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Northeastern Recreation Research Symposium Policy Statement

The Northeastern Recreation Research Symposium seeks to foster quality information exchange between recreation, tourism, and resource managers and researchers throughout the Northeast. The forum provides opportunities for recreation and tourism research managers from different agencies, state, and government levels, as well as those in the private sector to discuss current issues, problems, and research applications in the field. Students and all those interested in continuing education in recreation and tourism management are particularly welcome.

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Proceedings of the 2001 Northeastern Recreation Research Symposium

April 1-3, 2001



On Lake George in Bolton Landing, New York

Compiled and Edited by:

Sharon Todd

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Keynote Address

MAKING RESEARCH MORE RELEVANT: GIVE IT A TRY!

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Abstract: Barriers to research use are common to most scientific disciplines and areas of investigation. This paper addresses three interrelated issues to enhancing the effectiveness of science to aid decision making specifically to outdoor recreation, leisure and tourism: (1) clearly defining and framing research problems, (2) enhancing the flow of research findings to those who need them, and (3) enhancing education and training of researchers and practitioners. Suggestions are offered to help deal with these and related barriers.

Introduction

Problems concerning the effectiveness and utilization of research associated with leisure, outdoor recreation, and tourism are neither a new topic nor a problem unique to these areas of inquiry. Academic and research institutions engage in continual dialogue with both private and public sector administrators to enhance applications of research and related information-gathering activities.

The purpose of this paper is to provoke dialogue among researchers and users of research about enhancing the effectiveness of science to aid leisure, outdoor recreation and tourism decision making. No pretense is made that the author will address all the salient issues germane to this topic nor that the issues addressed are covered to their entirety. The intent is to identify some key issues that serve as barriers to achieving the greatest application of research.

In no particular order or relative importance, three issues are addressed:

1. Clearly defining and framing research problems,
2. Enhancing the flow of research findings to those who need them, and
3. Enhancing education and training of researchers and practitioners.

Of course, these issues are interrelated and tied to other variables impacting research utilization.

Most barriers to effective research application are not unique to the leisure, outdoor recreation and tourism field. Many are self-evident and have been addressed in many writings (e.g., Cole & Cole, 1967; Schweitzer & Randall, 1974; McCool & Schreyer, 1977) at conferences, symposia and workshops (e.g., McCool & Cole, 1997), and in academic classrooms and continuing education sessions (e.g., Anderson et al., 1995). Deliberations at the eleven Northeast Recreation Research (NERR) Symposiums have explored these issues as well.

Research use is impeded at both a macro- and micro-scale level. At the macro-scale, institutional constraints often separate the cultures of the research community and the users of research and other data (hereafter referred to as managers). For example, the reward system for researchers is often tied to the number and perceived quality of refereed publications, "pure" or theory-based research rather than research focused on problem solving and application of research findings, statistics rather than data interpretation and peer recognition in a specific academic or professional discipline. For many researchers or their supervisors, refereed publications are of greater value and count more than applied products. Arguably, many applied projects, while valuable, do not lend themselves well to refereed outlets. Further, many in the academic community are under pressure to obtain funding for graduate students and/or enhance the reputation of their program, sometimes at the expense of effective administration and oversight when their "plate is full."

Managers on the other hand often view research as "ivory tower play" not likely to be useful. Managers are frequently not evaluated or rewarded on the basis of project management for using research or data once it is collected, analyzed and delivered to them. They often do not actively interact with the research community or keep abreast of the scientific literature (like many researchers as well). However, the broadening participation of managers and researchers at the NERR Symposium and other similar gatherings (e.g., Jacobi & Manning, 1996) may demonstrate a growing interest in dialogue and potential collaboration.

At the micro-scale, researchers and managers need to work on communication skills and dialogue to define and frame researchable problems better, and to work collaboratively in problem solving so new information can be analyzed and critiqued and conclusions drawn. While researchers may or may not be involved in shaping decisions, they can help synthesize data into a format that is easily understood and displayed for interpretation. To accomplish such lofty goals requires time and energy spent by both groups in developing mutual interest and respect as well as learning the language representing each other's perspective and discipline. Developing interpersonal relationships is essential in doing so.

Of course, not all research is directly applicable to solving particular resource or management problems. Some theory-based research investigations enhance the knowledge base of a particular discipline, issue or general phenomena. Nevertheless, such research does have a clientele. And a particular group of researchers at some point should be expected to use their findings and contribute to the resolution of real world problems. For example, while basic advances in geographic information system (GIS) technology and interactive computer capabilities might be defined as theory-based research, what is learned has exciting potential to contribute to new and innovative online information systems (e.g., the Internet) that tourists can use to plan travel itineraries and learn about resources and opportunities of specific

locations (e.g., Buhalis, 2000; Lime et al., 1995; Lime et al., 1996; Sheldon, 1997). Commercial and public sector providers are greatly increasing their use of such technologies as well.

Some problems do not require formal research and may be solved through knowledge and experience of managers. Nevertheless, the science community can resolve some problems by contributing to literature reviews and documenting the state-of-knowledge on particular issues. Such activities may lead to the identification of information gaps and important research needs (e.g., Lucas, 1987; Lime, 1996; Lundgren, 1996; Cole et al., 2000; Fulton et al., 2000a; Mattson & Shriner, 2001).

Clearly Defining and Framing Research Problems

Dialogue with researchers and managers, along with various writings (e.g., Bardwell, 1991), frequently confirms that problems and research questions are not well defined. In example after example, participants in research projects lament that often it was not clear what managers wanted to know and/or that researchers did not reaffirm the research question or frame the question in a way that could be effectively investigated. According to Bardwell's (1991) provocative investigation of problem-framing and problem-solving, managers all too often engage in inadequate problem exploration. Bardwell reports on an Interaction Associates (1986) study of problem-solving tendencies which suggests that 90 percent of problem solving is spent: (1) solving the wrong problem, (2) stating the problem so it cannot be solved, (3) solving a solution, (4) stating problems too generally, and (5) trying to agree on the solution before there is agreement on the problem.

How a problem is defined and framed dictates the research direction and whether or not the data generated ultimately will be used in problem solving. In many respects, problem definition is the most important and critical component of a research project. But does this aspect of science receive the emphasis necessary to solve problems? Probably not! Research partners often devote a disproportionate amount of their budget, energy and time to research methods and the actual conduct of the research at the expense of clearly defining and framing the research question(s) before the research gets underway. In such cases managers may come away from a project saying, "That's not what I wanted!" or "I thought I was going to get . . . !" As the *real* problem begins to emerge after the research is underway, researchers may report, "That kind of data isn't possible from this study!" or "To get that, we'll need to do another study!"

Over forty years of research and management to operationalize the carrying capacity concept illustrates the frustration of inadequate problem definition and problem framing. Concern for various issues related to tourism and outdoor recreation impacts has led to discussions of, "How many is too many?" Such thinking is frequently driven by the notion that *visitor numbers or amount of development* is the primary force behind the carrying capacity approach and that restricting or limiting human use to some "magic number" is the solution for unacceptable impacts.

By more appropriately reframing the "How many is too many?" question to identify the *desirable or appropriate conditions* for a particular location or region, analysts concerned with unacceptable impacts can more effectively address their "real" problems. Once these challenging questions are answered, then it is appropriate to explore the realities of various management actions to evaluate if they indeed resolve the problems of concern. One such practice may be to limit or restrict the amount or type of use, but until systemic and structural questions are addressed, operational questions, such as the selection of management tools or actions to use for a particular situation, must be delayed (McCool & Lime, in press; Anderson et al., 1998). As such, a systematic process is employed that separates value judgements of *what ought to be* from the more prescriptive judgements of *how to accomplish* desired goals and objectives. Several planning frameworks, including Limits of Acceptable Change (LAC) (Stankey et al., 1985; McCool, 1994), Visitor Impact Management (VIM) (Graefe et al., 1990), Quality Upgrading and Learning (QUAL) (Chilman et al., 1990), and Visitor Experience and Resource Protection (VERP) (USDI, National Park Service, 1997), all call for the formulation of specific management objectives by specifying indicators and standards of quality. Monitoring activities are further required to assess when carrying capacity has been reached or exceeded. Management direction is then deployed to ensure that standards of quality are not violated.

Improving problem definition and problem framing calls for a shift in focus or way of thinking in which more emphasis and energy is directed to defining the specific problem(s) concerning an issue and framing the problem(s) so data or information needs can be articulated to guide the research. Without agreement on the problem, how is it possible to agree on the course of action to address the problem--and ultimately to agree on a solution! In situations where there is assumed agreement that the nature and scope of the problem is self-evident and a certain course of action will be needed to resolve that problem, we easily can become frustrated once into the research and later conclude that we are investigating a solution in search of the problem!

What are some approaches, activities or suggestions to enhance problem identification and framing?

- *A team approach: field manager-researcher partnership to foster communication, collaboration, understanding and buy-in.* Field level managers (e.g., at a park, forest, resort, refuge) need to be key players in project negotiations with the researchers to form a partnership from the get-go. Often, field managers are left out of the loop in identifying research needs because state, regional or national offices strongly dictate research direction and focus. While such an approach can be appropriate for many research questions, resource-specific needs are often best conceptualized and ultimately driven from field locations.

If possible, managers should be actively involved in data collection and analysis to foster ownership in a

project and commitment to seeing the results utilized. Meetings or other forms of active communication are necessary to develop and refine issues and plans. Building such understanding will have the most impact on the specific direction the project takes. The product(s) of such negotiations should be clear and produce a specific understanding of what the manager wants to know and what are the data needs to answering those wants and meeting expectations.

- *Problem analysis before the research begins.* As part of the problem definition and framing of research questions, a careful analysis of the problem is necessary. Perhaps for some projects much more emphasis should be placed on treating the problem analysis as a separate task in the research process. For example, once a manager identifies a general problem or issue, a researcher or research team in collaboration with managers could conduct a state-of-knowledge review to ascertain what is known and not known about the topic. The activity probably should be funded as an independent exercise and the results used to decide if further research is warranted. This approach would suggest such a task could be deployed through an independently conducted analysis by an individual or small group, by a team effort (e.g., Lime et al., 1985; Stankey et al., 1985), or in a workshop setting with a formal collection of published papers (e.g., Lime, 1996; Gregersen et al., 1996; Fulton et al., 2000b). While such an approach might require additional project management and review, it very likely could lead to a more thoughtful articulation of specific problems, a translation of the problems into clearly framed issues or hypotheses and guard against a premature commitment to an array of research activities and funding that might not be necessary at this time. Additional research might be postponed or canceled, thus saving limited resources for other priority uses. On the other hand, the analysis might uncover critical new information needs and shift the research accordingly.

Both suggestions call for management systems in which various management levels are committed to and held accountable for generating information that will find its way into an evaluation and potential implementation process. Resources need to be allocated and responsible employees formally directed to make necessary commitments throughout the life of a project.

Enhancing the Flow of Research Findings to Those Who Need Them

Deciding how to package and deliver the results of research and other information-gathering activities to managers can be frustrating. And what is done may not always result in the most useful products. The problem is neither new nor confined to those in the outdoor recreation, tourism and leisure fields. Adequate reporting of research-related activities falls on the shoulders of both researchers and managers. Funding is often limited or nonexistent for researchers to disseminate their results beyond a basic set of products. Researchers are often not required to produce

more than a basic technical report. A summary of major findings and possible implications may or may not be required.

Managers responsible for overseeing a particular project may not be especially knowledgeable of the research discipline or particulars of a study. They can become intimidated by the jargon used by researchers and/or the nature and scope of a project. Sometimes project management of research becomes an "additional duty as assigned." Frequently project management suffers when an individual has dozens of projects to track and cannot keep up with the administrative responsibilities and oversight. A manager may become reluctant to say "No" to making payments for progress that seems less than complete, or to change or guide the focus of a project. If manager involvement has not been an ongoing responsibility throughout the project, then it will be increasingly difficult to keep current on project details and ensure the work is progressing as planned and the researcher is held accountable. As noted in the previous section, research use remains hampered if managers are not significantly involved in the project, cannot formally allocate or readjust their time effectively to meet responsibilities, and are not held accountable by their superiors for their participation. Upper-level management support and commitment to use the research is extremely critical, as well. Of course, use of the research does not imply *carte blanche* acceptance and deployment of research implications. It seems to imply, however, that the findings would be part of a deliberation and decision making process.

What are some approaches, actions or suggestions to enhance the packaging and delivery of research findings?

- *A final technical report is not enough.* Delivering a final report without some face-to-face dialogue with users of the report may insure very limited review and use. In such cases the reports may be shelved or filed away with the recipient having little idea what the study *means!* Of course, if this is all the recipient of the research wants, the researcher must comply and move on.
- *Quarterly reports, final technical report, summaries, formal publications and meetings.* Depending on the nature and scope of a project, maximum learning, utilization and accountability requires that these five types of reporting mechanisms be required for all research endeavors. In each case, funding should be provided, perhaps for each task independently, to accomplish these activities. Seemingly, and all too often, funding for these activities are not included or are sorely inadequate because of limited funds—the funds are for the research! But, without these activities the chances of success as envisioned by the originators may be thwarted or the outcomes may not achieve expectations.

Quarterly reports ensure accountability and tracking, providing informative progress reports for a variety of interests for review and comment.

Meetings are essential, and if possible should be required throughout the project -- during the pre-project period, at one or more times during the conduct of the research and as a closeout to formally report on and discuss the findings and implications with research clients. Pre-study meetings seem essential if managers are to endorse the research fully and commit staff and other resources to the effort. These early meetings and discussions also provide an opportunity for upper level managers responsible for using the research findings to ascertain if the possible results of the research are appropriate or if the research might be too confining or could hold them accountable in ways which they would not be comfortable. (This is an entirely different topic and begs another set of questions, but it is entirely related to research utilization because it has to do with intellectual honesty of the research community and reporting what is found--not focusing on and reporting what the manager or research client wants to hear!) Meetings help project managers and research clients, as well as researchers, all to stay on top of the project and allow for a broader audience to regularly learn about progress (or lack thereof) and how the potential results of the work may contribute to the specific goals and objectives associated with resolving a problem and meeting management objectives.

Closeout meetings provide an opportunity for thoughtful discussion concerning what the research means and implications for management. When possible these meetings should be held between the time reviewers return comments on the draft technical report to the researcher and the final report is completed. In this way there may be maximum dialogue to insure important points are fully addressed and presented in the final report. Dialogue at this time also can uncover additional or extended analyses that will enhance the usefulness of the research that might not happen following a meeting after all the required documents are delivered.

Final technical reports document the overall context and conduct of the research and provide a detailed description concerning methodologies, data analysis and presentation of results. Sufficient detail should permit replication of the research as needed.

Arguably, technical reports need not extensively discuss the implications of the research findings. Once the author(s) presents the data thoughtfully highlighting the salient findings, the manager and their associates should take the lead in deciding what the findings mean and how to most effectively use the information generated. Of course, the researcher can be part of the dialogue and decision making, as was the case for carrying capacity investigations at Arches National Park during the 1990s (Lime et al., 1994; Manning et al., 1995; Manning et al., 1996). In those studies tabulations and raw data served as grist for several meetings and intense discussion concerning crowding norms and indicators of the quality of the visitor experience. Ultimately the information was

used to specify indicators and standards and to develop monitoring protocols (USDI, National Park Service, 1995).

The point is that managers usually want the research results as soon as possible after the work is completed. So why not provide that data to them as quickly as possible with a minimum of extraneous verbiage and direct the focus of data interpretation to the ultimate benefactors of the information? If an effective manager-researcher partnership is in place, the researcher probably will be brought into "So what?" discussions concerning implications. Furthermore, once the formal reporting requirements of the research have been satisfied, additional analyses and/or dialogue concerning study implications by the researcher could still be negotiated--with or without additional funding.

Summaries provide a concise reporting of the salient findings and implications that, depending on the purpose and scope of the research, can be used by managers or researchers as "press releases" to inform client personnel, the general public, special interest groups and the media. While often required to accompany a final technical report, research summaries or notes can be more formal and published through a technical series by the authors or the funding organization (e.g., Field et al., 1998; Pierskella et al., 1999; Warzecha et al., 2000; Lewis & Baxter, 2001). The intent is to provide a short (no more than 4-6 pages in length), concise and technically-sound statement of the findings that can be readily absorbed and understood by a broad audience. Such inexpensive products can be widely distributed and further summarized or reported on by other users. Consideration also should be given to joint authorship of summaries with management staff who participated in the project (e.g., Lewis & O'Neill, 2001), not so much as a courtesy but as recognition of their ownership and contributions to the completed work.

Formal publications, of course, including refereed journal articles, papers in proceedings, government agency reports and popular magazine articles, also serve as important avenues for research dissemination. For applied research concerning the National Park Service, for example, it might be appropriate in all grants and cooperative agreements to require that at least one manuscript be submitted to *Park Science*, the *Journal of Park and Recreation Administration* or some other management-oriented outlet. Again, including management staff who contributed to the research as co-authors should be considered whenever possible (Manning et al., 1999).

- *Researchers and managers co-author papers at conferences and symposia.* Akin to the joint authorship for research summaries or other publications, project partners should be encouraged to collaboratively present their findings at meetings--as they often do in technical and dialogue sessions at the annual NERR conferences (Jacobi & Manning, 1996).

Not only do these activities enhance opportunities for managers to buy-into the research and its utilization, it also allows individuals from "different cultures" to get to know one another on a personal basis and helps build mutual respect, understanding and learning. Developing a "good chemistry" among people who are trying to work toward mutual goals should not be underestimated!

- *Student papers should be independent of the project scope and purpose.* Normally a funding agency or client would not be in the business of funding student papers. Research assistants seeking to use the research for a master's paper or Ph.D. dissertation should do so as a separate task from the funded research. Keeping the two tasks independent can reduce the time necessary to complete products for the research client and can help students understand there usually are conceptually different purposes and outcomes associated with academic papers and products for managers. Furthermore, keeping the tasks separate can protect a student's interests and research direction because sometimes the funding agency and the principle investigator (i.e., the student's advisor) will change the focus of the project.
- *Multidisciplinary team projects.* More and more frequently team efforts are used to address complex and controversial issues concerning leisure, outdoor recreation and tourism. The goal is usually to bring together a mix of disciplines to tackle problems that require multiple viewpoints and perspectives. Such projects can be fraught with administrative headaches and necessitate strong project management to accomplish their intended purposes. One way to achieve maximum collaboration and communication is to designate a coordinator to provide oversight and to provide timely progress reports (e.g., Lime, 1989; Mahn et al., 1998). Several recent projects focusing on recreation carrying capacity issues in the National Park System seem to have received high marks for the level of collaboration among a variety of researchers and resource managers (e.g., Lime, 1989; USDI, National Park Service, 1995; Hof et al., 1994; Manning et al., 1998). In each case there were extensive pre-study meetings to define and frame research questions, active participation by field managers in data collection and/or oversight, frequent meetings during the conduct of the research to access progress and broad participation by agency staff and researchers in discussions about the implications and use of data generated. Furthermore, funding to accomplish these activities was earmarked *up-front* to ensure they were not omitted or postponed. There was an apparent institutional setting among various levels in the management system committed to and held accountable for implementing, or at least giving strong consideration to implementing, the research. Of course, as key management players move elsewhere or change their perspectives on the issues, there is no assurance the decisions will remain in place or be extended.

An alternative approach to deploying formal research projects per se, is to convene an expert panel or team to visit a site and offer their informed and collective ideas about a particular question (Hof & Lime, 1997). In collaboration with area staff, of course, an interdisciplinary team could spend several days at a location exploring the general problem of concern, defining and framing specific questions pertinent to the problem(s), understanding management objectives and purposes, seeing existing resource conditions and discussing how to resolve the most critical problems. The team would conclude their visit with an interactive meeting with decision makers and offer a set of written recommendations concerning the issue(s) at hand. Depending on the nature and scope of the effort, this activity could be done voluntarily or with varying levels of financial remuneration. The results of such exercises would be useful in further planning activities by area staff and public involvement. Follow up activities with the public could be used to test the advice given and refine future direction. Such "design teams" have been used successfully in Minnesota for more than a decade to explore community development concerns in urban areas (Hof & Lime, 1997).

- *Extension agents to bridge the communication gap.* Specified individuals associated with user client groups (e.g., land management agencies, state tourism organizations, state extension services and academic institutions) could serve an important role as "go-betweens" to aid research use (McCool & Schreyer, 1977). Of course, the research community itself can develop handbooks, manuals and other products to transfer knowledge to a broader audience than the original client (e.g., Cole et al., 1987; Cole, 1989a; Cole, 1989b; Marion, 1991; Anderson et al., 1998; Wang et al., 2000). The most useful contribution of such actions might be in carrying the findings and implications of a particular project to the broadest audience possible without expecting these activities to be conducted by the originators of the information. Besides the written word, a variety of other communication techniques can be deployed to accomplish such objectives. For example, the Internet increasingly is being used to disseminate information for lay as well as working professional audiences.

Enhancing Education and Training of Researchers and Practitioners

Academic institutions and employers increasingly are calling for professional degree programs that develop leaders, communicators and integrative thinkers. Such pleas surely are voiced in programs addressing leisure, tourism, outdoor recreation and natural resources planning and management.

In spite of calls for more liberal education for working professionals, many programs continue to emphasize basic facts and principles and demonstrate a reluctance to increase complementary liberal arts training at the expense of reducing some content coverage (e.g., Wellman, 1995;

Propst et al., 2000). Critics of traditional education argue that growing citizen participation in resource decision making activities, for example, demands that managers gain expertise and confidence in dealing with the general public to address and incorporate diverse values into thoughtful decisions (Propst et al., 2000).

To address the need for a more liberally educated workforce, analysts have called for a change in the learning environment. Professional degree programs must foster a greater balance of learning basic facts and principles with student-driven learning in which students are better prepared to seek out and work with the public and to accept the public's participation in making decisions about resources and multiple values. Many of these "new" professionals would be subject matter experts who facilitate consensus and dialogue building (McCool & Patterson, 2000). In addition to their technical skills, they also should possess effective interpersonal skills to address and solve problems. At the same time, faculty and other researchers would need to know more about the questions, problems and actions of managers taken to fulfill their responsibilities.

What are some approaches, actions or suggestions to enhance the education and training of students, researchers and practitioners concerning the conduct and use of research?

- *Interaction with diverse publics.* Students could benefit greatly by meeting and conversing with various publics interested in leisure- and tourism-related issues. Such activities could be incorporated into professional courses with exposure to children, seniors, persons with disabilities, single parent families, and so forth. The focus could be to learn through face-to-face dialogue about their concerns and how they value resource conditions and opportunities. Group interaction can aid in developing skills in listening, communication and synthesizing diverse opinions and values (e.g., using qualitative research methods).
- *Exposure to real world problems and solutions.* Courses that expose students to problems faced by real world practitioners and researchers help them understand the realities of work beyond the classroom and can aid them in selecting additional course work to hone their skills in fruitful areas. Increasingly, educators are developing courses, seminars and field excursions that involve speakers from various disciplines and perspectives. One example is a course entitled "Social policy and management in National Parks and protected areas" offered at the University of Wisconsin, Madison (by Dr. Donald Field). Visiting practitioners offer real world experiences and lead discussions following their presentations aimed at developing critical thinking and analysis skills for students. Internships and practica reinforce academic lessons, as well (Hartigan, 2001).
- *Group projects and problem solving.* Closely connected to the previous two suggestions are

synthesis courses of one or more academic sessions that address problem solving activities for real world problems. Most are undergraduate courses, but it would seem highly beneficial to mandate similar courses for graduate students. Sometimes called "capstone" courses, students and faculty collaborate with area practitioners to define and frame a research problem, generate data to address the problem(s) specified and conduct problem solving exercises in which new data is analyzed and evaluated. Finally, conclusions are drawn and presented in written form and orally. Client groups participate in the project as appropriate and engage fully in the review of the project. Students are challenged to apply aggressively what they know and learn during the process and, through group interaction, enhance their knowledge base built on actual experience (Kolb, 1984). These experiential learning opportunities take away the fear and inexperience of working in the real world and working within a group setting. They also aid students in finding and performing well in cooperative education positions, internships and other programs that may lead to permanent employment.

- *Incorporating more liberal education courses into the curriculum of professional majors.* By adding liberal education courses to complement students' professional majors such as forestry, recreation and leisure studies or landscape architecture, they should acquire integrative and strategic thinking skills to envision the direct connections to their majors and minors. The capstone courses noted above could benefit greatly from direct links to selected courses in political science, geography, sociology, ethics, history, demography, rhetoric, computer science, professional writing for the major and so forth. To implement such strategies, academic departments and programs must accept that some coverage of traditional course work will have to be eliminated, reduced or integrated into other course offerings.
- *Continuing education.* "Lifelong learning" has gained support as employers and staff try to keep up with changing technologies, principles and ways of doing business. Continuing education is more necessary than ever because the workforce is growing increasingly older and more and more employees have not had formal course work for many years (e.g., Wellman, 1995). Resource management and tourism agencies are increasingly forced to deal with new paradigms, issues and models including sustainability, ecosystem-based management, integrated resource management, benefit-based outcomes, resource and social conflicts, access to resource opportunities and citizen participation in decision making. Those and other new topics require continual upgrading of employees' knowledge base, technical skills, and expertise.

Of course, on-the-job experiences contribute to continual learning, but so do structured programs to expose professionals to new knowledge. Questions about the effectiveness of such programs are

legitimate but some continuing education programs, such as one in the Minnesota Department of Natural Resources, have found that participants exhibit increased self-confidence in their jobs, expand communication networks among employees, are more timely in implementing new ideas and concepts throughout the agency and provide more consistent and informative presentations to the public (Anderson et al., 1995). Efficiency, shared learning and other benefits can be realized through interagency and collaborative training (students as well as instructors) in which various constituency groups share information and perspectives.

Continuing education and learning for managers and researchers also can be realized through conference "dialogue sessions," sabbatical programs at specific sites or institutions, volunteering, personal travel and reading. And, never underestimate the learning potential of observation and constructive listening.

Conclusion

The barriers to research utilization identified in this paper and suggestions to help ameliorate them represent only a few of the issues that are relevant to this topic. These ideas beg a variety of answers to important questions such as how to garner institutional support and how to fund more meetings or special analyses to specify problems and frame research questions, and to discuss progress, final results and implications. Then there are calls for more extensive review of plans and technical reports, and preparation of research summaries and other publications. Efforts to enhance continuing education for working professionals also are costly and compete for scarce financial and other resources. Pleas also have been made to alter the learning environments of undergraduate and graduate education programs so new professionals in the workplace will be able to demonstrate a greater balance between basic knowledge in their major field and liberal education skills. In spite of these and other potential ideas to enhance research utilization, research and management budgets are usually not "fat," and many projects are significantly strapped simply to "make ends meet."

Accomplishing these suggestions requires creating an institutional setting in which *all levels of the management system (management, research or academic) are committed to and are held accountable for activities that enhance research utilization*. Sometimes creating such a setting is hampered by not setting priorities or simply by a reluctance to do things differently. Increased buy-in and accountability could mean incorporating specific elements related to research utilization more explicitly into annual performance standards for affected employees that would result in salary increases and/or advancement.

Accomplishing such lofty goals will not come quickly or without controversy, and skepticism concerning the value of these actions will continue. Nevertheless, a "from-the-ground-up" approach in which dedicated individuals seek institutional change may give credibility to these principles and help market and implement them.

Looking to successful actions by others and replicating or altering them to fit new situations is undoubtedly one important way to demonstrate a need for and benefits of new perspectives. This was illustrated in this paper with examples of successful continuing education programs such as those in Minnesota that gained support at all levels of management throughout a particular Department of Natural Resources division (Parks and Recreation). The successes to date have engendered an employee ground-swell to continue training on a one- or two-year cycle. The successful implementation of capstone courses at many academic institutions suggests another shifting paradigm, as do specific courses to bring into the classroom practicing professionals to expose students and faculty to real world problems and the realities of addressing them. Many research project managers are realizing the benefits of taking sufficient time to frame researchable problems carefully, making sure there is true collaboration of researchers and managers throughout the research, including the reporting, discussion and implementation phases of a project.

For the academic and research community, for example, this approach could mean rewarding applied research and application on an equal or nearly equal footing with the production of theory-based refereed journal articles. Arguably there are ample opportunities to publish aspects of applied research in journals as there are to publish so called pure or theory-based research findings concerning leisure, outdoor recreation and tourism in applied outlets. State-of-knowledge and literature synthesis pieces also are of high scientific and application value, and persistence by interested, respected people in the field should raise their perceived worth. Credit for expanding undergraduate and graduate courses that are successful in developing better leaders, communicators and integrative thinkers also should continue to be recognized and rewarded. Mentoring with students and graduates as well as promising high school students that could be recruited into professional programs also should be acknowledged.

The management community should reward managers who demonstrate exemplary skill in managing research activities as well as conducting their other duties. Such activities should take on an importance of much more than "other duties as assigned." Organizational advancement also could be enhanced by interacting with the research or academic community in student learning activities and mentoring.

Ultimately, how well individuals communicate and work together reflects how well problems and research gets framed, research is used, employees are educated and conduct themselves and institutional settings shift paradigms. Real as well as perceived barriers to successful research utilization will not disappear, but they can be diminished or managed by dedicated and persistent people who strive to *do the right things*. So consider trying some of the suggestions offered in this paper! Striving to be a good example will clone our co-workers, colleagues and students. Hopefully the next generation of managers and researchers will continue to progress by *doing things right* to enhance research utilization.

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