

PEER MENTOR ROLES IN A COLLABORATIVE ON-LINE RESEARCH AND LEARNING (CORAL) COURSE

By Thomas Treadwell Donna Ashcraft Troy Teeter Karyn Ritchie

While many peer mentoring programs are of a social and emotionally supportive nature (Center for Mental Health in Schools at UCLA, 2004), others are more academic in nature (Delquadri, Greenwood, Whorton, Carta & Hall, as cited in Gensemer, 2000; Houston & Lazenbatt, 1999; Tien, Roth, & Kampmeier, 2002). Many of these academic peer mentoring programs are based on a social constructivist foundation and encourage collaborative learning (Tien, et al., 2002; Topping, 1996).

Generally, constructivism suggests that learners construct, or develop, their own knowledge (Vrasidas, 2000). Some believe that knowledge is developed through an individual's own experiences, referred to as personal constructivism. Others believe

Thomas Treadwell,

Professor of Psychology

West Chester University West Chester, Pennsylvania ttreadwell@wcupa.edu

Most Influential Mentors:

J.L. Moreno, founder of group psychotherapy, psychodrama, and sociometry. A.T. Beck, founder of cognitive behavioral therapy. Their focus on 'action' rather than 'talk' demonstrated how the two concepts are essential to modify behavior. that knowledge is developed through interactions with others: cognitive changes occur through discussions with others, referred to as social constructivism.

In yet another perspective, it is believed that knowledge is developed through both an individual's solitary

Currently Reading:

John Irving (waiting to read his new book); other favorite authors include Richard Russo, Linda Greenlaw, Sabastian Junger, John Grisham and John Sanford.

Favorite Musician (or Music):

I don't have a favorite musician nor music - I like most.

My Greatest Challenge:

Personally - raising three boys alone. Professionally, developing challenging projects at the university level: (1) formulating & implementing the first graduate/masters program in group psychotherapy, psychodrama, & sociometry at the university level, and (2) creating a collaborative on-line research and learning project (CORAL). The CORAL project began 10 years ago - and is currently a work-in-progress mission.

Bottom Line:

Peer mentors build relationships, use group leadership skills and employ the latest technology to support the academic achievement of other undergraduates and empower them to value collaborative learning.

Donna Ashcraft, Ph.D. • Professor of Psychology Clarion University of Pennsylvania ashcraft@clarion.edu Most Influential Mentor: Tom Treadwell	Favorite Music: Classic rock and roll, especially Bruce Springsteen, Billy Joel, and Pat Benatar. I'm also an avid Parrothead and have just attended Jimmy Buffett's concert in Pittsburgh. Currently Reading: Until I Find You by John Irving (my	favorite author). <i>Harry Potter and the</i> <i>Half-Blood Prince</i> by J. K. Rowling. My Greatest Challenge: Raising three children (including one approaching puberty) with a minimal amount of mental anguish to both them and me.	About The Writer
Troy Teeter, • Senior Project Guide West Chester University Most Influential Mentor: Tom Treadwell	Currently Reading: The Shot by Philip Kerr Favorite Music: My current musical interest is Bach, specifically my classical guitar study of Carlevaro's transcription of the challeng- ing Chaconne.	My Greatest Challenge: Finding a sensible role in an increasingly irrational world.	ABOUT THE WRITER
 Karyn Ritchie, Project Guide West Chester University Most Influential Mentor: My father - he paved the way for me to learn how to function or operate on my own. 	Currently Reading: The Hitchhiker's Guide to the Galaxy by Douglas Adams. Favorite Music: Kiss and Venom were a few of the impor- tant bands in my life. Other favorites are Matchbox, Stray Cats and AC/DC.	My Greatest Challenge: Graduating from college and living independently.	About The Writer

Project guides facilitate

learning, encourage inter-

and intra-team discussion,

promote collaboration, and

foster key active learning

experiences with students.

experiences and through their interactions with others. These constructivist perspectives are quite different from traditional (objectivist) forms of teaching and learning whereby the knowledge of the instructor is deposited into the heads of students. In the constructivist approach, students are responsible for their learning and teachers and peer mentors serve as facilitators, whereas in the latter approach teachers are primarily seen as responsible for student learning.

The social constructivist perspective emphasizes the importance of collaborative learning. In collaborative learning students work together to achieve a shared learning goal; they form learning communities that encourage the development of ideas, and a supportive environment that encourages scholarship. Collaborative learning is vital to a social constructivist approach

because it allows for "distributed cognition", permitting thinking clarification (Vye et al., 1998).

Peer interaction is also conducive to deep-level processing (Houston & Lazenbatt, 1999) since it involves application, analysis, synthesis, and evaluation (Ellis & Whalen, as cited in Houston & Lazenbatt, 1996). The learner-to-learner interaction (Vrasidas, 2000) is vital in the construction of knowledge.

ROLES FOR PEER MENTORS

Peer mentors are especially helpful in collaborative academic environments. They can assist students in

> learning material through encouraging the discussion of course material. They can also model collaboration, and provide support to students enrolled in nontraditional courses who feel uncomfortable with the new learning environment. Thus, in collaborative learning environments students interact with each other and, if available, with peer mentors, to develop understanding of course material. In this case, peer mentors

aid classmates socially and emotionally, as well as academically. Peer mentors bridge the gap between faculty and students, contributing to the success of a collaborative learning environment.

THE SUCCESS OF PEER MENTORING

Peer mentoring has succeeded in a number of academic settings and is associated with a number of positive benefits (Topping, 1996). For example, a literacy project using fifth grade tutors for students (grades K-5) resulted in superior performance in reading and language arts compared to the control schools without peer mentors (Armstrong, Davis & Northcutt, as cited in Center for Mental Health in Schools at UCLA, 2004). A foreign language program using conversation between college students and high school students led to improved confidence and fluency, and increased the likelihood for college students to pursue a career teaching foreign language (Armstrong, Davis & Northcutt, as cited in Center for Mental Health in Schools at UCLA). A mentoring project creating opportunities for navigat-

ing and easing through college transition led to increased retention rates (students staying in school), increased graduation rates, and increased rates of transfers to four-year universities Edmonson, Fisher and Christensen, 2003).

While many peer-mentoring programs are successful, some are not, and Hall (2003) suggests "mentoring can have a[n] ... impact on a number of measures, but that this impact may not be large" (p.15). Successful mentoring programs are associated with a number of factors including screening of mentors, supervision

of the mentors, proper training of the mentors, frequency of contact with the partners, commitment to the mentoring program, and duration of the mentoring relationship (Hall, 2003). One of the biggest challenges and most rewarding functions for the instructor who uses peer mentors is providing the emotional, social, and academic support necessary for the mentor to succeed (Goodlad, 1999). The teacher bestows upon the mentor tactical responsibility and assumes full strategic responsibility. Feedback from supervisors to mentors, in the form of regular debriefing sessions, is needed to keep mentors aware of their progress.

COLLABORATION WITH PEER MENTORS

In this article we describe one example of academic peer mentors as used in a Collaborative On-line Research and Learning (CORAL) course developed by Treadwell

Training helps peer mentors to recognize that a close relationship with a student can cause a dependency whereby students are more likely to take their problems to the project guide rather than addressing their predicament with their team members.

and Ashcraft (2005) and Chamberlin (2000). CORAL is a model designed to teach collaboration among students using shared technology in the classroom. This specific course involves students from two universities enrolled in two different courses with the task of collaboratively completing assignments relevant to both course topics. Students communicate with one another using web based discussion boards, chat rooms, video conferencing, file managers, and on-line calendars. (For a more detailed description of the CORAL model see Treadwell & Ashcraft, 2005.) Project guides, literally, guide students through the CORAL course and assignments.

CORAL PROJECT GUIDES

CORAL project guides are upper level undergraduate students who, as graduates of a CORAL course, under-

stand the collaborative demands of the course and are able to offer their knowledge and experiences in assisting and mentoring students. They receive either monetary compensation or course credit for their work, but also occasionally volunteer their time and efforts. All project guides go through a training process to learn the mentoring system taught by the professors, beginning with observing their own peer project guide while they are a student enrolled in the CORAL course, progressing through such activities as role playing before serving as a project guide, and continuing with feed-

back and suggestions from faculty during their role as a project guide.

CORAL PROJECT GUIDE TRAINING

All project guides complete the CORAL course and can observe the role of their own project guide. Before the semester begins all project guides meet with each other, previous project guides, and faculty. Their roles are explained and they are given guidelines for their behavior. Role-playing of typical (and more difficult) situations takes place and they are given suggestions on how to best handle such situations.

Project guides are given a list of items that they need to check on in their groups/teams for each project the team needs to complete. These lists tend to get shorter as the semester progresses because the teams become increasingly independent.



Project guides and faculty meet via video conference after most classes and discuss the progress of the teams. This allows an opportunity to discuss different perspectives of teams' progress and what types of interventions should be used with them. Feedback on project guides behaviors and roles is given.

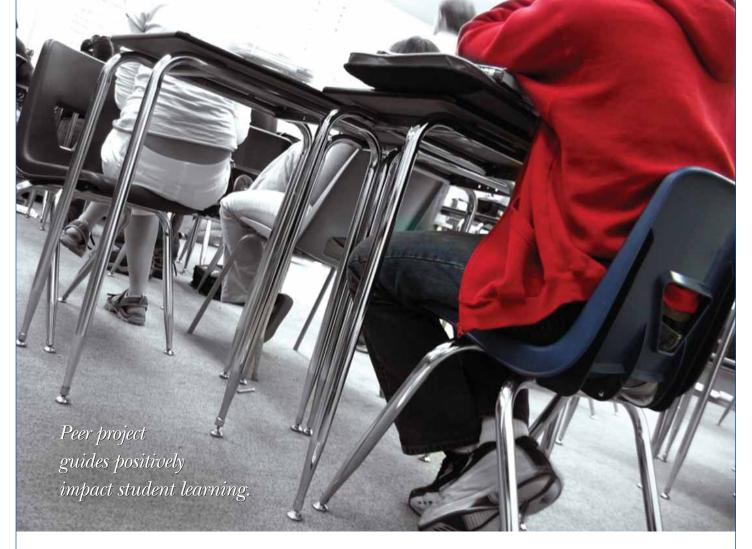
CORAL PROJECT GUIDE ASSIGNMENTS

We assign one project guide to a collaborative team. Teams consist of both same site and distant site members. Thus, face-to-face communication is possible with a team's project guide who is physically present with same site members. However, communication between a project guide and distant site members of a team transpire via the collaborative technology tools, such as videoconferences, web based discussion boards, and chat rooms.

Project guides serve a number of functions. They facilitate learning, encourage inter- and intra-team discussion, promote collaboration, and foster key active learning experiences with students enrolled in a CORAL course. Specifically they engage in ten helping strategies:

• Assist passive learners learn to be active learners. Project guides emphasize that learning is a process, by encouraging students to develop their own questions, and by being interactive and not directive.

- Provide emotional support to students. Project guides help students better regulate their motivation and emotions, which can sometimes become highly aroused in a collaborative classroom. They provide moral support and boost morale of students who feel frustrated or lost in this new learning environment.
- Assist students to engage in effective dialogue with teammates. Developing highly sensitive listening skills is a primary responsibility. Often students have never been exposed to a collaborative experience in which they must work intimately with other students. Consequently project guides direct and model effective communication skills with and for the students. If conflict develops among team members, they re-frame conflict within the context of course principles. Additionally, project guides must be firm when team posts to discussion boards start to wane. This pattern often becomes apparent after assignments have been completed, and teams believe they have nothing to do. Students need to be reminded of the value of time. When social loafing is apparent and is centered on one or two individuals, an email can spark participation in a way that avoids singling out members in front of their teammates. However, this is used as a last



resort when an individual is frequently absent from class and does not post or read the discussion board.

- Establish an air of professionalism. Project guides model a work and interpersonal relationship that is similar to a "real-world" work environment. In so doing, project guides model a work ethic that will be beneficial to students in their future endeavors.
- Assist students in the learning and utilization of collaborative technology. This involves teaching and modeling how to use electronic chat rooms, web based discussion boards, electronic calendars, and file managers to insure that participants see the importance of the communication technologies. Project guides make technology less mysterious and intimidating, and demonstrate that it can be used to work on assignments and contact team members outside of school hours. In addition to helping students to use technology, project guides also help them use it effectively, such that it encourages collaboration among team members. CORAL technology was set up to facilitate communication between all parties involved, that between students as well as the professors and project guides. Project guides must discourage the use of tools outside the CORAL sphere such as email, instant mes-

senger, and telephones (including cell phones). The use of these tools excludes some team members from the discussion within their team. When this happens, team communication and development begins to deteriorate, and issues about being excluded often arise and lead to conflict. Thus, project guides need to be aware when other technology is used for team communication and put a stop to it.

- Be aware of what is going on within teams. Project guides pay close attention to the patterns of team communication, observe how teams form and implement strategies for assignments, monitor how subgroups evolve, and examine how conflict is managed. A team's early self-analysis of its progress is often a flatteringly distorted description of its true functioning. Because of their intimate knowledge of a team's affairs, project guides are adept at discouraging this propaganda so that teams begin to acknowledge their deficiencies and therefore improve on them.
- Provide specific feedback to the faculty. Project guides get first hand ideas on how students perceive the collaborative course. They can therefore give instructors valuable information in keeping the collaborative course updated and revised. The guides are a benefit

to the faculty by providing them with insight into student perceptions, thus enabling continual improvement to collaborative teaching methodologies. Additionally, when students voice their opinions about their collaborative projects they are usually more candid in reporting disagreements and unresolved inter-personal conflicts with project guides than with professors. Project guides are therefore also able to provide professors with individual and team insights to which they normally would not have access.

• Redirect student objectives from individual pursuit of grades to the collaborative process of learning. The project guide's major responsibility is encouraging collaboration. Students most often come into a CORAL course assuming that they will be experts at collaboration right from the start, just as one would assume one could automatically achieve a desired grade in the traditional classroom if one put forth enough effort. However, CORAL is based on the assumption that students are not experts at the outset, and students continually need to be reminded that academic and team achievement is a process usually consuming the better part of a semester.

Bridging the gap from traditional to collaborative learning often fosters frustration for the learner. For example, students usually interpret their initial attempt at collaboration as a failure. Students often think that when they receive negative feedback from professors or project guides that their final grade is in jeopardy. What

they need to understand is that continual behavioral and academic improvement and team development is of the utmost importance in terms of their final grade. Mistakes are not a weakness but the formation of a strong foundation of experience upon which team members build collaborative goals.

We have found that the explanation of this component by

project guides is critical to collaborative team success. It must be noted that project guides explain this concept repeatedly to students that are new to the collaborative process, and some students do not understand this concept until the very end of the semester. However, we do find that the majority of students' early efforts are typified by pieced- together individual work, but their later assignments display a thoroughness and uniformity more indicative of collaboration. While their early dialogue is marked by schemes to simply complete assignments on time, students gradu-

Students frequently use project guides as scapegoats, accuse project guides of taking sides in team conflicts, and mistake feedback for hostility.

ally focus discussions on total team involvement. And rather than parrot project guide maxims, students come to express their goals in unique terms relevant to their experiences and needs. Additionally, there is a steady decrease in their reliance on project guides for explanations.

- Provide students feedback on completed assignments. Project guides have been trained to provide feedback to students and assist them in understanding the content of criticism they provide. For example, project guides read team papers and present feedback to team members focusing on both the content and organization of the paper. In addition to this feedback project guides comment on the team's inter and intra personal development as a social psychological process.
- Assist students in the development of time-management skills. Project guides model and teach how to manage (or juggle) time management procedures. Time management is such an essential component in a collaborative course that project guides are forced to make suggestions on how to meet assignment deadlines and organize team meetings, both electronically and face-to-face.

In sum, the project guide acts as a role model, provides space for students' mistakes, nudges students as necessary, encourages persistence, and serves as a technological consultant.

THE VARYING ROLE OF PROJECT GUIDES ACROSS THE SEMESTER

We find that semester-long teams go through the same four stages of team development described by Tuckman (1965) as typical of team growth. These stages are forming, storming, norming and performing. From a project guide's perspective, these stages are highly visible, and

the stage a team is approaching determines how much guidance and support they need from the project guides and the professors.

Forming is the stage where a group of people converges, becomes familiar, discovers similarities and differences, and decides what its objectives are and how it might reach those objectives as it forges the identity of a team (Tuckman & Jensen, 1977). Team members are often cautious and guarded in their interactions, not really knowing what to expect from other team members. Teams usually lack organization and rely heavily on project guides during the forming stage. For example, in this stage project guides introduce (and reintroduce) the technology and describe course methods. Teams feel very overwhelmed but seem to develop a curiosity that keeps them from quitting. Team members require a great deal of reassurance from project guides about the technology and their prospect of succeeding in the collaborative class.

Storming occurs when members within a team start to "jockey" for position and when control struggles begin to begin to work better together. Teams acknowledge and resolve their major conflicts, develop clear and efficient patterns of communication, and establish mutually acceptable strategies for completing work (Tuckman & Jensen, 1977).

This stage is marked by team satisfaction and feelings of self-efficacy that occasionally lead to self-delusions. Project guides need to remind them that they are not yet in the performing stage, that their work is only somewhat collaborative, and that they have a way to go before they begin to see collaborative quality. Misconceptions regarding col-

emerge. This stage is characterized by competition and strained relationships among team members along with varying degrees of conflict that teams experience. Teams engage in conflict over power, communication, perception of goals, and values (Tuckman & Jensen, 1977). Hostilities are mostly directed at one another, though teams can blame project guides for their difficul-



ties. For example, complaints often suggest that project guides are not present enough and that they favor one site over another.

Project guides can easily be pulled into team conflict. For example, if there is an argument across sites that emerge during a video conferencing session, team members are very likely to reach out to the project guides to assist in bringing the conflict to some resolution. It is during this crucial period when project guides have to bear in mind that the team members need to resolve issues on their own. Project guides make suggestions on how to come to a solution, but they do not tell teams directly what to do. This aids teams in better understanding a problem, while giving them free reign to seek a solution that is uniquely theirs.

Gradually the project guide involvement lessens as teams establish roles and norms, acquire some self-assurance as they begin to interact more closely with team members, and become more comfortable with the CORAL technology.

The norming stage of team development is characterized by cohesiveness among team members. After working through the storming stage, team members discover that they, in fact, do have common interests with each other. Students learn to appreciate their differences, and they laborative attributes exist and team members "get stuck" in what project guides refer to as the 'complacent stage'. During this stage, they witness the miniature success of collaborative improvement, and team members interpret this triumph as reaching the ultimate goal of collaboration. Thus, the project guides intervene at this point giving team members ideas on how to escape the plateau

of the norming stage. This allows team members to reflect on their interpersonal maturity to facilitate discussion on how to "fine tune" their collaborative process. Communication with project guide becomes more efficient, with more selective and specific questioning, a pattern that is then replicated in team communication.

The performing stage of team development is the result of working through the first three stages. By this time, team members have learned how to work collaboratively as a fully functioning team. They can define tasks, work out relationships more easily, mange conflicts, and work together to accomplish their collaborative mission. Teams display improvement in their patterns of communication, and they create clear problem-solving methods. Student dialogue centers on specific team tasks and shifts away from individual needs. Teams become self-reliant, and no longer look to project guides for support or procedural answers, but for only very precise feedback. Performing teams also use self-monitoring and self-evaluative procedures to maintain direction and focus. Selfmonitoring refers to assessments the team uses internally and may include the following questions: "Is the team functioning at its most productive level?"; "Does the team need to examine meeting effectiveness skills?"; and "Is it time to refresh teamcommunication skills?"

In order for teams to continue at their highest level of performance, periodic checks on outcomes are important during the performing stage. Team members help each other, conflict is de-personalized, problems are solved and successive goals achieved and exceeded. Satisfaction and pride become the dominant emotions.

CHARACTERISTICS OF SUCCESSFUL PROJECT GUIDES

Project guides are selected at the discretion of the CORAL professors. Selection is based upon their performance while taking the collaborative class as students. Professors use a number of criteria in choosing project guides. As students enrolled in the CORAL class, project guides:

- 1. Established themselves as responsible students
- 2. Attended the collaborative class regularly
- 3. Met deadlines for course assignments
- 4. Served as resource persons for their teams
- 5. Demonstrated good writing skill
- 6. Showed motivation and commitment to collaborative learning
- 7. Expressed eagerness to experiment with new ideas and ways of learning
- 8. Exhibited tact and assertiveness in working with their team members
- 9. Assumed distributed or shared leadership roles within their team without demonstrating qualities of the overachiever, for example, they do not do all the work themselves, nor do they leave the work for others.

Other considerations in project guide selection include choosing a person that will not be too aggressive, as the CORAL classroom is set up to be student-directed. However, it is necessary for the project guide to be in a place somewhere between passive and aggressive. A too aggressive project guide will become overly involved in their team's development, disregarding the non-traditional model; whereas a too passive project guide will be perceived by the students as not being involved enough. Passivity can compromise a project guide's respectability. A project guide must be direct with written and verbal feedback. Criticism is never popular, but it is essential to be unwavering in dispensing feedback, because a false sense of accomplishment and complacency most assuredly will result when it is absent.

In addition, successful project guides demonstrated other characteristics. They:

- Make a personal commitment to be involved with students
- Respect individuals and their ability and their right to make their own choices
- Listen and accept different points of views
- Appreciate student struggles and provide empathy, not sympathy
- Look for solutions and opportunities as well as barriers
- Are enthusiastic and nurturing
- Are not authority figures
- Build and respect trust within the collaborative environment
- Help students find their place in the collaborative environment
- Provide concrete resources
- Provide students with experience and support in a collaborative environment
- Assist students in the learning process with one another.
- Are generous with time

"Help others get ahead. You will always stand taller with someone else on your shoulders." ~ Bob Mowad ~

THE BENEFITS OF BEING A PROJECT GUIDE

Good peer project guides play an integral role in the collaborative student-to-student and faculty-to-student triad, contributing to the success of a course. Peer mentoring has obvious benefits to both professors and students enrolled in courses employing a mentoring concept: students receive assistance in their learning; and the faculty receive support in teaching a collaborative course and obtaining project guide perspectives on the collaborative process, thereby aiding in course revision. However, peer mentors also benefit from their role as collaborative teaching assistants. Lidren and Meier (1991) identified the following benefits to peer tutoring: "(Those selected to be tutors) develop an awareness of their own intellectual capacity, learn about information processing of others, develop problem-solving strategies, and become effective and efficient teachers" (p. 7). Mentors also profit with improved self-esteem, enhanced social insight, and developed social and interpersonal skills (Hall, 2003).

CORAL project guides benefit by accepting a role that demands organization and time management and provides an opportunity for important interpersonal coaching. Being a project guide also allows simultaneous collaboration with professors and one's peers. In addition, project guides gain a deep understanding of collaborative course content, and an opportunity to practice collaborative skills with new people. The role also provides an opening to be an impartial observer of continuing team development.

Additional benefits will occur when the project guide graduates and has this specific experience to apply to future endeavors.

TROUBLESHOOTING PROJECT GUIDE SITUATIONS

While we found that the role project guides play is beneficial to them, faculty and students, they do also run into a variety of situations that can be troublesome. For example, the project guide's role is often undefined to students who have not previously had a peer mentor. Project guides bridge the gap between student and professor; however, they do not have the authority that the professors have. Nevertheless, it is important that they are not seen as "fellow students", as this can cause problems with respect. Students will not take project guides seriously if they are perceived as being on the same level as them. Such a perception compromises a project guide's credibility, leaving the project guide's role discounted or ignored altogether.

A significant problem that continually arises is that students often have great difficulties going from the traditional classroom to a student-centered one. Learners have a tendency to seek out information from professors rather than project guides due to the fact that this has been successful in the past. This is a natural byproduct of their orientation to traditional classroom instruction. Therefore, project guides need to be proactive early in the course and assert themselves as sources of knowledge. Some learners receive an answer from a project guide only to later ask the same question of the professor. Gaining students' confidence early will eliminate this tendency to doubt their judgment.

In some cases, students dislike the project guide or misinterpret their feedback or their role. For example, students frequently use project guides as scapegoats, accuse project guides of taking sides in team conflicts, and mistake feedback for hostility. There have been times when it appeared that project guides were not communicating with team members due to a lack of project guide postings on discussion boards. However, students need to remember that the course is studentcentered and the majority of the communication will be among team members and not from project guides. Project guides need to continuously reinforce the notion that the course is collaborative, not cooperative as in a traditional class environment, and that the students themselves are responsible for their learning and success. Furthermore, just because a project guide has not posted a message does not mean that they have not been reading them or that they are unaware of what is happening in the team.

One very important project guide rule is to keep a safe emotional distance from the learners, or students. In some cases students enrolled in CORAL courses are friends or acquaintances of the project guides. However, these relationships must be kept separate from their role as project guide. Even if current students are unknown to the project guides, there can be a temptation to form friendships. However, developing a close relationship with students can cause a dependency whereby students are more likely to take their problems to the project guide rather than addressing their predicament with their team members. Project guides need to let both individuals and teams work things out on their own, and are made fully aware of this during their training and during faculty feedback. Attachment to a single member can be divisive to a group and can prevent the individual from establishing strong bonds with team members. Meeting outside of class in relation to assignments with students is unacceptable for the same reasons. It fosters dependence and conflict because the whole team is not involved in the communication.

In dual site collaborative work such as the CORAL project, cross-site in-groups and out-groups can form, for example, team members from one site may form a group or clique that does not include team members from the other site. This "us versus them" or 'in-group/out-group' (Sherif & Sherif, 1956) mentality can develop into conflict between the sites, so a project guide must take extra measures to maintain strict boundaries, especially in conflicts between sites. It is often hard to do this while at the same time remaining involved with the development of one's team. There needs to be a distinct separation between project guide and the student and what each of their roles entails.

Sometimes the bias can shift over to the project guides, who are perceived as favoring one site. Typically, though, this is a misperception by the learner(s), and sometimes is a projection of a team's own in-group/outgroup conflicts. A project guide must not be drawn into this ploy and identify with one site. Instead, the project guide should remind both sites to focus on their own issues.

Occasionally the in-group/out-group conflict emerges with across site project guides. This is addressed immediately by bringing misinterpretations to the attention of the project guides in disagreement. In so doing they work through their misconceptions.

Project guides must also be aware that they will need to help teams/students deal with interpersonal team conflict, and may feel ill equipped to do so. However, reminding teams of the social psychological processes and group dynamics at the root of their conflict is useful because this tactic distracts from the emotional component and serves as a learning opportunity. Most teams resolve conflicts on their own, but it is also beneficial to remind them that conflict, which is usually viewed as a rather destructive experience, is normal, healthy, and considered a process of team growth. Furthermore, it is important for project guides to be vigilant of the group processes of their team regardless of whether or not conflict is evident.

SUMMARY

Project guides are undergraduate students who have successfully completed a collaborative course. They participate in class (help the student teams during in-class activities); provide outside class support to students (provide feedback on papers, explanation of group developmental stages, mentoring, etc); and supply feedback about course-related issues to faculty members. They are mentors who work to develop a sense of community and trusting relationships within student work teams. It is through these successful relationships that project guides are able to provide a rare perspective to undergraduates. Project guides are able to share with the students the value of what they are learning and the reasonableness of the collaborative workload.

Peer project guides positively impact student learning as is evidenced in anecdotal feedback from student mentees/partners. More objective data for the successful influence project guides have on student learning is also available. We found that students rate project guides highly. Means are around 4.3 on a 6.0 scale, but medians tend to be higher. More specifically, students report that project guides are helpful in resolving disagreements in groups, clarifying objectives, and fostering collaboration.

References

Center for Mental Health in Schools at UCLA. (2004). *Technical assistance sampler on* a sampling of outcome findings from interventions relevant to addressing barriers to learning. Retrieved April 18, 2005 from http://smhp.psych.ucla.edu/pdfdocs/Sampler/Outcome/appf1.pdf

Chamberlin, J. (2000, April). One psychology project, three states. Monitor on Psychology, 31, 4, 58-59.

Edmonson, S., Fisher, A. & Christensen, J. (2003, April). *Project CONNECT: A university's effort to close the gaps.* Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL. Gensemer, P. (2000). Effectiveness of cross-age and peer mentoring programs. *Information Analyses, 30,* 1-15.

Goodlad, S. (1999, September). *Never knowingly undersold: A watchword for tutoring and mentoring schemes*? Paper presented at the 2nd Regional Conference on Tutoring and Mentoring, Perth, Western Australia.

Hall, J.C. (2003). Mentoring and young people: A literature review. SCRE Research Report 114. Retrieved from http://www.scre.ac.uk/resresport/pdf/114.pdf

Houston, S.K. & Lazenbatt, A. (1996). A peer-tutoring scheme to support independent learning and group project work in mathematics. *Assessment & Evaluation in Higher Education*, *21*, 3, 251-266.

Houston, S.K. & Lazenbatt, A. (1999). Peer tutoring in a modeling course. *Innovations in Education and Training International, 36*, 71-79.

Lidren, D.M. & Meier, S.E. (1991). The effects of minimal and maximal peer tutoring systems on the academic performance of college students. *Psychological Record*, *41*, 1, 69-77.

Tien, L. T., Roth, V. & Kampmeier, J. A. (2002). Implementation of a peer-led team learning instructional approach in an undergraduate Organic Chemistry course. *Journal of Research in Science Teaching*, *39*, 7, 606-632.

Topping, K. (1996). The effectiveness of peer tutoring in higher and further education: A typology and review of the literature. Retrieved May 24, 2005 from

http://www.londonmet.ac.uk/deliberations/seda-publications/topping.cfm

Treadwell, T. & Ashcraft, D. (2005). Pedagogy for collaborative on-line research and learning: The CORAL model. *National Society for Experiential Education Quarterly, 30,* 1, 10-17.

Tuckman, B.W. (1965). Developmental sequences in small groups. *Psychological Bulletin, 63,* 384-389.

Sherif, M. & Sherif, C. (1956). *An outline of social psychology (Rev. ed.)*. New York: Harper and Row.

Tuckman, B.W. & Jensen, M.A. (1977). Stages of small group development revisited. *Group and Organization Studies, 2*, 419-427.

Vrasidas, C. (2000). Constructivism versus objectivism: Implications for interaction, course design, and evaluation in distance education. *International Journal of Educational Telecommunications, 6*, 4, 339-362.

Vye, N.J., Goldman, S.R., Hemlo, C., Voss, J.F., Williams, S., & Cognition & Technology Group at Vanderbilt (1997). Complex mathematical problem solving by individuals and dyads. *Cognition and Instruction*, *15*, 4, 435-484.

AUTHORS NOTE

The authors thank Heather Avery for her suggestions in the writing of this article.



"Thoroughly to teach another is the best way to learn for yourself." ~ Tyron Edwards ~

"Education is all a matter of building bridges." ~ Ralph Ellison ~

THE Spirit OF MENTORING

n 1987 when US President Ronald Reagan challenged Soviet Premier Mikhail Gorbachev at the Brandenburg Gate to "tear down that wall," the "Great Communicator" had no idea what role Canadian society had played several years earlier in making the destruction of the Berlin Wall a reality. The conditions for change began in 1973 in Ottawa when Alexander Nicklaevich Yakovlev was sent to Canada as the Soviet ambassador. But this former Red Army soldier, badly wounded in the Second World War, was not being given this diplomatic assignment as a reward. Instead, he was being exiled to Canada because of his written critique of Russian nationalism. "Little did his masters know," journalist Lawrence Martin stated, "that this banishment would serve as the foundation for the major role he played in democratizing the Soviet system."

For the 10 years that Ambassador Yakovlev was hidden in Canada, he used this opportunity to learn everything he could about Western society. Although his exile was considered a demotion, Mr. Yakovlev's longevity and connections in Ottawa earned him the reputation as the dean of the diplomatic corps. His inquisitive, informal, open and goodhumoured nature contradicted what Canadians typically experienced from Kremlin Politburo members.

Mr. Yakovlev developed a range of extraordinary friendships. He sought out a number of Canadian mentors, including Canadian Prime Minister Pierre Trudeau. He met privately so many times for lunch with the Prime Minister that bureaucrats in External Affairs became exceptionally curious about the nature of this mentoring relationship. While the content of their discussions has never been revealed, Mr. Yakovlev was a graduate of the history faculty of the Yaroslavl University and likely probed Mr. Trudeau's understanding of the history of Canada.

Mr. Yakovlev had many frank and direct conversations with Canadians steeped in democratic traditions. He looked, listened and absorbed what life was like throughout Canada. Eugene Whelan, then the Canadian Minister of Agriculture, was impressed by his friendliness. "We were just a couple of old peasants," he recalled. "Neither of us could stand a lot of b.s." The two officials would often tease each other, but according to journalist Lawrence Martin, Mr. Yakovlev came to know that Canadian democracy "was vastly superior to his old system back home."

Spurred by what he was learning as a recipient of mentoring, he tested out his education about Canadian society in a relationship he developed with McDonald's CEO George Cohon. He



urged Mr. Cohon not to give up on bringing "Big Macs" to Moscow. He assisted Mr. Cohon to learn ways to combine Soviet and Western economic interests; eventually the Golden Arches arrived in Moscow.

But the impact of being mentored by Canadians and living in Canada were most strongly demonstrated during a visit to Canada in 1983 by then-Soviet Minister of Agriculture, Secretary Mikhail Gorbachev. Meeting in Mr. Whelan's backyard in Windsor, Ontario, the Soviet ambassador and Mr. Gorbachev were able to elude their security people to talk openly for a period of time. It was during this pivotal meeting that the two men realized that they experienced a chemistry between them. A mentoring relationship developed and Mr. Yakovlev introduced Mr. Gorbachev to the ideals that would eventually be known as glasnost (openness) and perestroika (restructuring).

In the mid-1980's, Mr. Gorbachev longed for more time with his mentor and ended Mr. Yakovlev's exile in Canada. He invited him to return to Moscow as the director of the Institute of World Economics and International Relations. Eventually Mr. Yakovlev became Mr. Gorbachev's chief of staff. In recalling his mentor, Mr. Gorbachev stated, "He made an enormous contribution to the democratic processes and the transformation of the country.

We often argued, but always understood each other."

Vladimir Isachenkov, writing in the Globe and Mail stated, "Perhaps no one will ever know how much of perestroika came from Mr. Gorbachev and how much from Mr. Yakovlev. Some believe that Mr. Yakovlev was the theologian of the new faith and Mr. Gorbachev was the evangelist. Their shared gospel was that the paternalistic system of orders and proscriptions from Moscow had stifled

all the incentive and initiative. To get the county working required making people responsible for their own fate, and for that they needed not only economic incentives but access to information and a belief that their opinions were no longer irrelevant."

When Mr. Gorbachev became the Soviet leader in 1985, Mr. Yakovlev helped Mr. Gorbachev spearhead a policy of openness and lift the heavy hand that muffled both the freedom of the press and the freedom of individual speech. His mentorship assisted the new leader to fend off attacks from die-hard Communist Party fanatics and created a new era of discussion, freedom, and growth.

The Soviets sent signals to their Eastern European satellites that they supported a transition into socialist democracies. Throughout 1989 one government after the next in Eastern Europe collapsed. Support for the East German government from the Soviets evaporated and by late 1989 East Germany no longer had what they needed to maintain the Berlin Wall.

Alexander Yakovlev was known as the "Godfather of Glasnost" and it was his mentorship that brought down the Berlin Wall. Mr. Yakovlev died at his home in Moscow in 2005. He was 81.