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ABSTRACT

       This paper presents strategies and rationales for implementing certain instructional techniques to move a class from cohort to community. The context is the new Distance Master's program in Instructional Systems Technology at Indiana University. The authors give suggestions for instructional and non-instructional strategies that have students interacting at the levels of communication, cooperation, and collaboration. Instructional strategies include: ways of presenting material; assignment design; team management; content covered; and strategies for discussion material. Non-instructional strategies include: creating a computer support system so that students look beyond the technology; making reserve readings and other library resources readily available to distance students; designing an onsite orientation that encourages students to quickly bond with each other at the beginning of the program; creating an online cafe for off-topic discussions; and dealing with team/class disputes. These strategies are cross-indicated with their intended outcomes, i.e., strengthening the feeling of community as defined by a set of characteristics. Suggestions for evaluation techniques are also presented, as are questions for further research. (Contains 55 references.) (Author/MES)

Building community in an online learning environment: communication, cooperation and collaboration

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Abstract:

This paper presents strategies and rationales for implementing certain instructional techniques to move a class from cohort to community. The context is the new Distance Master's program in Instructional Systems Technology at Indiana University. The authors give suggestions for instructional and non-instructional strategies that have students interacting at the levels of communication, cooperation and collaboration. These strategies are cross-indicated with their intended outcomes, that is, strengthening the feeling of community as defined by a set of characteristics, which are adapted from Schwier (in press). Suggestions for evaluation techniques are also presented, as are questions for further research.

This paper came out of work done by the team of Tiffany Anderson, Joni Craner, Pam Eddy, Melanie Misanchuk, and Carol L. Smith.

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Introduction

The shift from traditional classroom education to computer-mediated distance learning poses enormous

challenges to instructors and learners. The concept of the classroom where students meet to interact with other learners and the instructor no longer exists in the virtual model. The instructor can no longer "look" around the room to see if students are attending to the material, are bored or confused, or are even present. Since learners are now engaged with the computer instead of other learners, they lack a natural social outlet which can lead to feelings of isolation. Because isolation is a major contributor to attrition (Morgan & Tam, 1999), one potential strategy for reducing dropout rates is encouraging the students to support each other and feel part of a community. The task of the authors of this paper was to structure the course design so learners have mechanisms to connect with each other and form community.

The literature on effective teaching and learning promotes several "big ideas" that we used as foundations for our recommendations. These include Vygotsky's (1978) social development theory and the Seven Principles for Good Practice in Undergraduate Education (Chickering & Gamson, 1987). Vygotsky's social development theory states that social interaction is vital to cognitive development; all higher-order functions originate as the relationships among individuals. To scaffold learning we must require learners to interact with the content, the teacher and each other. Our strategies focus on promoting communication, social interaction and participation. Many of the principles, theories and strategies we encountered reflect the Seven Principles of Good Practice in Undergraduate education (Chickering & Gamson, 1987). At their core, each of the seven principles focuses on interaction. In 1996, Moore and Kearsley described three types of interactions that are necessary in distance education: learner to learner, leaner to content and learner to instructor. We would argue that these three types of interaction are necessary in education regardless of where or how it takes place.

Characteristics of Community

There is much discussion of learning communities (Baker & Moss, 1996; Bauman, 1997; Cross, 1998; Haythornthwaite, 1998; Hill & Raven, 2000; Kowch & Schwier, 1997; Palloff & Pratt, 1999; Rasmussen & Skinner, 1997; Raymond, 1999; Riel, 1998; Schwier, 1999; Wilson & Ryder, 1996) of communities of practices (Lave, 1993; Lave & Wenger, 1991; Wenger, 1998), and virtual or online (social) communities (Kim, 2000; Preece, 2000; Wellman, 1979; Wellman, 1999; Wellman, Carrington, & Hall, 1988; Wellman & Guila, 1999a; Wellman & Guila, 1999b). Although each type of community has its distinct characteristics and requirements, there are many things they share in common. What we are endeavoring to create will be a combination of all of the aforementioned communities: a bounded group of students involved in cooperative learning online. Because of special characteristics of this program, some general concerns for community-building do not apply. For example, there is much talk in the virtual community literature about attracting members and defining the community based on common interests. In our case, this cohort is thrown together and "forced" to form community. Outside members are not encouraged to participate, mainly because the common interest in this case is "taking the Distance Master's in IST from IUB." In a terrestrial community of practice, members might see each other at work, or meet in person once a week to deal with issues in their work lives. This will not exactly be the case for our community; although they will probably have some work issues in common, they are not a group of "teachers" or "nurses" or "engineers" who share vast amounts of experience and knowledge. Unlike an informal learning community, which spins itself from nothing and is based on a variety of people coming together

for informal learning purposes and where the direction of both the learning and the community is malleable, our learning community will exist within strict parameters of this coursework. Obviously, members will be encouraged to bring other experiences and knowledge to bear on their coursework, but at the end of the day, the learning in question will be much more restricted than an informal learning community.

Selznik (1996) identifies seven elements of community: *history, identity, mutuality, plurality, autonomy, participation*, and *integration*. With respect to virtual learning communities, Schwier (in press) adds: an *orientation to the future, technology*, and *learning*. Some of these characteristics of community will be present from the beginning. Others, the cohort will have to grow into. We will describe the features of these 10 characteristics, and discuss how we will use them for our purposes. Selznik notes that communities are stronger when their members share history and culture, rather than simply abstract general interests. Unlike an established terrestrial community, the nascent community forming from the Distance Master's program will not have a *shared history*. Their history, like their *identity*, will have to grow and develop through their interactions with each other. We believe that a shared sense of identity will develop in this cohort, and will strengthen their communal identity. Schwier's suggested strategies for fostering identity include team-building exercises, developing community logos, and public acknowledgement of individual and group accomplishments within the community. He also notes the importance of articulating the "focus or purpose of the community" and outlining the requirements and rituals. The structure of the courses allows for frequent and obvious reiteration of community focus, and events such as orientation can help the group define its own rituals and norms.

The very fundamentals of a learning community require interdependence and reciprocity, what Selznik terms *mutuality*. Since our focus is on cooperative and collaborative learning, this mutuality will develop naturally. Schwier also recommends asking "leading questions that encourage members of the community to invest in concerns held by other members, and to share ideas and possible solutions" (p. 5). This type of interaction can be encouraged at course-level in the class forum, and on a social level in the Online Café. We combined Selznik's terms *history, mutuality*, and *identity* into a larger category called *group identity*. By combining these three concepts we emphasize the fundamental importance of group identity in fostering community. Although one of our goals in the next few semesters is to help students begin to construct a history relevant to their community, this is not something that can be imposed upon the group from outside. It has to grow from the sharing of each individual's history and the links that the learners form with each other based on their experiences. These links are characterized by interdependence and reciprocity, in other words, mutuality. Group identity results from this history and mutuality, and from making the budding community history public and available to all, especially newcomers.

Plurality, according to Selznik, results when many different types of interactions amongst members of a community occur, often rooted by individuals' membership in other communities (work, neighborhood, church, etc.) that intersect. We replaced *plurality* with *social interaction*. Given a virtual community, one that to some extent is externally imposed, the opportunities for plurality are limited compared to those available to geographic communities. By providing opportunity for and the expectation of social interaction among participants, we purport the program will provide the plurality needed. *Autonomy* of

individual members within the community, especially within an academic setting, is important to foster. We will encourage thoughtful, personal postings within the forum, to avoid group-think and "me too, I agree" contributions. Students will receive basic instruction on netiquette and will be encouraged to continually address evolving group norms to maintain respectful communication and to build consensus. We use *individual identity* in place of *autonomy* to underscore the importance of both group and individual identities within a virtual learning environment.

In the case of a virtual community, *participation*, both social and academic, is integral. Without active participation in discussions and other class activities, the learner is not part of the community; indeed, the learner does not even "exist." This is one core distinction between being a passive member of a physical community where you are seen and your presence is noted and registered in the minds of others. In a virtual community, you must make a concerted effort to communicate with others in order to exist. At the same time, allowances must be made for learners to shape the participation, both in structure (number/kind of postings) and in content (managing the discussion of subjects interesting to them).

The *future orientation* of a learning community can operate at a number of different levels. A stronger community bond will be formed when a particular cohort goes through a number of courses together, moving toward their finishing the program and earning a degree. It can be argued that a learning community can develop within the constraints of a single four-month course, but it is much more likely that students will form long-lasting academic and social bonds throughout an entire program. Visioning exercises and direction of learning activities (having participants describe how what they learned will help them in future learning and in their work) can also give the community a focus on the future. In our case, the community's view of the future may be limited to the two or three years they spend in the program. However, it is possible that they will continue to maintain community ties once they have earned their degrees and are working again. It is also possible that members of the Fall 2000 community would end up wanting to remain part of the Distance Master's community after they graduate, and would like to integrate themselves with the new incoming cohorts. This may pose particular problems of negotiation and fit of the role for graduated members to "return" virtually and engage with students working through the program.

Schwier notes that "the *nature of the learning* can be broadly defined and contextual"(p. 4) but is a necessary part of a virtual learning community. For our purposes, the learning involved is more specific and structured; the cohort moves through a set of core courses together, in a particular order. Our goal is to foster community among them before they finish the first year, so that although they will go on to take other courses with other distance learners, they will not only maintain ties with their initial cohort community, but will also have learned the foundations of virtual community creation and will use these skills in other classes. We have changed Schwier's term *learning* to *knowledge generation*. According to Schwier, "communities are built or dismantled by those in the communities, not by the people organizing or managing them" (p. 2). As they mature, communities define their own social rules of conduct and select their own leaders, assuming *ownership* of their governance and norms. Learning communities, note Palloff and Pratt (1999), exhibit evidence of socially constructed meaning, willingness to critically evaluate the work of others, again assuming ownership of their knowledge creation and sharing.

Integration of all of these elements is necessary for a strong community. Schwier suggests creating belief statements and evolving group norms, and adhering to a learner-centered philosophy that "supports individual expression while building a group identity" (p. 5). Finally, *technology* is an important consideration for us: although it is thanks to certain technologies that virtual community-building is even possible, there are certain limitations put upon the group because of technology. Although it is the conduit for discourse, it can also exclude or discourage people. Tools that are complicated, unavailable for a certain platform, that are slow and cumbersome can all render the discussion process less than ideal, and members who do not actively participate essentially leave the community. Although Schwier recommends using technology compatible with older, less costly equipment to render the community more inclusive, this is not a concern for us.

Based on Selznik's (1996) seven characteristics and Schwier's (in press) additional three characteristics of community, we have assembled the aforementioned six key elements of community. From these elements, we define community as: a group of people who are brought together to share and generate knowledge in a mutually supportive and reciprocal manner. Its characteristics are ownership, social interaction, group identity, individual identity, participation, and knowledge generation. Furthermore, integration of all of these elements is necessary for a strong community.

Having defined some of the particular characteristics of a virtual community, we will now turn to some basic strategies for creating community. Palloff and Pratt (1999) recommend these steps:

- Clearly define the purpose of the group
- Create a distinctive gathering place for the group
- Promote effective leadership from within.
- Define norms and a clear code of conduct.
- Allow for a range of member roles.
- Allow for and facilitate subgroups.
- Allow members to resolve their own disputes (p. 24)

In our case, many of these steps are automatic, but they should still be given careful consideration. For example, the general purpose of the community is defined as "the Fall 2000 cohort for the IST Distance Master's program." However, instructors or organizers may have more specific goals and purposes from the beginning, and even if they do not, other purposes may emerge from the community throughout the term. Pallof and Pratt (1999), surprisingly, do not put much emphasis on the communicative aspect of community without which a virtual learning community cannot exist.

We feel that one of the most important indicators of a learning community is the first: when students communicate not only on an academic level but on a personal level. Working together towards the goals of the course is what they are "supposed" to be doing. When they begin to talk about their personal lives (families, hobbies, jobs), their triumphs and trials with being a distance student (scheduling, technical problems, disagreement with pedagogy), when they seek each other's counsel for other areas of their life (job change, which elective course to take next, family issues), this is the point at which we feel they are

comfortable as a community. There is a good chance that not everyone will be everyone else's best friend. However, when a majority of the members feel they are in a safe enough space to "speak up" about things in the public forum, rather than in individual e-mail messages, then this is evidence of a successful community. There may be a few members of the community who do not feel that the Online Café is an appropriate place to discuss non-academic subjects, and it is the role of the mentor and the community members to make the Café a welcoming place for this type of discussion. As in every type of community, there will be some people who opt out of certain discussions, or even out of all "non-official" discussion, but this is quite normal. There will probably be smaller communities within the larger online class, people who form bonds and discuss the course work and their lives, but not on the general forum. These differences can appear for a variety of reasons; Eastmond (1995) found divisions on age, gender, experience, and learning style lines. However, he also found that the groups often transcended age and gender, for example, two characteristics that might, in a traditional classroom, be impediments. The final step in creation of an online community is to evaluate whether a community has formed, and if so, in what ways has the community aspect contributed to learning. Our project will address methods for performing the first evaluation of whether community has formed.

Definitions

We will examine ways to use certain instructional strategies to work to move the cohort toward a community. We suggest encouraging interaction at three levels: communication, cooperation, and collaboration.

Cohort: The cohort is the group of students going through the core classes as a group. They may have an initial connection, such as a common employer, but it does not necessarily constitute a strong bond.

Communication: Communication is defined here as the basic level of discussion in an online format. Students must participate in discussion to have any sort of presence in the class whatsoever. Communication can be focused around readings, lectures, and any other ideas based on course content or course administration. Communication can occur asynchronously in the SSF or via e-mail, or synchronously via chat rooms or telephone.

Cooperation: Cooperation entails students working in groups or otherwise dividing up tasks. A machine metaphor can illustrate cooperation in the classroom: different parts of the machine perform different functions and goals, but work together towards a similar end. For example, students may divide up a project, but are eventually assigned individual grades for their work. Examples of cooperative tasks include: dividing up sections of a report to write and doing peer review of each other's work.

Collaboration: Collaboration is the most integrated form of group work, and is therefore potentially the most difficult and the most rewarding. In the case of collaboration, the group members work toward a common goal, one that carries a mutual investment. For example, students may each work on every part of the report, consulting each other and re-reading each other's edits. They are invested in every part of

the project because they will share a common grade. Examples of collaborative tasks include group writing and creating an instructional design model.

Community: A virtual learning community, as described in the introduction, is one of the ultimate goals of the core courses.

The three levels of interactions can be compared by several characteristics, as in the table below.

	Communication	Cooperation	Collaboration
Learning	Information transmission	Knowledge transmission	Knowledge generation
Inquiry	Individual inquiry	Delegation of tasks	Common inquiry
Decision-making	Agree to disagree	Vote (majority rules)	Social negotiation to consensus
Goals/agendas	Multiple goals/ multiple agendas	One goal/ multiple agendas	One goal/ one agenda
Accountability	Individual accountability	Individual accountability	Group accountability
Learning relationship	Complete independence	Partial interdependence	Complete interdependence

As one of our goals is to create and sustain a community of learners, we set about achieving that goal using a variety of resources. Our two main categories of strategies were instructional and non-instructional. Strategies that fall into instructional include: ways of presenting material; assignment design; team management; content covered; strategies for discussing material. Non-instructional strategies include: creating a computer support system so that students look beyond the technology; making reserve readings and other library resources readily available to distance students; designing an onsite orientation that encourages students to quickly "bond" with each other at the beginning of the program; creating an online café for off-topic discussions; dealing with team/class disputes.

Core Instructional Strategies and Rationales

These are strategies that can be used throughout the Core courses, at the program level, and how they contribute to the elements of community.

Ownership	Knowledge Generation	Individ. Identity	Shared Identity	Social Interact.	Particip.	Strategies	Rationale
X		X	X	X	X	Students participate in a face-to-face orientation on campus.	Face-to-face interactions allow to people to create strong initial bonds, which will lead to a greater sense of community right from the beginning.
X	X			X	X	Students will learn about online communication, including rules of netiquette	Online communication is vastly different from more traditional forms of communications (Black, 1995).
	X			X	X	Students will undergo training in using SiteScape Forum, e-mail, majordomo creation, basic web searches, and MS Word for collaborative writing purposes.	To help reduce barriers to effective learning and establishing social relationships, participants should be given the opportunity to build confidence and competence with the distance education process and supporting technologies (IDE, 2.2).
		X	X	X		Students will post photos of in SiteScape Forum at Orientation.	Connecting people's names and faces is a first big step to forming bonds.

x	x		x	x	x	Students will participate in a content-based group project that requires that they negotiate the exact content.	People will form strong personal and academic bonds through shared adversity (Ruhleder, 1999).
				x	x	Students will be required to eat lunch as a group two days during Orientation.	People who have a social connection to the group will work better together (Palloff & Pratt, 1999).
				x	x	Students will be given the opportunity to participate in at least two evening social activities.	People who have a social connection to the group will work better together (Palloff & Pratt, 1999)
		x			x	First posting should be a non-graded/non-credited assignment (e.g. biography).	Students need non-threatening, interesting ways to begin creating online community (Funaro, 1999).
x	x	x	x	x	x	Create an online café that will serve as a non-course-specific conversation area to encourage off-task communication.	People need distinctions between work and play (Palloff & Pratt, 1999).

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						Encourage instructor and distance mentors to participate in social interactions, especially in the early stages of the course	Social interactions between and among learners enrich the learning community and should be supported in the instructional design of the course (IDE, 2.5).
X				X	X		
			X	X	X	X	Students will be encouraged to share, in the online café, information about their non-academic lives, for example, offering mutual support in term of how they are keeping up with their job and school schedule. Students should be encouraged to offer successful strategies to the class.	Reciprocity and help are two important hallmarks of community. Students who take an interest in each other's well being, both academic and social, will have more of a support system of peers than those who do not (Wellman & Gulia, 1999).

R511 Instructional Strategies and Rationales

R511, Instructional Technology Foundations I, is a two-credit course that has historically been offered each fall semester. This course is required by all IST Master's students and is typically taken concurrently with R521/522, Instructional Design and Development, and R580, IST Colloquium. It is team-taught by two faculty members and one graduate assistant who has taken the course. As it actually happened, R511 and R590 were NOT offered to the first cohort of Distance Master's students, so these strategies were not implemented in Fall 2000. However, course design for Fall 2001 is now underway.

The overall objective of R511 is to provide a comprehensive introduction to the field and profession of Instructional Technology (IT). Because most students coming into the IST program come from fields other than instructional technology, R511 gives newcomers a grounding in the history of the field as well

as an explanation of how the components of the field fit together. There is a particular emphasis on the evolution of the "big ideas" of IT.

In the onsite version of R511, class meetings occur once per week in 2-hour sessions. Directed readings compiled in a course packet are provided as practical resources to support assignments and class discussion activities in the course. Most class periods are divided into two portions: During the first hour, each of the three instructors facilitates a group discussion among 15-20 students about assigned readings. The remaining portion of the class time is devoted to further lecture and clarification about topics contained in the readings.

Students are graded according to participation in class discussion, personal synthesis and reflection (as noted in weekly minute-papers collected at the end of each class), three individual written essays (one team-based, two individual), and a final exam or written essay.

Ownership	Knowledge Generation	Individ. Identity	Shared Identity	Social Interact.	Particip.	Strategies	Rationale
					x	A fundamental element for success for the distance students is an understanding of the key expectations • how much time the course will require • the level of performance that is expected of them • the demands that participating in the core will have on their time.	Students, but especially students learning at a distance, need to have expectations, assumptions, deadlines, etc., made explicit and kept clear (Palloff & Pratt, 1999). Understanding and respecting expecta-tions for participation and performance will be critical to the students'

									success. Taking Core online will be more demanding than doing it face-to-face.
	X	X			X	X		Instructors will assign discussion roles (facilitator, summarizer, devil's advocate, etc.) to encourage shy members and force students to think in different ways about the material and about the discussion of the material.	Students should be challenged to engage the material from different perspectives; different roles improve learner-learner interaction and improve learner-material interaction (Bonk, 2000).
	X		X			X		Students will be expected to take part in regular peer reviews by critically evaluating each other's papers.	It is important to develop a critical eye towards other community members' work.
X	X					X		Each week, someone from each group will summarize their group's discussion and post the results for the other groups to read.	Bringing from small groups to the larger group provides for more viewpoints and better discussion (Beaudin, 1999).

	x		x		x	Students will be divided into 3-4 small groups for discussion of readings and course projects.	Small groups facilitate better discussion for learner-material interaction (Hiltz, 1998).
x		x			x	Students will fill out weekly "1-minute evaluation" web form, to instructor only. Possible topics include what you liked/disliked about the week's work, how you can transfer this knowledge to your work, and generally how you are feeling.	To better assimilate and process what they have learned, students require a forum to critically reflect on the material and on themselves as learners (Palloff & Pratt, 1999). Keeping in touch with the professor improves learner-faculty interaction.
	x		x		x	Instructors will require high-quality online interactions with peers and discussions of readings by making a portion of the grade dependent on it. (We	Effective learning environments should provide frequent and meaningful interactions among learners. (IDE, 2.1)Good practice

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						recommend at least 25%).	encourages cooperation among students (Chickering & Gamson, 1987).
	X			X	X	Instructor and/or mentor will model ways to produce lively, constructive discussion: questions should be open-ended, but focused on students' interpretation of the text.	One of the best ways to keep discussion on topic and students motivated is to participate actively in the conversation (Beaudin 1999).
X	X	X			X	Instructor will point out excellent discussion, postings, interactions, etc. of other students to continually promote high expectations and model good interaction.	Good practice encourages prompt feedback (Chickering & Gamson, 1987). Faculty-learner interaction improved by attentive professor.
X				X	X	As needed, instructor will revisit netiquette and general interaction issues, and stresses the importance of interacting in a respectful way. Have the community develop group norms based on emergent issues.	Social negotiation leads to the creation of a safe space, which is essential for learning (Palloff & Pratt, 1999).

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·						x	Students will be expected to check SiteScape Forum and e-mail every two days and post quality contributions at least twice a week. Participation points will be calculated based on these postings.	Because of the nature of the evolving discussion, students should be constantly engaged in the course, without any lengthy absences from discussion. (Caldwell & Taha, 1993)
x			x	x		x	The instructor/AI should make contact with students who are not actively participating to find out why and address their concerns.	Students need to actively feel like they're part of the community, and that the instructor is interested in their well-being, academic or otherwise (Palloff & Pratt, 1999).
	x		x		x		Students will work together at all three levels of interaction:	In order for a newly-formed cohort to move to community, they must change the quality of their interactions. The community

							Communication • Cooperation • Collaboration	should move toward successful use of collaboration, in addition to the continued use of group discussions and cooperative tasks.

Questions for Further Research

The evaluation of the success or failure of community in the Fall 2000 Distance Master's Core is a question of primary interest. It will be useful to determine whether community forms, and if it does form, what pedagogical advantages does it offer the learners. There are many other topics worthy of research.

- What are some valid measures of community development?
- How can learners be motivated to take part in virtual academic or social community activities?
- What are special features of "forced community" like the Master's cohort?
- What is the expected/observed life cycle of the Distance Master's learning community?
- How does this community develop and maintain its history?
- Should the Distance community be integrated with the residential graduate community? If so, in both academic and social ways? If so, how can this be accomplished?
- How can the community best be mentored?
- What are the different roles for instructors, graduate assistants, volunteers, upper-year IST students, etc?
- What communication/collaboration tools foster the development of a learning community?
- What are the best practices for using existing communication tools in distance education?
- What tool features lend themselves to different aspects of collaboration and community-building?
- How appropriate were the tools chosen for Fall 2000 in terms of collaboration and community formation?

Conclusion

Having determined that richer learning takes place within the context of a learning community, this report provides background descriptions of characteristics of community and, more specifically, a virtual learning community. We discuss the goal of moving a cohort to a learning community through

scaffolding activities rooted in the communication formats of communication, cooperation, and collaboration.

The report deals with both the program-level: Core (principally orientation and the online café), and course-level: R511. The courses are described, instructional strategies and rationales are presented, possible assignments are detailed, and an instructor checklist is provided.
Finally we thought it necessary to determine some strategies to evaluate a) whether community has formed within the cohort, and b) in what ways the community contributed to deeper learning. We also provide some possible topics for further study.

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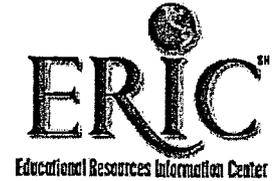
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