

How facilitated e-mail mentoring benefits all participants.

Participating from the Sidelines, Online: Facilitating Telementoring Projects

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Abstract

Asynchronous, text-based communication is different from most other forms of interchange in important ways. It lacks the full spectrum of visual and audible information that people depend upon, often unconsciously, in face-to-face exchanges. It also requires different interaction strategies if it is to be used to create maximal educational benefit by and for students and teachers. These techniques can be modeled and made explicit by someone closely following online conversations in the role of facilitator, helping participants to construct online teaching/learning experiences in mutually beneficial ways. The Electronic Emissary's years of research have shown that the people best prepared to assist in these ways have experience in both online communication and pedagogy. The Emissary's facilitators provide individualized, "just in time" assistance to teachers, students, and subject matter experts during their telementoring exchanges.

K.3.1 Computer Uses in Education

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Resources available via telecommunication technologies are providing creative K-12 teachers with new ways to engage their students in authentic learning experiences: those that reflect how knowledge is built and used in the world outside school. Today, a teacher no longer needs to play the role of expert in the classroom. It is possible, for example, for students to learn about weather phenomena from meteorologists studying weather as it occurs, or to discuss interplanetary space travel with astronauts actually in space at the time of interaction, using simple telecomputing tools such as

electronic mail and chat. Volunteer subject matter experts (“SMEs”), such as the meteorologists and astronauts mentioned above, can work virtually with students over an extended period of time, developing mentor-protégé relationships and assuming a portion of the responsibility for the learning process that occurs during their interactions with the students. This practice has come to be known as “telementoring” (Harris, 1998).

The Electronic Emissary

The Electronic Emissary Project (<http://www.tapr.org/emissary/>), prototyped in fall, 1992, and launched online in February, 1993, is, to our knowledge, the longest-running K-12 telementoring effort. The Emissary is a “matching service,” pairing subject matter expert volunteers with K-12 teachers and their students who are studying in the fields of the SMEs’ expertise. In doing so, it helps to establish content-related, curriculum-based teleapprenticeships (Levin, 1987), or electronic mentorships (Riel and Harasim, 1994), through which “use of e-mail or computer conferencing systems to support a mentoring relationship when a face-to-face relationship would be impractical” (O’Neill, Wagner, and Gomez, 1996, p. 39) occurs. Emissary-supported projects are requested by teachers using an interactively-accessible database of volunteer subject matter experts with custom-designed selection software (Jones and Harris, 1995). The Electronic Emissary is also a research effort, examining the nature of adult-child interaction and collaborative, asynchronous teaching and learning in primarily text-based, computer-mediated environments. The students in Emissary teams are encouraged to inquire about their curriculum-related topics of interest, which are also the subject matter experts’ content specializations. The teachers in Emissary teams work with the SMEs, the students, and

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university-based online facilitators/research assistants to shape this interaction, helping participating teachers to incorporate it into the face-to-face K-12 classroom learning environment.

The Nature of Telementoring Interaction

Currently, most telementoring occurs via electronic mail. Communication by electronic mail is different from most other forms of interchange in significant ways. It is asynchronous, primarily text-based, and relatively fast, with participants often widely distributed geographically. It lacks the full spectrum of visual and audible information that we depend upon, often unconsciously, in face-to-face exchange. Therefore, telementoring by e-mail requires somewhat different interaction strategies if it is to be used to create maximal educational benefit (Harris, Rotenberg, and O’Bryan, 1997). For example, more frequent and more explicit purpose-setting, progress-reporting, and problem-solving communications may be necessary online than in face-to-face interaction (Kimball and Eunice, 1999).

Such medium-specific strategies can be directly suggested by someone closely following online conversations in a facilitative role, helping participants to construct the teaching/learning experience in individualized ways. The people best prepared to do this in telementoring situations are those who have the requisite experience in both Internet-based communication and education to know how to help project participants build mutually accessible bridges between their differing workplace ways (Harris, Rotenberg, and O’Bryan, 1997). These communications assistants, or facilitators, “act as ‘playground monitors’ or gentle guides while participants ‘play in the sandbox,’ developing the norms and rules [of the telecollaboration] as they go” (Palloff and Pratt, 1999, p. 20). When telementoring is directly and personally facilitated, what do these communications coaches do?

Roles Facilitators Play

Various dictionaries describe a facilitator as one who assists, makes easier, or frees others from the difficulties of a situation. Thus, online facilitation could be described as the art of providing the support and scaffolding to SMEs, classroom teachers, and students as they work together in an asynchronous environment to develop relationships that assist with achievement of educational goals. Often, this interaction means that the facilitator must perform many functions, always ready to shift from one role to another. From a review of relevant literature, McGee and Boyd (1995, p. 645) identified three types of behaviors that facilitators often display in the online interactions that occur during an Emissary-sponsored telementoring project.

The facilitator may serve as a moderator during initial contacts as the participants are establishing the framework for the project. As moderator, the facilitator models the language, discussion techniques, and netiquette protocols necessary for quality communication in the online environment. In addition, the facilitator models proper use of the technical framework within which participants operate in order to assure quality communication.

The facilitator may serve as a mediator as the project progresses. Tasks such as tracking down resources and materials that enrich the learning experience or providing technological assistance that supports learning goals—such as setting up a realtime chat or videoconference among teachers/students and SMEs—may become part of the facilitation process.

And, the facilitator facilitates or engages the teachers/students and SMEs in collaborative learning processes by planning with the teacher, monitoring online interactions, and providing guiding comments as needed.

As facilitators move flexibly from one of these three types of behavior to another, their functions in the learning process shift. The ability of the facilitator to recognize which facilitation roles are necessary for them to play as the learning project progresses is another key component of successful telementoring facilitation.

Facilitators who have worked with the Electronic Emissary Project describe taking on multiple roles simultaneously, playing them differently for each electronic team of students, mentors, and teachers. For example,

As a facilitator, I found that my role would range from being a “listener” to “technician” to “prompter,” and, once, even as “referee.” (Figg, 1997)

I have played a major role in getting teachers and SMEs to correspond promptly and in getting projects that have sort of petered out to come up again, by contacting the teacher and the SME to find out what was happening at each end. In a couple of instances I volunteered to make suggestions to the teacher on how to proceed with the project, but for the most part let them do the thinking. (Mathew, 1997)

I spent a part of every day for fifteen weeks involved in the matches I was responsible for, first as a source of information and instructions. I answered questions, helped to solve problems and provided a framework for each project to function within. Then, as an encourager, providing suggestions for starting points and positive feedback for jobs well done. Sometimes I intervened when miscommunications seemed eminent, offering a more objective interpretation of a situation. But mostly, I was an observer, reading and learning along with the participants. (Wadbrook, 1999)

Our observations of online facilitators' interactions and reflections have yielded three additional roles that they seem to play: tour guide, tutor, and “nag.”

Facilitator as Tour Guide

Just as a tour guide directs the travel experience for clients embarking upon a journey, the facilitator participates in coordinating the learning event that is created among the participating SME, teacher, and students. In an Emissary-sponsored project, the learning event progresses through a process of initial contacts between the facilitator and participants, initial contacts among participants (with the facilitator monitoring the exchanges), and continued exchanges that explore the content matter and address the learning goals of the project. The "facilitator as tour guide" assists telementoring project participants in organizing the particulars of the project, suggests schedules for communications and timelines for project activity, and coordinates efforts among the SME, teacher(s), and students so that all participants can benefit from interacting in a telementoring context.

Facilitator as Tutor

The "facilitator as tutor" uses initial communications to model the language and style of communication appropriate for successful mentoring to occur. Often, "netiquette" recommendations, as well as reminders of online communications conventions (such as emoticons), are forwarded to participants as a means of "breaking the ice" and establishing standards for virtual interaction. The facilitator serves as the communications expert who understands the types of interactions, exchanges, and instructional collaborations that succeed in a telementoring environment, complementing the content expertise of the telemmentor and the pedagogical expertise of the participating classroom teacher. The facilitator is often called upon to explain why a suggested collaboration technique might fail, demonstrate alternatives that will flourish under the constraints of the medium, or model techniques that can support the project's learning goals.

The contexts in which most telemmentors work are quite different from K-12 teaching/learning environments. Of particular note are differences in Internet accessibility, and the expectations that these contrasts can create. Most telemmentors

have easy and frequent access to telecomputing tools throughout their workday, and are accustomed to having brief, multi-turn, text-based conversations with colleagues using quick turnaround times. K-12 students and teachers have much less frequent and much more inconvenient access to telecommunications facilities. Whereas a mentor might expect a reply to an e-mail message within 24 hours, many K-12 students are able to use Internet facilities only once weekly. Therefore, it is sometimes necessary for telementoring facilitators to function as "contextual translators" among people working both inside and outside the K-12 classroom, so that adjustments to expectations for amount, frequency, and types of communication can be made to fit the realities of both working environments (Harris, Rotenberg, and O'Bryan, 1997).

Facilitator as Jovial "Nag"

For the occasionally reluctant participant who experiences difficulty with asynchronous interchanges as educational endeavors, the "facilitator as nag" jovially reminds everyone of interim project deadlines, becoming the persistent voice that prods participants into communicating in a timely and consistent manner. In telementoring projects, collaboration is essential and expected, and the job of ensuring collaborative participation from all parties falls to the facilitator.

What Does a Facilitator Do?

By its very nature, facilitation of telecollaborative work is individualized and participant-centered. As Kimball and Eunice (1999, p. 5) explain, "Facilitation is paying attention to what is happening in your group, as distinct from what you wanted or expected would happen...you want to detect where members are now and work with that energy to move in the direction [they] need to go."

What actions do telementoring facilitators take when playing the roles of technical tutor, design consultant, prompter, listener, encourager, problem-solver, and referee? How might an individual who can effectively function

as a tour guide/event organizer, tutor/content specialist, and jovial nag endeavor to facilitate a telementoring project? Though the nature of these responsibilities is dependent largely upon the ways in which particular telementoring projects are structured, facilitators help members of telementoring teams to:

- Set up and test communications facilities (accounts, filters, etc.).
- Introduce themselves, getting to know each other personally and professionally.
- Set realistic project goals and expectations.
- Get answers to procedural questions.
- Adjust goals and expectations according to project developments.
- Keep communication flowing throughout the project period.
- Identify, address and resolve miscommunications.
- Structure and participate in different kinds of online activities.
- Evaluate individual and group contributions to learning/teaching.

Telementoring facilitators must be careful to assist and suggest, rather than direct. This is more easily said than done, especially in the case of an electronic team that is not communicating regularly or effectively. It is essential that team members assume responsibility for the success of the exchange. As one Electronic Emissary facilitator said,

You have now set the stage for the exchanges to begin and, at this point, it is up to the participants to “take charge.” Let them know that you are available to answer any questions that they have and will be happy to assist them in any way you can, then take a step back and see what happens. (Wadbrook, 1999)

Telementoring Project Phases

The Emissary’s facilitators suggest that their roles and functions change as projects evolve through three phases: introductory, operational, and closure.

Introductory phase

For Electronic Emissary facilitators, telementoring project support involves serving approximately 20 different electronic teams simultaneously whose participant interests and requirements are individual and unique. The facilitator’s first job is to make an initial contact with the teachers requesting SME telementoring services, then with the SMEs who were requested, to see if they are available for the telementoring project described by the teacher and student(s). Using information provided in e-mail message headers from teachers and SMEs, the facilitator requests that the Emissary’s system administrator establish a uniquely named, private, and customized e-mail distribution list for the curriculum-based project that the teacher proposed.

The goals of the facilitator during these initial contacts are twofold and simultaneous. First, the facilitator is working with the teacher to determine that the scope and nature of the learning goals envisioned are feasible and appropriate for the medium. Sanchez and Harris (1996) suggest that projects with a definite statement of the content to be covered and educational goals to be achieved by the exchange are perceived more often by participants as successful. Questions involving e-mail access, project schedules, and sufficient time for student participation must be addressed in this instructional design phase of the telementoring project. Second, the facilitator is working with both teacher and SME to ensure that the technical foundations, such as the list used for sending and receiving messages, are established and running smoothly.

Once the project’s “virtual space” has been established, the teacher and SME are invited to begin communication related to project planning. During this phase, the facilitator is making suggestions and offering clarifications as needed, using this time to model appropriate interaction patterns while encouraging the SME and teacher to establish the goals and framework which will launch their student-centered online relationship.

Operational Phase

After initial contacts are made, an Emissary project moves into an operational phase during which the participants are in charge of the learning journey. During this phase, the job of the facilitator is to monitor their participation, while encouraging participants to control the direction of the project so that it addresses their instructional needs, goals, and preferences. The facilitator actively observes and analyzes patterns of interaction in order to take “just in time” action that helps participants avoid the misunderstandings, frustration, or project failure that can result from communicating in a primarily text-based, asynchronous environment.

Closure Phase

The facilitator also helps bring closure to the learning journey. First, the facilitator secures two different types of feedback information from each of the participants (teachers, students, and SMEs):

- Project summaries are created collaboratively by all members of each electronic team. Looking back upon their telementoring experiences provides a culminating exercise for project participants. These project summaries, with their authors' permission, are made available online at the Emissary's Web site at this address: <http://www.tapr.org/emissary/projectssummaries.shtml>.
- All participants also provide evaluations of their personal telementoring experiences, formatted as responses to a standard set of open-response questions.

Upon receipt of these documents, the facilitator arranges with the participants in each team to withdraw from the project. The facilitator then requests that the system administrator close the project's e-mail list. Often there are requests that project lists be left open so that the teacher, SME, and students can continue communicating. These requests are generally granted. However, without facilitation, very few of the communications remain active for more than a few weeks.

Key Facilitator Characteristics

What does it take to be a successful online facilitator—to play the roles described above in service to students' and teachers' learning in telementoring exchanges? Interviews with facilitators, SMEs, and teachers participating in Electronic Emissary projects reveal that the successful facilitator utilizes certain skills. These are listed and described below.

Technical skills and knowledge of online community-building

Key to any successful telementoring facilitation is the ability of the facilitator to use the technical skills needed to accomplish the goals of the project. For Emissary projects, the main telecommunication tool is an e-mail management program. A firm grasp of the features of the program—e.g., accessing the program, receiving/sending messages, responding using reply functions, attaching files, establishing filters to sort messages—and the use of it to receive, record, and archive messages is necessary so that the facilitator can demonstrate and model effective use of the team's e-mail list. Many of the participants in Emissary-supported endeavors are online novices, so each telementoring project is structured so that participation procedures can be experienced by telementoring teammates through a series of initial test messages among the teacher, SME, and facilitator. At this time, the facilitator's technical skills may be utilized in “troubleshooting” possible glitches in the distribution list or simply as support for teachers and SMEs to practice their skills before bringing the students online.

These initial test messages serve an additional purpose. Building an online relationship between the SME and teacher that will support successful interaction begins with the first few messages among facilitator, SME, and teacher. In these messages, the facilitator models forms of interaction for the participants that will encourage online community-building. Regular use of these techniques, such as dialogue that invites participation, enthusiastic responses, the sharing of ideas, elaboration upon previous

comments or ideas, provision of feedback, and clear acknowledgement of comments from specific participants, are critical to the success of telementoring projects. In some ways, this success is directly influenced by the online modeling skills of the facilitator.

Establishing an environment in which the SME and teacher feel comfortable using the technology not only ensures that participants are able to concentrate primarily on the learning goals of the project, but also allows them to explore other project options. For example, Emissary facilitators have been called upon to locate supplemental Web resources, prepare graphics for project use, advise participants in the use of desktop video conferencing tools, and assist in the construction of Web pages.

Organizational Skills

Facilitators assisting Emissary electronic teams work with at least twelve—often up to twenty—projects at a time, and are faced with a deluge of messages from project participants on a daily basis. Organization is a must. The day-to-day demands of project facilitation include checking e-mail on a daily basis and responding when appropriate, locating resources for various projects, checking status reports for account activity, and posting reflections/reminders for team members as needed. The successful facilitator develops organizational strategies that allows him/her to efficiently manage the morass of messages while effectively monitoring project participation.

“People” Skills

Telementoring requires use of online interaction strategies that ensure that telecollaborative instruction will meet the educational needs of students while effectively utilizing the capabilities of networked technologies. Online interaction challenges our development and use of interpersonal skills. Facilitators are very conscious that readers of the written word may attach meanings not intended. Without the use of visual and auditory information that can provide nonverbal information to participants sharing an exchange, the art of communication

takes on unique nuances. Successful facilitators learn to muster all the tact, diplomacy, negotiation, and peacekeeping skills developed in face-to-face interactions and apply these skills to online communication. Often, facilitators are responsible for modeling the use of e-mail messages to convey ideas, suggestions, and feedback in ways that encourage reflection or clarification without the sting of criticism.

Knowledge of Classroom Practices and Instructional Design

A component common to many successful Emissary projects is the preliminary statement of clear educational goals/purposes for the exchange. Thus, the planning and design of the project must not only meet curricular goals, but also teacher expectations of what will occur in the project. A facilitator who has spent time in the classroom designing instruction for students and who is familiar with classroom practices that develop as teachers manage students' in-classroom learning can assist teachers in ways that those without this experience cannot. Facilitators can help to ensure that the design of telementoring projects meets educational goals and teacher expectations while suiting the specific capabilities of the telecomputing tools used—a skill that many teacher participants who are novices with telecommunication technologies have yet to develop.

Aid for Facilitators

Technical, organizational, “people,” and pedagogical skills assist the online facilitator with making the collaborative process successful and productive. The Emissary's facilitators, through sharing experiences, materials, suggestions, and reflections with each other, have formed an extended and virtual community of sorts, supporting inexperienced facilitators in the acquisition of necessary skills and awarenesses. Reflections documents, e-mail exchanges, and informal interview data have been interpreted to produce an online facilitator's manual, located on the Web at <http://www.tapr.org/emissary/facmanual.shtml>, that shares these practical suggestions. We have chosen to compare the

facilitator's role in the learning process to that of a tour guide or event organizer, comparable to the escorts who accompanied guests as they traveled on elegant Orient Express tour trains near the turn of the 20th century. Many of the tasks a tour guide performs ensure that customers are provided with special opportunities and an interesting and worthwhile itinerary. The tasks a facilitator performs during the learning journey help participants to attain the same outcome—a memorable and educational learning experience.

The Uniqueness of Telementoring Teams

Though facilitators have developed logically generalized suggestions for assisting telementoring efforts, each of these electronically scaffolded relationships is as unique as the collection of personalities and past experiences that combine to bring it to life. As Bennett, Hupert, Tsikalas, Meade, and Honey (1998) observe, "In speaking with students about their telementoring relationships, it was clear that there was no set path to success. Instead, there were many moments in which students and mentors could connect on a deep level" (p. 25). Direct facilitation of telementoring, though it is time- and effort-intensive, can provide each electronic team with individualized, sensitized, and spontaneous assistance, thereby increasing probabilities that students will be well-served and planned projects will be completed. It may be necessary to provide direct facilitation in the networked learning environment at this early time in the history of K-12 telecollaborative learning experiences, since without active facilitation, only about 30% of all projects currently attempted reach fruition (Kerns, 2000).

Electronic Emissary facilitators consistently remark upon the variety of projects, personalities, and perceptions among and between the members of the telementoring teams with which they work (e.g., Figg, 1997; Gould, 1997; Wadbrook, 1999). While giving advice to future online facilitators, one explained this multi-layered uniqueness by saying:

Remember that each project is unique and is serving different needs for different teams. In the spring of 1999, I had conventional classroom students, a pair of homeschooled brothers and their teacher/mom, an independent study student, and a group of gifted and talented math students from different schools in the same district. All participants come to the [project] with their own expectations and goals, so...you need to pay especially close attention to how the exchanges are progressing. (Wadbrook, 1999)

If each telecollaborative exchange is unique, it serves to reason that the nature of its thumbprint emerges primarily from the online interaction of particular personalities that come together to form a virtually-connected group. Understanding the nature of electronic personality, then, is one key to successful telementoring facilitation.

Electronic Personalities

The electronic personality is "the person we become when we are online" (Palloff and Pratt, 1999, p. 22). Telecommunicating persons actively create electronic personalities that may or may not resemble others' impressions garnered from face-to-face interaction. Many who are experienced with online exchange actually create a range of electronic personalities that function differently in different virtual situations (Palloff and Pratt, 1999). Facilitators must be adept in recognizing and helping team members understand and adapt to the electronic personalities presented as telementoring occurs. The range of electronic personalities experienced by one facilitator during just one academic semester of online assistance can be illustrated in these three descriptions:

For example, we have one teacher...who writes all of his e-mail in lower case and limits the length of his comments to one or two lines! His project is often very slow to get off the ground, and even though his students are working independently with the [telementor], they tend to need

much prompting.

Another teacher...clearly describes how she is using the information in her classroom and almost "paints" the [mentor] a picture of her classroom! Needless to say, this is a very successful match with a constant and enjoyable flow.

The "online personality" of one of the [telementors] is brief, to the point, and concise. And, although [she] is brief, she always ends her messages in a personal manner with comments like "Take care" or "Let me know how it works out." (Figg, 1997)

Differences in electronic personalities lead to differences in online communication styles, rhythms, and purposes. Facilitators need to be aware of communicative subtleties on multiple levels at once to best recognize needs and offer appropriate assistance. As Kimball and Eunice (1999) explain, "In a face-to-face setting, facilitators watch body language and facial expression and lots of other signals to develop a sense of what's going on. Participants in virtual learning communities convey this same information in different ways" (p. 5). In many cases, this means that the facilitator, using only her sense of electronic personalities built from accumulated experience communicating online, and her knowledge of the operational and cultural differences between K-12 and other contexts, built from past professional experience, must "translate" for and advise telementoring team participants.

For example, Figg (1997) analyzed a series of misunderstandings between a telementor and the teacher and students with whom she agreed to work as follows:

As she communicates with the students regarding health issues, [the mentor] constantly points out that many issues in health require a medical doctor. The teachers and lab teachers have "interpreted" this personality as not making an effort to communicate with the students and are disgruntled with the progress of the project, which is not

how I interpret her online personality at all. ...I have spent much time communicating with [the mentor] to get her to personalize her responses more and open up more with the students. At the same time, neither the lab teacher nor the classroom teacher have made efforts to communicate with [the mentor] and often the students ask the same questions of [the mentor] over and over, so there doesn't seem to be any "teacher facilitation" at [the classroom level]. And, I have spent much time talking with the classroom teacher regarding how she could help the students form better questions for [the mentor]. In addition, I have spent time with the students suggesting ways to improve their questioning techniques.

This facilitator's description of a telementoring "match" fraught with communicative difficulties, and her concomitant attempts to help each participant understand the others' communicative styles exemplifies the sensitive and important work that only direct facilitation can accomplish.

The Goal: No Facilitation Needed

Realistically and idealistically, direct facilitation for telementoring teams can and should only be available on a limited basis. Facilitation should be provided only long enough to help team members learn to use the medium effectively for a particular educational endeavor, and always with an eye toward participants being able to communicate effectively and independently. In a sense, the facilitator's ultimate goal is to eliminate the necessity for her functions. As one Emissary project facilitator said,

I suspect that my greatest reward as a facilitator will be to see how successful a project team can be without me. In my role as facilitator, as with my role as teacher: when they don't need me anymore, I know I have done my job!! (Wadbrook, 1999)

Our more than seven years of experience assisting and studying telementoring has borne out what Bennett, Hupert, Tsikalas, Meade, and Honey concluded from their work with young women in 1-to-1 career-oriented telementorships. "...Merely getting people online is not enough; to fully utilize the strengths of online communication, attention and care must be paid to building and maintaining a sense of community among participants" (1998, p. 4). It is in this action-oriented notion of community—how it is built, what encourages its depth, and what discourages its development—that the keys to successful telementoring are kept. Online facilitators, through direct involvement, can help students, teachers, and interested others learn to use these keys to unlock doors to unique and mutually beneficial telecollaborative learning partnerships.

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