs are children and young

learners, it is better to use audio accompanied by animation (audio + animation) and video featuring animations (video-only), as children and young learners in general overwhelmingly favour them. Likewise, in terms of improving LLs' acoustic channel, which is the most privileged in terms of getting used to aural language, it can be said that audio-only can be more beneficial, although 'listening without visual clues is something we do for a relatively small proportion of our listening time' (Ridgway 2000b: 182). Since audio-only do not feature any visuals, LLs have to rely completely on speech. This naturally and ultimately will improve their acoustic channel. Furthermore, some LLs are highly visually oriented and some are highly auditory oriented (Carson and Longhini 2002: 408; McLoughlin 1999: 222-23; Brickell 1993: 103, Dunn 1983: 496-506, Reid 1987: 92). This pedagogically requires the provision of different media types (e.g. McLoughlin 1999: 222, 229; Hoven 1999: 92, Borchardt 1999: 10). Likewise, listening relies on the senses of sight and hearing. Therefore, not only do all these require us to include audio-only, but they also require featuring audio-visuals (i.e. audio-only + visuals, audio + animation, video-only, video-THs + visuals) in IMM listening software.

3.4. The procedure

The LLs accessed the software in separate classes, with a maximum of 12 in each class. There were 14 Pentium PCs with appropriate headphones. The LLs were introduced to the software in the first ten / fifteen minutes of the first session. They were shown its major features using a computer projector, including how to run and control it, and how to make full use of it. After the introduction, the LLs were requested to complete the learners' profiles questionnaire (Appendix 1). The main source of the learners' profiles questionnaire was Brett's data collecting procedures for finding out LLs characteristics (1999: 465-9, 474; 1996: 211-12). Having conducted the learners' profiles questionnaire, the LLs were free to use the software as they wished for at least two teaching sessions.

3.5. Methodology

The research questions aimed to find out the LLs' perceptions of the opportunity of relistening to the same audio-only with visuals and audio-visuals without visuals in MLS for self-study. This is one of a range of different topics that are covered in CALL research (Baturay et al. 2010, Al-Seghayer 2001:203; Hegelheimer and Chapelle 2000; Brett 1999: 344, 417; Ortega 1997; Brown 1997; Brett 1996; Deville et al. 1996; Mangiafico 1996; Stevens 1995; Crosby 1994, Dunkel 1991: 8).

The investigation of the LLs' perceptions required the use of quantitative (descriptive) and interpretative research (Nunan 1993: 218, Chapelle and Jamieson 1991, Dunkel 1991: 19-20), which is only one of a range of research methods generally employed in the field of CALL. This method has an important role to play in the investigation of effectiveness in particular when LLs' attitudes towards CALL are investigated (Chapelle and Jamieson 1991: 43). This is important as attitudes towards language study are consistently shown to be related to achievement (Masgoret and Gardner 2003; Linebarger 2001; Baltova 2000; Gardner 1985).

Additionally, qualitative analysis was also used to strengthen the research (Fitz-Gibbon 1999: 38). A combination of two different methods for one study provides methodological triangulation (Seliger and Shohamy 1995: 121), which confirms findings and increases the validity of the conclusions reached through different sources, as each method uses different data collection methods and data analysis techniques.

Discovering the LLs' perceptions, in the context of the research questions, the design of the software, and the type of data that needed to be collected required the use of questionnaires (Munn and Drever 1995: 10, Chapelle and Jamieson 1991: 44-5),

interviews, observations and log-files. The questionnaires, interviews, observations and log-files were pilot tested before administration and they were revised to correct any misinterpretation (see Turel 2004: 272, 285 for details). For example, during the pilot testing, it became obvious that everything was not clear. Therefore, some items were eliminated, some new ones were added, some were revised syntactically and some were partly changed.

Questionnaires were the key means of data collection. The questionnaires consisted of structured (closed) questions in the form of 6-point and 2-point scales (Appendix 2). The questionnaires also featured multiple measures of similar attitudes so that the invalidity and unreliability in the answers could be guarded against. They were conducted after the LLs had finished working with the software.

The interviews were semi-structured interviews, as they had pre-determined objectives and focuses. The semi-structured format gave the researcher the opportunity of including more questions or changing them to a limited extent during the interviews, depending on the responses that were received from a respondent. This gave an interviewee a degree of power and control (Seliger and Shohamy 1995: 166-7). Eight (out of 45) LLs were interviewed shortly after using the materials (i.e. within one or two weeks). The selection was based on the principle of 'first-accessed, first-interviewed'. Although the main purpose of the interviews was to crosscheck the main data, they also raised some interesting issues.

The instrument for the observation was a checklist, as this enabled the researcher to focus on pre-determined aspects of behaviour (Appendix 3). They were conducted while the LLs were using the software.

The log-data, which was part of the software, was used to track and register the LLs' look-up behaviour. This enabled the crosschecking of the observations.

The data from the questionnaires was analysed using descriptive statistics (SPSS- one-way frequency method/test). The qualitative data (interviews) were categorised according to categories that were extracted from the data itself and then applied.

The correlations between the attitudes variables and the type of LLs were calculated by using SPSS. The Spearman test in Bivariate was used, as the variables were ordinal (SPSS 1996: 203, 165, Norusis 1998: 365-6), with the data also being cross-tabulated. When at least one of the variables was not ordinal, their correlation was computed by using Chi-square in Crosstabs (SPSS 1996: 164, Norusis 1998: 352). When the expected value in one or more cells was low (cell count was below 5), then Fisher's exact test was used instead of Chi-square (SPSS 1996: 164, Norusis 1998: 315).

4. Results

The results of items 7, 8, 9, 10, 11 and 12 (Appendix 2) were obtained with the aid of a one-way frequency (descriptive statistics of SPSS). Observation items 1, 2, 3, 4, 5, 6, 7 and 8 (Appendix 3) were used to check if the participants used the media types or not. Interviews elicited the LLs' attitudes to the design of the same media types in different forms in MLS.

4.1. The learners made use of the opportunities

Observations (Table 1), log-data (Table 2) and interviews revealed that the LLs used the opportunities of re-listening to the same audio-only with visuals and audio-visuals without visuals, as shown below.

Observed number	video	video without visuals	video + visuals	video + visuals without visuals	audio + animation	audio + animation without visuals	audio	audio + visuals
27	100%	22.2%	100%	3.7%	100%	100%	100%	100%

Table 1. The LLs' use of the listening media types according to observations.

ID code	The elements the click of which were registered					The number of sessions	Total time
	audio-only	audio-only + visuals	audio + animation	audio-over clips of the reading text	drag & drop activity of video-(THs)+visuals		
2	v	v	v	v	v	3	8:01:20
5			v	v	v	2	1:15:58
7			v			4	5:20:08
8						1	0:03:58
11	v	v	v	v	v	2	5:28:34
15	v	v	v			2	2:55:46
16	v	v	v	v	v	3	4:51:35
17	v	v	v	v		3	6:15:13
18	v	v	v			2	3:13:15
21	v	v	v	v	v	2	2:26:46
22			v	v	v	2	3.01.58
25	v	v	v	v	v	3	5:14:40
27	v	v	v	v		2	7:53:19
28		v	v	v		5	6:54:15
31			v	v	v	5	3:03:38
32			v	v	v	2	4:11:35
35						1	1:39:13
36				v	v	1	0:16:10
38						1	2:15:38
41	v		v	v		5	5:37:12
42	v	v	v	v	v	4	5:29:30
44	v	v	v	v	v	1	1:31:11
45	v	v			v	3	3:34:30

48				v	v	2	3:01:11
49	v	v	v	v	v	3	3:03:53
52	v	v	v	v	v	5	5:37:31
53	v	v	v	v	v	3	6:25:31
56	v	v	v	v		3	6:22:21
57	v	v	v	v	v	2	3:03:32
59	v	v		v	v	3	6:30:01
60	v	v	v	v	v	1	1:16:18
62			v	v	v	2	2:32:11
63	v	v		v	v	3	3:18:51
64	v	v	v	v		3	5:25:57
65		v		v		1	2:21:49
69			v	v		2	3:10:41
72			v			3	2:34:11
74	v	v	v	v	v	2	4:23:00
75	v	v	v	v	v	2	3:49:92
77			v			1	0:12:13
78	v	v	v		v	2	2:30:39
79	v	v	v	v	v	2	5:05:56
81	v	v	v	v	v	3	6:15:58
85			v	v	v	2	3:00:06
Total	%	%	%	%	%	mean	mean
44 LLs	61.36	63.63	79.54	77.27	63.63	2.47	2:54:10

Table 2. The tabulated log-data from the LLs.

Comments arising from the interviews regarding re-listening to audio-visuals without visuals, included the following:

'I think it is very important especially to improve the listening with re-listening the same audio-visuals without visuals' (Subject 1/Interview)

Comments arising from the interviews regarding re-listening to audio-only with visuals, included the following:

'I think it is better because … it explain[s] more information about the subject, the topic. [So you mean it gives more information about the topic]. Yeah' (Subject 2/Interview) (see also below for other interview data)

The observations (Table 1), log-data (Table 2) and interviews show that the LLs listened to all available media types in the software, although LTs in some forms (Table 1) were not used by all of these LLs.

4.2. Re-listening to the same audio-visuals without visuals is considered useful

When the LLs were asked whether it is useful if they can also re-listen to the same audio-visual texts (video-only, video (THs) + visuals, audio + animation, audio + visuals) without visuals (item 7), it revealed that they find re-listening to the same audio-visuals without visuals useful.

No.	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know
7	It's useful if you can also listen to the same audio + visuals without visuals	28.9	55.6	8.9	6.7		
					Agree	Disagree	No-answer
17	Re-listening to the same audio-visual texts without visuals is not necessary				13.6	86.4	2.2

Table 3. One-way frequency table of the LLs' attitudes to the opportunity of re-listening to the same audio-visuals without visuals.

Table 3 shows that 84.4% agreed or strongly agreed that it is useful. When the same question was asked in the negative form with two-choices (item 17), 86.4% agreed.

4.3. Learners think that re-listening to the same audio-visuals without visuals can improve their hearing skills (i.e. help them to get used to aural language)

When the LLs were asked whether re-listening to the same audio-visuals without visuals could improve their hearing skills (item 8), 77.8% agreed or strongly agreed (Table 4).

No.	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know
8	Listening to the same audio-visuals texts without visuals can improve your hearing skills	31.1	46.7	17.8	4.4		
					Agree	Disagree	No-answer
18	Re-listening to the same audio-visuals texts without visuals does not improve hearing skills				11.1	86.7	2.2

Table 4. The LLs' attitudes to the role of re-listening to the same audio-visuals without visuals in improving hearing skills.

When the same question was asked in the negative form with two-choices (item 18), 86.7% agreed (Table 4) that re-listening to the same audio-visuals without visuals can improve their hearing skills.

4.4. Learners think that re-listening to the same audio-visuals without visuals can improve their listening

When the LLs were asked whether re-listening to the same audio-visuals without visuals can improve their listening (item 9), 80% agreed or strongly agreed (Table 5).

No.	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know
8	Listening to the same audio-visuals texts without visuals can improve your listening	31.1	48.9	17.8	2.2		

Table 5. The LLs' attitudes to the role of re-listening to the same audio-visuals without visuals in improving their listening.

The quantitative results were also supported by most of the qualitative data (7 out of 8). There were some interesting reasons: Having the opportunity of re-listening to the same audio-visuals without visuals can:

- improve their listening (6 times mentioned)

"I think it is very important especially to improve the listening with re-listening the same audio-visuals without visuals." (Subject 1 / Interview)

"I think it's also good. It's good and useful because this makes us sure about this is listening and improve our listening." (Subject 4 / Interview)

I: … Should we give this chance to students?

S: Yeah, yeah. If it's finally, after after we watch the visual before, that's ok that's ok. It will improve their listening.

I: You think that it's useful if we include this option.

S: Yeah, I think so, I think so...' (Subject 6 / Interview)

"I think it's a very good idea because … we need to listen audio without video clip, but at first we can't listen audio without visuals. So, I think it's very good to improve my listening." (Subject 10 / Interview)

- help them remember what they say (mentioned once)

"I think em… after the first listening watching the video [is] better because you can … remain … [remember] remember what you say." (Subject 2 / Interview)

- help understand better, as it requires LLs to focus on what they hear (once mentioned)

S: Em… it's a useful way to, to re-listen to the same audio-visual without.

I: Why?

S: Because now you understand em… the audio very well . And now you must now understand every single word alone without help with visuals .

I: And how does this help you?

S: To help my listening, to catch the word… (Subject 3 / Interview)

- help focus on pronunciation (once mentioned)

"I think it's very useful particularly to listening because I heard pronunciation very clear. So I think it's very useful." (Subject 7 / Interview)

There were some LLs (1 out of 8) who thought that it was not necessary to re-listen to the same audio-visuals without visuals.

"I think it's not necessary without visuals because with screen it's better to use." (Subject 9 / Interview)

There were also some relationships between different variables (Table 6). There was, for instance, a significant positive association at the 0.01 level (2-tailed test) (P< .0001) between the view that regarded re-listening to the same audio-visuals without visuals useful and the views that regarded re-listening to the same audio-visuals texts without visuals improving hearing skills and listening.

Significant P. values of Spearman's non-parametric and Chi-square correlation table between the variables (7-9, 17-18). Only the variables that have significant p values haven been given		8- Listening to the same audio + visuals texts without visuals can improve your hearing skills	9- Listening to the same audio + visuals texts without visuals can improve your listening
7- It's useful if you can also listen to the same audio + visual texts without visuals	Cor. Coefficient	.480**	.461**
	Sig. (2-tailed)	.001	.001
	N	45	45
8 -Listening to the same audio + visuals texts without visuals can improve your hearing skills	Cor. Coefficient		.549**
	Sig. (2-tailed)		.000
	N		45

Table 6. Significant P. values of Spearman's non-parametric and Chi-square correlation table between the variables (7-9, 17-18).

This means that the LLs who regard re-listening to the same audio-visuals without visuals useful also tend to believe that it can improve their hearing skills (i.e. getting used to aural language) and listening.

In the same way, there was a significant positive association at the 0.01 level (2-tailed test) (P< .0001) between the view that regarded re-listening to the same audio-visuals without visuals can improve hearing skills (i.e. getting used to aural language) and the view that it can improve listening. This means that the LLs who think that re-listening to the same audio-visuals without visuals can help improve their hearing skills also tend to believe that it can improve their listening.

There were some relationships between the LLs' characteristics and their attitudes (Table 7). There was, for instance, a significant negative relationship at the 0.05 level (P< .0005) between the LLs who regarded themselves good about learning English and understanding when listening to English and the views that regarded re-listening to the same audio-visuals without visuals useful and improving listening.

Significant P. values of Spearman's non-parametric and Chi-square correlation table between the learners-characteristics variables (2-19) and variables (7-9, 17-18). Only the variables that have significant p values haven been given		13c- How good they feel about learning English	14c- How good they feel about understanding when listening to English
7- It's useful if you can also listen to the same audio-visual texts without visuals	C. Coef. Sig. (2-t) N	-.280 .080 40	
8 -Listening to the same audio-visuals texts without visuals can improve your hearing skills	C. Coef. Sig. (2-t) N		
9- Listening to the same audio-visuals texts without visuals can improve your listening	C. Coef. Sig. (2-t) N	-.352* .026 40	-.291 .065 41

Table 7. Significant P. values of Spearman's non-parametric and Chi-square correlation table between the learners-characteristics variables (2-19) and variables (7-9, 17-18).

The LLs who agree that they feel good about learning English and understanding when listening to English tend to think that re-listening to the same audio-visuals without visuals is not useful and cannot improve their listening.

4.5. Learners find re-listening to the same audio-only with visuals useful

No.	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know
10	It's useful if you can also listen to the same audio texts with visuals	44.4	37.8	13.3	2.2		2.2
					Agree	Disagree	No-answer
19	Re-listening to the same audio texts with visuals is not necessary				6.7	91.1	2.2

Table 8. Simplified one-way frequency table of the LLs' attitudes to re-listening to the same audio-only with visuals.

When the LLs were asked whether it is useful if they can also re-listen to the same audio-only with visuals (item 10), 84.1% agreed or strongly agreed. When the same question was asked in the negative-form with two-choices (item 19), 93.2% agreed (Table 8).

4.6. Re-listening to the same audio-only with visuals can improve listening

When the LLs were asked whether re-listening to the same audio-only with visuals can improve their listening (Table 9, item 11), 79.5% agreed or strongly agreed. When they were asked the same question in the negative form with two-choices (item 20), 91.1% agreed (Table 9) that re-listening to the same audio-only with visuals can improve their listening. They consider having such an opportunity beneficial.

No.	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	No-answer
11	Listening to the same audio texts with visuals can improve your listening	31.1	46.7	20.0			2.2
					Agree	Disagree	No-answer
20	Re-listening to the same audio texts with visuals does not improve listening development				6.7	91.1	2.2

Table 9. The LLs attitudes to the role of re-listening to the same audio-only with visuals in terms of improving their listening.

4.7 Re-listening to the same audio-only with visuals can prepare for the real-world

When the LLs were asked whether re-listening to the same audio-only with visuals could prepare them better for the real world (item 12), 68.9% agreed or strongly agreed (Table 10).

No.	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know
12	Listening to the same audio texts with visuals can prepare you better for the real world	33.3	35.6	26.7	2.2	2.2	

Table 10. Attitudes to the role of listening to the same audio-only with visuals in terms of preparing them better for the real world.

The quantitative results were also supported by all of the qualitative data (8 out of 8). Some interesting reasons emerged. Having the opportunity of re-listening to the same audio-only with visuals can:

- enable LLs to have more information about the topic/subject (3 times mentioned)

S: I think … it's better because it … explain [s] more information about the subject, the topic.

I: So you mean it gives more information about the topic S:

Yeah.' (Subject 2 / Interview)

"I agree with you because it's with visual make more declaration for the students and improve his skill more." (Subject 6 / Interview)

S: I think it's better because in the end I can construct my idea. I:

Do you mean it helps you to understand better?

S: Yes. ' (Subject 7 / Interview)

- help LLs to find out if they have understood audio-only (once mentioned)

S: I think if I listen first without visuals, and after that with visuals, it's better.

I: Why?

S: Because first to decide which words I can catch or not, first of all. But if I watch the visual with audio at the same time first thing, I think I can't catch this word, but if the first time if I just listen to the audio without visual, I can decide which word I can catch or which one is difficult for me.

I: So it helps you to find out if you can understand without visuals or not?

S: Yes yes. (Subject 3 / Interview)

- help LLs to understand audio-only (once mentioned)

S: I think it's very useful.

I: Why?

S: Because it's helps for me to understand easily. (Subject 10 / Interview)

- help draw LLs' attention to salient features (twice mentioned)

"I think it's also useful because it make me sure about if I have mistakes in my answer and cannot hear. This is the word. Visual make me attention this is the point I need to answer." (Subject 4 / Interview)

S: I think very good idea because I can understand what's the point of the sentence. Visuals tell me.

I: So you find them useful.

S: Yes. (Subject 9 / Interview)

There were also some relationships between different variables (Table 10). There was, for instance, a significant positive association between the view that regarded relistening to the same audio-only with visuals useful and the views that regarded relistening to the same audio-only with visuals prepares learners better for the real world and improves listening.

The LLs who think that re-listening to the same audio-only with visuals useful also tend to believe it can prepare them better for the real world and improve their listening. The LLs who think that re-listening to the same audio-only with visuals can improve their listening also tend to believe it can prepare them better for the real-world. The LLs who think that re-listening to the same audio-only with visuals is necessary also tend to believe that it improves their listening development.

Significant P. values of Spearman's non-parametric and Chi-square correlation table between the variables (10-12, 19-20). Only the variables that have significant p values haven been given		11 -Listening to the same audio-texts with visuals can improve your listening	12 -Listening to the same audio- texts with visuals can prepare you better for the real-world	20- Re-listening to the same audio- texts with visuals does not improve listening development
10- It's useful if you can also listen to the same audio texts with visuals	C. Coef. Sig. (2-t) N	.807** .000 43	.496** .001 44	
11- Listening to the same audio texts with visuals can improve your listening	C. Coef. Sig. (2-t) N		.580** .000 44	
19- Re-listening to the same audio texts with visuals is not necessary	Fisher's Exact Test			.000

Table 11. Significant P. values of Spearman's non-parametric and Chi-square correlation table between the variables (10-12, 19-20).

There were also some relationships between the LLs' characteristics and their attitudes (Table 12).There is, for instance, a significant positive relationship at the 0.05 level (P< .05) between attitude-variable V10 and characters-variable V17. The LLs who practise listening alone also tend to think that re-listening to the same audio-only with visuals useful. The other significant relationships are as below. The younger LLs tend to think that re-listening to the same audio-only with visuals cannot improve their listening (at the 0.05 level, (P< .05).

Significant p values of Spearman's non-parametric and Chi-square correlation table between the variables (10-12, 19-20) and learners-characteristics variables. Only the variables that have significant p values haven been given		5- Age group of the LLs	13a- How confident about learning English	15c- How good about improving their list	17- How often LLs normally practise listening alone	18- How often want to learn Eng. with comp.	19- How often want to practise listening with comp.
10- It's useful if you can also listen to the same audio texts with visuals	C. Coef.				.360*		
	Sig. (2-t)				.016		
	N				44		
11 -Listening to the same audio texts with visuals can improve your listening	C. Coef.	-.423**			.362*	.325*	.295
	Sig. (2-t)	.005			.016	.034	.057
	N	43			44	43	42
12 -Listening to the same audio texts with visuals can prepare you better for the real-world	C. Coef.	-.321**	-.289	-.271			
	Sig. (2-t)	.033	.067	.091			
	N	44	41	40			

Table 12. Significant p. values of Spearman's non-parametric and Chi-square correlation table between the variables (10-12, 19-20) and learners-characteristics variables.

The LLs who tend not to want to practice listening alone and learn English with a computer also tend not to regard re-listening to the same audio-only with visuals can improve their listening. The LLs that tend to be younger, confident and very confident at learning English and good at improving listening also tend not to believe that re-listening to the same audio-only with visuals can prepare them better for the real-world.

5. Discussion

The LLs were provided with the opportunity of re-listening to the same audio-visuals (i.e. audio + (supplementary) visuals, audio + animation, video-only, video-THs + visuals) without visuals, and the same audio-only with visuals.

The LLs agreed that re-listening to the same audio-visuals without visuals was useful. They think that this can improve their hearing skills (i.e. help them to get used to aural language, focus better on what they hear and pay attention to pronunciation) and listening. The results match the findings in the field of FL learning style preferences in that some LLs are auditory (Dun and Dun 1979: 238-44, Dunn 1983: 496-506, Reid

1987: 96-7). Presumably, they want to re-listen to audio-visuals without visuals, as it suits their auditory learning style preferences better.

The results also match the well-known advantages of audio-only as an LT in that audio is beneficial for LLs in terms of them getting used to aural language as well as helping them to rely completely and heavily on speech, which would naturally and ultimately improve their acoustic channel.

The results are also consistent with the social learning theory, as it suggests that repeated exposure to similar or parallel material contributes to learning. Here, the LLs are in favour of re-listening to the same audio-visuals without visuals.

From the standpoint of designing MLS, the implication is to provide the opportunity of re-listening to the same audio-visuals without visuals. This can help LLs during the FLL process, as repetitious exposure is one of the invaluable factors in FLL (Robinson 1989: 119-33; Carroll 1977: 507), and the option of listening to audio-only helps LLs to get used to aural language, focus better on what they hear and pay attention to pronunciation.

As a result, such an IMM software design is likely to lead to a better preparation for the real world. There is, however, one issue that needs to be emphasised here. Although the opportunity of re-listening to the same audio-visuals without visuals was considered by more than 77% (1) useful, and (2) improving their hearing skills (i.e. getting used to aural language) and (3) listening; the number of those who re-listened to audio-visuals without visuals was very low. This might be due to different reasons such as:

1. Audio-visuals without visuals options were not default, but optional. The underlying assumption is that the audio-only, which was default, was re-listened by all the LLs (100%).
2. Audio-visuals without visuals options were not accompanied by any listening tasks. The audio-only, which was accompanied by listening tasks, was re-listened by all of the LLs. These potential reasons are consistent with what Mangiafico (1996: 107) found.
3. LLs in comparison with audio-only in general prefer visuals more and this might also be another reason why all of the LLs did not re-listen to audio-visuals without visuals.

This means that the design of audio-visuals without visuals in an IMM environment needs to be further developed so that more LLs use such an option. It also means that only presenting LTs on screen is not enough. To overcome this, the following can be suggested:

1. Audio-visuals without visuals option can be default rather than optional (at the post-listening stage)
2. Listening tasks can be provided with all audio-visuals without visuals options, which can further encourage LLs to use such opportunities. Findings show that LLs pay little attention when they are not required to give an answer (Mangiafico 1996: 109), and they participate actively when they are required to use language through interactive activities (Little 1995: 179, Ruhlmann 1995: 54, Mangiafico 1996: 113)

The LLs find it useful if they can also re-listen to the same audio-only with visuals. They think that re-listening to the same audio-only with visuals can improve their listening and better prepare them for the real-world.

The results match the findings in the field of FLL and acquisition in that the LLs have revealed that re-listening to the same audio-only with visuals helps them to have more information about the topic, understand easily and better, and prepare them for the real world. In terms of the role of visuals, this substantiates previous findings (Herron et al. 2002: 37, Ginther 2002: 133-67, Rubin 1994, Secules et al 1992: 480-82).

The results are also consistent with the dual coding, the redundancy, the comprehension input and the noticing theories, as providing LLs with re-access to audio with additional comprehension cues (visuals) can help comprehension, noticing, awareness and recalling.

The results are also consistent with the social learning theory, as it suggests that repeated exposure to similar or parallel material contributes to learning.

For the production of learning and cost effective MLS, the implication is to provide the opportunity of re-listening to the same audio-only with visuals, as (1) this is what the LLs want. (2) There is a consistent correlation between attitudes and achievement. (3) This provides a repetitious exposure at different stages of listening with different aspects of the input each time, which is one of the invaluable factors in FLL. (4) The above mentioned hypothesis, theories and facts (i.e. learning style preferences) require us to do so. Such an IMM listening software design can be a positive enhancement of better understanding and listening development.

There is, however, one issue that needs to be mentioned here. While re-presenting audio-only LTs with (supplementary) visuals, the requirements of the cognitive load theory (Kalyuga 2000: 161, Sweller, 1999) and working memory should not be ignored. In short, we need to be precise and keep the balance. Failure to take into account such implications not only can decrease the effectiveness of multiple modalities in re-presentation of audio-only LTs with (supplementary) visuals, but it can also decrease working memory resources available for learning and inhibit acquisition (Kalyuga 2000: 161-72).

Further research might try to find out how LLs can be encouraged to use such opportunities to their fullest effects. It might also try to uncover what the effects and contributions of re-listening to the same LTs in different forms (audio-only with visuals and audio-visuals without visuals) at different listening stages in MLS to FLL are.

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Appendixes

Appendix I: The learners' pre-exposure characteristics - questionnaire results (in %)

Gender	*Male* 56.5 %			*Female* 43.5 %		
Nationality	Libyan 30.4	Japanese: 10.9		Spanish: 4.3	Kurdish: 2.2	
	Saudi: 6.5	Tai: 13		Colombian: 2.2	Mongolian: 2.2	
	Syrian: 4.3	Chinese: 8.7		Italian: 2.2	Vietnamese: 2.2	
	Estonian: 2.2	Portuguese: 4.3		Bulgarian: 2 .2	Israeli : 2.2	
Native language	Arabic: 43.5	Spanish: 6.5		Mongol : 2.2	Bulgarian: 2.2	
	Japanese: 10.9	Kurdish: 2.2		Russian: 2.2	Portuguese: 4.3	
	Chinese: 19.6	Italian: 2.2		Vietnamese: 2.2	Mandarin: 2.2	
Age group	*11-15 years*	*16- 20 years*	*21-25 years*	*26-30 years*	*More than 30 years*	*No answer*
		4.3	23.9	34.8	34.8	2.2
Any other languages (apart from English and their native language) they speak			No		Yes	
			76.1		23.9	
The period of learning English	*1 - 2 years*	*3 - 5 years*	*6 - 10 years*	*More than 10 years*	*No answer*	
	37	26.1	21.7	8.7	6.5	
Their level in English	*Pre-intermediate*		*intermediate*		*Advanced*	
			87		13	
Their level in listening	*Pre-intermediate*		*Intermediate*		*Advanced*	
			100			
Their reasons for learning English	Post-study: 45.7		Job: 21.7		No-answer: 4.3	
	World language : 26.1		Communication : 2.2			
Computer literacy	*Basic User*	*1*	*2*	*3*	*4*	*5*	*Proficient User*
		37	10.9	32.6	17.4	0	No-answer: 2.2
						No	*Yes*
Those who used software for learning a foreign language before						76.1	23.9
How they feel about learning English	*confident*	*1*	*2*	*3*	*4*	*5*	*No-answer*	*not confident*
	relaxed	13	21.9	39.1	10.9	4.3	8.7	*not relaxed*
		13	19.6	50	8.7	4.3	4.3	
	good at it	8.7	26.1	41.3	13	0	10.9	*not good*
How they feel about understanding when listening to English	*confident*	8.7	13	41.3	21.7	8.7	6.5	*Not confident*
	relaxed	6.5	15.2	39.1	21.7	8.7	8.7	*not relaxed*
	good at it	6.5	10.9	52.2	15.2	6.5	8.7	*not good*
How they feel about improving their listening	*confident*	6.5	19.6	41.3	17.4	6.5	8.7	*not confident*
	relaxed	8.7	19.6	39.1	17.4	8.7	6.5	*not relaxed*
	good at it	6.5	23.9	37	19.6	2.2	10.9	*not good*
		a lot	*often*	*sometimes*	*occasionally*	*never*	*no-answer*
Do they normally study English alone?		10.9	30.4	54.3	4.3		
Do they normally practise listening alone?		6.5	28.3	52.2	8.7	4.3	
Do they want to learn English with computers?		21.7	26.1	32.6	15.2	2.2	2.2
Do they want to practise listening with comp?		32.6	26.1	26.1	8.7	2.2	4.3

Appendix 2: Questionnaire about the design of media-types in one MLA

This questionnaire is about the priority of media types in the NewMillennium multimedia-listening software. Please tick the appropriate choices (more than 1 is possible)

	Questions	SA	A	N	D	SD	DK
7	It's useful if you can also listen to the same audio + visual texts without visuals						
8	Listening to the same audio + visual texts without visuals can improve your hearing skills						
9	Listening to the same audio + visual texts without visuals can improve your listening						
10	It's useful if you can also listen to the same audio texts with visuals						
11	Listening to the same audio texts with visuals can improve your listening						
12	Listening to the same audio texts with visuals can prepare you better to the real-world						

	Questions	A	D
17	Re-listening to the same audio-visual texts without visuals is not necessary		
18	Re-listening to the same audio-visual texts without visuals does not improve hearing skills		
19	Re-listening to the same audio texts with visuals is not necessary		
20	Re-listening to the same audio texts with visuals does not improve listening development		
21	Would you like to add anything about media types		

Your full-name: …… Thank you very much.

Appendix 3: Observations about the design of media types in one MLA.

Subject no / name: ...

About the priority of media types		
1	They listened to the video-only	
2	They listened to the video-only with visuals	
3	They listened to video + visuals	
4	They listened to video + visuals without visuals	
5	They listened audio +animations	
6	They listened audio +animations without visuals	
7	They listened to audio-only	
8	They listened to audio-only with visuals	

Non-participant observer's name: …… Signature & Date: ……