A Practical and Progressive Pedagogy for Project Based Service Learning

Robert Hugg and Scott Wurdinger
Minnesota State University, Mankato

This article explores the use of a new teaching and learning model that incorporates diverse progressive teaching methods to create an innovative tool for educators. The Partnership For Learning Model (PFLM), was created specifically for service learning students, community partners, and faculty with a carefully choreographed series of classroom exercises This model, along with its corresponding exercises and assignments, may be applied to a wide range of professional, academic courses that will enhance student's life skills and provide real world benefits for the communities where it is used.

John Dewey (1938), the architect of American progressive education, described education as involving the full range of the students' life experiences, not just the academic experience. More simply, he believed education was a deeply, perhaps inextricably intermingled, social phenomenon that served to reinforce the aims and methods of society as a whole. A foundational principle of Dewey's was that, to effectively participate in education, a student must be able to experience education in the *context* of life. A context-rich environment would, Dewey believed, make the process both meaningful and ultimately more practical and applicable for the student. The student and society would gain in equal measure (Dewey, 1900).

Unfortunately, Dewey's philosophy appears to have been largely ignored in today's formal education settings because currently there is a clarion call throughout America that education is in crisis (Bridgeland, DiIulio, & Morison, 2006). The question of the level of meaningfulness of education is under close scrutiny from inside schools and colleges as well as from individuals outside (Bickman, 2003). Feedback from students is clear: hands on, practical application is needed more than lecture and theory (Astin, 1993; Levine & Cureton, 1998; Sax, Keup, Gilmartin, Stolzenberg, & Harper, 2002; Schroeder, 1993). Feedback from prospective employers is equally clear: being book smart is not enough; students need practical skills prior to graduating from college (Busse, 1992; Brown. & Hesketh, 2004; Coplin, 2003; NACE, 2005). Understanding theory is important, but lacking experience in a rapidly shifting global economy does not bode well when trying to get a job after graduation. Competition for jobs is fierce for new graduates; a well rounded resume, heavily laden with academic success, is just the first step for a call to interview. Real world experience that is both practical and marketable is often the difference between a job offer and a polite, "Have a good day -- good luck in your future endeavors." As a result, the all too frequent lament of students is, "How do I get experience unless I have experience?" Students know they need experience, but what experience is the right experience to be competitive, and how do they get that experience?

Conversely, employers face an equally difficult dilemma. They have the need for skilled employees who not only have technical skills but a host of practical and life skills as well, and they cannot afford the months of effort required to train a recent graduate to effectively join their workforce. Many employers have needs that require more than a traditional college education; these needs include experience with teamwork, project skills, organizational skills, communication skills, time management and an understanding of leadership and followership. Seasoned professionals use these skills with ease, an unconscious extension of their lifelong training and experience, but to neophyte graduates these skills are alien, even incomprehensible. Being "booksmart" is one thing, while demonstrating professional skills needed to perform a job is quite another. This situation may leave students and employers alike pondering the question, "Is a college education enough?"   A new model combining effective teaching and learning techniques in thoughtfully designed and innovative ways may solve this riddle.

Students and their educators face a distinctly unique challenge: how does one gain practical real world experience in disciplines rich in theory, technology, and methodology? This article will examine a new progressive learning model, The Partnership For Learning Model (PFLM), designed with educators, students and employers in mind. This model seeks to bridge academic experience with real life experience, thereby making formal education more meaningful and portable. The PFLM, simply put, is a teaching approach that combines theory with direct experience. Service learning projects drive the curriculum, and once these projects are identified, all subsequent classroom learning focuses on bringing these projects to fruition. For instance, developing garden plots for a local community requires students to work together with city administrators and local organizations, such as Chambers of Commerce, in order

to bring their project to completion. Here are several active approaches to learning, rooted in Dewey's philosophy of progressive education, that are used with the PFLM:

- *Project-Based Learning*: Project-based learning is an instructional method centered on the learner. Instead of using a rigid lesson plan that directs a learner down a specific path of learning outcomes or objectives, student designed projects allow for in-depth investigation of a topic worth exploring (Harris & Katz, 2001; Katz & Chard, S. 1989).

- *Problem-Based Learning*: Students collaborate to study the issues of a problem as they strive to create viable solutions. Unlike traditional instruction, which is often conducted in lecture format, teaching in problem based learning normally occurs within small discussion groups of students facilitated by a faculty tutor (Aspy, Aspy, & Quimby, 1993; Bridges & Hallinger, 1991).

- *Applied Learning*: Applied Learning is most controversial because it is so widely defined and equally widely stylized and used. Applied learning is described as a situation in which, when provided opportunities to apply learning through projects, students actively inquire, investigate, organize and "operationalize" their ideas (Dewey, 1902). The only common thread among the dozens of applied learning definitions is that it is active application of previously learned theory (Keller, 2004).

- *Practical Skills/Life Skills Training*: Practical Skills are those which bring value to the student and the employer but are, paradoxically, seldom found as a formal point of curricula.   These skills include time management, critical thinking, teamwork, leadership, followership, communications, presentation skills, and organizational skills. Virtually any skill that can be reasonably expected to have value across the life experience of the student can be an important part of curricula (Dewey, 1916).

- *Service Learning*: There are many definitions of service learning. The common denominator in all service learning is a program where service to a person or agency results in a student learning experience (National Service Learning Clearinghouse, 2004).

- *Authentic Learning:* Instruction is based as much as possible on "the real world." Learners work with rich, complex cases and engage in meaningful, functional tasks. Instruction that is not authentic often oversimplifies; such oversimplification impedes the development of useful representations of knowledge and makes transfer, or the ability to use knowledge in new situations, difficult (Anderson & Armbruster, 1990).

- *Action Orientation*: Learners must be active participants in their learning, not passive recipients of information. Learning and acting must be intimately related; therefore, throughout training, novices must attempt to perform authentic tasks. They must repeatedly perform as expected of expert practitioners (Anderson & Armbruster, 1990).

The PFLM uses all of these progressive practices because they help integrate academic, emotional, professional, and life skills; however, project based learning is the centerpiece of PFLM. Project-based learning is not new; it is known to have been used for many centuries, and its widespread use is documented as early as 1590 in architectural schools throughout Europe (Knoll, 1997). By 1765, project learning was transplanted as a regular teaching method to America and remained in widespread use in public schools until 1915. Dewey's theories placed great value on the project method, meaningful active experience that he foresaw as an ideal partnership between student and teacher that could be conducted for the good of, and in the context of, society itself (Dewey, 1900).

What It Is and How It Works

PFLM is a new model that is consistent with the educational philosophy of John Dewey and that also addresses new educational challenges that did not exist within Dewey's lifetime. Students and educators in the 21st century are challenged by evolving employer needs, needs that require diverse, real experience. As a new model it combines proven techniques in new and innovative ways. As a holistic teaching and learning model, PFLM is built on three assumptions:

- Students must be prepared to learn; they must participate in the preparation of their learning environment in order to excel.

- For education to be meaningful it must have connection with other parts of the students' life experience; without that connection knowledge becomes an isolated artifact of the educational experience.

- Students have a limited understanding of the relationship between theory and practice unless they apply theory, reflect, and then

apply their learning to future experiences; a "lived" understanding is needed for a complete learning experience.

To fully grasp the importance of the three assumptions, it is worthwhile to examine each a little more closely. The following paragraphs briefly explore these assumptions:

Preparation is crucial: by building a learning environment together the student-educator partnership is jumpstarted. By encouraging, even requiring, students to physically and psychologically participate in the rules and goals setting, students become participants in education, not just recipients. Simple steps such as room layout, project choices/input, choice of role playing roles, and mutually establishing routines become invaluable points of collaboration.

Meaning is derived from how the student may benefit from the lesson. Once students realize the role of the educator is not to teach them *things* but to open doors for them to explore and discover, students quickly become invested in the learning process. Educators understand the content but must also accommodate *context*: finding universal context (e.g., life skills, authentic experience, personal insight) is often the key to meaningful content.

Relationships pervade life: whether professional or social, human relationships are the norm. Too often, academic experiences are linear – programmed experiences that methodically build upon each other to a predetermined goal. Unfortunately, the ability to take notes, study, and pass a test does not mean a student can apply the theory, learn, reflect, and perform better in successive applications. Practical meaningful application followed by reflection can unlock the door to a student gaining a better understanding of how skills, actions, and responsibilities interact, counteract, and enhance each other. Understanding these relationships can yield a permanent educational experience that transcends the impact of earning an "A" on an exam.

To understand this structured and incremental partnership model it is perhaps most useful to view PFLM through the eyes of a typical class with topics and activities for each class session. Because the first session is critically foundational and preparatory, it is important to describe it in some depth.

The first class session consists of two steps: identifying interests, skills, and goals, and identifying a team project. The first step consists of a series of very short activities in which students anonymously identify their interests, skills, and goals on separate index cards. These cards are then collected and distributed back to the class, ensuring that no student receives his or her original cards. Students then compile three separate lists (interests, skills, goals) on the board; the instructor

facilitates this by asking strategically placed questions as the lists are being built on the board (e.g., what types of skills do you think it takes to be a really good video game player?). The class is then broken into small teams of four and completes a problem solving exercise in which each group connects the dots between the lists, identifying which skills support which interests, which interests support which goals, and which skills support which goals. The activities take less than thirty minutes, but they set the stage in several crucial ways:

- As an anonymous activity no student, or his or her input, is perceived to be singled out for either praise or ridicule by his or her peers (or the instructor).

- Students frequently find that they have the same interests, skills and goals (or perceived lack of interests, skills or goals) as their peers.

- They discover a connection, frequently for the first time, between their interests and "real world" skills (e.g., video game playing requires problem solving, hand-eye coordination, and strategic thinking skills).

- They discover that, as a class, they have a large and diverse skill set available.

- Individually and collectively they invoke Dewey's Pattern of Inquiry (1938, pp. 101-119) which includes identifying the problem, establishing a plan, testing the plan, and reflecting on results for the first time in a structured manner.

- The first piece of team activity has been completed in a non-threatening way.

At this point the students are given the opportunity to choose their project from a list of real world, pre-screened projects. While the pre-screening ensures that the projects are appropriate (significant, possible within the amount of time allotted, connected with a reputable agency) pre-screening also ensures that project completion is not possible by a single student, but is only possible with teamwork. This not only reflects the nature of professional projects in the "real world" but serves as a vehicle for many of the team building activities during the course.

Typically, there are many more choices of projects than there are students to work on them, and a general rule of thumb is 3-4 students per project. Students choose their project (choice is a very powerful motivator and investment strategy) and are required to negotiate with each other for projects *as a class* if any project is under- or over-staffed. Past projects include city-wide childcare availability assessments, historic preservation and re-use, updating city land use surveys

and maps, planning city-wide holiday events, and more. Any project that can be completed within the available time and with the available resources can be considered. Non-profit organizations are good project sources: they have much need and few resources.

The amount of information the students are given also reflects the nature of project work in the "real world": a short paragraph with a brief description is all that is provided. It is typical in the real world that organizations have a "big picture" vision, frequently vague or under articulated, of what they would like to accomplish, but typically they have little actual detail to plan or execute a project. Though students normally have many questions at this point they must commit to a project without any additional information. Though this may seem arbitrary, this serves to segue to the final activity of the first class session.

The instructor briefly explains the roles of the project players; the organization that is the project source is the *customer*, the course instructor is the *manager*, and the students are *consultant project teams*. The manager serves as facilitator, mentor, safety net, and sounding board; the customer is never the supervisor of the project or the team. The project teams are managed by the manager, and they plan and execute all facets of the project under the guidance and supervision of the manager. The teams are *responsible* for delivering an acceptable product to the customer but are *accountable* to the manager for all actions necessary to deliver the product. All work from this point forward is undertaken within this framework.

Students form their project teams at this stage; while there are large group (class) activities throughout the remainder of the course, much of the activities and dynamics center on small group (team) work from this point forward. Students are told that initial meetings with their real world customers will be conducted the next week and that they will need to obtain additional information from their customers at these meetings. At this time, through a short class-wide exercise, students are introduced to critical analysis.

Critical analysis as presented in this venue is not a generic mindset but a specific, concise methodology. As conceived by Wurdinger (1997), critical analysis is an easy to learn three-step process by which a person identifies an *assertion* in a situation, identifies the implicit and explicit *assumptions*, and derives *questions* that explore the assumptions. This process of identifying and clarifying is an easy means of understanding a situation and some of its implications. In a project setting, students use this process to build key insightful questions and begin to strategize about what information they really hope to gain from their customers. To maintain focus and prevent students from feeling overwhelmed, students are limited to building four key questions.

Once again Dewey's Pattern of Inquiry is invoked: students identify their problem by determining what the customer really thinks they want, developing a plan, testing the plan by identifying assumptions and key questions, and reflecting on whether what they have determined provides a clear path to interact with the customer. The instructor's role at this point is to ask descriptive (or even leading) questions rather than providing prescriptive answers. The final task for the individual teams during this first class session is determining the details of how they will communicate with each other and with their "manager" (the instructor). The instructor closes the session by facilitating a very brief report-out in which each team shares their key questions and their communication protocol. The teams are assigned homework (reflection/initial thoughts on how to tackle the project) and the instructor describes acceptable business apparel for the meetings. The instructor also coordinates the customer meetings and replies to each individual team with dates and times.

Meetings with the customers are typically scheduled twice in the first month and then once a month for the remainder of the project, though students negotiate with the customer on communication protocols (e.g., weekly by e-mail, twice a month by memo) based on the comfort level of the customer. All communication (written, spoken) is coordinated with and through the instructor; this ensures that the respective roles are observed by all involved. Communication between the instructor and the customer is more frequent: a weekly telephone call or visit serves to assess satisfaction with the project status or to manage the comfort level of a high maintenance customer. This small investment in time also sets the stage for future project opportunities.

At the end of the first class session several key concepts have been introduced and used in a practical manner by the students: problem solving, critical analysis, pattern of inquiry, self assessment, and communication within a small group. Additionally, the first step in project based learning has been successfully navigated: the project has been identified.

While the first session differs from successive sessions in that it is mainly preparatory in nature, this same pattern is repeated in each successive class session: activities and exercises are used to introduce key concepts that the teams then use in the context of their project. The instructor acts as facilitator and mentor; he/she does not approve a project plan or scope of work but instead asks questions to help students focus their thoughts and efforts. Since there is no predetermined project result, students experience the reality that initial plans frequently fall short of the final vision and that all plans are best viewed as living processes that evolve. They learn as a result of the

effect of their mistakes and how their process contributed to the mistakes.

Problem solving with these authentic projects continuously occurs within the framework of the project: role playing and other active approaches to learning mentioned earlier are not only geared towards technical performance but also organization, planning, leadership, management, ethics, accountability, time management, and communications styles and strategies. In every case the reflection/report-out of the individual and the project team doubles back to a key question, "How can you apply this to your project?" Very typically, by the third week of class students make this connection without prompting and become adept at articulating their new discoveries.

While project troubleshooting does occur in class, the bulk of project work occurs as homework. Updated project plans are e-mailed to the instructor at a scheduled time each week; this gives the students flexibility to work and adjust their plans as requirements change but keeps the instructor in the loop. Each class session the teams provide brief five-minute status reports on their projects to the class as a whole; this provides a myriad of benefits:

- Allows students to identify needs and concerns and share critical expertise between teams.
- Allows students to share best practices with their peers and experience networking.
- Allows students to gradually build confidence in professional public speaking.
- Ensures forward momentum both individually and collectively.
- Allows the instructor to spot a project that is in trouble early in the process.

As students become comfortable with their process and project they also incorporate expertise from their academic discipline into their project work, connecting the dots spontaneously. Concepts are continuously introduced or revisited across the life of the class to facilitate the project completion but, more importantly, to reinforce the experience as a whole.

Here is a project example that may help readers better understand how the process unfolds during a semester-long course. As a project, one team of students chose to research and develop an informational brochure on obesity reduction for the United Way. The team consisted of four students: a mixture of undergraduate and graduate students, men and women in an age range of 19-27. The customers' vision was to produce an informational brochure that, at the time, did not have a definite community audience. Through the critical analysis exercises noted above, the project team

prepared for their initial customer meeting by determining their four key questions:

- What is the self perceived/assessed role of United Way in obesity reduction?
- Are there community partners that United Way desires to work with on this issue?
- Are there constraints (time, budget, resources, politics, etc) that United Way can identify that impact this project?
- Is there an existing United Way process that must interact with the project processes?

Based on these questions the team was able to help the customer group focus their vision. This helped the customer determine needs versus desires (simple prioritization), the constraints, and the realization that the project process would need to mesh with an existing county-wide committee process. The result of the initial meeting provided three immediate benefits:

- The customer had a clearer vision of their actual needs, desires and constraints.
- The students had clearer details to determine what was possible within their allotted time.
- Feedback from the customer was so positive that it boosted the project team confidence.

Based on this information the team used new concepts presented to build a scope of work document, a brief document that outlines what is and is not part of the project, specifically what will and won't be delivered, a timeline for completion, and points of contact. This scope of work document was then presented to the customer for negotiation/approval at the next meeting and became the project agreement and the learning contract. Once armed with this approval the students used new concepts presented in the previous class (basic project planning) and prepared a project plan that included detailed tasks, assignments, timelines, fallbacks and specific deliverables. By the third week of class the team had learned and successfully applied scope of work essentials, basic project planning, critical analysis, fundamentals of negotiating in a professional environment, communications strategies, expectations of business dress and demeanor, basic team organization, and the basics of customer expectation management.

In the following weeks concepts introduced and applied included time management, ethics, change management, accountability, fundamentals of committee work, leadership, professional corporate writing, presentation skills, and grace under fire (the

ability to perform confidently and professionally when things go wrong). Each step of the way the team built confidence in themselves and their abilities and used the instructor increasingly as a mentor – the senior member of the firm who helped them balance their perspective – and less as a source of determining what's correct or incorrect. United Way first accepted the team as subordinates and then eagerly embraced the team as partners through every part of the process. As the committee work progressed, the team also discovered ways to balance the frustrations of committee work with gleaning the tiny golden nuggets of vision and innovation that committees frequently generate but often overlook. New communications skills became vital as students struggled with, and then overcame, a wide variety of leadership styles within the county-wide committee.

New skills, such as expectation and time management and scope of work discipline, became the student's "best friends" as the committee, impressed by the quality of work, pressed for even more products of even greater impact. Teamwork, communication, and leadership became highly polished as the students performed and kept not only themselves but the United Way committee on track, on pace, and on vision. The final product far exceeded the initial vision United Way had originally crafted. The students planned and executed a project that produced, in the words of the United Way, a *series* of well researched, elegant, professionally designed color brochures that targeted schools, workplaces, and health care facilities with meaningful information. The brochures, each with different content and a message deliberately aimed at its target audience, moved the vision from that of a handout available upon request to an initiative that would place focused informational resources in every school, healthcare facility, and business in the metropolitan area. As a result the United Way changed its plan from that of maintaining a brochure for distribution on request to generating 10,000 copies for proactive outreach across the length and breadth of the city. The United Way also included the names of each student on the team in its reporting and advertising, as attribution for professional accomplishment.

However, the final product for the students was not the brochures, but a formal presentation for their peers, family, and friends that showcased their products, their insights, their lessons learned, and their coming of age as working professionals.

PFLM uses a different pedagogy that employs diverse methods that partner with each other. A cornerstone is the extensive use of small groups: much of a graduate's professional career will be spent in team-based activities, and PFLM reinforces that reality. A second cornerstone of PFLM is that effective

learning cannot separate content from context. To that end, practical skills and the real nature of actual community based projects are partnered at every juncture. Figure 1 illustrates the learning partnerships and interactions within PFLM.

Unlike traditional models where content is delivered and understanding assessed through quizzes and tests in a linear and segmented nature, students perform in learning situations that have applicability beyond the classroom. The student as an individual and a member of a team, along with the instructor, solve problems and apply new skills. Actions, reactions, learning, exercises, discussions, assignments, and experiences are done in a continuum that is constantly both new and self reinforcing. Simple, free, and readily available exercises may be found in Appendix A. These exercises are combined with real community needs and students needs to provide a dynamic and fast paced, but exciting, learning experience for students, agencies organizations, and faculty. While many of the homework assignments found in Appendix B focus on actual project work, some assignments are scheduled to prepare for the project work or track and communicate the project status. In every instance the homework is preparatory for the exercises in the next class session. A final project report and a final presentation are assignments beyond the completion of the project itself.

Understanding the Partnership Aspect of PFLM

Partnership is a key component of PFLM in many forms. Teaching methods are partnered for best effect; students are partnered for the most diverse, robust, and realistic experience; and community and faculty are partnered with students and each other in innovative ways. This layered partnership approach brings great depth, flexibility, and value to the learning experience.

The roles of the community partners are designed to highlight the strengths of each while minimizing their inherent weaknesses. Local governments and non-profits are the sources of projects; these agencies "outsource" real world projects to the University. This is an attractive proposition because many agencies cannot complete projects due to political, expertise, time, resource, or funding constraints. The role of the agency as customer, not the supervisor, effectively relieves these agencies from the burden of intern supervision. Because multiple students work together, larger projects can be tackled; this opens the door for agencies to think in bigger and more important terms than in either internships or typical service learning.

Students from various disciplines form the teams for this project work, and all interaction with the customer is supervised by the instructor. The instructor provides a consistent level of supervision, expectation,

FIGURE 1
Learning and Performance in PFLM

The PFLM Process of Learning and Performance
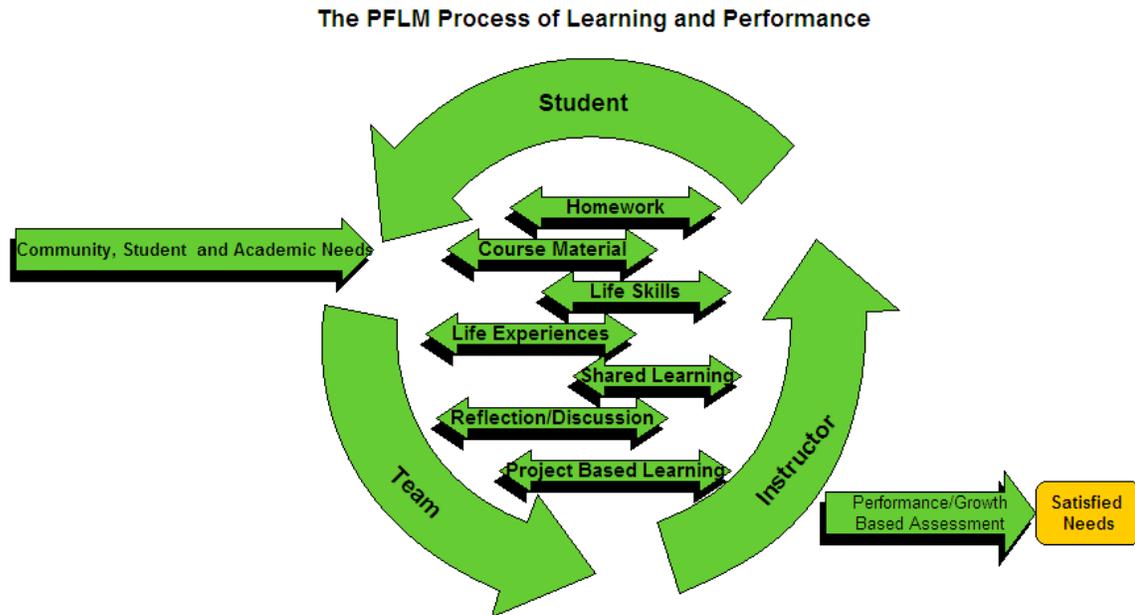
and guidance, ensuring that the spirit and goal of the learning environment is maintained at all times. Students, in the role of consultants, meet with their customer to determine needs, collect data, and provide updates and status reports. Students also build project plans, set milestones, and conduct research to meet customer needs, all with instructor reinforcement that focuses on expected student performance as professional employees. The PFLM faculty role is critical yet manifestly different from that in traditional education. The instructor guides the student experience, ensuring a reality-based context is followed and supported by technical knowledge and experience; this experience is interwoven with practical skills instruction and experience. The instructor acts as facilitator and mentor, helping the student connect the dots on the holistic canvas. The instructor choreographs exercises, discussions, role play, and assessment across the spectrum of the student experience. The big project helps build a curriculum that includes multiple smaller projects, a typical experience in real life, incorporating numerous details and concepts to which a student must attend. Students participate simultaneously in the processes of learning and learning how to learn, and are able to begin to self assess and critically explore their interests, goals, and needs.

An interesting side effect of PFLM is that students and customers bond in a professional sense, and each interacts with the other to create the best possible product while understanding the unique perspectives of the other. Agencies gain not only a deeper appreciation for the students but build stronger, multifaceted, ties to the university as a result of the service provided. PFLM has proven itself to be a learning strategy that is centered on the student and the material: reality based content is centered on the student's interest and community experiences, interaction, and growth. The result is an emotionally satisfying experience for students, agencies, and faculty.

Initial Results and Final Thoughts

Of the initial test classes in which PFLM was used, 45 students participated in a formative survey describing their experiences and designed to provide some initial feedback on the efficacy of the PFLM. The survey included background information including gender and class level but did not include student identities. Questions included student feedback on applicability of the course; perception and rating of skills learned; comparison to other courses that involved service learning, internships and/or practicum; and student self assessment of personal growth in areas such as confidence, team and leadership skills, and desire to become involved in the community. Representative verbatim feedback from students included the following:

- "I think I learn more in this environment, it's because learning happens naturally – not in some sort of planned out structured environment. I have gained multiple experiences that have taught me quite a few things…experience stays with you longer than any sort of class lecture."

- "I would take this class again because of the practical application of the skills we learned. It gave me a great opportunity to see how committees really work and apply my education to the real world. So much of college is just book learning, it is nice to be able to apply that knowledge."

- "I would take this course again for the pragmatic experience, getting your hands dirty. Rarely will courses put students in a learning situation doing practical business cultural analysis through actual projects" (Hugg, 2005).

Over 97% of students who completed PFLM courses stated they wished to take another PFLM course. Student feedback overwhelmingly rates the mentorship and life skills aspects as highly as the community based project work; students find the process energizing, rewarding, and even intriguing. Sample verbatim comments from the surveys included the following:

- "I would take this class again because it give [sic] you really good experience for a future job. This class really was more of a part-time job that that of a normal class. As for the learning, I believe I got more from this than any text book could have given me."

- "I really enjoyed this class. It is the best course I have EVER taken. Courses and text books can never teach students how to interact with people, make decisions, and produce a project that numerous people will benefit from" (Hugg, 2005).

In course feedback, many students who experienced PFLM expressed a desire to continue working on community projects. Additionally, several students expressed an interest in graduate-level education directly as a result of their experiences with their undergraduate PFLM work. Verbatim comments from the survey included the following:

- "I would take this class again because it gives me real group work and working for a customer experience that is essential to know how to do in the real working world."

- "Working on a project that makes a difference in the community is also another reason that I decided to take this class again."

- "I will take this class again as a grad student but I will try something totally different, i.e. no non-profits (projects) (Hugg, 2005).

Perhaps most importantly, many students articulated that they now see their education as a continuing process, not a goal unto itself.

In addition, feedback from students who completed both internships and PFLM courses found that, in 87% of the cases, their PFLM experience was more meaningful than their internship experience. These students stated that they perceived their internships to be limited in scope and importance, whereas their PFLM experiences were perceived as significant contributions to the community, a sentiment shared by community agencies in separate feedback. Sample comments from the survey in this area included the following:

- "Great experience to get involved in the community and have guidance and mentorship in doing so."

- "The students and faculty have been a pleasure to deal with. They are quite professional and produce a quality product. I am pleased to see the university reaching out to the community in this manner."

- "We believe the [products developed] will be very beneficial to the city in assisting us in our goal of growth and development" (Hugg, 2005).

It was also discovered that students in 15 courses with different academic disciplines, ranging from sophomores to final semester graduate students, outpaced course expectations (Hugg, 2005). Their interest level, performance, professionalism, and confidence increased dramatically with each successive milestone and exercise. Simply put, it is meaningful because they contribute in a real way and find rewards in the process, not just the results. With instructor mentorship they also gain valuable perspectives that fuel their curiosity and confidence. Student feedback indicates they highly value the mentorship provided by instructors and are invested in the process; they experience ownership and collaboration and share the responsibility for their educational experience.

Though this model has only been used for a few semesters, the initial results are encouraging. Local agencies and communities are genuinely pleased with the results, and the university now has a long waiting

list of diverse projects generated from many community agencies. As word spreads, agencies are eager to partner with the university and are thinking outside the traditional internship or service learning boxes and more about larger and more significant community needs. Communities have also demonstrated the desire to recognize students' work; a typical response at the end of a project is either a letter of appreciation by name to the students or publishing the final product with professional attribution to the students.

Faculty members find PFLM interesting and thought-provoking; it has proven to be an ideal platform for intra-departmental and inter-departmental collaboration. Several more faculty members are either rewriting their existing curricula using PFLM philosophy or incorporating individual elements into their courses. Many of these faculty members have stated they have discovered and seized research and writing opportunities as a result of their PFLM experiences, a facet that promotes professional development as well as intellectual curiosity.

PFLM is not a silver bullet; it is simply an innovative tool for educators to consider. It is based both on century's old proven methodology and built on 21st century research to reflect the changing needs of communities, educators, and students. At its core, it is the best practice of educators partnered with a new way of organizing both thought and effort. It is not designed to replace internships but is, perhaps, well-suited as a capstone experience to launch a graduating student into the professional world.

The challenges students face in a PFLM based course are complex and diverse, and they mirror what it would be like to be employed in a professional setting. By facing and solving real world problems using basic project management, team building, and leadership skills, students operationalize concepts and see tangible results. By using strategic thinking skills such as critical analysis, students not only learn how to structure their thought processes but see the actual connections between their processes and the results in real time. By experiencing the complexities of communication in a live project setting, students not only learn the subtleties, strengths, and pitfalls that come with interpersonal communication, but they experience the techniques necessary to keep a team focused, productive, and cohesive. Advanced thinking skills such as learning to be a critical evaluator and designing a scope of work document let the student see, experience, and reflect on the value of strategic thought integrated with a deliberate process. In every instance the student is challenged by new situations, requiring continuous analysis and reflection. In the end, students earn not only new skills but new perspectives and confidence in their new abilities. PFLM's broad range of experiences, skills, and challenges seem superbly structured to allow a student to walk from college to the professional world amply armed, eager, and confident.

References

Anderson, R. C., & Armbruster, B. (1990). Some maxims for learning and instruction. *Teachers College Record, 91*(3), 396-408.

Aspy, D. N., Aspy, C. B., & Quimby, P. M. (1993). What doctors can teach teachers about problem-based learning. *Educational Leadership*, *50*(7), 22-24.

Astin, A.W. (1993). What matters in college? Four critical years revisited. San Francisco: Jossey Bass.

Bickman, M. (2003). *Minding American education: Reclaiming the tradition of active learning*. New York: Teachers College Press.

Bridgeland, J. M., DiIulio, J. J., & Morison, K.B. (2006). *The silent epidemic: Perspectives of high school dropouts.* Washington, DC: Civic Enterprises, LLC in association with Peter D. Hart Associates for the Bill and Melinda Gates Foundation.

Bridges, E. M., & Hallinger, P. (1991, September). *Problem-based learning in medical and managerial education*. Paper presented for the Cognition and School Leadership Conference of the National Center for Educational Leadership. Nashville, TN.

Brown, P., & Hesketh, A. (2004). *The mismanagement of talent: Employability and jobs in the knowledge economy.* Oxford: Oxford University Press.

Busse, R. (1992). The new basics: Today's employers want the "three Rs" and so much more. *Vocational Education Journal, 67*(5), 24-25,47.

Coplin, W. (2003). *10 things employers want you to learn in college*. Berkeley, CA: Ten Speed Press.

Dewey, J. (1900). *The school and society.* Chicago: University of Chicago Press.

Dewey, J. (1902). *The child and the curriculum.* Chicago: University of Chicago Press

Dewey, J. (1916). *Democracy and education*. New York: Macmillan

Dewey, J. (1938). *Experience and education*. New York: Macmillan.

Dewey, J. (1938). *Logic: The theory of inquiry*. New York: Holt, Rinehart, and Winston.

Harris, J. H., & Katz, L. G. (2001). *Young investigators: The project approach in the early years.* New York: Teachers College Press.

Katz, L., & Chard, S. (1989). *Engaging children's minds: The project approach.* Norwood: Ablex.

Keller, D. (2004). Applied learning: Adapted from engaging the world: The powerful strategies of applied learning. Retrieved November 13, 2005,

from http://www.newhorizons.org/strategies/ applied_learning/keller.htm

Knoll, M. (1997). Project method: Its vocational education origin and international development. *Journal of Industrial Teacher Education, 34*(3), 59-80.

Levine, A., & Cureton, J.S. (1998). *When hope and fear collide: A portrait of today's college student.* San Francisco: Jossey-Bass Publishers.

NACE. (2005). *NACE job outlook 2005*. Bethlehem, PA: National Association of Colleges and Employers.

National Service Learning Clearinghouse. (n.d.). *Service learning*. Retrieved October 21, 2004, from http://www.servicelearning.org/article/frontpage/ 2/.

Sax, L. J., Keup, J. R., Gilmartin, S. K., Stolzenberg, E. B., & Harper, C. (2002). Findings from the 2000 administration of "Your First College Year": National aggregates (Los Angeles, CA, University of California, Higher Education Research Institute).

Schroeder, C. C. (1993). New students-new learning styles, *Change.* 25(4), 21-26.

Wurdinger, S. D. (1997). *Philosophical issues in adventure education*. Dubuque: Kendall/Hunt.

_____

ROBERT HUGG is adjunct faculty at Minnesota State University, Mankato (MSU, M) in the Department of Educational Leadership. His current research interests are in project based learning, experiential learning, and progressive pedagogy as a means for excellence in teaching. Additionally, his ongoing research interests are in brain-based learning, diversity education, and community-based service learning as an integral part of the college education process.

SCOTT WURDINGER has been teaching and researching applications of experiential learning since 1984. He believes strongly in allowing students to pursue their interests and helps facilitate a student-centered learning process. Scott is the author of *Using Experiential Learning in the Classroom: Practical Ideas for All Educators* and serves on the board of EdVisions Leadership Institute and the Board of the Center for Engaged Leadership. He is currently the Coordinator of the Experiential Education Graduate Program at Minnesota State University, Mankato.

Appendix A
Sample Exercises and Activities Used In PFLM

Exercise/Activity	Week(s)	Outcome Focus
Fear in a Hat Anonymous activity in which students identify their greatest fear about their first post-graduation job.	1,10	Builds common ground in a safe manner; identifies individual and group challenges for project.
Interviews Short mock interviews in which students interview for their project team. Instructor is the interviewer and focuses on project choice and friendly interview outcome.	1,12	Builds common ground in a safe manner; establishes workplace tone; jumpstarts reflection on communication styles and the value of preparation.
Skills & Interests Inventory Anonymous activity where students identify their best skills and interests. Emphasis on drawing out skills not easily recognizable by students (e.g. attention to detail is crucial in video game playing).	1,13	Builds common ground in a safe manner; identifies individual and group skill set; identifies diverse skills (used to pursue interests) that are easily transferable to the workplace.
Goal Setting Students identify their # 1 goal for the class, then the individual lists are combined into a group list. Group list is negotiated – narrowed down to include the most common goals while including the most meaningful individual goals.	1	Builds common ground in a safe manner; identifies individual and group goals; establishes common group ground while maintaining individual perceptions and goals.
Connect The Dots Students connect the dots between group skill set, group interests list, group goal list and group fears list. Involves basic problem solving that requires insight and creativity as well as concurrent free flowing discussion.	1,13	Builds common ground in a safe manner; identifies individual and group skills as compared to challenges (fears) that need to be overcome; highlights the depth of existing skills. Shows how group/individual goals can be met through collaboration.
Critical Analysis Introduction to critical analysis as an active, consistent technique through small group activity using list of project choice descriptions provided by instructor.	1,2,8	Facilitates examination of projects and project choice; focuses students on gaps in information and sets the stage for initial conversation with customer; sets the stage for scope of work exercise; enhances communication between students.
Project Choice Students rank their top 3 project choices and form project teams based on choice and project resource needs. Teams reflect and give feedback on why project was chosen. Teams decide project communication protocols.	1	Project selection and project team formation; small and large group reflection/sharing of project choice and individual goals; Teams decide how they will communicate with each other and the instructor; Team selects/elects a project manager.
Short Customer Meeting Students meet with their customer (project owner) in a formal meeting to determine customer actual needs and/or communicate project status. Followed by discussion and reflection with instructor.	2,9,13	Students meet customer and project becomes "real"; effect of professional attire, communication and behavior; highlights value of critical analysis as a preparatory technique, students gather information to build a scope of work and a project plan.
Scope of Work Based on customer meeting, project teams build a scope of work. *This may be drafted during the customer meeting as part of project negotiation.*	2	Project teams work through, and commit to, the parameters of the project; basic problem-solving; sets the stage for the project planning exercise.
Basic Project Planning Hands on introduction of project planning basics; teams build draft project plans concurrent with	2	Enhanced problem solving, communication and goal setting; determines action steps; also includes introduction to time management and

instructor introduction of basics. *Instructor facilitates and mentors.*		task identification and scheduling.
6 Hats Thinking Focused thinking technique for team building and team communication. Highly effective means of quickly gathering multiple perspectives in a friendly, reflective and inclusive manner.	2	Increases planning & work efficiency, communication and "open-minded" leadership; increases value of individual perspectives in a team; prompts students to cover all the bases and consider options otherwise easily overlooked.
Project Status Report (Initial) Teams present a detailed overview of project status and immediate goals to entire class. Emphasis is on instructor mentorship and facilitation as well as best practices/lessons learned sharing between/among teams.	3	Scope of work and project plan delivered as part of initial status report; class-wide discussion and reflection of plan parameters is facilitated by instructor; introduction to the basics of formal presentations; the scope of work and project plan become the formalized learning contract
Spy Story An interrelated set of 10 puzzles designed to explore and examine team organization, task delegation, trust, and communication.	4	Impossible to complete without team work within the allotted time; provides immediate tangible lessons on organization and communication.
Project Status Report (Recurring) Teams present a 5-minute overview of project status and immediate goals to entire class. Each team rotates status reporting among its members.	4-7,9-13	Helps instructor ensure team stays on track; helps ensure team members are adequately communicating with each other; helps teams glean lessons learned from each other.
The Professional Jonah Teams evaluate each others' project plans using critical analysis and Six Hats thinking (includes introduction to groupthink).	4	Understanding the need for, and role of, the Jonah (group critical evaluator); reinforces previous learning in a safe environment; provides insightful peer feedback to plans; helps prevent groupthink.
Communications Styles Exploration of leadership and management personalities and effective communications styles through role playing. Project status is used as the vehicle for role-playing.	5	Students learn how to effectively manage expectations when faced with a variety of management and communications styles; enhances awareness of preparation and self confidence as well as poise.
The Art of Staff Meetings Introduction to planning and leading a staff meeting followed by role playing in which students plan and lead short staff meetings using different leadership styles.	6	Awareness of the effect of different leadership/communications styles on productivity; reinforces previous learning and value of preparedness; reflection/ sharing effects of styles used.
Leadership and Supervision Role playing in which the instructor plays various workers who participate in a project to varying degrees. Students are the immediate or upper level supervisor required to keep the project on track.	7	Introduction to the challenges and ethics of supervision; reinforces earlier communications, goals, skills and negotiation learning; safe, yet highly self- reflective exercise in which students may inwardly examine their project team roles and performance.
The Formal Staff Meeting A formal staff meeting in which each team must present a detailed briefing to the instructor and class. Emphasis is on coherency, professional attire and behavior, and, if necessary, articulating corrective actions planned to put project on track. *Followed by discussion on change management.*	8	Professional behavior under stress; the value of preparedness and effective team communications; reinforces critical analysis and Six Hats thinking to determine if project work so far and preparation for staff meeting was adequate; reinforces expectation management role playing; allows teams to adjust plan to meet scope.
Professional Writing I Using critical analysis, teams examine professional writing samples provided by the instructor. Followed by an exercise where teams	9	Introduction to professional writing (vs. other writing styles); the value and necessity of peer review; use of critical analysis on one's own writing; the effect of well written business

divide topic areas of their project, and each team member writes a paragraph on a topic area. These paragraphs are then peer reviewed.		documents; the effect of poorly written business documents; sets the stage for teams to begin drafting their final project report.
Professional Writing II Instructor-mentored exercise in which teams build a plan for their report and begin drafting the report itself. Students draft a report that describes the customer need, project, and project results.	10	Explores the commonly accepted writing format and style of the business and professional world; reinforces collaboration, critical analysis, Six Hats thinking and business ethics from readings and discussions.
Presentations 101 Introduction, role playing and peer feedback on formal presentations. Emphasis is on presentation formats and skills and techniques used.	11	Familiarity with common presentation formats including PowerPoint; reinforces value of preparation, communications styles, self-confidence, problem-solving.

Appendix B
Sample Assignments Used In PFLM

Assignment	Week	Notes
Draft Scope of Work Document	2	May be completed in class.
Project Plan and Scope of Work	3	Delivered at first Project Status Report.
Weekly Project Plan Updates	4-13	E-mailed to instructor each week.
Personal Growth Journal	2-14	Each student maintains a journal.
Communications Styles Readings Complete handout readings as preparation for in class exercises.	5	Handouts provided by instructor.
The Art of Staff Meetings Complete handout readings as preparation for in class exercises.	6	Handouts provided by instructor.
Leadership and Supervision Complete online readings as preparation for in class exercises.	4-7,10	Selected online resources by credible authors on leadership techniques.
Professional Writing I Critique Each student finds a professional writing example and uses one or more techniques learned in class to explore the effectiveness of the example.	9	Used in conjunction with instructor provided examples in the professional writing exercises.
Presentation 101 Readings	3,11	Selected online resources by credible authors on presentation techniques.
Formal Presentations A final assignment and an exercise; teams share their personal insights into their project, process, and lessons learned, as well as what they learned about themselves during the process.	14, 15	Increases confidence and comfort level of presenting before a group; opportunity to "tell their story"; significant piece of course closure process.