

# Further Consideration of Heuristic Guidelines for Multiple Institution Instructional Development Projects

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**Abstract.** This article elaborates on some of the heuristic dimensions of instructional development put forth by Haney, Lange, and Barson in the late sixties. In addition, several new heuristic guidelines are presented and more recent articles on heuristic guidelines are discussed. These new guidelines provide additional commonsense approaches to instructional development (ID) which the authors discovered while working on a series of interinstitutional instructional development projects. The old and new heuristic approaches are based on first hand experience in the field. Some of the new guidelines are specific to multiple institution ID projects. Others have applicability for any type of ID project.

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Over a decade ago, *AV Communication Review* published a classic article by Haney, Lange, and Barson (1968): "The Heuristic Dimension of Instruc-

tional Development." Eighteen heuristics appeared in that article, many of which are still applicable today. Since then Forman and Richardson (1977) and Durzo (1978) have added to the list. Forman and Richardson described problems inherent in a multi-institution instructional development project and offered helpful suggestions and caveats for large-scale projects. Durzo provided a more general set of guidelines for instructional development programs in higher education based on an extensive review of the literature.

For those working in the area of instructional development, the heuristic guidelines set forth in these three articles continue to be a set of "strategies, tactics, gambits, and ploys" which the instructional developer can use with reasonable confidence. This article attempts to clarify and elaborate on some of these heuristics and identifies additional ones which are particularly pertinent to multi-institution instructional development projects.

The conclusions drawn by the authors of this work are the result of 2 years of observations made while participating in a large instructional development program with the Ohio Regional Medical Audio-Visual Consortium (ORMAC). This consortium of the

seven Ohio medical colleges was funded by the National Library of Medicine to investigate the feasibility of producing and evaluating self-instructional materials when multiple institutions are involved in the instructional development process (Contract No. 1-LM-6-4715). The authors participated in the development of seven instructional packages which were developed and field-tested for the seven medical schools in Ohio. Each package was developed using a standard instructional development model; each required about 60 minutes of student time to complete. The authors coordinated the development of three of these packages and participated in the development of the other four. The medical schools at Case Western Reserve University, Ohio State University, Toledo University, and the University of Cincinnati housed the production centers. Faculty and developers from the medical schools of Ohio University, Wright State University, and the Northeastern Ohio Universities also participated in the development and field testing of the packages. Nearly 50 content experts (faculty members) participated in the project. Six quite

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## EDITOR'S NOTE

When *JID* received the manuscript by Hoban, Heider, and Stoner, we were glad that someone had decided to update and expand the classic list of heuristics presented by Haney, Lange, and Barson ("The Heuristic Dimension of Instructional Development." *AV Communication Review*, 1968, Vol. 16, No. 4, pp. 358-371).

Because the Haney, Lange, and Barson article was 12 years old, because it appeared in a different journal, and because many of our readers might never have read it or

might have forgotten it, reviewers suggested that *JID* reprint the original article as a companion piece to Hoban's.

*JID* saw this as an excellent chance to let our readers see a classic ID article. It is as valid today as it was when it first appeared and still provides many concrete and practical suggestions about conducting instructional development.

We hope you will find useful the following juxtaposition of the two articles. If you would like to see other "classic" ID articles reprinted in *JID*, please let the editor know.

## Heuristic Guidelines

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different content areas provided the framework for the packages. The instructional development coordinators for each package met about eight times during the 2 years to exchange ideas, identify common problems, and critique the instructional packages in various stages of development.

The following perspective on heuristic guidelines, then, is the result of the authors' hard-won experience on the ORMAC projects.

### Create the Conditions for Adoption

ORMAC was concerned that the materials, expensive to produce, would be widely adopted. Therefore, great care was taken in structuring conditions of transferability as had been recommended by Durzo (1978) and Haney, Lange, and Barson (1968). One of the project's assumptions was that instructional materials developed by faculty members from multiple institutions would have maximum adoption since faculty at each medical school would have part ownership of them and ownership encourages usage.

To further increase the likelihood of adoption, the materials were designed in a modular format known as a Flexible Instructional Module (see *Procedures and Standards for Developing Instructional Materials*, 1978). This format would allow course directors to use some or all of the materials in their courses.

Generally, the assumption about shared ownership appears to have validity (see *Documentation Report*, 1979). However, the authors note that

ownership and modular flexibility do not guarantee the wide adoption of materials developed through a collaborative interinstitutional process. Factors such as curriculum configuration, student preferences for instructional method, and changes in faculty and instructional content contribute to the choice of instructional packages.

### Carefully Assess the Need

Durzo (1978) comments that faculty need to invest time and energy in developing an understanding of an educational problem before attempting to solve it. The authors agree with this concept and found that with a fast-moving, multiple faculty project this is a particularly critical concern. Before engaging in an instructional development project, make sure the faculty who have instructional responsibility for the related courses or units agree that there is a definite need for the instructional program under consideration. If faculty members do not perceive this need, they will provide little enthusiasm or assistance for the development of the package and may even hinder its development. Furthermore, faculty members may not use the package even if they have participated in its development. At best, they will tell students that the package is in the library should anyone be interested.

Students' perceptions of the need for the instructional package are also important. Students will probably not use the material unless required to do so. Hence, instructional packages dealing with "soft" subjects such as interpersonal skills, attitudes, or emotions—subjects for which testing is extremely difficult—often go unused by students. Our experience has borne this out,

much to our dismay. If teachers expect students to be exposed to educational materials, they must require such exposure even if there are no cognitive gains expected.

Finally, even if a real need has been identified, it may not be necessary to develop materials from "scratch." Existing materials may be embellished or modified. ORMAC has carried out these "reconfiguration" projects with success. Such a process is often the more desirable alternative when one considers the time and energy needed to develop a new package from the ground up.

### Do Not Try to Please Everyone

Solicit a variety of opinions from faculty and students about the content and structure of the package. Use this feedback during the developmental stages, but do not insist that the final product please everyone. Not only will production time and effort be increased unnecessarily, but a disjointed, mediocre product may result, that will not really either please or displease anyone. This problem can be alleviated by identifying one or two persons who are respected by the other experts and relying on their feedback most during the final stages of development. Forman and Richardson (1977) make a similar point in their article on a team approach to course development.

This heuristic dimension may appear to contradict Haney and associates' guideline that development should proceed on the basis of agreement. We do not wish to imply that agreement should not be sought as an ideal. However, we found that in dealing with the seven faculty "content specialists" from seven schools, it was difficult to reach agreement. After an initial consensus on the

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#### CONCLUSIONS AND RECOMMENDATIONS

In pursuing the analysis of the concrete data from the Instructional Systems Development Project at the four universities, the project evaluators and development teams perceived an infrastructure of operating practices and patterns that in the past have often been ascribed to mere common sense. This paper attempts to point up the significance in this aspect of instructional development, and proposes heuristics as positive action guides which media specialists do and should follow to be effective in their work. The authors are supported in their assertion by the repeated surfacing of these heuristics at

all of the institutions observed in the project.

In the final analysis, the application of heuristics may be the real service that the media specialist offers an educational institution. Scholarship, research ability, administrative competence, and technical know-how are necessary but not sufficient, and it may be that the ability to operate in the heuristic dimension is what truly makes the media specialist special.

The implications of this observation for media specialist preparation are monumental. The media field is faced with the prospect of institutionalizing heuristics into structured experiences and courses of study for both current practitioners and those in training. Few media study programs at present have these inputs. It is time they did.

general thrust of an instructional package, most instructional development teams worked with only a few content experts.

### Be Aware of Packaging Decisions

Recognize early the many decisions to be made and activities to be performed concerning the format, layout, production, reproduction, binding, and distribution of the package. It is all too easy to underestimate the time and cost involved. Consider, for instance, whether printed material will function as a one-time student workbook or as a reusable package. A personal workbook might be more convenient for the student, but it will drastically increase the reproduction cost. Similar considerations should be given to other media formats, particularly the costs of reproducing videotapes.

Media specifications are critical and should be considered early in an instructional development plan. Required technical specifications may prove to be a major unanticipated expense, particularly if additional hardware such as a Time Base Corrector is needed for reproduction. An excellent package which is difficult to distribute and duplicate is limited in its potential audience.

While these packaging decisions seem obvious, they are often overlooked. Decisions on such issues may result in expensive alterations if not made wisely at a project's beginning. As Durzo (1978) notes: "Projects begun without sufficient support may be compromised or may fail from undernourishment."

### Select Appropriate Evaluation Approaches

Select an evaluation approach appropriate for the intended use of the package. If the material is designed to be used as part of a course, you may need only to collect attitudinal data about the package. After all, how many textbooks are selected based on empirical testing? While this may sound like heresy to some instructional developers, some educators believe that an educational experience, rated by students as interesting, motivating, useful, reinforcing, and so on, is worthwhile even if specific cognitive gains are not documented. If, however, the package is to be used independently, specific expected learning may need evaluation. While Durzo

(1978) suggests a more comprehensive evaluation process, it may not always be practical or desirable to evaluate all aspects of an instructional development project.

### Set Reasonable Time Lines

One of the greatest dangers instructional developers face is overpromising their products. One area consistently overpromised is development time. This is particularly true in higher education where faculty and developers are involved in multiple university functions. Unless these multiple faculty responsibilities are taken into account, there is a strong temptation to set time lines which cannot be met. As a result, faculty members and developers alike feel inordinate pressure, which often causes hostility toward the project and project personnel. Such a deterioration of morale may compromise the educational and production quality. While this guideline is often mentioned in the literature, it is worth reiterating because of its importance. If realistic time lines are not set there is an increased likelihood that faculty and developers will become disenchanted with instructional development. So even though a package may be completed on time, an unintended outcome of "turning off" faculty to instructional improvement may result.

### Choose Production Center

Choose the production site(s) which can do the best job. Although this sounds obvious, selection of a facility may be complicated by the fact that production usually generates revenue which all production houses seek. This revenue may create pressures to make decisions based on political or organizational expediency rather than production quality.

When selecting a production center, examine recent products to see what each center can do best. It may be desirable to elicit help from outside experts in choosing a production site; an outsider may have a more objective opinion on the quality of the work. Finally, consider the possibility of using more than one production center. This option is particularly appropriate when several media formats (e.g., slides, video) are to be used in the final product. A center specializing in production of a particular medium may be able to produce better quality at less cost.

### Reward Students

Haney, Lange, and Barson (1968) urged developers to involve students in the development process. We have found that it is difficult to obtain student volunteers to participate in testing of either prototype or finished instructional materials. Consequently, when student participation is desirable, it becomes important to make a reciprocal arrangement with students representing the population for whom the package is intended. The most satisfactory method we have found is to pay students for time spent working with the instructional materials, filling out evaluation forms, and participating in debriefing sessions. Even a small reimbursement is important. Not only does it provide incentive for participation, it also places responsibility on students to take seriously their role in the developmental process.

The heuristic guidelines mentioned in this article are not meant to be exhaustive. While some of these guidelines are more relevant to large-scale projects, the majority are pertinent to any size instructional development project. It is hoped that they will add credence to some of the guidelines already found in the literature. Because it is unlikely that developers will have empirically based protocols from which to work in the foreseeable future, guidelines based on experience will continue to help instructional developers perform their jobs effectively.

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