TECHNOLOGY AND MEDIATED INSTRUCTION: AN INTERDISCIPLINARY ESSAY

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The expanded use of technology, for educational purposes is entering an expanded phase in the development of Western culture. It began with the advent of the printing press (McLuhan, 1969), and continues with the electronic explosion of the world of television (McLuhan, 1964). This "media sensitivity" has been brought about by that controversial prophet of modern times, Marshal McLuhan.

Even though many scholars may disagree with his pronouncements and generalizations about the role of media in a mass society (Rosenthal, 1968), they all agree that McLuhan has highlighted the role of technology in modernizing the world into a "global village." Technology however is more than the use of radio and television. It also involves the use of computers, satellite communication, and other products of solid state circuitry. In the arena of mediated instruction, all of these forms of technology continue to play a role in the structuring of concepts into forms of knowledge which are processed as human information. Technology, then, includes print culture as well as electronic culture and utilizes the visual display of the icon tube as well as the printed page.

Unfortunately, for many students of print culture, the world of technology remains only peripherally recognized in the context of the classroom. They speak of "audio-visual aids" as supplements to the printed page and barely see that film, radio, television, and the computer are in & of themselves . . . . viable means of effective instructional media (Tanzman and Dunn, 1971). Hence, just as students who have difficulty with processing the linear and analytical texts of the print culture are labelled "functionally illiterate," one can refer to these neophytes to the world of technology and mediated instruction as "visually illiterate." When they witness the simultaneous display of visual instructional materials, they do not process images with great acuity. Rather they have vague recollections of the impact of this mode of cognition as a source of information. Donis Dondes (1973) is among those educators who recognizes the need for more work in the area of visual literacy.

Based on a Gestalt model of psychology, Dondis attempts to bring into focus the anatomy of a visual message and the dynamics of contrast and visual style. This focus on visual competency is shared by others (Brown, 1973) who are involved in the use of media for instruction. Hence,

more teachers are beginning to develop courses on coping with mass media (Littell, 1972).

This is also a dominant concern of the journal of **Technology and Mediated Instruction** (AM). However, TAMI is also dedicated to the development of viable theoretical models of an interdisciplinary nature that will provide insight into the interaction of media, cognition, and learning (Salomon, 1979).

THE NATURE OF INTERDISCIPLINARY MODELS

Many scholars enter a discipline of traditional knowledge and rarely, if ever, seriously question its relationship to other disciplines. They are usually content to define the parameters of their quest for knowledge and insight in traditional terms, and remain faithful practitioners of the dictates of their own disciplines of study. There are visionaries, however, who come with a broader vision of epistemology. As such, they frequently share insights with other fields of investigation and are usually involved in incorporating basic concepts from other disciplines into their own research or classroom applications. These are members of an ever growing minority of scholars who do not permit themselves to be hindered by the confines of traditional knowledge, but rather seek to transcend the limits imposed by arbitrarily defined disciplines and bridge the gaps which characteristically separate these fields of knowledge from each other.

As a case in point, consider language teaching. On many college campuses, it is directly under the control of literature oriented depart-ments. Departments of English Literature teach freshman composition and rhetoric. Departments of Modern Languages teach French, Spanish and German, and other Departments of Literature teach lesser known languages. The fact that these departments are vested with the teaching of language is as much an error of history as an error of judgment. During the 19th century, philology was seen as the literary use of language and scholars of languages were also familiar with literary tradition. But since then, these aspects of tradition have separated and the study of philology grew into the formal study of linguistic analysis and the study of literature has become concerned with question of criticism. Each has its own autonomy and envisions itself as a separate discipline with separate needs, and goals. But, why should the student of literature be saddled with language teaching? Others could equally qualify for the task. The linguist has even more of a concern for language teaching as he or she comes from a tradition in which the forms and structures of verbal expression have been dissected and analyzed and this makes the linguist highly competent in dealing with the components of linguistic expression. But, what does the linguist do in the language classroom? He or she is usually concerned with matters of reading comprehension, compositional strategies, testing of classroom materials, structuring of classroom time and curricula, and other matters of pedagogical interest.

It is this concern with education that leads one to ask whether or not the linguist is really qualified to teach languages. Why not have languages taught by schools of education where teachers are trained in the use of multi-media presentations, the development of curriculum and the assessment of cognitive skills? Obviously, what should happen is very different from what does indeed happen and in this case tradition has pervailed. Language education remains a vestigial interest of literature departments at a time when it is in need of a more interdisciplinary focus.

Donald Campbell (1969) has provided an interesting statement on the nature of interdisciplinary research. The root metaphor for his approach to resolving problems across disciplines is the "fish-scale" model in which the various overlapping scales represent autonomous disciplines which happen to touch upon one another's mutual areas of investigation. The reason why Campbell has chosen this model is that he sees science in rather traditional terms.

Scientists, according to Campbell (1969) add their discoveries to the growing body of knowledge in the field. They add new facts to a traditional stick pile of accrued knowledge. Hence, the focus here is on the exhaustiveness of research findings and the systematic accretion of empirical data. Unfortunately, there are some major problems with this model of interdisciplinary research. Most importantly, it confuses multi-disciplinary models of epistemology with interdisciplinary ones. The former are merely intercalated or sequentially packaged disciplines which are united under the rubric of some common label. This approach is characteristically associated with "area studies" programs in which the student is given access to the history, literature, language, and politics of a geographical area.

There is no basic concern with integrating these findings and synthesizing their interpretations of the events. The study of language is divorced from its relationship to literature and the knowledge of history is not incorporated into literary analysis. It represents a "super market" approach to education in which students enter the system with a designated amount of purchasing power and roam the aisles of the program randomly picking up courses from different categories until they have accrued the minimal amount of products. They then leave the educational program carrying individually wrapped parcels of knowledge but have no idea as to how these items can be combined or prepared for nutritional value in the kitchen.

Interdisciplinary research, on the other hand, requires that the student and the program directors resolve theoretical and applied differences between disciplines. They must concern themselves with conflicting problems of methodology, design, and must be able to integrate the historical knowledge of a region to its literary and linguistic forms of expression. In this case, knowledge is not merely intercalated in terms

of autonomous disciplines, but lends itself to constant interaction and reanalysis across related areas of investigation.

THE SOCIOLOGY OF MASS COMMUNICATION

The use of media for information control has been a perennial topic among journalists (Cirino, 1971), but only recently has the concept been studied in detail in the domain of television and other forms of mediated knowledge. Actually, it has been within the present decade that this focus on public language and social control has been seriously studied outside of the print culture (Melody, 1973; Epstein, 1973). As Claus Mueller (1973) noted, the use of media is not politically neutral. When images of heros are presented they are done so at the expense of those cast as villains and it is this kind of tacit dichotomy of content in the use of the mass media which has a potential for the sociolization of the establishment values within a given culture. Hence, mediated instruction could be used critically to enhance the powers of visual literacy (Littell, 1972).

In political science, there is the concept of "agenda setting" in which those in control of the agenda decide just what will be officially considered to be an issue and open to the public forum. The significance of agenda manipulation is that it enables those in power to deliberately place on the agenda items for consideration which might otherwise upset the status guo. By avoiding real issues of power and control or by creating "bogus" issues for public discussion, the concept of agenda setting can be politically volatile.

Similarly, when films are edited for classroom use, they provide a form of agenda setting. The editor decides what to place into the sequence of shots and what to leave out. This decision is not always based on technological excellence. Often it is derived from the editor's value system and how the editor's social reality is constructed (Berger and Luckmann, 1966). Should the editor perceive a world in middle class values, then these predilections will appear and reappear throughout the film. If the editor has a certain ethnic bias, then this Weltschau will emerge in the speech of the interactants and in the various forms of highlighted social interaction.

SUMMARY

The media, therefore, is not a neutral entity. Media can not only project the interpretation of a visual event, but even become in and of itself, the event to be interpreted.

Thus the editors of **Technology and Mediated Instruction TAMI** perceive their task to keep NALLD membership abreast of the latest developments in the academic uses of media and technology, be it it foreign languages, physics, or special educator. Finally TAMI must not only

examine the relative merits of the new technologies vis-a-vis older and proven tools, but must also measure their effects upon the learning environment. Anything less would be just journalistic jargin.

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