

CASENET: Creating Conditions for Conversation and Community for Teachers in the Midst of Reform

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Abstract

This paper reports on the use of CASENET (Creating Associations of Experienced and Novice Educators through Technology), a multi-year project that uses multimedia compact disc cases and high-bandwidth telecommunications to create a professional development network for teachers in the midst of systemic reform in the state of Kentucky. Initial findings indicate that the CASENET tools and resources establish conditions for mutually beneficial professional conversations that encourage participation in a professional community. Such participation has been shown to support teachers as they attempt to change practice and implement reform. Six veteran social studies teachers and six student teachers engaged in discussions of teaching strategies and garnered mutual support for the risk-taking inherent in change. The multimedia cases provided a common context for discussion and the videoconference allowed for personalized, non-threatening contacts among teachers at vastly different stages in their careers, but faced with similar challenges. A description of the CASENET tools and resources is included.

Keywords — professional development network, community and conversation building, educational reform.

1. Introduction: Professional Development and Electronic Networks

Educators have become interested in the utility of rapidly developing electronic networks to support serious, systemic reform in the nation's schools (Means, 1994). Educational reformers see opportunities for

technology to support standards based educational goals (Means, 1994), to assist with innovative assessment (Sheingold and Erikson, 1994), to enhance teacher preparation (Barron and Goldman, 1994), and to scaffold learning for at-risk students (Cognition and Technology Group, 1994). However optimistic may be the promise of technology to support reform, researchers have also noted problems implementing innovative technological approaches that effectively promote systemic reform. A common problem is that technology can be used to maintain the status quo, in the service of traditional or less effective educational approaches (Newman, 1994). One factor that is crucial to the effective use of technology for reform is professional development that integrates technology (U.S. Office of Technology Assessment, 1995).

In specific instances it is now possible for teachers seeking professional development information to join on-line discussion groups, post questions to bulletin boards, and obtain text files electronically. But quantity of interaction does not necessarily imply quality (Harasim, 1990). This fact may be crucial to online professional development activity. Professional development that aims to change practice according to new teaching standards may need to engage teachers in a more intensive, structured milieu of professional community and intellectual teamwork (Gallegher & Kraut 1991) than is currently possible.

The use of cases has supported collaboration between experts and novices. Cases are an effective way to provoke thought and foster situational learning (Koschman et al, 1990), to model expert decision making in complex, ill structured domains (Spiro et al. 1988), to compare differences in novice and expert approaches (Borko et al., 1992; Borko & Livingston,

1989) and to contextualize problem solving (Cognition and Technology Group, 1992, 1991; Risko, 1992b; Risko, Vount & Towell, 1991). The CASENET project, described below, will incorporate the use of cases with the communication and collaborative potential of electronic networks for professional development purposes.

2. Background and Need for the Project

The 1990 Kentucky Education Reform Act (KERA) requires a major upgrading and installation of desktop and network technology in the 176 school districts throughout the state. The Kentucky Master Plan for Technology designates the Kentucky Education Technology System (KETS) as the integrated wide-area network that will connect school districts, the states' colleges and universities, and its government agencies. As Kentucky schools come on-line, it will be critical that viable uses of the network exist to accommodate the professional needs of teachers -- teachers who will be expected to engage in new types of teaching (e.g., non-graded primary instruction and portfolio assessment) and problem-solving activities vastly different from those they may have learned in their previous professional preparation. The case method as we have proposed here is well established as a very effective approach to strengthening the problem-solving abilities of professionals (Christensen, Garvin, & Sweet, 1993; Sykes & Byrd, 1993). We intend to take case teaching well beyond its current use through the use of CD-ROM technology and networking.

Brown and Campione (1990) have conceptualized the learning community as a network of engaged participants who collaborate in reflection, critical thinking, and change. McLaughlin & Talbert (1993) also describe the critical role of professional discourse and learning communities in transforming teaching practices. According to their findings, among the key factors crucial to building teachers' capacity for change is "participation in a professional community that discusses new teaching materials and strategies and that supports the risk-taking and struggle entailed in transforming practice." Due to the strategic role of technology in Kentucky's systemic reform, the stage has been set to use electronic networks to establish collaborative on-line professional communities to support teacher change.

3. The CASENET Project

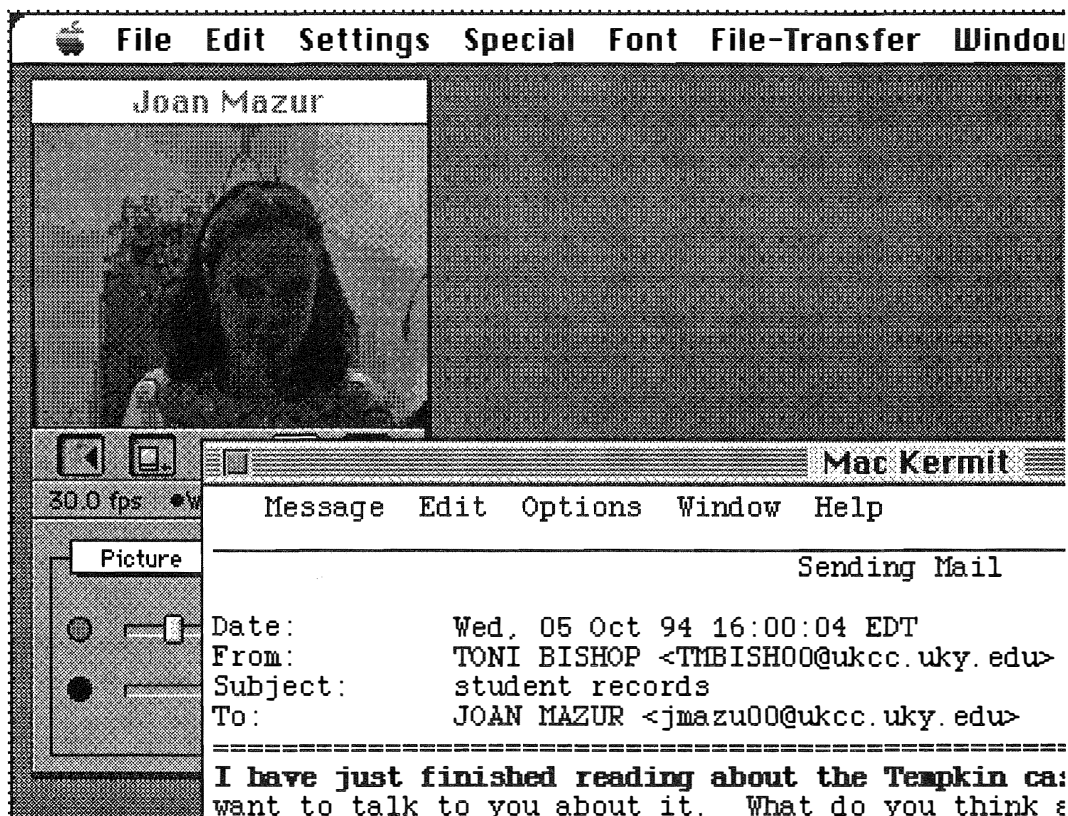
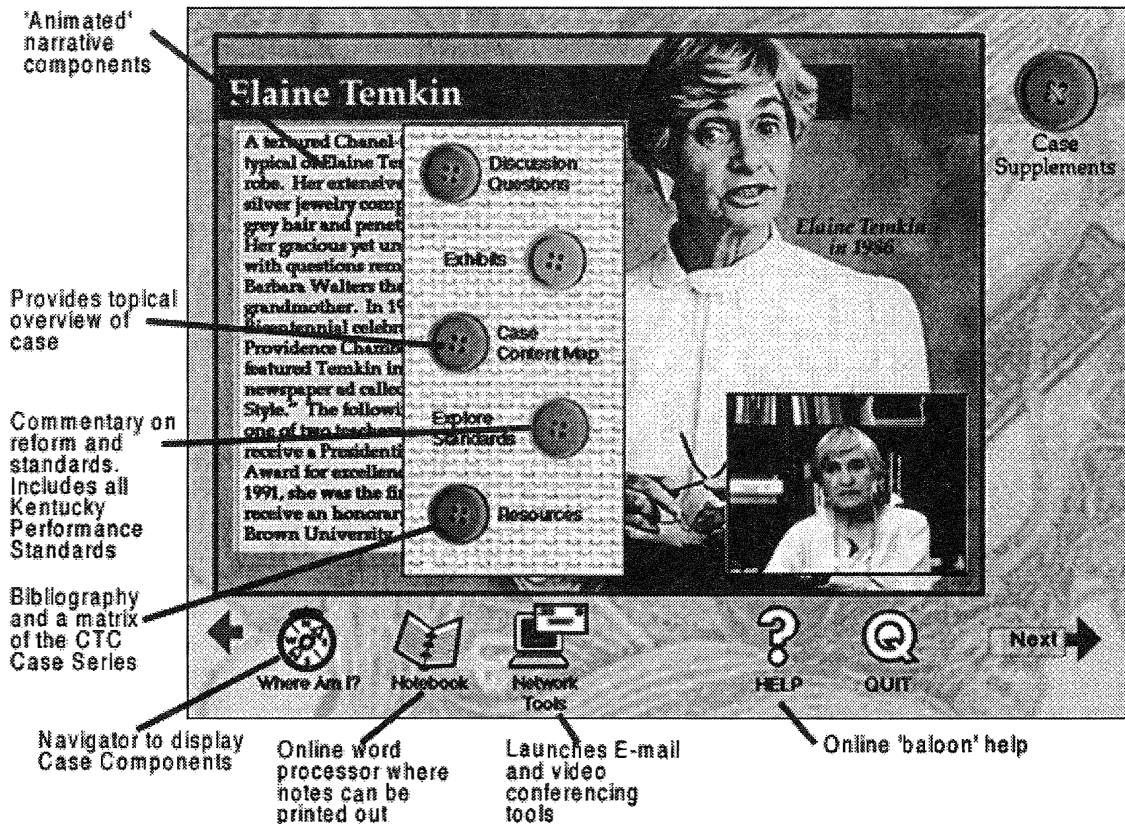
CASENET is an on-line professional development network under development at the University of Kentucky's College of Education. CASENET has three primary components each designed to facilitate the use of authentic (true story) cases and telecommunications

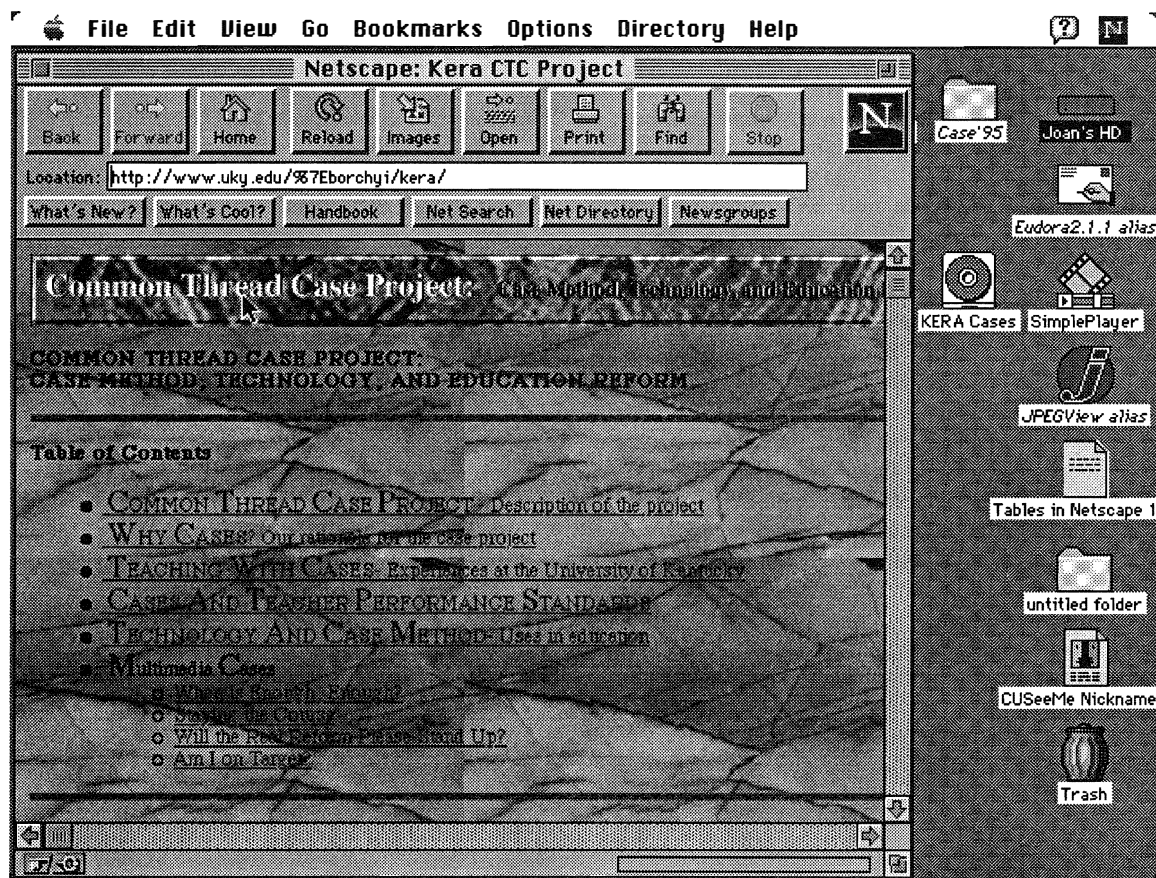
technology for intensive collaboration and professional development. They are:

- (1) True story, standards-based cases (called Common Thread Cases) in multimedia CD formats
- (2) A model electronic network (with video) for standards-based professional development
- (3) Research on the effectiveness of electronic case forums for ongoing professional development and collaboration between new and experienced teachers

The learning community described above is being established by integrating (1) electronic cases of accomplished teachers with (2) a technology system that allows telecommunication access to other teachers in diverse locations, and (3) focused training in the multifaceted uses of electronic cases. Using cases of successful teachers is not an new approach to professional development (Wasserman, 1993; Kagan, 1993; Kleinfeld, 1989). What is novel is a recent trend to transform hard copy cases for educators into electronic formats (Fishman & Duffy, 1992, 1993; Desberg, Colbert & Trimble, 1995). This accomplishes two important objectives: a) the creation of much richer cases that can include audio and video enhancement as well as student artifacts and b) the capability for every teacher in Kentucky to access case discussions electronically using CASENET. One of our primary goals in developing CD-ROM cases is to render highly engaging narratives of equal value to both beginning and experienced teachers. In this way, cases become the vehicle for a shared experience and subsequent conversation (Bliss & Mazur, in press). The conceptual framework and criteria for the CTC cases have been described elsewhere (Bliss & Mazur, 1995a). The interface and telecommunications tools are shown in figures 1-3 below.

To what extent can this integration of effective pedagogy (case method) and advanced technology create professional communities among veteran and novice teachers who work at considerable distance from one another? As experienced teachers in a rural Kentucky high school and student teachers at UK talked with each other about a common thread case, we documented features of CASENET. Our goal was to identify conditions for mutually beneficial professional conversations that would become the basis for participation in an on-line professional community. Would these conversations help the participants explore new teaching strategies and support the risk-taking inherent in changing practice and reform?





4. The CASENET Conversations

Six experienced history teachers (ranging from 18 to 29 years in the classroom) in Shelby County, Kentucky each individually studied the CD-ROM version of a case entitled "When Is Enough, Enough?" the story of award-winning high school teacher, Elaine Temkin (Bliss, in press). Mrs. Temkin teaches U.S. history thematically to provide a frame of reference for chronological events. She begins her course with a unit on the Vietnam war and uses primary source materials and cooperative learning extensively. The story focuses on the way she motivates a low achieving student, Mark, who wants to transfer to a less demanding course. After each of the six teachers had the opportunity to study the case, they met as a group for a two and a half-hour facilitated case discussion. The final activity in was a videoconference with a student teacher at the university. After the entire professional development sequence the veterans participated in a one hour focus group debriefing regarding their experiences. The researchers participated as observers. The Shelby County teachers received professional development credit for participation in the case sequence of individualized study, group discussion, and video conferencing with student teachers.

Concurrent with the Shelby County sequence, six social studies student teachers in their second semester of a Master's with Initial Certification Program at University of Kentucky (sixty-five miles from Shelby County) had also studied the When is Enough, Enough? case as part of their core curriculum. They had engaged in the same amount of case discussion as their experienced counterparts, led by the same facilitator. Each student teacher was paired with an experienced teacher for a desktop video conference consisting of a half-hour private discussion of the case.

Concurrent with the conversations, participants in both groups rated themselves as novice computer users and reported 'daily to weekly' experience with basic software, compact discs, or e-mail. Compact disc technology and video teleconferencing tools were available at the university and high school site, features common to approximately 34 % of the schools in the state according to a recent survey (Mazur, in press).

Data are summarized based on the content of conversations (1) among the veteran teachers, and (2) between the novices and veterans.

4.1. The Experienced Teachers' Conversations

During the focus group, teachers commented on the multimedia aspects of the case. All six noted that the video and audio clips made Temkin and her exemplary practice real to them, and as one viewer said, "all the more admirable." Two women noted that the audio comments embellished the text and "fleshed out" Temkin's views on testing and accountability. An 18 year veteran discussed the usefulness of the case exhibits. "There were actual student writing samples, I could see the progress resulting from her teaching. This was very important to me." Another teacher noted the multimedia made him "focus more closely on the information...I didn't want to miss anything." Indeed, during the case discussion, the facilitator and observer noted the teachers' recall of detail was extensive. Although each teacher had access to a hard copy case for reference, none felt the hard copy was necessary.

The combination of individual and group work with the case was synergistic. Four teachers noted use of the CD case on the individual workstation allowed them to reflect on the teaching strategies and compare them with their own, prior to discussion. All of the veterans emphasized the importance of the focus on instructional strategies related to their discipline. The opportunity to discuss these strategies with colleagues in their own department honed their insights and challenged their thinking. One veteran who had always used a strictly chronological approach in history courses noted that he had spent two days of his recent spring break "questioning my entire 18 years of teaching...have I been wrong for this long? I've tried to put this all in perspective and consider all the sides."

Providing a forum to talk about teaching was valued. In response to a question regarding what was most beneficial about the case experience, all six alluded to the focus on pedagogy. For example, one teacher pointed to insights regarding Temkin's accountability scheme for cooperative learning. "Temkin has them come in accountable by checking homework assignments. I'm going to try that, I've never been satisfied with my accountability strategies in cooperative groups." Each discussed the pros and cons of Temkin's approach and related it to his or her own teaching context, experience, and needs. A teacher of 21 years said, "so many of us that have been in education for umpteen years have been teaching traditional, very traditional, and this experience was an opener for me to think about thematic teaching." One woman who has been teaching for 20 years summarized, "One of the things that interests me most is hearing how other teachers teach. I got into teaching because I love history...I need to be reminded of that."

At the conclusion of the focus group, the teachers reiterated the value of engaging in "flexible professional development." Four out of six teachers commented on the convenience of the CD case which could

be used as part of a professional development day, after school or when time permitted. They could direct the content of their discussions and participate in an in-depth investigation of an accomplished history teacher. The self-directed, collegial case conversations affirmed their professional status, engaged their judgment, and afforded them the opportunity to discuss what interested and challenged them most: their teaching.

4.2. The Novice-Veteran Conversations

Immediately following the videoconferencing conversation, each student teacher and veteran was interviewed privately for one half-hour. They were asked, "What, if any, insights did you gain about teaching history?" Five of the six student teachers said they explored thematic teaching by discussing such topics as "what themes would you choose?" or "would the case subjects' theme of conflict and consensus really work?" The sixth student said, "it reinforced for me the importance of being really well planned for cooperative learning. I was also eager to know if starting a history course with Vietnam could in fact work." One student teacher stated, "I got some new insight into the case. Discussing the case with twenty-five other graduate students--we cover a lot of issues, but it is much different when you discuss a case like that with someone who has been in the classroom twenty years. They have different insights into what the issues are." Another teacher commented that he was heartened to know that a very experienced teacher who considered himself traditional was thinking about changes to his own practice.

The students found the video conversation to be private, safe, and frank. Six out of six respondents commented on the benefits of talking with someone not connected with their immediate school situation. The following were characteristic of the responses: "After your first full day of teaching, wouldn't it be great to have someone experienced to talk to and not worry that you might say something wrong?"; "It's pretty risk-free being able to talk to someone who has nothing to do with your evaluation...it leads to a much richer discussion."

Conversations included discussions of new teaching approaches. Four of the six Shelby County teachers noted they had discussed the possibility of using a thematic approach with the heterogeneous groups they currently taught; these four also noted that the student teachers encouraged them to take risks and try a new approach. "It was a rare opportunity to actually talk about instructional strategy and exchange ideas like 'how do you use this theme?' I really liked this for professional development, instead of a lot of management tasks." Another stated "we discussed Vietnam and using your personal experiences to enhance the realism of the themes and topics you choose. My opinions regarding the effectiveness were confirmed by [the student teacher] and it forced me to clarify how this was useful."

The experience teachers commented on their roles as mentors. It was evident from their responses that while they believed they had something to offer the new teachers, they, too were searching for answers and trying new, somewhat risky techniques as part of the reform. One wrote this comment about the interaction, "It felt good to be seen as a mentor, I'm not sure if they saw us as true mentors-dispensing wisdom-but anyway, it gives me confidence, confidence I need to keep rethinking and changing my teaching."

5. Providing Conditions for Professional Conversations

The CASENET conversations show the case provided a common context for discussions focused on pedagogy. The participants discussed (1) the facts of the case, (2) the case teacher's instructional strategies and (3) complex pedagogical issues raised in the case. The case discussants explored pedagogical issues using insights drawn from their own experience and evidence from the case. These on-site and on-line professional conversations supported and encouraged the sharing of individual expertise and experience, a benefit of collaboration consistent with research findings of O'Malley and Scanlon (1989). Throughout the initial CASENET field test, the participants articulated individual views as well as responded to the differing comments of others, an activity that Steeples (1993) notes can lead to refinement and deeper understanding of concepts. This process of articulation and refinement may also broaden the application of underlying principles (Brown & Palinscar, 1989), a skill which will be crucial to incorporating new standards and approaches throughout a teaching career.

The CD Cases and telecommunications tools provided several conditions to support these interactions:

- **A shared context for discussion.** Using the multimedia case as a basis for common experience, differences in the school contexts and teaching approach of each teacher could be assimilated into a discussion of the specifics of the case. This made the experience more relevant and stimulated multiple perspectives on an issue.
- **An emphasis on pedagogy.** The true story case was believable and included specific issues and strategies related to teaching social studies. This was motivating and challenging. Teachers, it seems, want to talk about teaching and need more opportunities to do so.
- **Flexible professional development options.** The CD cases were engaging and convenient to use as schedules permitted. This was a key benefit for teachers working around school scheduling. Also, the teachers were free to discuss topics of their

own choosing either in the case discussion or during the video conference, which fostered ownership of the process. All participants were eager for more cases and contacts with other teachers.

- **On-line contacts that were personal, safe, and proximate.** The isolation inherent in teaching is well documented. This isolation is both physical and conceptual. The video personalized the contact and the electronic link brought the Shelby County and UK sites closer to one another. The benefit of having several contacts with whom to discuss misgivings and ideas openly (without the threat of evaluation) was noted by both experienced and novice teachers.

As the participants reported, these conditions contributed to a sense of identification and involvement with their own profession, a consequence of on-line collaboration also reported by Steeples (1993). These preliminary data demonstrate how features of the CD-ROM cases and the desktop videoconferencing established conditions for mutually beneficial professional conversations. These findings are consistent with Harrington's (1993) work that suggests the potential of computer conferencing to support professional discourse. Conversations that enthuse teachers about activities such as mentoring and reflective practice are one vital component of a learning community.

6. Future Directions

It is clear from this initial investigation that more research is needed on the evolution of an electronic community of experienced and novice educators. Can participation in such a community affect teachers' ability to incorporate new types of pedagogy? For instance, what types of realistic on-line relationships (e.g. mentors, partners, case facilitators) are needed? These initial veteran-novice contacts were necessarily brief and superficial. Under what conditions do enduring on-line relationships develop and what tools are needed? In the upcoming year we plan to broaden the scope of case training and CASENET participation. Urban areas and rural Appalachian districts in cooperation with other teacher preparation programs will be included. These groups will be using the multimedia cases, desktop video conferencing, Kentucky's two-way videoconferencing system¹, as well as e-mail and the Common Thread Case Netscape home page. As we work to develop implementation models and expand participation in CASENET, we will continue to explore the role of technology in creating associations between novice and experienced educators in the midst of reform.

Acknowledgments

The CASENET project is a partnership between the University of Kentucky/University of Louisville Joint Center for the Study of Policy, the BellSouth Foundation, Kentucky Educational Television, and the Gheens Foundation.

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