

INSTITUTIONAL CHANGE AND CAMPUS GREENING AT TULANE UNIVERSITY

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Abstract—A case study of Tulane University that examines the institutional change process is presented in this paper. Agents of change can use the examples and conclusions as a basis for making changes at any institution. The inability for Tulane to make the campus environmentally sustainable in terms of operations and education was due to the lack of an institutionalized internal lobbyist and leader dedicated to environmental issues. That argument is supported with a model for institutional change, a historical analysis of nonenvironmental and environmental change initiatives at Tulane, a review of campus greening programs in institutions of higher education, and a series of interviews with Tulane students and employees. In the summer of 1999, as a result of an earlier version of this study,² an Office of Environmental Affairs (OEA) was created according to the “Blueprint for a Green Tulane,” which outlined the steps necessary for institutional environmental change to occur. The central component of that change is leadership from the OEA’s Environmental Coordinator and from students who will, in turn, carry their leadership beyond the campus to create a more sustainable world.

INTRODUCTION

“Greening the campus” means increasing environmental awareness or action or both on campus—in the operational facilities and processes of the campus as well as in the human communities of the campus and surrounding areas. Greening the campus involves working towards some or all of the goals set forth in the Blueprint for a Green Campus.³ Although the fundamental theme of greening is education, this study focuses on campus operations, the greening of which is pedagogical process itself.

The economics of campus environmental initiatives in higher education are well documented: greening the campus saves money. Twenty-three conservation initiatives at fifteen U.S. institutions of higher education each saved between \$1,000 and \$9 million, with total annual savings at \$16.8 million (Eagan and Keniry 1998).⁴ Investing in campus greening is therefore an economic, educational, and environmental investment with handsome returns—both financial and social.

In addition to saving money, campus greening allows students to learn how to infuse environmental sustainability into the larger society. Students must be able to practice (and see the university practice) the lessons of environmental sustainability, which they are taught in the classroom. Tulane has committed to environmental studies along with three other areas of interdisciplinary interest: urban studies, international studies, and information

technology. Together, the four are conducive to environmental responsibility and stewardship.

Tulane is located in New Orleans, LA, the southernmost port on the 2,552-mile-long Mississippi River. The Mississippi River Basin drains 41 percent of the landmass of the continental United States. The river is the dominant feature of New Orleans, and the university has designed research agendas and teaching curricula around it. Tulane was established in 1834 as the Medical University of Louisiana to study and treat “the peculiar diseases which prevail in this part of the Union” (Tulane University 1997). The university is now comprised of 11 academic divisions with approximately 6,500 undergraduates, 4,800 graduate students, and 8,000 employees, of which approximately 1,750 are full- or part-time faculty. Tulane is responsible for approximately 24,000 jobs in Louisiana and an annual injection of nearly \$1.5 billion into the local economy (Strecker 1998). With its location on the Mississippi River, traditional focus on health, and impact on the local economy, Tulane has a formidable presence in the Southern United States.

INSTITUTIONAL CHANGE

A Model for Institutional Change

Figure 1 is the model of institutional change. It is derived from a literature review of institutional change in higher education.⁵ Additionally, case studies in nonenvironmental

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² This article is excerpted from a larger study by the author, *Greening the Campus: Institutional Environmental Change at Tulane University* (1999). It is available on the Internet at www.tulane.edu/~env_stud/greening.htm.

³ The Blueprint (1995) mentions ten items: integrating environmental knowledge into all relevant disciplines; improving environmental course offerings; providing opportunities to study campus and local environmental issues; conducting a campus environmental audit; purchasing environmentally responsible products; reducing campus waste; maximizing energy efficiency; making environmental sustainability a top priority in campus land-use, transportation, and building planning; establishing a student environmental center; and supporting students who seek environmentally responsible careers.

⁴ The summary of financial data from Eagan and Keniry (1998) is available at www.nwf.org/nwf/campus/tools/publications/gigr/cost.html.

⁵ The complete literature review is in the *Greening the Campus* study.

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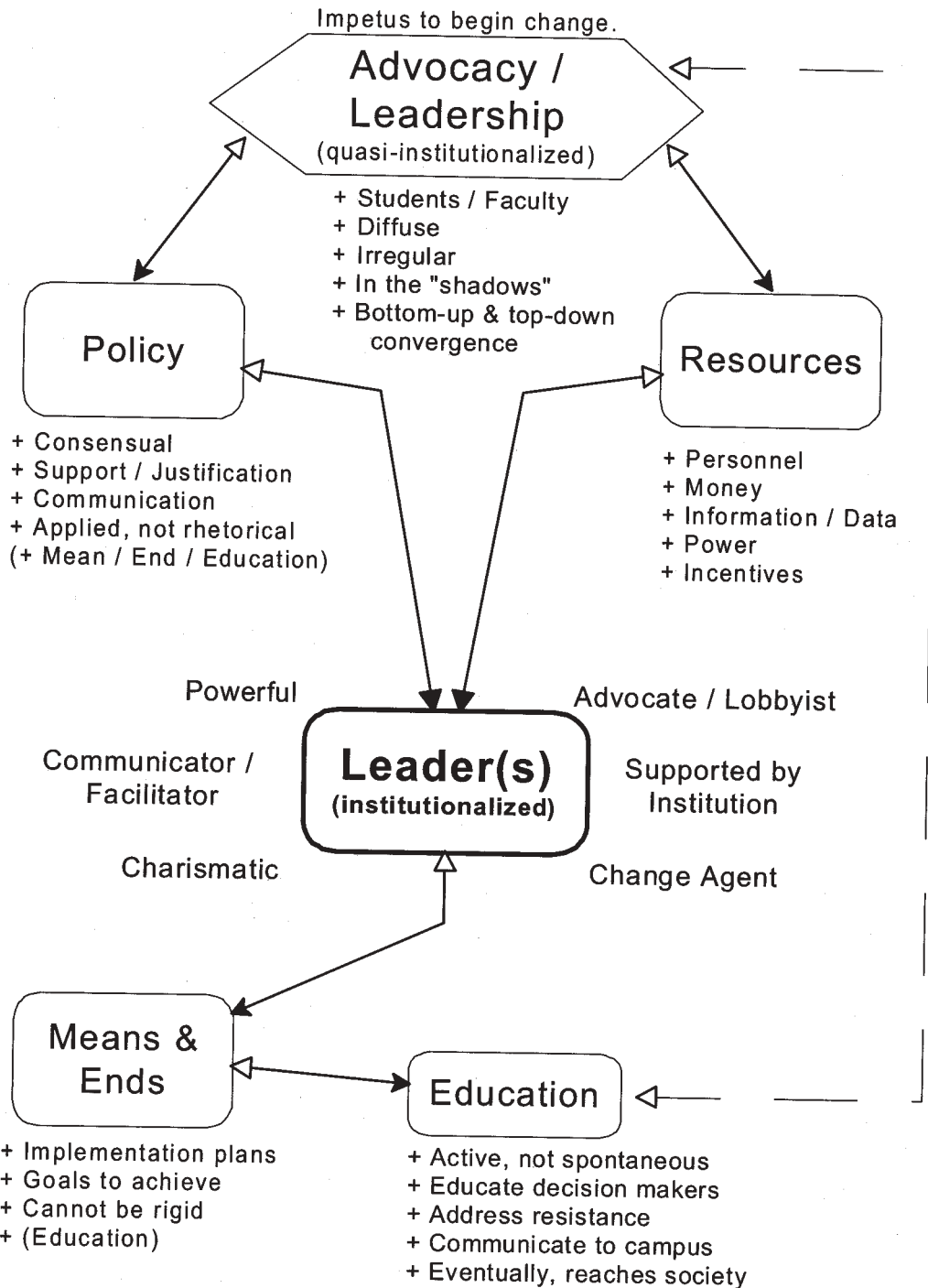


Figure 1—Schematic of the model for institutional change.

and environmental change at Tulane and in academia support the model, which itself is not restricted to environmental change in any way. The key element is a leader who is an administrator or faculty member but not a student because students lack power and connections and are temporary. (Students, however, do play absolutely integral roles in the change process, as discussed in a later section.) In addition to the leader, leadership from the administration is necessary to support the change agenda.

The model is a conceptual framework for understanding and implementing change. It is dynamic: the dark arrows represent normal "flow," whereas open arrows represent feedback. The model is dynamic not only in itself but also between applications; different circumstances result in different paths. For example, education (the "end") may result in further advocacy for new changes (thus the dotted line, effectively making the model cyclical); also, procuring policy may return the advocates to the advocacy stage

before getting resources. The model is not rigid; for example, policy may be skipped entirely, but the results of the change may not be permanent. Dividing the change process into the segments of the model is artificial but necessary; institutional change is not spontaneous, and greater understanding of the process will increase the likelihood of success for change movements.

Advocacy is the impetus to begin change. It is the product of diffuse, irregular efforts of (primarily) students and faculty found in the “shadow” of the university—the area outside of the “mainstream” of campus life and separate from the traditional governing structures of the institution (Bowers 1997, Mansfield 1998). Advocacy is usually a grassroots or bottom-up effort, but top-down advocacy is just as important: the two converge in the middle to create the integrated advocacy required for institutional change.

Advocacy results in policy. Development of specific and general policies should be consensual with the input of all appropriate parties. Policies should be applicable, enforceable, and nonrhetorical in order to support, justify, and communicate the change goals. Additionally, policy development and having policies in place are forms of education (a means and end) about the change agenda (Altbach 1974, Cerych and Sabatier 1986, Creighton 1998, Fantini 1981, Gitell 1981, Hamburg and Ask 1992, Keniry 1995, Lane 1990, MacTaggart 1996, Smith 1993, Strauss 1996).

Advocacy and policy procure resources. Roughly prioritized, the primary resources are personnel (a leader, support staff, an office), financial resources, information and data, power (or direct access to power), and the ability to offer opportunities and incentives for improvement and positive change. Resource allocations should be in line with the missions of the institution, and a continual supply of necessary resources will maintain the desired changes (Altbach 1974, Cerych and Sabatier 1986, Creighton 1998, Dominick 1990, Fantini 1981, Gitell 1981, Hamburg and Ask 1992, Keniry 1995, Lane 1990, MacTaggart 1996, Smith 1993, Strauss 1996).

Leadership is the key and defining element of the model for institutional change. Advocacy procures the leader, who is supported with policy and resources. The leader is in an institutionalized position dedicated to the change agenda. He or she is the change agent: the communicator and facilitator of the change process, the advocate and lobbyist for the change agenda. The leader needs power or direct access to power. The institution—especially the administration, which should also act as leaders for change—must support the leader. Finally, the leader should be charismatic. Important character traits include communication, interpersonal and listening skills, visionary planning, and the capability to accomplish meaningful projects (Berry and Gordon 1993, Creighton 1998) (see also Altbach 1974; Cerych and Sabatier 1986; Creighton 1998; Dolence and Norris 1995; Dominick 1990; Fantini 1981; Farmer 1990; Gitell 1981; Hamburg and Ask 1992; Keniry 1995; Lane 1990; MacTaggart 1996; Orr 1990, 1992, 1994, 1995, 1996; Rainsford 1990; Smith 1993; Strauss 1996; Wood 1990).

While the leader is the key element to the model, it is also the place for the tragic flaw: how one person can do everything. Some solutions include having other leaders and/or support staff, or, as discussed below, having a guiding committee and involving students in the change process.

The leader develops well-defined means to achieve agreed-upon ends. Neither the means nor the ends can be rigid. Means are the implementation plans; they are many and specific, and they address education and process re-engineering (physical and administrative). Ends are goals; they are few and broad in scope. Examples of ends might be ecological literacy of graduates and an environmentally sustainable campus (Alinsky 1971) (see also Altbach 1974, Dolence and Norris 1995, Eagan and Orr 1992, Farmer 1990, Keniry 1995, Lane 1990, Smith 1993, Wood 1990).

Education is the primary means and end. Campus decision-makers must be educated on the mechanics of the means and ends of the change agenda. The same issues should be communicated to the entire campus since education about the change agenda is not spontaneous, e.g., the campus community must be educated on the mechanics of a recycling program or the larger goals of environmental sustainability. Eventually, the education reaches society, and such is the ultimate goal for environmental change in higher education (Ackerman 1997; Altbach 1974; Brown and Duguid 1996; De Young 1986; Dolence and Norris 1995; Gitell 1981; Keniry 1995; MacTaggart 1996; Orr 1992, 1994; Smith 1993).

Some theory ties together the model for institutional change in higher education. Change does not happen spontaneously (Ackerman 1997, Bowers 1997, De Young 1986, Williams 1991). The changes pursued must be realistic. They will take time to achieve and will never be 100 percent complete (Cerych and Sabatier 1986, MacTaggart 1996, Steeples 1990). Operational changes affect some people significantly, whereas most are affected only minimally; transformation, not revolution, is needed. A two-dimensional framework of change is appropriate for Tulane: depth is the degree to which a change requires a departure from existing values and practices, and breadth is the number of areas within the institution that a change is expected to introduce modifications. Wide/deep changes result in opposition, and narrow/shallow changes do not take hold. Changes are most likely to succeed when they are moderate in depth and breadth of change (Cerych and Sabatier 1986). Institutional environmental change with regard to campus operations is moderate change (Hamburg and Ask 1992).

Nonenvironmental and Environmental Institutional Change at Tulane

Six case studies of change initiatives at Tulane show that moderate and profound changes are possible—given an empowered leader (or leaders) with resources and policy who introduces means and ends to implement change.

Multicultural Affairs, Bisexual, Gay, and Lesbian Affairs, and Tulane College Programming show that it is necessary to establish offices responsible for oversight and implementation of changes. Advocacy began the establishment of all three, and all established policies and procured resources; then institutionalized leaders

implemented educational programs (means) to achieve broad goals (ends). Two other reforms were more ambitious in their scope: Tulane 2000 sought to stabilize the university's budget (and subsequently focus the institution's academic priorities) with cutbacks and resource reallocations; the University Transformation Program sought to improve the quality of staff services and classrooms, create an extracurricular program for first-year students, institute an information technology helpdesk, and establish an international studies office. Both initiatives had a leader (the president and the provost, respectively) and resources to develop and implement policy to affect change. People did not immediately embrace these issues (they were not spontaneous); advocates and leaders convinced the campus that they were meaningful changes. For example, Tulane's management takeover of the Housing Authority of New Orleans was not spontaneous—the leader who initiated the project believed that Tulane's involvement was appropriate and in the best interests of HANO, Tulane, and the citizens of New Orleans.

The necessary elements of achieving change characterize these preceding examples, and most fit into the strategic goals of the university (urban studies, international studies, information technology, and environmental studies). Missing from these six initiatives, however, is a concerted effort to make Tulane more environmentally responsible. Whereas environmental research and education have improved (largely due to grant funding), the third and critical element of a green institution of higher education—operations—has not been greened. The three divisions of the university are research, education, and operations, and, at Tulane, each has been greened to some extent.

Environmental research has been the most successful division. It is a popular area because of the income associated with research grants and the opportunities for publishing. Also, quasi-policy (the environmental studies focus) and resources (multimillion dollar grants) led the development of extensive environmental research programs. The leadership of Dr. John McLachlan of the Center for Bioenvironmental Research at Tulane and Xavier Universities (CBR) has developed, coordinated, and maintained environmental research program opportunities. The research division received a subjective grade⁶ of "A-" in the spirit of the Green Gradecard for the Green Wave environmental audit (discussed in a later section).

Tulane's Environmental Studies Program (ENST) has a history that epitomizes how institutional change occurs. In the early 1970s, students lobbied for the creation of the ENST, but the resulting coordinate major program (in which students major in another field in addition to environmental studies) stagnated until the early 1990s because the program was not allocated a budget and had only the devotion of one professor, who was not compensated for his

involvement. As a result of the then new environmental studies focus of the university, the program progressed: new faculty became involved and established an environmental education committee, and grant monies provided the resources to offer course development grants, purchase equipment, hold training seminars,⁷ and hire a part-time program coordinator. As a result, the program prospered, and enrollment increased dramatically. But the faculty leading the program could not dedicate enough of their professional time to the program; they treated it as if it were a University Senate committee. The student environmental organization, the Green Club, worked cooperatively with the ENST on numerous projects, including the Environmental Forum Newsletter, campus environmental email lists, and the design and publication of the Enviro Counter Culture Catalog, a guide to environmental classes at Tulane, which has received wide acclaim from within and outside of the university.⁸ In 1998, the grants ended and the university did not provide a budget for the ENST and its more than 50 students. The CBR stepped in to fund the program, but that funding is also from grants. The future of the environmental education program at Tulane is in question because of the lack of institutional support (a budget). The program is still directed by faculty members who receive no compensation or official credit for their time. Whereas the ENST has potential to be a top program at Tulane and in the Southern United States, the lack of support and the absence of a full-time dedicated leader are hindering such success. The education division received the subjective grade of "B-".

The Green Club and the Tulane Environmental Project (TEP) have been significantly involved in the greening of one operational aspect of Tulane: recycling. Recycling at Tulane began in the 1970s as a volunteer effort. In the late 1980s, the Green Club formed to address more institutionalized recycling. In the early 1990s, Green Club leadership petitioned the university to establish a committee to green the campus. Tulane's president at the time, Dr. Eamon Kelly, established the TEP and appointed the chair, Oliver Houck, Professor of Environmental Law. The TEP was active for 2 years. In the first year, the members of the TEP researched and implemented a recycling program, hiring a full-time coordinator and receiving a minimal university budget. (In their second year, they began a recycled procurement program to "close the loop," but that initiative was limited to a few paper products.) Peaks and troughs in student leadership and activism (advocacy), the coming and going of numerous recycling coordinators over the years (leadership), and variable administrative support (resources) have led to peaks and troughs in the success of recycling operations. The Green Club has attempted other operational greening programs, e.g., a "Green Dining" initiative in Tulane dining areas, with minimal success. The administration took on an economics-based lighting retrofit, which did not include any education initiatives for saving energy and had no explicit environmental motives, but no other significant environmental initiatives have been

⁶ The Green Gradecard did not use any standardized grading procedure; the approximately 45 students who conducted the audit relied on collective, subjective judgement to grade each area. The same subjectivity was used in this study, although the research behind the decisions was more extensive.

⁷ Information on the faculty enrichment seminars is at www.tulane.edu/~efes/.

⁸ The Catalog is available at www.tulane.edu/~greencb/catalog/.

institutionalized. The operations division received a subjective grade of “D-”/“D”.

The history of greening at Tulane supports the model and reaffirms the need for a leader. Research has had a supported leader, and that division has been successful. As for education, the Environmental Studies Program should be a university-supported program with a leader. Recycling and procurement programs are in need of improvement; each needs policy, resources, leaders, and comprehensive means to achieve those ends. Additionally, other campus greening programs for operations need to be established for Tulane to live up to its reputation as an environmental (research and education) university.

THE GREENING PHENOMENON IN HIGHER EDUCATION

The Green Gradecard for the Green Wave environmental audit highlights many areas that are in need of improvement at Tulane, especially when compared with other institutions of higher education.⁹ Experiences in academia offer caveats, lessons learned, and examples on which Tulane can build and even exceed. The greening initiatives in academia support the model for change, and they show the sound economic, social, and environmental implications of such programs (Blueprint 1995, Creighton 1998, Eagan and Keniry 1998, Keniry 1995, Smith 1993).

Environmental audits are powerful tools for gathering information about the environmental quality of the campus. They are the starting point for environmental change, and they provide information to educate the campus, the community, and especially those involved in the audit. Tulane’s audit, the Green Gradecard for the Green Wave, which an Environmental Sociology class conducted in the spring of 1997, issued letter grades with respect to various areas of environmental performance. Environmental Studies, an energy-saving lighting program, and hazardous waste policies received “A-” grades, whereas recycling, investment practices, and procurement of chemicals and pesticides received failing grades. Overall, the audit graded 22 areas, and Tulane’s “Green GPA” came out to a 1.9/4.0, or a “C” average. The audit concluded that the university should make an “institutional commitment to incorporate environmental decision making into all facets of [campus] operation . . . [and] establish a standing University Committee for Environmental Affairs.” The Gradecard supports the model for change in that it advocates institutional policy and resources that would allow for administrative (leadership) efforts to implement environmental change.

Programs at other institutions concerned with environmental curricula and campus environmental consciousness illustrate the essential role of leadership to provide education. Their success is reflected in campus environmental cognizance. Progressive environmental building, land use, and transportation (parking) policies have social, administrative,

and economic benefits. Energy and water conservation programs are financially sound and serve as education about the importance of conserving natural resources. The greening of food service operations has health, environmental, and economic benefits for the campus and local community. Waste issues (recycling, hazardous waste, and medical waste) are visible to many in and out of the campus community; greening them is fiscally responsible, is educational, has positive impacts for the environment, and improves the image of the institution. Green procurement provides market stimulation to keep recycling and waste reduction initiatives available and economical. Finally, environmental research and socially responsible business and investment practices have impacts that can be felt around the world. Case studies from progressive and innovative institutions in the above areas provide examples of what and how Tulane can green (Creighton 1998, Eagan and Orr 1992, Keniry 1995, Smith 1993). Many of the case studies support the model for change.

HEARING FROM THE TULANE COMMUNITY

Interviews with Tulane students, staff, faculty, and administrators further support the model. Five of the six questions support the thesis of the study that a leader is needed to institutionalize and carry out greening efforts.

The four main institutional change barriers, as determined from the interviews, are institutional/organizational (lack of communication, lack of advocacy, and the lack of a leader), financial (lack of allocation of resources), cultural (lack of education),¹⁰ and educational (lack of a modus for education). Interviewees thought that greening programs should relate to operations (administrative and physical) and education (individual and community learning, both in and out of the classroom). The results of the interviews clarify roles of each tier of the university community: students as learners, educators, and advocates; staff as learners and empowered “doers”; faculty as advocates and educators (who should practice environmental sustainability, especially if they teach it); and administrators as leaders in all aspects of the greening process. The responses for the roles of administrators reiterated every element of the model and focused on the need for an environmental coordinator to lobby the administration on environmental issues. Finally, interviewees affirmed that it is possible and appropriate to green Tulane. It is now possible to formulate a proposal for greening Tulane.

THE “BLUEPRINT FOR A GREEN TULANE”

The “Blueprint,” which is based on the model for change, is the plan for implementing institutional environmental change at Tulane. Included in it is the proposal to establish an Office of Environmental Affairs (OEA) and create an Environmental Coordinator position, both of which were accomplished in the summer of 1999. The “Blueprint” is presented here as outlined in the spring of 1999; changes in actual implementation are presented in the Conclusion.

⁹ Tulane’s mascot is the “Green Wave.” The Green Gradecard for the Green Wave is available at www.tulane.edu/~greencb/audit/audit.html.

¹⁰ The “cultural barrier” is complex, and more research is necessary to determine specific aspects that could be the target of educational programs.

Advocacy

Re-establish/reinvigorate the Tulane Environmental Project (TEP) as the Tulane Environmental Committee (TEC). Ideally, President Cowen should initiate the new TEC; he should also confirm all appointments to the TEC and appoint the chair who would act as the presidential liaison. The TEC would be charged with approving an annual agenda for campus greening and reviewing OEA projects. A working group from the TEC could develop such an agenda and then continually work with the OEA. The Environmental Coordinator of the OEA would report to the TEC, (which would, in turn, answer to the president). The TEC would meet once or twice each academic year with representatives from the students (Associated Student Body and Green Club), the staff (Staff Advisory Council), the faculty (University Senate, CBR, and ENST), and the administration (President's Executive Working Group). Such representation involves the research, education, and operations divisions. The members of the TEC should be the key players on campus with regards to environmental change. The TEC would be the convergence of grassroots advocacy, which has been displayed for years, and top-down advocacy, which has yet to be shown, while simultaneously holding the power to make environmental change. The TEC, the OEA, and the Environmental Coordinator are interdisciplinary, interdivisional entities pivotal for coordinating comprehensive institutional greening.

Policy

Publish a statement that Tulane will be a leader in environmental research, environmental education, and environmental stewardship. The statement should outline the core values of environmental responsibility that Tulane will espouse. With such a proclamation, the TEC could gather input from the university community via "town meetings" and could draft a university environmental policy statement. The president and the various legislative bodies of the university could then ratify the policy. Additionally, it would be necessary for the university to sign on to national and international environmental platforms, e.g., the Talloires Declaration and the Valdez Principles; such involvement brings national and international attention as well as assistance in implementing sustainability on campus. Finally, project-specific policies, such as for recycling and procurement, should be developed.

Resources

Seek funding for institutionalizing the OEA from internal and external sources. Internal funds could first come from a cooperative funding procedure, whereby each of the academic deans, along with the vice presidents who would be primary representatives on the TEC, would contribute \$3,000 to \$5,000 for the job search and first year's salary of the Environmental Coordinator. With a job search estimated at \$3,500 to \$4,000 and with salary and benefits estimated at \$36,000 to \$36,500 (for a senior program coordinator position), a total of approximately \$40,000 is needed; with eight academic deans and three vice presidents, the cooperative funding program could work. (In the spring of 1999, no one was reluctant to contribute to such a cooperative funding measure; they did mention that they would be more willing to participate once they knew that the

president supported the OEA proposal.) This literal buy-in into the OEA is important for developing cooperation.

External funds could come from alumni gifts and endowments for programs, such as scholarships and speaker series, and grants for projects and operating expenses. An endowment of \$1 million would secure the OEA in perpetuity; the Office of Development could assist in such fundraising. Some grants pending in the ENST include such monies in anticipation of the OEA; the ENST has found, however, that granting agencies will not pay for employee salaries but are more likely to provide funds for students, programs, and operating expenses. A study sponsored by the Nathan Cummings Foundation suggests that granting agencies and foundations fund specific campus projects that have the potential for success and could serve as a model for other institutions to use. Additionally, the report recommends "seed money" funding for projects that will eventually sustain themselves (Strauss 1996).

Other potential funding mechanisms include a university budget, internal "loans" repayable with savings from cost avoidance programs, and a student environmental fee. The more innovative the design of the OEA, the more marketable it is; as such, the OEA could easily raise outside funding—especially from alumni and foundations. Other necessary resources include personnel, information and data, and an office. The issue of personnel is addressed later. Initial sources of information and data already exist (the larger study from which this paper is extracted and the environmental audit mentioned above), but an annual report of the OEA submitted to the TEC, e.g., the "State of the Tulane Environment", could continue to chronicle important information and data. Finally, the OEA has been allocated office space in the new Environmental Science Building complex where it will be in close proximity to most of Tulane's environmental research and education programs. The CBR, Green Club, and Environmental Studies Program can provide necessary office supplies, including a computer, until full funding is raised.

Leadership

Empower the OEA to make a positive impact on campus. The Environmental Coordinator should work closely with various campus entities and constituents to develop and implement greening initiatives.

Means and Ends

Educate the campus on environmental issues. This education could be via the following possibilities: large- and small-scale seminars and programs for students, staff, faculty, and administrators; continued research into and implementation of greening initiatives; a comprehensive measurement/reporting system; the development of an environmental management plan; and classroom and curriculum initiatives. The TEC should initially prioritize projects, and, after the first year, the TEC could approve annual plans and review past performance. The "ends" should be outlined in general and specific policies. The Environmental Coordinator might also teach environmental classes such as "The Campus and the Biosphere" or "Ecological Design."

THE OFFICE OF ENVIRONMENTAL AFFAIRS

Leadership

The OEA will house the leadership that will make environmental change at Tulane: the Environmental Coordinator. As the director of the OEA, the Environmental Coordinator should report to the TEC. Dr. John McLachlan and the CBR would essentially provide a “home” and some day-to-day operational oversight for the OEA, whereas the TEC would provide the approval and guidance for long-range operations. Dr. McLachlan might also chair the TEC. Such an establishment is necessary because of the access to the varied power and resources of TEC members in addition to the valuable experience with successful environmental change initiatives of the CBR and its director. The TEC would involve the people who guide the university in its daily and long-range operations and would ensure that environmental concerns are heard. The TEC could appoint a working group (with ample student involvement) to cooperate with the OEA throughout the year on projects and programs.

The OEA should be “bootstrapped” to each division and tier of the university: research, education, and operations; and students, staff, faculty, and administrators. Bootstrapping involves creating official and unofficial connections that prevent atrophy or abolishment and that foster collaboration and cooperation between all areas of the university. Such connections include research programs with the CBR; educational and service programs with the Green Club, the ENST, and various deans; and operational programs (the ones that will receive much of the focus) with the appropriate vice presidents and facilities administrators. Many other connections are possible with Janitorial Services, Student Programs, Orientation, Admissions, Housing and Residence Life, Athletics, and campus institutes. These connections bootstrap the OEA to the core of the university and provide ways to affect change.

Having an environmental coordinator—the leader—is absolutely critical to the institutional environmental change movement. The leader should be a full-time employee with appropriate experience and degrees; the leader cannot be a student, although students are the second key to success.

Students

Students from the Green Club, ENST, student organizations, and the general campus population are pivotal to the feasibility and success of the OEA. Not only could students carry out office duties in the OEA, they could also participate in and benefit from the myriad programs. To maintain their involvement, ENST and OEA fundraising endeavors could provide work-study funds for student workers, scholarships for leadership and academic excellence, and research assistanceships for student projects. Such opportunities would also be excellent recruiting tools.

As “customers,” students are effective advocates for change; they could advocate and stand up for issues in student milieus by representing the OEA on various campus committees. Through the OEA, students would have an organized outlet for environmental activism, volunteerism,

and research opportunities as soon as they arrive on campus. They would provide a constant source of enthusiasm and ideas for the program, continually clarifying the *raison d’être* of the OEA. Students would be involved in an active learning and service community, and they could gain valuable leadership and job skills by, for example, taking part in efforts to educate campus denizens through various programs such as greening seminars, the Internet, and publications.

As well as contributing to the success of the programs of the OEA, the students will also be active participants in their own education. In addition to classes, other educational venues include service learning in the community and campus environmental research, effectively using the campus as a laboratory for environmental problem solving and for learning how to make positive environmental change.

Programs of the OEA could also help create connections for students, especially between students and place, i.e., Tulane and New Orleans. The connections they make at Tulane through the OEA—with outside agencies, community members, with professors and, most importantly, with each other—would ensure the lasting success of the OEA because of the broad and dedicated alumni support network that could develop. And the innovative programs of the OEA and ENST could certainly attract talented new students.

The OEA will depend integrally on students; it will also empower, support, and educate them. The relationship will be one of symbiotic, collective leadership, and learning. Campus sustainability programs are an extraordinary boon for the students, the entire university community, and, ultimately, modern civilization. The students will carry their lessons and skills with them, disseminating environmental sustainability wherever they live.

Programs

Potential programs of the OEA range from large-scale projects (conferences with national or international organizations) to smaller scale projects (office recycling education in a department; they would encompass the four divisions and four tiers of the institution, the areas of Tulane’s strategic interest, and all appropriate environmental parameters. Through the TEC, presidential invitations could be sent to key faculty and administrators to strongly encourage them to participate. In doing so, the OEA would educate campus decision-makers and crystallize their involvement with campus stewardship programs, all of which would strive for ecological literacy.

The OEA would not necessarily run all the programs, but it would help coordinate efforts, provide information and experience, and advocate for new programs. Students are an integral part of the programming function of the OEA, and they comprise the crucial links between the OEA and the myriad departments, programs, and organizations on campus and in the community. The successful projects of the OEA should be chronicled in campus, local, and national media. Projects would likely begin focused on campus; once the OEA builds momentum and accomplishes some campus

tasks, programming could move into the local community. The program possibilities are virtually endless.¹¹

CONCLUSIONS

In the early fall of 1998, it was estimated that, with fundraising throughout the year and with hiring in the spring, the OEA could be in place by the summer in order to prepare for the next academic year. In 1998 when an earlier version of this study was circulated to raise support and funding, eight deans, the CBR director, the vice president for administration and planning, and the provost all said that they were in support of the initiative in principle. Funding was solicited from these senior administrators via a one-page proposal abstracted from the “Blueprint”. It cited the research findings (presented earlier) and recent events (outlined later) as sources of campus support and asked for their financial contribution. Follow-up meetings ensued with most of them. Eventually, all were in support but were hesitant to commit resources before they knew the opinions of the president. After convincing them of presidential support, each donated amounts ranging from < \$1000 to over \$5,000. Then the hiring process began, and the OEA was established.

In 1998–99, Tulane was in a time of profound change—a presidential transition. Tulane’s new president, Dr. Scott Cowen, saw that year as a “renaissance of thought and action” to redesign Tulane for the future. That time of strategic planning was an opportune time for institutionalizing the greening process, and the grassroots advocacy pulled out all stops in order to convince President Cowen that the OEA was a good and worthwhile venture. He was not immediately convinced of the validity of the project, but after 1 year of advocacy, he gave his verbal support. At least seven actions were fundamental to the advocacy of 1998–99. All were student initiated and led, thus exhibiting the unique role and power of students in implementing change. The president was their ultimate target, but the advocacy helped crystallize the involvement of the administration and the campus in general.

First was the establishment of the Associated Student Body’s Committee to Green Tulane, which created a proposal asking the administration, and the president specifically, to implement steps that would make the university more environmentally responsible, including establishment of the OEA. By the spring, the committee presented its recommendations to the student body assembly, which passed the resolution; a subsequent campus newspaper article on the resolution included a quote from President Cowen supporting the recommendations in principle. Second was a year-long series of letters to the editor regarding campus environmental initiatives, all of which were in response to contemporary campus news issues, such as parking and security lighting, which were not originally presented as environmental in nature. The third item involved the collective results of numerous programs by the Green Club,

including public events on Earth Day and America Recycles Day as well as numerous smaller events that garnered campus media attention. Fourth was a continual series of meetings on the proposal with the president and other administrators. Fifth was the attention provided to Tulane when the present author, then a graduating senior, was selected for a national scholarship, as well as top campus honors, for work greening Tulane; those events involved local television as well as local and national newspaper coverage.

The penultimate item was of great importance to the eventual success of the advocacy. Using the Greening the Campus study and some of the core texts that informed it (Creighton 1998, Keniry 1995), the present author and Dr. Charles Reith, a visiting professor of business and environmental studies, teamed up to create a class entitled “Ecological Design.” The class performed an in-depth audit of Gibson Hall, Tulane’s main administration building that houses the offices of the president, provost, senior vice presidents, and other upper administration. The results of the audit were presented in poster form at a campus-wide Earth Day celebration in Alcee Fortier Hall, one of the two new environmental science buildings on campus. President Cowen, many administrators, and hundreds from the campus community were present at the event. A report with suggestions for specific improvements, one of which involved the establishment of the OEA, was prepared and submitted to President Cowen; the campus faculty-staff newsletter featured the Gibson Hall audit, and the report and posters were placed in Gibson Hall itself as well as on the Internet.¹² In addition, earlier in the semester members of the class attended and presented at a national conference on ecological campus design. The eight Tulane delegates—two staff, one faculty, three students, and the two professors—eventually drafted a letter to the administration supporting efforts promoted at the conference, and they formed a working group that continued to meet and follow up on ecological design issues. The class also sponsored two campus-wide events: a public lecture by renowned campus environmental activist David Orr of Oberlin College, which was well attended (especially by administrators) and was pivotal to the campus greening dialogue; and a round-table discussion on the merits of the International Standards Organization’s environmental management scheme, ISO 14001.

The ISO issue became the final and pivotal item in the advocacy effort. President Cowen, a professor of business, understood the language of ISO 14001 and eventually lent his support to a concerted effort to decide if it was best for Tulane. A 1-day conference on the feasibility of ISO at Tulane was held in May of 1999; it involved many faculty and senior administrators, and even included an important appearance by President Cowen. The proposal for the OEA (the “Blueprint”) now included language that called for pursuing ISO certification, which Tulane saw as a program that could eventually go beyond campus boundaries and connect with

¹¹ For examples of potential programs, see Greening the Campus (footnote 1), especially Appendix F (also Table 4 of the Executive Summary).

¹² The class report and syllabus are at www.tulane.edu/~greencb/enst481/.

local institutions that have environmental impacts (especially industry).

With presidential support and 2 years of funding procured, a national job search began in early June. In early August, a committee hired Elizabeth Davey, who had experience in campus greening initiatives and the added bonus of having a Ph.D. in English, providing her with a familiarity with the academic environment and a certain legitimacy among the faculty. Unfortunately, the group who formed the search committee and who should have eventually become the Tulane Environmental Committee, did not form the TEC, and thus starting institutional change and campus greening moved more slowly than it would have if the TEC were initially in place. Whereas the TEC has yet to be formed, the ISO initiative may result in its creation because it is an important element for ISO certification. Its absence has been noticeable.

It was a controversial decision to place the OEA in the CBR because of the center's isolation from many aspects of the university (especially the operations). However, the most appropriate home for the OEA, the office of the vice president for administration and planning, agreed to consider relocation of the OEA after it becomes established because placing it in the CBR for administrative start-up purposes seemed the best decision despite the political ramifications. The office space in one of the two new environmental studies buildings on campus guaranteed a close proximity to other environmental programs such as the Environmental Studies, the CBR, and the Green Club, whose Student Environmental Center is located there. After a year of operation, the future placement of the OEA is still uncertain.

All the elements of model for institutional change are evident in the events that unfolded at Tulane. Presenting the model to the administration also legitimized and supported proposed decisions since they saw the logic, data, and support of the literature (and academics resonate with academically supported arguments). The advocacy stage involved the collective efforts of many to convince the administration to go forward with the proposal; the TEC as a formal entity was not the instrumental advocacy group as in the "Blueprint." Resources were pooled collectively, and plans are already in place for alumni fundraising and grant writing. Policy exhibited the dynamism provided for in the model. Only informal policy (the early versions of the "Blueprint" and commitments to funding support, for example) was in place before the hiring of Dr. Davey. Eventually, formal policies will be established as in Tulane's Strategic Plan in which, as a result of Davey's work and the advocacy that led to her appointment, President Cowen has recently included environmental issues. The OEA is in place, and its leader, Dr. Davey, is working closely with the various groups, departments, and schools and is developing a variety of means to educate the campus on environmental issues with the eventual ends of environmental responsibility. Although much planning remains to be done, she has already started campus greening projects such as: instituting a grant program for student campus environmental research and education projects, creating with alumni the Tulane Environmental Network, improving recycling and

composting efforts, creating an "ecological design" chapter of the campus master plan, developing a preorientation program, and developing an environmental Web page.¹³

The model has provided a helpful framework for understanding and activating institutional change. The limitation of the "Blueprint" (and of the model) has been recognized: it limits to one person the responsibility for making Tulane an environmentally responsible institution, rather than sharing the responsibility and initiative across schools and departments. Some of that limitation could have been alleviated if the TEC had been successfully established before or at the time of Davey's hiring. The second element to remove some of that limitation, however, is being actualized. With Davey's leadership, students are playing key roles in greening Tulane; they are being supported with work-study funding, semester research grants, and extracurricular activities. In fact, it cannot be stressed enough that the students—from the Green Club, the Environmental Studies Program, the Associated Student Body and the general campus population—were absolutely central to the success of the entire initiative to institutionalize campus greening. Moreover, they are key to maintaining the effort, and, after their campus tenure, these students and their peers will take sustainability beyond the campus to create a more sustainable world.

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¹³ See www.tulane.edu/~eaffairs/.

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