

Don't Blame the Technology: A Checklist for Planning Technology-Assisted Lessons

When educational technology fails us, the real blame often lies with inadequate lesson planning. The authors therefore propose a four-point checklist for planning lessons which apply technology, whether audio, visual or computer. The checklist encompasses medium, software, student control, and teacher guidance. The checklist reflects the authors' respective English as a Second Language (ESL) teaching experiences at Ohio University, the University of Akron, and Arkansas State University. It is supported by a comparison of publications on each medium (Brumfit, Phillips and Skehan, 1985; McGovern, 1983; Lindenau, 1986; among others) and on learner/teacher roles (Widdowson, 1983).

It's nothing new, but it continues to bear repeating: The use of educational technology fails language learning unless it is integrated into a well thought-out lesson plan. Frequently, instructors are so preoccupied with technical questions that they overlook more fundamental pedagogical ones. Many who devote considerable preparation time debugging programs, perusing hardware and software catalogues, or investigating the latest audio-visual resources, otherwise neglect explicit instructional objectives and teaching strategies until the last minute, and then hastily improvise. In such cases we encounter skeptical and frustrated learners who do not perceive the point of the lesson, and thwarted instructors who are apt to blame the technology.

The blame, however, for poorly realized lessons often lies not with the technology itself but with the lesson planning process. As Rivers (1981,

p. 5) puts it: "Technological wonders cannot assist learning without effective courseware, that is, a carefully designed and executed language sequence that provides authentic language materials which are interesting enough to retain the students' attention and encourage perseverance."

Instead of beginning the planning process with a teaching device in mind and asking "Now, what can I teach with this?", a sounder approach is to begin planning a specific instructional objective and inquiring "Which application (*if any*) of technology would best assist the learner to attain this objective?". To foster this *pedagogy first* approach when it comes to instructional technology, the authors propose a checklist for formulating coherent lesson plans. The four-point checklist raises questions about selection of medium, selection of software, amount of student control, and amount of teacher guidance.

CHECKLIST

Selection of Medium

Is the teaching medium the most appropriate one for the language skill(s) to be learned? Different media do not necessarily aid the same language skill equally well. For example, Taylor (1979) finds the language lab ill-suited for teaching production of segmentals since learners tend not to perceive the differences between correct and incorrect target language pronunciation. Yet, he finds the lab fruitful for independent language practice at the word level or higher, observing that at this level, students can more successfully self-correct by comparing their responses with an audio recording.

D. Willis (1983) criticizes the use of video for teaching with still visuals, noting that a simpler medium—the overhead projector—is more effective for this purpose. Yet, like J. Willis (1983a), he considers video invaluable for teaching the relationship between verbal and visual elements in communication.

Clarke (1986) has noted that there is frequently little advantage to using computer-assisted language learning (CALL) for the practice of discrete grammatical points. Such practice is handled just as well with pen and paper. Yet, he finds that the computer's capacity for maximum learner choices makes it advantageous for assisting reading instruction. In this respect, we, at Ohio University, have also found CALL advantageous; we have selected it for a task-based ESL reading activity: No other medium could so conveniently allow students to experiment with alternative plots for a reading about a fictitious highjacking.

Selection of Software

Has the software been chosen on the basis of pedagogical criteria, or merely for entertainment or novelty value? It is, of course, desirable to seek out entertaining materials for students, and granted, a brief interlude of computer games, T.V. comedy, or recorded songs can, at the very least, provide a needed respite from the usual classroom routine. Nonetheless, entertainment value should not be the *primary* criterion of selection. Novelty wears off quickly; it will not motivate learners indefinitely, and may even have an adverse effect on the motivation of adult learners from traditional educational backgrounds—adult learners who feel “We are not here to be amused!”.

“The successful use of *any* [italics added] teaching aid—printed materials, blackboards, flashcards, overhead projectors, and so on—presupposes the successful application of certain pedagogical principles to teaching.” (Loneragan, 1984, p. 5). This is equally valid for the selection of audio or video tape recordings and CALL programs. Pedagogical criteria include relevance to learner needs and interests (Fox, 1985; Rubrecht, 1977; Willis, J., 1983a), fulfillment of predetermined instructional objectives (Fraenkel, Underwood & Whitney, 1979; Phillips, 1985; Willis, J. 1983b), adherence to a communicative

approach (Loneragan, 1984; Sanders & Kenner, 1984), and authenticity of the language task (Porter & Roberts, 1981).

At the University of Akron, for instance, we use videotaped news excerpts from *The Today Show* as one type of listening comprehension and summarizing exercise. We have chosen this software because our students wish to be able to follow televised news broadcasts in order to stay abreast of current events, broaden their vocabularies, and improve their understanding of American civilization. As their teachers, we have diagnosed their need to more readily extract main ideas from spoken discourse. *The Today Show* news software provides authentic communicative practice of this “main idea” extracting skill: It is natural, when watching the news, to focus on main ideas rather than concentrating on every word and detail.

Amount of Student Control

To what extent can the learner control the pace and sequence of the lesson in accordance with his or her individual ability and learning style? In other words, how easily can the learner interrupt in order to think, take notes, or ask for help? How easily can learners repeat, skim through, or skip materials as they feel necessary?

Control of pace and sequence in the audio-visual laboratory depends primarily on access to the play, pause, fast forward, rewind, and cuing functions of the tape deck or videocassette recorder (VCR). In the CALL lab (where access to hardware is usually given), control depends primarily on the availability and quality of software features such as *escape* and *help* functions, menus, and branching.

If instruction is to be based on a behavioristic model (as with the audio-lingual method), student access to hardware and software is not essential. However, it should be remembered that the monotony and dehumanization of the behavioristic approach nearly killed off the language laboratory during the 1970s. If, on the other hand, instruction is to follow a more humanistic model, such as that espoused by Widdowson (1983), the amount of student control is of major importance.

Widdowson notes that when a single, unalterable pattern of language learning is imposed on a class of diverse individuals, the learners tend to conform to the artificial language behavior of the classroom, but do not necessarily *acquire* (i.e., assimilate) natural language behavior. Conversely, asserts Widdowson, when teaching conforms to individual learning patterns, actual language acquisition is more likely to occur.

For teaching to conform to individual learning in a technology-assisted lesson, learners must receive the control afforded by access to hardware, and, in the case of CALL, by the appropriate user-friendly software. The use of educational technology for *lockstep* performance (where the student is denied any control) has been criticized by Long and Porter (cited in Mydlarski, 1987), who consider lockstep unrepresentative of normal communication; and by Arthurs (1979) who suggests that it interferes with the individual's propensity to break language down into the type and length of unit he or she finds easiest to process.

Aware of the drawbacks of lockstep performance, we, at Arkansas State, do not monopolize control of the tape decks in the Intensive English Program language laboratory. Instead, we fast-copy lesson programs from the source at the lab console to each student position, thus enabling students to control both pace and sequence individually. Similarly, the CALL software developed at Ohio University for reading activities enables students to independently discover the "correct" conclusion to the fictitious highjacking story by trial-and-error and deductive reasoning.

Amount of Teacher Control

To what extent is the teacher guiding the language learning? Student control of the delivery system and teacher guidance of learning are not mutually exclusive. Although learners can and should be given responsibility for their own learning, this cannot and should not entail simply having them sit down in front of machines, and leaving them there to flounder. Even self-access, or independent study materials, necessitates a teacher qua *facilitator* to keep the student from bogging down in difficult language, or from straying too far from predetermined instructional objectives.

Widdowson (1983) compares the facilitator role with the role in mother tongue language acquisition. Children, he explains, do acquire the mother tongue through experimentation and discovery, but they are not *free agents*. Their language discovery is inevitably constrained by the role model. And so it is with target language acquisition.

The teacher has to devise some sort of order, some pattern of constraint, because without it there is no purpose in the exercise of individual freedom to act and the conditions for the engagement of the ability to acquire language just will not be met. (p. 9)

The importance of the teacher as guide or facilitator in technology-assisted instruction is supported by Lindenau's (1986) language lab case study. When Lindenau's subjects worked independently with unaltered, commercially produced ESL audio programs, barely 20 per cent were responding appropriately to the tapes. The remainder were either responding inappropriately, or, in fact, not responding at all. When, however, recorded instructions to the tape programs were made specific to the learning situation, and when an instructor was present to monitor and guide the subjects, the percentage responding appropriately jumped to 80 per cent, with zero per cent not responding at all.

Our language laboratory case study at Arkansas State University yielded similar results. Intensive English students working independently with recorded mini-lectures were having difficulty completing the exercises within the allotted time. Monitoring through the lab console showed one reason why: When in difficulty, students futilely replayed the same utterances over and over again instead of attempting to pick up meaning from contextual and rhetorical cues as they had been instructed to do.

Likewise, we have found instructor guidance essential to teaching academic listening with videotape at the University of Akron. Lessons based on videotaped lectures are aimed at learners who are preoccupied with language at the sentence or word level. The purpose of teaching academic listening is to teach strategies for drawing inferences from academic language. The instructor interrupts the videotape at intervals to demonstrate the strategies in question. To

neglect this sort of guidance would defeat the purpose of the lesson; there would be nothing to discourage the learners from reverting to their natural inclination to focus on discrete words and sentences at the expense of overall meaning.

At Ohio University, teacher guidance has been linked with attainment of instructional objectives in CALL. Hubbard et al. (1986) hypothesized that Intensive English students could more effectively acquire vocabulary if: (a) students could choose a *key word* from L₁ as mnemonic to recall a phonologically similar target word from L₂, and (b) students were provided with review quizzes of the items they had missed. The researchers, therefore, produced their own software, *The Keyword Vocabulary Program*, to try out this hypothesis in an independent study setting. The hypothesis, however, could not be tested. Left without teacher guidance, the students observed tended to ignore the mnemonic and review capabilities of the software, and attacked vocabulary items with traditional memorization. Despite the research investment, students were using the computer as no more than an "electronic flashcard."

Conclusion

Admittedly, the checklist here presented is based on small-scale case studies and the theoretical literature. More empirical research is necessary to discover teaching techniques which make the best use of instructional technology, particularly in the area of teacher and learner roles. Nevertheless, at least one conclusion can be clearly drawn: language laboratories, VCRs, and micro-computers are not labor-saving devices for the teacher. Lessons mediated by technology demand as much planning effort, if not more, than conventional instruction. Such planning need not intimidate the technological neophyte, since the four points discussed in the checklist draw on teaching expertise, not the expertise of the media technician or computer hacker. Even teachers new to electronic teaching media and software can think through pedagogical criteria for the selection of medium and software; they can anticipate the need to balance student control and teacher guidance. Without thorough lesson planning, hundreds if not thousands of dollars of equipment will do

nothing more than frustrate students, disappoint teachers, and, eventually, be abandoned to gather dust and rust.

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