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Research-Based Outreach: Albert Bandura's Model

Abstract
Knowledge based on research is the most distinctive resource that universities have to share. The traditional approach has been simply communicating the results of research. The psychologist Albert Bandura has participated in a far more sophisticated and efficacious form of outreach in which his pathbreaking research on influencing human behavior is reinforced by multi-disciplinary and multi-investigator research in aid of writers, actors, and communication specialists. Research identifies critical issues and illuminates the causes and conditions surrounding them, guides the planning of responses, and tests their efficacy. Research-based outreach requires the theoretical and methodological tools of a multi-disciplinary team.

Stephen F. Hamilton
Associate Provost for Outreach, Professor of Human Development
Cornell University
Ithaca, New York
sfh3@cornell.edu

Universities live in tension between the isolated contemplation of the monastery and the hectic exchange of the marketplace. Universities emerged in twelfth-century European cities and towns, eventually displacing monasteries and cathedral schools as centers of learning, and expanding the curriculum to prepare future doctors, lawyers, rulers, and warriors as well as clerics (Haskins, 1923/1957). Although universities have continued to enjoy some degree of protective isolation from the "real world," they also retain obligations to the societies that charter and pay for them. Living in tension between the monastery and the marketplace gives universities their capacity to bring knowledge to bear on practical problems.

Extension, outreach, and engagement manifest that creative tension. (These terms can be distinguished, but they have much in common.) When universities share some of their resources with people beyond the academic community, they simultaneously demonstrate the value of the support and protection they enjoy and give up some of that protection. Land-grant universities were founded with a mission to the marketplace, but now nearly all institutions of higher education in the United States claim to do more than teach and conduct esoteric research. They encourage students, faculty, and staff to participate in their communities, point with pride to their contributions to economic development, and issue press releases about the benefits promised by their faculty's newest research findings.

Energy and expertise are two of the resources universities have to share. Person-power is found in abundance on campuses. Students especially, but also staff and faculty can pitch in to make things happen in their local communities and elsewhere; alternative spring breaks to help clean up hurricane damage along the Gulf Coast are an excellent recent example. Such high-energy activities are worthwhile, but the kind of outreach that higher education can do better than any other institutions is grounded in knowledge, the academy's stock-in-trade.

Not so long ago, simply disseminating reliable research-based information was a great contribution, one in which universities excelled all other institutions. Cooperative Extension is the institutional epitome of this contribution. But as the volume of information multiplies and electronic technology makes information more easily accessible, universities are in competition with many other sources of information. The challenge has become to reach out effectively and reciprocally, to move from being the fount of knowledge toward joint participation with community partners, being responsive to pressing needs while inquiring continuously into how best to meet those needs. Outreach of this nature helps to sustain the balance-in-tension between the university as a cloister for learning and the university as an actor in the affairs of the day. (See Peters, Jordan, Adamek, & Alter, 2005, for an insightful treatment of this type of engagement.)

Social Cognition in the Service of Health and Welfare

Delivering the Henry Ricciuti Lecture at Cornell, Albert Bandura provided an exceptionally rigorous example of research-based outreach, which he prefers to call "translational research." Considered by many to be the world's most eminent psychologist, Stanford's Bandura is best known for his ambitious and elegant experiments and his powerful theoretical writings. The use of his research in outreach activities helps to re-define what it means to do research-based extension. (See also Dunifon, Duttweiler, Pillemer, Tobias, & Trochim, 2004).

He described several programs in developing countries that are using his insights to alter attitudes and behavior toward gender equality, family planning, and health behavior. He showed brief illustrations and discussed "serial dramas" broadcast by radio or television in Brazil, China, India, Mexico, and Tanzania. These programs have been carefully designed according to his principles of social influence and behavior change and their impact has been stunning. Enrollment in literacy programs in Mexico rose from 100,000 to 1,000,000 when TV characters learned to read. Radio dramas in Tanzania led to increased condom distribution and reductions in numbers of sexual partners. As a rigorous test of their impact, broadcasts were limited initially to one half of the country. Subsequent broadcasts to the other half of the country yielded the same changes (Bandura, 2004).

The Many Contributions of Research

Research contributed in different ways and at multiple points to these successful efforts at "fostering society-wide changes." Bandura's presentation began with data establishing the need to reduce unsustainable population growth in developing countries. Demographic and public health data directed outreach toward demonstrated needs and toward those most in need. Those data also serve as a baseline for subsequent evaluation.

Bandura's scholarship on ***The Social Foundations of Thought and Action*** (1986) provided the theoretical grounding for the serial dramas. As a partial illustration, his research has found that effective modeling for behavior change entails not only a positive model but a negative contrasting model plus a transitional model, someone who is going through the change from negative to positive. Making use of this finding, script writers created characters to serve as these three types of models.

A third type of research also supported the script writers' creativity. People representing the intended audiences were interviewed about the kinds of problems and issues that are important to them, revealing as well how they think and talk about these matters. A variant of market research (more specifically, social marketing), this form of inquiry aided the script writers and actors in portraying situations with which audiences could identify. As the programs aired, additional research monitored audience response, checking on which characters proved attractive and which situations challenged audience members to think and act differently. Depending on one's discipline, this can be thought of as either additional market research or as formative evaluation.

No matter how well-crafted it may be, a serial drama has no impact without an audience. Research on communication and on the diffusion of innovations guided both the broadcasting of the programs and the provision of supplementary programs, such as increased availability of contraception. Research of this nature revealed, for example, that villages in which people gathered around one radio to listen to a serial drama proved to be ideal settings for post-broadcast discussions, which augmented the program's impact. It also confirmed the importance of giving audience members access to services and sources of information that would help them to follow through on intentions to change their behavior in response to the serial dramas, for example, a toll-free number to call for help in combating spouse abuse.

Any enterprise of this magnitude must be carefully evaluated. The evaluation research Bandura described went well beyond the typical survey of how participants responded to a program and even beyond most attempts to assess a program's impact. Country-wide social and health statistics were used in time-series designs to track changes across entire populations. The experimental design employed in Tanzania yielded exceptionally powerful confirmation of the program's effectiveness. Everett Rogers, who originated research on the diffusion of innovations (Rogers, 2003), was responsible for this experiment (Rogers et al., 1999).

One more kind of research contributed to the project Bandura described. It is so obvious as to remain implicit: the content conveyed in the programs is supported by research (e.g., condom use reduces the risk of HIV-AIDS infection). This brings us back to the dissemination of research-based information. Information dissemination remains a necessary element of contemporary outreach, but it is no longer sufficient.

Social science research is essential to improving the design and delivery of outreach, but research in other disciplines can provide the content, and the arts and humanities can make unique contributions. Bandura was quick to praise the gifted writers who created engaging characters and plot lines and the talented actors who brought them to life, without which his theoretical concepts could not have been applied effectively.

Serial dramas also required musicians, camera operators, set designers, and other creative talent. A ***New Yorker*** article credits Mexican TV director, Miguel Sabido, with developing serial dramas. Sabido, in turn, credits Bandura with the insights that guide his work (Rosin, 2006).

Forms of Research That Contribute to Outreach

Bandura's model illustrates a rich and complex interweaving of research with outreach. The threads can be pulled apart and arrayed in rough chronological order to illustrate an ideal case of research-based outreach.

1. First, outreach is directed toward problems whose magnitude and distribution is empirically determined; research helps to establish priorities among problems and to identify target audiences.
2. Then research on etiology and incidence yields empirically validated knowledge germane to those problems that is incorporated into outreach programs.
3. The design of those programs is guided by research on how people think and what influences their behavior.
4. Specific audiences are queried for additional design guidance.
5. Research on communication and diffusion is utilized in implementing the program design.
6. Evaluation research aids in refining and improving the program. It provides feedback on audience responses, and ultimately assesses the program's diffusion (e.g., audience nature and size) and impact (e.g., attitude and behavior change).

Even though this separation is somewhat artificial, it reveals how limited conventional notions of research-based outreach can be. Certainly the content of outreach programs should be valid and up-to-date and certainly programs should be carefully evaluated, but the contributions of research can be much greater.

In addition to their grounding in social science, medical, and public health research, the serial dramas depended upon experts in the arts and humanities as well. It is too easy to identify scholarship with research, and research with science. Outreach should draw on multiple disciplines, even when their contribution is something other than research.

Implications for Research and Outreach

Outreach so thoroughly infused with research is not only better outreach, it also generates new knowledge. Findings about attitude change from large-scale experimental interventions often have greater "ecological validity" than those from contrived laboratory experiments (Bronfenbrenner, 1979). The research that informed the programs Bandura described was conducted both in laboratories and in natural settings and was published in leading psychological journals. He did not do one kind of research as an academic psychologist and another for application.

Everett Rogers' role in evaluating the impact of serial dramas in Tanzania highlights an essential point about research-based outreach: one researcher is not enough, even if the researcher is Al Bandura. One discipline's research is not enough either. Outreach is inherently an interdisciplinary endeavor. Like "big" science research, outreach is increasingly conducted by multi-disciplinary teams.

Each of the forms of research that contributes to the programs Bandura described has its own standards of rigor and its own peer-reviewed journals. Outreach requires theoretically refined and empirically validated research that is conducted in a range of settings using a variety of theories and methods, each appropriate to the issue at hand and the relevant discipline(s). Linking research so closely with outreach enables scholars not only to apply what they have discovered but also to test those discoveries, advancing knowledge in the process. The effectiveness of an outreach program guided by Bandura's findings provides another level of validation of those findings beyond replication in someone else's laboratory.

Achieving such a vigorous hybrid of research and outreach is not always possible, or even necessary. It serves as a model that cannot always be replicated. Not every problem generates or merits the amount of resources required to mount a nation-wide campaign to change behavior. Moreover, such a campaign would be far more challenging in the United States and other media-soaked nations. The image of an entire village sitting around a radio epitomizes how different things are here. Reflecting on the six different uses of research in the work Bandura described and on the other contributions that made the serial dramas effective can help those engaged in research and outreach to identify both the strengths and the limitations of their enterprise. It should, at the least, help clarify that "research-based" outreach needs more than one kind of research.

Bandura made a strong case during his visit to Cornell that the amalgam of research with outreach that he described is essential to the future of psychology, but the point applies to other academic disciplines as well. Although thrilling achievements in space exploration and fascinating discoveries in elementary particle

physics continue to drive public support for research, taxpayers increasingly want to know how they can expect to benefit from their investment in research. Medicine and the life sciences have answered that question most compellingly and have flourished as a result. Social and behavioral scientists have been far less successful at demonstrating the value of their work and building broad public support. Scholars in the arts and humanities face much higher hurdles. Linking research and other forms of scholarship more closely with outreach will not only help solve important problems outside of academe but also help to renew and maintain the disciplines.

Few scientists achieve Albert Bandura's level of productivity and distinction, and few outreach efforts are as ambitious and efficacious as the ones he described. Programs with different content and methods and scholars from different disciplines will all deviate substantially from this example. No single scholar can hope to approximate this ideal. Even large-scale team projects will usually fall short in some aspects. But the rich mutual reinforcement of research and practice that he described should inspire all of us to link research more tightly with outreach and to do so at multiple points rather than settling for research-based content.

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joe-ed@joe.org.

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