Media Workstation

Audio Resources

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IT was nearly a century ago that audio was first used for instructional purposes, and though a lot of research has gone into its use, the subject has been relatively sidelined in more recent years, probably because of the pervading influx of video and computer technology (Tripp & Roby, 1996).

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Audio resources are, nonetheless, still quite popular with teachers, as they are among the most easily accessible teaching aids. Relatively inexpensive hardware and easily available (or *producable*) software, makes the audio aid a simple and (often) effective way of introducing diversification and illustration in the classroom.

But the question remains why use audio at all - indeed, beyond that, why use media!

Because there is a need to break down classroom walls and pull the outside in. Because "media's ways of structuring and presenting information - that is, their symbols stystems - are media's most important attributes when learning and cognition are considered ..." (Salomon, 1979, p.216).

Mind, there is the problem of retaining the attention of the students through the appealing to only one of the senses, i.e., the auditory. "The disadvantage of audio, for sighted students, is that it provides nothing for the visual channel to focus on." (Laurillard, 1993, p.112), which suggests that any one pure audio presentation session should be very short In fact, short term auditory memory, unless reinforced by rehearsal, has a capacity of between 1.3 to 1.7 seconds (Potter, 1990), which limits the amount of memory that will eventually make it to long term encoding. This is particularly true in the case of verbal instruction, which is why it is often preferable to "structure and provide information" in a way that can utilise the different registers not available to the teacher in person in the classroom.

Since "all the information with which our senses continually bombard us has to be screened, as only certain selected features are to be attended to and subsequently consciously processed" (Biggs & Moore, 1993, p.208), we must make certain that we select the features to be processed, and find ways to indicate them to our students. The audio aid is one such way.

Practically...

Audio recordings can, among other things, be of:

- songs, utilising the student's familiarity with the piece to underscore an instructional cue, while using the melody as a mnemonic device to help semantic memory;

- interviews with the protagonists of the topic being explored, bringing in tonal diversification, as well as introducing proximity;
- excerpts from radio programmes that bring to the classroom the differing opinions of debating participants, or the slickness of presentations that edit different elements into one sound-bite, concurrently presenting the point made and the evidence that backs it up;
- playback of recordings by the students themselves, fostering interactive involvement and a possibility of metacognition for the learners;
- drama excerpts, that bring to life what would normally be monotonous same-voice reading;
- professionally pre-recorded exercises that can be given to the student for auto-instruction as consolidation of classroom lessons.

Audio recordings can also be an inclusive tool, especially for visually impaired students that may replace reading with audio. Also, "students with learning difficulties can revisit classroom presentations via audiotape. They can replay more difficult sections as often as necessary." (Newby, et al, 1996, p.73).

Equipment is also easily available and often portable. Equipment can include the audio-cassette recorder (undoubtedly the most common); CD players (even recordable CDs - which includes audio - are quickly becoming standard computer peripherals); mini-disks,

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excellent for clarity; and, of course, digital audio that can be played back from computers and/or specially designed equipment.

Message loss

In order to maximise on the effectivity of audio resources, the teacher must first understand the difficulties incurred by the receiver and how the integrity of the original message suffers through a mixture of physionomic, psychological and envioronmental factors.

Heinich, et al, (1996), map the process between the encoding by the sender and the decoding by the receiver of the audio message, as it filters through the "Hearing-Listening Process".

Here I am presenting a modified model that shows the process of loss and modification of the audio-recorded and played back M^1 (the original message) as it transforms into M^2 (the received version of the message). Note the important distinction between the physiological process of "hearing", in which the physical qualities of the ear and the physical environment play a very important part; and the psychological process of "listening", in which psychological noise, and a number of poor listening habits (here quoted from Adler, et al (1995) can also "warp" the sent message.

All conditions involved in the make-up of character – they that also determine how effective a communicator a person is with whom, succinctly outlined in Berlo's model (1960), I believe, have a final effect on the received message, psychologically continuing the losses already incurred by the listening losses.

The teacher must accept that these losses are possible each time s/he uses recorded audio, and find ways of compensating for each factor in order to maximise on content and form integrity.

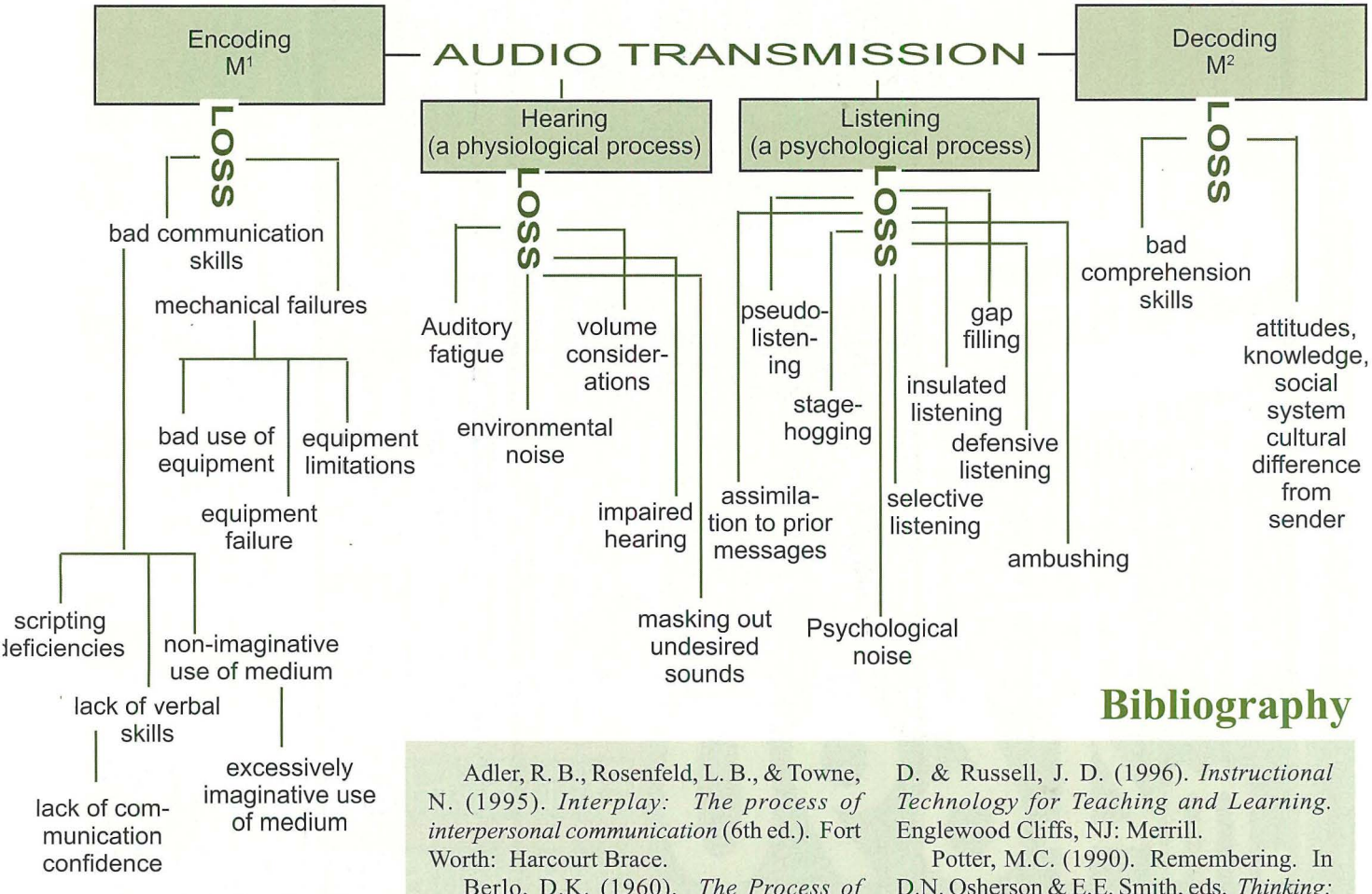

Fig.1. Audio-message loss model

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