Conversation and Discourse in Instructional Development

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An often overlooked aspect of instructional development (ID) is the personal communication usually accompanying development efforts. Most ID models emphasize technical processes such as needs assessment, performance analysis, goal definition, and test construction. In practice, however, such technical processes are accompanied by a parallel process of personal communication and negotiation among those involved. Personal communication is especially crucial in a team project, but even a single developer often has to converse with others to obtain advice and service. Conversation skills are part of the repertoire of interpersonal skills needed for successful instructional development (Coldeway & Rasmussen, 1984; Bratton, 1979).

This article draws upon both our observations and a review of the literature for suggestions of ways to enhance personal communication in ID. We emphasize that every development effort is an opportunity for participants to learn more about the content taught and the development process, as well as about each other. We argue that conversation skills are as important as technical skills in overcoming ID's inherent limitations, promoting team understanding and trust, and ensuring quality. Although talk is cheap, the right kind of talk can significantly enhance team interaction and development outcomes.

Underlying Limitations of ID

Although development models vary, they have common characteristics (cf. Crilly, 1980; Diamond, 1980; Patton, 1980). Most assume that teaching is more technology than art—that there is a body of knowledge one can acquire and apply to make instruction more effective. Development models emphasize specificity and the use of research-based evidence in identifying instructional ends and means. They often include systematic attention to a range of factors affecting implementation. They present the development process as iterative, implying that instruction often will be deficient when first attempted, that knowledge of what will work is incomplete, and that revisions based on tryout data will ensure that the instruction becomes more effective in successive approximations. Finally, they describe a logical progression of activities for doing development, usually with a caveat that the process is not as linear as portrayed and that decisions at any stage in development seldom are made without reference to later ones.

Rationality, objectivity, and empiricism are hallmarks of ID models—and they should be. In practice, however, these ideals are not always attainable, and there are limits to the extent they can be realized in even the best of situations. Empirical evidence to guide development is not always available and its collection may not be feasible. For example, there are various empirical techniques for ascertaining what should be taught, but many have only marginal utility when the great effort involved is compared to the moderate importance of objectives and numbers of students affected. Similarly, there are research-based rules for designing instruction, but in any given situation, you may not know exactly to apply them, and it is not practical to carry out the controlled experimentation needed to determine this. Moreover, tryout data generally concern instruction as a whole, not specific design methods. Data gathering is constrained by available resources, and the relevance of existing instructional research and the meaning of information garnered in tryouts require judgment. In addition, any objective data collection method will have its own elements of subjectivity (Cronbach, 1975; Maslow, 1966).

Subjectivity is part of any human endeavor. Even science depends on common sense, and what constitutes common sense among individuals, groups, and societies changes constantly. People understand phenomena within the context of what is already known, and perception is affected accordingly (Campbell, 1973). What people know or believe depends on propositional and tacit knowledge. The former is acquired through interpersonally shared statements about objects and events, while the latter is not immediately expressible in words or symbols (Polanyi, 1967). Tacit knowledge, based on the notion that "we know more than we can tell," enables people to comprehend metaphors, empathize feelings, and recognize faces without attending to specific features. Objectivity can only be approximated and cannot be divorced from its perceivers (Petrie, 1976; Pirsig, 1974). And even if people perceive and interpret "objective" information similarly, they may not use it in a way all would consider "rational." Decision makers, for example, tend to search for information until they find solutions that are satisfactory, rather than optimal (Simon, 1969). They attend to information selectively and reject whatever is incompatible with their existing beliefs (De Sola Pool, 1973; Eiser, 1980; Sears & Whitney, 1973).

In sum, all development projects involve subjectivity and each participant brings a different point of view. Studies have shown that as development proceeds people exchange information, including information about their beliefs. Participants argue for and against alternatives and choose the most defensible alternatives. (Cashell, Lent, & Richardson, 1975; Walker, 1970). In such deci-

sions, objective information and reason play a role, but it may not be the most important role.

Negotiation and Conversation

Given that people are likely to bring varied backgrounds and expectations to development projects, especially when interdisciplinary teams are used, the process can be viewed as one of negotiation about what should be accomplished and how. Negotiation has four characteristics (Lazer, 1979), each of which may be present in development:

· *Common and conflicting goals.* When people have some shared and some discrepant aims, they can negotiate to lessen the discrepancies. Although the single, overarching goal in development is to solve a performance problem, those involved will have some shared and some conflicting ideas about objectives, solutions, and implementation.

· *Non-zero results.* Everyone negotiating expects to gain something. In development, it may be to have ideas accepted or to obtain other rewards for contributing to the development project. What constitutes a gain or reward varies among individuals.

· *Variable values.* In a development project, participants will attach different values to information exchanged, concessions made, or the rewards possible, and, in the course of negotiating a project, participants may alter their evaluation of what portions of the project mean to them. For example, as a program develops, ownership feelings may come to have more value to some participants than the initial released time did; an idea rejected at one time may regain currency as more information is obtained.

· *Imperfect information.* In negotiation, all participating parties have inadequate information. As discussions proceed, participants exchange information, gather data, and clarify issues. Out of this gradually emerges a better sense of direction and of the issues that must be resolved to complete the project.

Issues require negotiation, and any development decision, assumption, or approach to which there are discrepant opinions or perceptions can be considered an issue. Issues can exist in many areas, such as goal validity, content treatment, instructional strategies, and evaluation procedures. Participants resolve issues by exchanging information, making concessions, or both. Futhermore, as the project progresses, issues that have already been resolved can be raised again by original team members, or, more likely, by new participants. When the participants change, the issues change.

Negotiation can be approached several ways. One is to consider the process adversarial, with winners and losers. In a more benign form, this approach entails search for agreements where everyone wins, but with each participant attempting to manipulate the situation by defining what constitutes winning. Someone selling a house, for example, may eventually concede to move out early even though they already planned to do so, while telling the buyers the asking price should be accepted because of this "sacrifice."

Negotiation can also be handled as a mutual search to resolve differences. This kind of negotiation is more appropriate for development efforts. However, there are occasions in development when differences are not understood and the communication process breaks down. Individuals may insist on having things their way, information may be withheld, its flow interrupted. In negotiation based upon cooperation and inquiry, communication is paramount. In order to confer and accomplish, people must be able to converse.

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Relevant Theories

Four theories having implications for conversation and discourse in instructional development are:

(1) Pask's conversation theory;

(2) Habermas's theory of communication competence;

(3) Argyris and Schon's theory of interpersonal interaction; and

(4) Stake's model for responsive evaluation.

Though these theories are drawn from different fields, all focus on knowledge, the assumptions and ideas affecting action, or the communication processes through which agreements about knowledge and action are reached. Each theory is supported by research studies or propositions from the philosophy of science, and each helps explain the nature of conversation and its improvement.

Pask's conversation theory (1976) is based on attempts to develop intelligent computer programs that model the acquisition of knowledge and requirements for agreement and understanding in human discourse. Mechanisms whereby students and computers can converse in subject domains are created by identifying concepts within the domain and specifying their interrelationships. Concepts are key words or phrases explaining the subject, and the instructional authoring process demands that each be defined unambiguously and in ways that do not contradict previously made statements. When authoring is complete, a concept map is created that can be displayed graphically, so students can choose which concepts to learn in any order. The maps are called entailment structures, and there is little evidence of unique structures for given subjects. This not only adds credence to the idea that content relationships are more complex than simple hierarchies (Bergan, 1980), but suggests content relationships are idiosyncratic to those developing the instruction, representing not the structure of the subject, but the developers' perceptions. In addition, Pask has discovered different learning styles when people converse in a subject domain. Some progress serially, one step at a time, within a small area of the subject. Others are wholist, preferring to get a broad, partial overview before learning details.

Generally, wholists learn more efficiently and have greater tolerance for

uncertainty. Since developers are trying to learn about the most appropriate solution to a performance problem, such differences in learning style may come into play. Serialists may discuss development decisions linearly, while wholists discuss those more distant. Serialists may view wholists as unable to stick to the point; wholists may view serialists as rigid.

Habermas's theory of communication competence is part of the work of Jurgen Habermas (1973, 1975) concerning the problem of objective technical procedures being used for practical, value-laden purposes. Drawing upon the work of Hegel and Marx, he has described ideal communication conditions in which all participants have an equal chance to initiate and perpetuate discourse and to question comments of others under circumstances that reduce distortion or domination stemming from strategy, barriers, ideology, or neurosis.

Although concerned with discourse at a societal level, Habermas has specified conditions for open communication appropriate to ID. These conditions include:

(1) involving a broad range of participants who are affected by a project;

(2) providing equal opportunity to start and carry on discussion;

(3) allowing all participants to question ideas of others; and

(4) monitoring discussion to avoid domination, distortion, or use of manipulative strategy.

These conditions assume that those involved in a conversation can competently monitor and reflect upon the discussion process and their own behavior.

Chris Argyris and Donald Schon (1974) have developed a **theory of interpersonal interaction** based on studies indicating that people lack open communication skills and the ability to monitor their thoughts and actions. Argyris and Schon have analyzed personal communication by having people write out what was actually said and what accompanying thoughts transpired in both pleasant and stressful situations. They also asked people to describe how they try to behave interpersonally. They have found large discrepancies between people's theories and what they practice.

The prevalent theory concerning personal communication is characterized by attempting to manage conversation unilaterally. The theory is a tacit one, based on competition, diplomacy, and manipulation. Argyris and Schon suggest an alternative inquiry-oriented approach made possible by:

(1) maximizing valid information through publicly testing perceived or attributed meanings attached to the statements and actions of others;

(2) providing others with accurate reports of one's own feelings, beliefs, and assumptions;

(3) making all discussants responsible for managing the conversation and implementing resulting agreements; and

(4) using terms denoting directly observable behavior when speaking rather than words attributing motive or inferring judgment.

The fourth theory, **responsive evaluation,** was developed by Robert Stake (1975) as an alternative to quantitative assessment methods. Responsive evaluation provides a means for focusing conversation on inquiry in development settings. Full portrayal is emphasized, few assessment procedures are prespecified, and evaluators concentrate on identifying issues and gathering data so that issues are resolved. The evaluation process becomes an occasion for discourse, resulting in shared perceptions of meaning and value and reflection upon the validity of varied expectations, not objective truth. Truth and value assume a kind of internal validity, defined in terms of those involved, that continually changes as more becomes known. The approach can be used to probe the tacit meanings, feelings, beliefs, and concerns of development participants. Team evaluators and others attend to discrepancies in what is said, proposing these as potential issues. The evaluators separate, sort, and sequence issues so that issues are addressed logically, and they gather data that help to illuminate or eliminate issues identified.

Together, the theories pinpoint problems affecting conversation in ID, such as the relativity of knowledge, differences in learning styles, and tacit theories of conversing that are barriers to reaching agreements about objectives, content, and instructional procedures. The barriers are so formidable that it is a wonder anything can be accomplished. But the theorists do not just present problems and leave practitioners in despair. Pask has shown that people can acquire better learning styles, while Argyris and Schon have demonstrated that people can articulate and modify their tacit interpersonal theories. More importantly, all the theories suggest conditions for more effective discourse in instructional development. The conditions, listed in Table 1, are not only rules for guiding discussion, but also understandings and attitudes that might be shared by development participants.

Continuing Problems

If there are obstacles to applying objective, rational technical development methods, there are also impediments to establishing more effective communication conditions.

First, language and cultural differences limit the extent people can communicate.

Second, deadlines can limit discussion time. Deliberations take longer when all ideas are examined, something not bad when talk is on target. But what constitutes a digression and who should make that determination?

Third, focusing on real or potential differences in discussion can result in unintentionally creating issues that do not exist, diverting attention to insignificant issues, or exaggerating issues. Differences can arise over something as major as evaluation methodology or as minor as a handout title. Who determines which issues merit most attention and how?

Fourth, people communicate on different levels and some are more articulate. Conversation helps convey meaning but does not guarantee one will be understood.

Fifth, people have beliefs that are nonnegotiable. For example, some subject experts have folk ideas about instruction, originating in training traditions, and some developers have standards for creating instruction they are unwilling to compromise.

Finally, some people may not see the need for establishing or maintaining effective conversation or be willing to invest the effort.

Conclusion

There are practical limits to the use of technical ID methods, and it is not always possible to resolve development issues empirically. Subjectivity and interpersonal sharing of perception and meaning are necessary, requiring information exchange and conferring by those involved. The process can be more or less directed toward inquiry and is affected by learning styles and individual beliefs regarding interpersonal interaction. Several theories highlight personal communication problems and conditions for making conversation more effective in development contexts. Although there are problems in implementing these conditions and limits