Project-Based Learning in a Public Park and Recreation Agency: Multidimensional Approaches to University Student Learning

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Abstract

Project-based learning (PBL) is different from traditional didactic learning in that it utilizes a model that moves classroom activity out of the classroom and into the "real world." An undergraduate recreation class in evaluation and a graduate recreation seminar in management agreed to participate in an innovative learning experience. Classes, and the instructional team, used multiple methods - secret shopper, multi-attribute utility technique, structured interview focus groups, and importance by performance analysis web surveys - to address several questions regarding management and evaluation in a public park and recreation agency. While this unique approach to student learning was sometimes confusing, frustrating, and difficult, class members planned an inquiry, collected and analyzed data, and reported their findings to the agency. The process of learning was unique and created opportuni-

ties for learning that challenged class members to examine how the selected techniques can be applied in an agency.

Keywords: project-based learning, performance measurement, evaluation.

Introduction

Have you ever ventured beyond your comfort zone while preparing to teach a class? While it may be easier to prepare lectures and hand out examinations, changing the context of learning requires considerable risk. The typical, classroom learning experience involves dispensing information from an instructor to a learner. In many cases this approach does not elevate or challenge the learner to a higher level of cognition required to transfer knowledge to new contexts (Gentner, Loewenstein, & Thompson, 2003). An undergraduate recreation class in evaluation and a graduate seminar in recreation management agreed to be part of an innovative approach to learning in the spring of 2005. An opportunity was provided to class participants to examine a current delivery system in parks and recreation. Students would be able to compare what existed with contemporary, management theory, against current practice. In addition, class members would be able to utilize evaluation techniques learned in class. The intent was to provide class members with a project-based learning (PBL) approach directed at determining the efficiency and effectiveness of a public park and recreation agency in relation to: (1) organizational response to community need; (2) management practices; (3) evaluation of programs and services; and (4) the policy formulation and planning processes.

This article provides a brief overview of a complex project-based learning experience. Creating a single learning experience in which undergraduate and graduate students were exposed to several evaluation techniques provided a powerful learning opportunity that was at times exciting, and at other times frustrating. PBL is a unique educational approach that should benefit instructors in their attempts to construct learning experiences that link academia to professional practice.

Project-Based Learning

Project-based learning (PBL) is different from traditional didactic learning in that it utilizes a model that moves classroom activity beyond the four walls and into the "real-world" or community. PBL usually emphasizes learning through activities that are more interdisciplinary and student-centered in nature. Furthermore, this type of learning process is one where students have the opportunity to integrate their classroom studies with real world issues and practices (San Mateo County Office of Education, 1999). It is a technique that can lead to higher levels of student motivation as students are given the opportunity to engage in their own learning through the

pursuit of their own interests and questions (Kucharski, Rust, & Ring, 2005). Ultimately, class members become the catalysts for their own decision making and problem solving (Doppelt, 2003; Gülbahar & Tinmaz, 2006; SMCOE, 1999; Thomas, 2000).

One important aspect of PBL is its interdisciplinary nature. With PBL, class members have the chance to incorporate different subject areas and techniques in truly authentic settings leading to the production of authentic outcomes for both the students and the setting where PBL occurs. Through this interdisciplinary and authentic approach, students can envision the relevancy of the connections between their own learning and real world concerns. If performed well, PBL can lead students on a path to developing real world skills. Many of the skills learned through PBL are those desired by today's employer, including the ability to work well with others, make thoughtful decisions, take initiative, and solve complex problems (SMCOE, 1999).

It is imperative to understand that PBL does not infer a lack of curricular content. PBL also involves the integration of content that is based on curricular standards and goals. Successful PBL will integrate content learning both prior to the process, during and after the completed project. Thus, PBL not only occurs outside of the classroom but in the classroom as well. It is vital that instructors and class members work closely together within the classroom setting to develop relationships that will foster critical thinking and discussion as the project progresses. In turn, instead of instructors filling the traditional role of lecturer and authority, they now have the opportunity to act as coaches, facilitators, and in the best of scenarios, co-learners. In the most successful instances, completed projects become the stimuli for in-depth discussion, specific not only to content, but to the type of learning that has taken place during the actual day-to-day work that has been accomplished through the utilization of specific PBL components.

One of the paramount outcomes from successful PBL is the potential for instructors and class members to develop heightened relationships with leaders in the larger community (including agency personnel, government officials, and the media). The final outcomes related to a PBL experience are usually shared not only within the academic environment, but with key stakeholders, who are both entitled to, and in need of, the information that has been gleaned from the project.

PBL is often comprised of a multimedia component. Students have the occasion to use various technologies effectively as tools in the planning, development, or presentation of their projects. (SMCOE, 1999). The ultimate vigor of this component is not the multimedia technique itself, but how that multimedia component is incorporated within the curricular content, allowing it to work authentically within the actual project being produced.

PBL also involves a strong student direction component. Class members are encouraged to take full advantage of decision-making opportunities and are expected to initiate those decisions throughout the entire project. Of course, it is still the role of the instructor to provide class members with the appropriate structure and feedback mechanisms to help class members make adequate decisions, and when necessary, revisions to those decisions.

One of the unique components of PBL is its promotion of collaboration between students, students and the instructor, and ultimately, students, instructors and members of the larger community outside of the academic setting. Here class members have the chance to develop and learn essential collaborative skills, such as group decision-making, relying on the work of peers, integrating peer and mentor feedback, providing thoughtful feedback to peers, and working with others as student researchers (SMCOE, 1999).

It should be understood that PBL is not synonymous with service learning. In service learning there is an implied purpose that as a result of the learning engagement that the agency or entity will benefit from the services provided by the learners (Quezada & Christopherson, 2005). For instance, if a class were to engage in a service learning project that focused on offering programs to inner city youth for a period of time, the anticipated result would be that the targeted children would benefit from the planned program and the students would benefit as pre-professionals plying their trade. PBL does not carry the same purpose of service learning. First, PBL may or may not result in an outcome that is beneficial or of common agreement between the parties involved. Service learning, in contrast, is anchored in the principle that the service benefits are for the entity that is being served by the learners (Quezada & Christopherson, 2005). Second, PBL in its advanced forms, is more directly focused toward the learner and their ability to assay the situation, make informed decisions, create a plan for addressing the critical questions, securing information, analyzing the data (qualitative or quantitative), and using contemporary techniques for appraisal or evaluation. Third, PBL is not merely simulation, but may utilize various techniques to enrich the learning experience. Depending on the structure and goals of the particular project,

> PBL may connect to the real world because it addresses real world issues that are relevant to students' lives or communities. A project may be connected to real professions through use of authentic methods, practices, and audiences. Real world connections might also be made by communicating with the world outside the classroom, via the Internet or collaboration with community members and mentors (SMCOE, 1999, para. 7).

Fourth, PBL typically is not designed to occur as a single experience but involves multiple engagements of learners and the real world agency or host.

Approach

At the beginning of the spring semester each class was presented with the course outline and an opportunity to learn in a rather different manner. The Mayor and the public, park and recreation agency had agreed to allow access to the classes for the purpose of learning how to apply evaluation techniques and management reviews. Having been thoroughly briefed on the PBL approach, both classes received a set of ten questions to ponder, including:

1. What are the intended plans of the unit? What evidence is there that planning is comprehensive, principled, anchored in contemporary needs of our community?

2. How is the agency plans including mission, vision, values, goals, and objectives formulated?

3. What relationship does the agency have with other units in government? Other municipal jurisdictions? Advocate organizations? User groups?

4. What is the prevailing philosophy underlying management practice?

5. How efficient and effective is top level management? Middle level management? What is the "corporate climate" within the unit?

6. What is the satisfaction level of frontline level managers' employees? Part time employees? Mid-level managers' employees?

7. What level of service quality is provided by selected facilities?

8. Are employees receiving training, development and other support necessary to insure the highest quality in the design, delivery and evaluation programs, facilities and services?

9. Is there evidence of interagency collaboration and partnership efforts?

10. Is there evidence of a contribution from the agency to local, regional and national professional ideals, initiatives and standards of practice?

These questions served as points of discussion for framing the actual PBL experience. The class members and instructional team (comprised of three faculty members and two doctoral students) used the questions listed above to create "study teams." The two classes created 14 sector teams with approximately 45 class mem-

bers. These sector teams included:

Program Evaluation Class (undergraduate)

1. Program Planning
2. Staffing Profile, Deployment & Training
3. Response to Community Needs & Demands
4. Customer Service Quality
5. Delivery of Programs & Services
6. Interagency Collaboration & Partnerships
7. Evaluation of Programs & Services

Seminar in Management (graduate)

1. Intended Direction of Agency
2. Agency Organizational Structure & Culture
3. Organizational Leadership & Community Relationships
4. Marketing and Branding of Agency Programs, Services
5. Financial Operations, Allocations and Utilization
6. Efficiency (shared area with both classes)
7. Effectiveness (shared area with both classes)

The purpose of the sector teams was to divide the labor and have each team focus on a portion of the study. The innovative PBL experience focused on gathering information from a public park and recreation agency to examine each of these sectors using multiple methods. To determine the efficiency and effectiveness of the public park and recreation agency, three quantitative and two qualitative methods were employed by the student teams. To analyze the quantitative data, class members used the *Statistical Package for the Social Sciences (SPSS) Version 13.0.* Qualitative data from the structured interview focus groups (SIFG) and *Multiple Attribute Utility Technique (MAUT)* were analyzed using traditional qualitative methods (Dey, 1993), and are discussed in the following sections (see Table 1).

Secret Shopper

Based on the principles of Parasuraman's *SERV-QUAL* service quality evaluation system (Parasuraman, Zeithaml, & Berry, 1985), this section of the PBL experience examined data from a "Secret Shopper" evaluation of customer service, program quality, and site and facility maintenance. In total, the study team conducted 119 Secret Shopper interactions with agency staff over a two-week period in the spring of 2005. Eight agency sites were selected from categories of services offered by the agency: two of these were aquatic centers; two were golf facilities; one was a sports center; one was the parks office; and two were community centers. Two primary avenues for gathering information were employed: telephone interviews, and on-site visits.

TABLE 1

Summary of Applied Techniques

Sources	Type of Data
Secret (or Mystery) Shopper	Quantitative
Structured Interview and Focus Group (SIFG)	Qualitative
Multi Attribute Utility Technique (MAUT)	Quantitative
Importance X Performance, web-based Survey	Quantitative
Benchmarking with CAPRA Standards	Qualitative

Telephone Interview Secret Shopper Evaluation Procedures. Data produced by this method were quantitative and qualitative. Class members counted the number of rings before the call was answered. A series of predetermined questions, appropriate to the venue were posed to the staff member who answered the phone. Responses ranging from (1 [poor]-7 [excellent]) were assigned to the staff members' responses to the questions.

On-Site Secret Shopper Evaluation Procedures. The class member role-played a potential user at each site and asked series of questions relevant to that site. Following their visit, secret shoppers rated the site in terms of key SERVQUAL dimensions: "tangibles" (Appearance of the physical facilities, equipment, personnel and communication material), "reliability" (Ability of the staff to perform the promised service dependably and reliably), "responsiveness" (Willingness to help customers and provide prompt service), and "empathy" (Provision of caring individualized attention to customers). Multiple items in each of these dimensions were rated from 1 [strongly disagree] to 5 [strongly agree].

In both the telephone contact and the on-site visit, the class member recorded written notes about the experience to provide anecdotal information. The data from the telephone interviews were analyzed by calculating means and comparing across the different venues.

Structured Interview Focus Groups

Structured interview focus groups (SIFG) were used to obtain information regarding carefully structured questions about issues of concern to the organization. The SIFG technique "comes largely from marketing research, but has been widely adapted to the social sciences" (Marshall & Rossman, 1999, p.114). According to Krueger (1988), as cited in Marshall and Rossman (1999), by creating a supportive environment and asking questions in a structured format, the researchers can identify trends in perceptions and opinions of those interviewed. The purpose of this procedure was to understand potential differences between different levels of management. These differences may result in uncertainties concerning resource allocation

and diminution of trust and commitment to a common mission within an organization. Thus, the results of carefully designed SIFG can contribute to increased efficiency and effectiveness in management[JCN1], by enhancing trust, communication and consistency of message across all management levels (den Hartog, 2003).

Each focus group involved conducting data collection sessions with staff selected by the agency to represent upper level, middle level, and frontline level management. Six focus group sessions were facilitated by class members and faculty. Each group consisted of five to six employees selected by the agency. Representatives of each level of management participated in a focus group to address questions from Category I *(Planning, Evaluation, and Quality Assurance),* and Category II *(Collaboration, Organizational Structure and Leadership).* Interview data stored on cassette tapes were transcribed into thematic statements for the unit of analysis. These data were analyzed for common, recurring themes relating to the following categories: Direction of the Agency; Leadership; Financial Management; Staffing and Work Environment; Communication; Planning; *Marketing and Branding; and Agency Performance.*

Multiple Attribute Utility Technique (MAUT)

MAUT procedure engages individuals in a process that leads to identification of decision options that have greatest utility (Camasso, & Dick, 1993). In this study, three groups of staff representing upper level management, middle level management, and frontline level management were invited to participate. Each group consisted of five to six employees selected by the agency. Staff participants were asked to assume that they were participating in a MAUT exercise to develop the optimal agency of the future.

The *MAUT* process targeted the following critical factors for decision making by managers as it related to Job Satisfaction, Leadership, Efficiency, Effectiveness, Organizational Climate, and Essential Outputs from Program Planning. Each of these factors included 4-5 variables. Procedurally, participants assign coefficients to a set of variables that are indicative of a feature that is central to the decision process. Coefficients are assigned such that the sum across all variables sum to 100%. Participants discuss the weightings and in a second round again assign weightings to the variables. Following a final discussion, the group is encouraged to reach consensus on the assigned weightings. The identical group process is used to assign weightings to specific, observable "indicators." Indicators are components of the variable. They also must total to 100% when the group assigns weightings. Final coefficients for evaluating facets of decision options are obtained by multiplying the coefficient for each indicator by its respective variable coefficient (see Table 2, Figure 1). Finally, each decision option is evaluated by summing the products of coefficients and characteristics of that decision option.

TABLE 2

Example of MAUT Chart

Construct	Round 1	Round 2	Variables	Round1	Round 2	Indicators	Coefficients
				16.00	26.00	Indicator1	3.90
				17.00	29.00	Indicator2	4.35
	15.00	15.00	Variable1	15.00	28.00	Indicator3	4.20
				28.00	17.00	Indicator4	2.55
				24.00	26.00	Indicator5	3.90
				100.00	100.00		
				9.00	21.00	Indicator1	3.57
				16.00	24.00	Indicator2	4.08
	17.00	17.00	Variable2	28.00	19.00	Indicator3	3.23
				23.00	18.00	Indicator4	3.06
				24.00	18.00	Indicator5	3.06
				100.00	100.00		
				19.00	15.00	Indicator1	2.25
				20.00	22.00	Indicator2	3.30
	18.00	15.00	Variable3	27.00	23.00	Indicator3	3.45
				30.00	21.00	Indicator4	3.15
				4.00	19.00	Indicator5	2.85
				100.00	100.00		
				10.00	23.00	Indicator1	6.90
				30.00	16.00	Indicator2	4.80
	20.00	30.00	Variable4	20.00	15.00	Indicator3	4.50
				16.00	27.00	Indicator4	8.10
				24.00	19.00	Indicator5	5.70
				100.00	100.00		
				10.00	23.00	Indicator1	5.29
				20.00	19.00	Indicator2	4.37
	30.00	23.00	Variable5	30.00	17.00	Indicator3	3.91
				22.00	18.00	Indicator4	4.14
				18.00	23.00	Indicator5	5.29
Total %	100.0	100.0		100.00	100.00		

Web Survey: Importance by Performance

This study also utilized a web-based, *Importance x Performance Analysis* survey that [JCN2] was posted for all agency employees for a period of two weeks. The

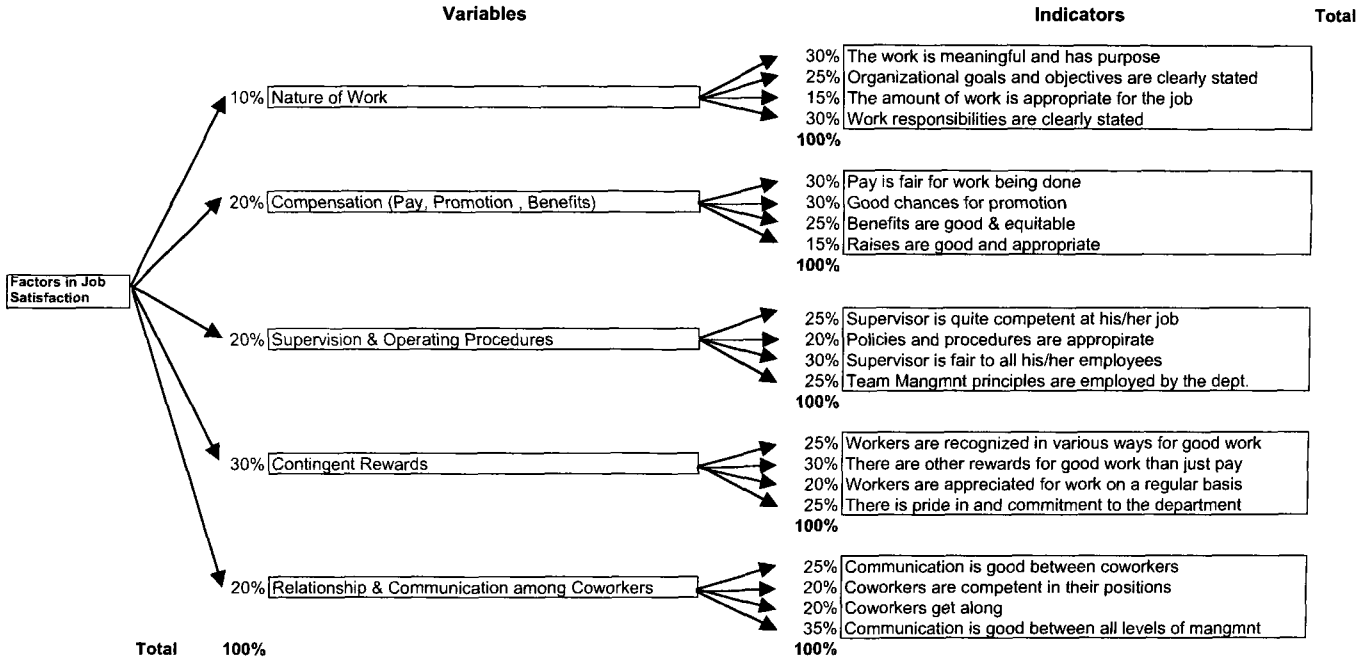

Figure 1: MAUT Job Satisfaction Template

questionnaire had 59 questions on a 9-point scale. The items related to the efficiency and effectiveness of the agency. Survey participants were asked to read each statement and indicate, "How Important" that item is to your agency by clicking one of the buttons which best represents your opinion (1 = Not At All Important ...9 = Critically Important). Next, for the same statement, participants were asked to indicate "How well your agency is performing" by clicking one of the buttons which best represents your opinion (1 = Not performing at all ...9 = Performing exceptionally well).

Importance by performance analysis (IPA) yields priorities for management action. As cited in (Burns, Graefe, & Absher, 2003), "IPA measurement has been a frequently used method of relaying customer service feedback to managers (Crompton & Duray, 1985; Guadagnolo, 1985; Hammitt, Bixler, & Noe, 1996; Hollenhorst, Olson, & Fortney, 1992; Martilla & James, 1977)" (p. 2). Items that received high scores for both importance and performance were considered, *Keep up the good work.* Items that had high importance scores, but low performance scores, were *Immediate priorities for action.* Items that were high in performance, but low in importance, were *Overkill.* Items that were low in performance, and low in importance, were Non-priorities. Alternatively, evaluators subtracted performance scores per item from importance scores and interpret those *Discrepancy scores.* Large negative values in discrepancy scores represent priorities for action. In this PBL application, importance by performance analysis provided class members with the opportunity to conduct a comparative analysis across different levels of management.

The agency requested all full time employees to complete the web-based survey. One hundred thirty eight (138) employees responded to this invitation. Data from the web respondents were analyzed by class members and the staff team by evaluating discrepancy score averages and comparing those averages across levels of management. In addition, data were analyzed to determine compare mean scores of "importance" and "performance" across the levels of management (upper level managers, middle level managers, and frontline level managers).

Benchmarking with CAPRA standards: Agency website and documents

The *Council on Accreditation for Park and Recreation Agencies (CAPRA)* is a national program for accreditation of public park and recreation agencies *(http://www.nrpa.org)* that has operated since 1989. The CAPRA standards are the nationwide cornerstone of accreditation for public parks and recreation agencies. The Council establishes standards that are used to evaluate an agency for the purpose of accrediting the agency as one that meets the minimal standards. Materials and primary source documents were obtained from agency managers, as well as the agencies website to provide the student teams with essential information to carry out a simulated analysis with the established CAPRA standards. The documents provided to the study team by the agency included financial indicators, planning documents and program promotional materials (see Table 3).

TABLE 3

Example of Master Conversion of Principal Questions, Indexing CAPRA Standards Project-Based Learning in Action

Team		Principal Questions	Method of Obtaining Data	Question Format	Response Format	Applicable CAPRA Standards
I. Program Planning	1	Are there goals, objectives, specific outputs, clear targets of programs?	**Focus Groups ; Existing documents**	Structured interview process w/ (Staff & Citizens). Examination of documents	**Oral responses that result in themes; Chronicle of responses X category of demand**	1.3, 3.5, 6.1, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8.
	2	How important is program planning ? How well does it plan?	**Web based**	IMP X PRF	**Rating**	2.4.1][2.4.1.1, 2.4.1.2, 2.4.1.3, 2.4.1.4]
	3	Is there evidence of continuous planning for improvement of programs by staff?	**Focus Groups ; Existing documents**	Structured interview process w/ (Staff & Citizens); Examination of documents	**Oral responses that result in themes; Chronicle of responses X category of demand**	
	4	Do all levels of administration share the same vision of program planning?	**MAUT Process**	Prepared list of branches (MAUT)	**MAUT Weightings ; Oral responses that emerge into themes**	
II. Staffing Profile, Deployment & Training	1	What level of expertise is used to deliver programs? Services?	**Existing documents**	Excel spreadsheet	**Full, part time, seasonal, volunteer; top, middle & front line managers: education level; years of service; certification type**	4.1.2 [4.1.2.1, 4.1.2.2, 4.1.2.3,], 4.1.3 [4.1.3.1, 4.1.3.2, 4.1.3.3, 4.1.3.4], 4.2, 4.3
	2	Is there evidence of staff deployment for program services?	**Existing documents**	Excel spreadsheet	**NOTE: merge with PQ 1 above**	
	3	Are staff provided opportunities for advancement? Training? Cartification?	**Web based**	IMP X PRF	**Rating**	4.1.4.4 [4.1.4.4.1, 4.1.4.4.2, 4.1.4.4.3], 10.4
	4	How does this agency compare to other P & R agencies in staffing ratios? Quality?	**Focus Groups Benchmarking**	Structured Interview Rating Scale/Standards	**Themes compared against benchmarked agency**	
	5	Are program staff (full, part time & seasonal) satisfied with their jobs?	**MAUT Process**	Prepared list of branches (MAUT)	**MAUT Weightings ; Oral responses that emerge into themes**	
III. Response to Community Needs & Demands	1	Is there evidence that the agency is responding to identified community needs?	**Web based**	IMP X PRF	**Rating**	3.4.3, 3.6, 6.1[6.1.1], 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8
	2	Is there evidence that the agency responds to citizen demands in programming?	**Focus Groups ; Existing documents**	Structured interview process w/ (Staff & Citizens); Examination of documents	**Oral responses that result in themes; Chronicle of responses X category of demand**	6.2.1, 6.2.2, 6.2.3, 6.2.4
	3	Is there evidence of the incorporation of needs based planning?	**Focus Groups Benchmarking**	Structured Interview Rating Scale/Standards	**Themes compared against benchmarked agency**	3.4.3
	4	Is there evidence of community input of needs to the agency?	**Web based; focus groups**	IMP X PRF; prepared list of questions	**Rating; Matrix of responses X sector**	6.1.1
	5	Is there evidence of the agency responding to agency prioritized needs? State needs?	**Web based**	IMP X PRF	**Rating**	3.5, 3.6, 6.2

Project-based learning is uniquely different then traditional didactic models because it organizes learning around projects (Thomas, 2000). However, as Thomas (2000) states, "the idea of assigning projects to students is not a new one" (p. 3). What makes PBL significantly different is that it supports student engagement in real life, problem-solving situations (Doppelt, 2003). Gülbahar & Tinmaz (2006) found that participants in an e-portfolio, undergraduate class that used project-based learning, learned better, were more "actively acting" in their learning, and were more satisfied with their course. Contrarily, one drawback to PBL is that students may get frustrated in the early stages of the implementation of project-based learning into their courses. However, Lenschow (1998), as cited in Gülbahar& Tinmaz (2006), found that most students felt more motivated as time elapsed in a project-based learning course, because this type of learning offered increased student autonomy, and the opportunity to put theory into action.

This project-based learning at a parks and recreation agency was time consuming and mentally challenging. The instructional team asked themselves a myriad of troubling questions at many points during the process. How would we successfully combine an undergraduate evaluation class, a graduate management course, gain access to a public agency, and evaluate its programs and personnel at a time when the agency was adjusting to a new political administration? Would it be possible to quickly educate, train, and mentor class members possessing varying skills, abilities and motivation levels? And, would they be able to execute nine critical tasks: (1) create items for the Importance-Performance Analysis (IPA) web survey; (2) understand nominal group techniques (NGT); (3) design questions and facilitate structured interview focus groups (SIFG); (4) create the multiple attribute utility technique (MAUT) variables and indicators, and facilitate the MAUT groups; (5) produce secret shopper surveys; (6) reliably collect data; (7) interpret data; (8) write up a report of the findings; and (9) present potentially sensitive and politically volatile results at city hall to the Mayor, and upper-level managers of the agency?

Due to the amount of details and planning, the lead-faculty operated with a "team philosophy" that emphasized delegation of tasks to members of the instructor team, and close communication regarding objectives. The instructional team included two department faculty, a visiting professor, and two doctoral students. The departmental faculty provided services such as web site design and data collection, ongoing consultation to the class members regarding planning and implementation, in-class mentoring, on-site facilitation of MAUT and SIFG data collection, and assistance with the draft final reports by the respective study teams. The doctoral students provided faculty support, student instruction and in-class mentoring, on-site agency data collection and analysis, and editing of the final evaluation report. All members of the instructor team met weekly and planned for the upcoming classes. Each team member was assigned responsibilities for that class, which involved specific learning objectives to meet the next goal.

After gaining commitment from the Mayor, and the public agency, the courses were planned to fulfill different project functions. Both the graduate management class members and the undergraduate evaluation class members were assigned to learning teams. Student teams carried out specific tasks and met objectives based on the PBL course goals. The data were analyzed by management level (front line, middle and upper) in order to determine differences within the organizational structure. Graduate-level class members produced evaluation materials, and gathered and analyzed data for the following topics: *Organizational Structure & Culture; Marketing & Branding; Organizational Leadership;* and *Mission, Vision & Values.* Undergraduate student teams focused on: *The Planning Process; Human Resources; Mission Accomplishment; Benefits to Community Quality of Life; Programming;* and *Program Evaluation.* The Importance by Performance Web-based survey produced data for the categories: *Agency Planning; Work Environment; Leadership; Mission, Vision, Values;* and *Meets Community Needs.* These results were analyzed across management level and interpreted for use in the final presentation to the key elected official.

The challenge to the undergraduate class members was considerable. The process of producing and creating, and then, cutting and revising, was not always understood by the undergraduate students. For example, the MAUT variables were pre-determined by the instructor team, but the indicator item pool was drawn from student contributions. All student work output was then reviewed by the instructional team for quality and accuracy. Due to a larger than necessary pool of items only some of the items that were created by the students were selected. This led to negative perceptions by some students regarding valuation of work and effort. Therefore, the instructional team continuously emphasized to the students that the concept of the class was a PBL experience, not just the end product of an evaluative report.

Empowerment of the students was a significant outcome for the PBL course. Throughout the semester, student sector teams met weekly with the lead instructor and the instructional team. Class sessions were often working laboratories where approaches to gathering information were debated, and logistical strategies articulated. Feedback from students was highly encouraged, and decision making was often predicated upon their input. What made the learning extremely dynamic was that the student teams became deeply immersed in the real life evaluation process. This put into practice the literature and theoretical models from textbook readings.

At the conclusion of the semester, both the graduate and undergraduate class members were called upon to present findings from the study. Student teams produced written reports of methods and results for their sectors. The instructional team collected the student reports, edited the draft material, and produced a final Evaluation Report addressed to the Mayor and the agency director. It is important to note that the evaluation and findings were reported without bias or agenda, and the recommendations provided were for the benefit of the agency, its personnel, and the

customers that the public agency serves. In addition, selected graduate and undergraduate class members were asked to present significant findings from the study to the agency upper-level managers and the Mayor, with students from both classes in attendance. The presentation was conducted at city hall, in the council chambers.

In hindsight, the process of conducting a project-based learning experience was time consuming and challenging for the instructional team and the class members. However, it was believed that the PBL approach incited deeper inquiry and a more passionate engagement in the learning process than a traditional didactic approach. Because the instructional team was engaged in a parallel process of learning with their students, both were immersed and absorbed in a project with real and meaningful consequences.

Conclusion

PBL is a unique and high order method of learning. It affords learners the opportunity to ponder, ask questions, construct alternatives, examine options, get real answers to real questions, and produce a document or product that is the evidence of their learning. Faculty and teaching teams can examine PBL as a way to connect learning to the community. While the results may or may not please the agency or public, the fundamental purpose is not producing impenetrable research, but inciting learning.

From our PBL experience we gained a greater appreciation for the mere scope and magnitude of our endeavor. In the future, we would reduce the size of the project. In addition, the PBL experience may have been more manageable had the objectives addressed a single question and focus on only one aspect of the agency's operations, rather than an entire system. The ability of the student learner is also a challenge. There are clear disparities among the learners in any given class. Yet PBL allows those with the most insight, knowledge, and/or skill to serve as mentors, role models and leaders, which mirrors the everyday processes that exist in agencies, society at large, and in industry. Lastly, although some students would prefer to have the plan and tasks clearly delineated, in retrospect, a bit of ambiguity is often a catalyst to seeking answers, initiating action, and solving problems.

Recommendations

As a result of this experience, the author's would recommend the following to instructor's who might use PBL as a learning technique:

1. Control the size of the PBL experience to manageable and focused objectives, as large, complex projects are difficult to manage in a 15 week semester.

2. The duration of the PBL can vary in number of weeks or days, but should be matched to the complexity of the planned experience.

3. Students should come to the PBL experience with selected competencies and knowledge (i.e.) use of Excel spreadsheets, basic knowledge of SPSS [graduate level], and awareness of the organizational structure and culture of the agency being studied.

4. Provide the opportunity for periodic, formal reporting opportunities for the learning teams, in class, and before their peers. This will provide an opportunity to test their ability to communicate findings and demonstrate understanding of the technique(s) used in their PBL.

5. Sequence learning modules for each technique that range from simple, conceptual lessons to increasingly more difficult skill mastery where, for example, a software program is employed to calculate data.

References

Bradford, M. (2005). Motivating students through Project-Based Service Learning. *T H E Journal, Vol. 32 Issue* 6, 29-30

Burns, R. C., Graefe, A. R., & Absher, J. D. (2003). Alternative measurement approaches to recreational customer satisfaction: Satisfaction-only versus gap scores. *Leisure Sciences, 25,* 363-380.

Camasso, M. & Dick, J. (1993). Using multi-attribute utility theory as a priority-setting tool in human services planning. *Evaluation and Program Planning, 16*(4) 295-304.

Cochrane, C. (2004). Landscapes for Learning. *Educational Leadership,Vol. 62 Issue 1,* 78-81.

Dey, I. (1993). *Qualitative data analysis: A user friendly guide for social scientists.* London: Sage.

Doppelt, Y. (2003). Implementation and assessment of project-based learning in a flexible environment. *International Journal of Technology & Design Education, 13*(3), 255-272.

Gentner, D., Lowenstein, J., & Thompson, L. (2003). Learning and transfer: A general role for analogical encoding. *Journal of Educational Psychology, 95*(2), 393-408.

Gubacs, K. (2004). Project-based learning: A student-centered approach to integrating technology into physical education teacher education. *JOPERD, 75*(7), 33-43.

Gülbahar, Y., & Tinmaz, H. (2006). Implementing project-based learning and e-portfolio assessment in an undergraduate course. *Journal of Research on Technology in Education,* 309-327.

den Hartog, D. (1999). Trusting others in organizations: Leaders, management and co-workers. In B. Nootebaum & Frédérique Six (Eds.), The trust process in organizations: *Empirical studies of the determinants and the process of trust development,* (pp. 125-146). Northampton, MA: Edward Elgar Publishing Ltd.

Kucharski, G. A., Rust, J. O., & Ring, T. R. (2005). Evaluation of the ecological, futures, and global curriculum: A project-based approach. *Education,* 125, 652.

Marshall, C., & Rossman, G. B. (1999). *Designing qualitative research* (3rd ed.). Thousand Oaks, CA: SAGE Publications, Inc.

Parasuraman, A., Zeithaml, V., & Berry, L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing, 49,* 41-50.

Polman, J. L. (2004). Dialogic activity structures for project-based learning environments. *Cognition & Instruction,* 2004, 22(4), 431-466.

Quezada, R. L. & Christopherson, R. W. (2005). Adventure-based service learning: University students' self-reflection accounts of service with children. *Journal of Experiential Education, 28*(1), 1-17.

San Mateo County Office of Education. (1999). Project-based learning with multimedia. Retrieved from http://pblmm.k12.ca.us/PBLGuide/WhyPBL.html.

Thomas, J. W. (2000). A review of research on project-based learning. Retrieved June, 26, 2005 from http://www.autodesk.com/foundation.