Service-Learning: Some Academic and Community Recommendations

Robert F. Kronick and Robert B. Cunningham

Abstract

Civic engagement, service-learning, and university-assisted community schools are strong forces in making universities, as anchor institutions, engaged and responsible within their spheres of influence. By helping solve social problems, universities engage in the highest form of learning, come to understand social issues and problems, and escape the problem of inert knowledge, knowledge that is valuable only in a classroom.

Preface

*I*n the late 1990s and early 2000s, the term "anchor institution" emerged as a new way of thinking about those institutions most likely to become engaged in solving urgent central city problems and in grappling with the broader issue of urban development *(Luter & Taylor, 2013)*. This line of thinking dovetails with the engaged university *(Bok, 1982)*, civic engagement *(Kronick, Dahlin-Brown, & Luter, 2011)*, service-learning *(Kronick, Cunningham, & Gourley, 2011)*, and university-assisted community schools *(Benson, Harkavy, & Puckett, 2007; Kronick, 2005)*.

The term "eds and meds" (i.e., educational and medical institutions) was coined by Geruson *(1994)*, who stated that the unique resources available to eds and meds provide them with the potential to become catalytic change agents with the power to trigger the revival of cities. He also saw these institutions as immobile. Fulbright-Anderson, Auspos, and Anderson *(2001)* said that anchor institutions "have a significant infrastructure investment in a specific community and are therefore unlikely to move out of that community" *(p. 1)*. Indeed, most scholars, policy makers, and practitioners consider spatial immobility in central cities the prime characteristic of anchor institutions. Invested capital is highly correlated with the immobility of anchors, so these institutions have a strong economic stake in the health of their communities *(Harkavy & Zuckerman, 1999)*. Harkavy and Zuckerman *(1999)* posit that the term, "anchor insititution" arose because they are large, place-based institutions that are not likely to move out of cities. Examples include higher education, local foundations, and the United Way *(Luter & Taylor, 2013)*. Anchors are generally considered permanent

fixtures in their physical location. Luter and Taylor *(2013)*, however, point out that there is not total consensus on the mobility level of anchor institutions.

An engaged university movement has continued to evolve over recent decades. The engaged university evolved through the proliferation of various civic strategies, such as service-learning and university-assisted community schools. Service-learning changed the roles of teachers and students. Engaged universities have begun to transform universities and communities. Students became experts because of their involvement with community members (e.g., vulnerable students and families) and universities became enmeshed with the community, working to solve problems, instead of acting as ivory tower intellectuals. Dewey *(1902)* has described solving problems as the highest form of intelligence, and Lewin *(1935)* has stated that the best way to learn about something is to try to change it. These approaches to dealing with communities are reflected in the strategies of engaged universities.

Introduction

As crucial anchors in their surrounding communities, institutions of higher education bring myriad resources that can address the many pressing challenges facing localities. The engagement of institutions of higher education in their communities is most effective and sustainable when it is tied to institutional mission *(Maurrasse, 2007)*. As teaching and learning are central to the core mission of colleges and universities, it is critical to link institutional engagement to these activities. Service-learning is one prominent way that institutions of higher education have created opportunities to simultaneously enhance communities and improve student learning.

Service-learning can be defined in numerous ways. Items on the following list reflect descriptions of service-learning in the literature.

1. Service-learning challenges the status quo.

2. Service-learning is a problem-solving instrument of social and political reform.

3. Students (may) become agents of social change in service-learning.

4. Service-learning struggles with issues of idealism and individuals.

5. Service-learning, and by extension service-learners, sees needs.

6. Service-learning is connected to an academic course and requires integration, reciprocity, and reflection.

7. Service-learning balances service and learning.

8. Service-learning includes sensing, reflecting, and acting.

9. Service-learning is a point on a continuum from volunteerism to internship learning.

10. Service-learning attempts to answer the question, whose side are you on? *(Kronick, Cunningham, & Gourley, 2011)*

Kronick, Cunningham, and Gourley *(2011)* developed a framework for service-learning that focuses on sensing, reflecting, and acting. This model is intended to increase understanding of the potential and challenges of service-learning. Kronick, Cunningham, and Gourley explicate the significance of sensing, feeling, and acting:

> Experiential learning arises from experience and returns to experience. It can be conceptualized as a cycle incorporating sensing the environment, reflecting on the sensed information, and testing the accuracy of one's reflections. *(p. 121)*

The learning cycle commences with *sensing* the environment—accumulating disparate bits of information by attending to what one absorbs from seeing, hearing, touching, smelling, or tasting. To sense, one attends to the specific: entering concrete situations, absorbing new information, or looking at old information in a new way.

In *reflecting*, one ponders what has been sensed, then distills the experiences into patterns, theories, or principles for action. Reflection turns experience into learning *(Boud, Keogh, & Walker, 1985)*. Reflecting on what one has experienced is necessary to progress upward along the learning spiral. Reading, listening, and discussing help the learner link sensed experiences to general principles.

Acting tests reflections. Acting is for the manager what theory-testing is for the scientist. Reading or thinking cannot substitute

for action. Reading about management is different from implementing management. The practicing manager is constantly acting. For the scholar, "acting" may not involve dramatic arts or the public arena, but writing and exposing one's reflections to the marketplace of scholarly ideas in books and journals, and at academic conferences *(Kronick, Cunningham, & Gourley, 2011)*.

Although sensing, reflecting, and acting are conceptualized as distinct stages, the learner can engage all stages simultaneously, or shift randomly among the stages. The teacher facilitates movement across these stages. The teacher's role in the experiential learning process is to present an initial situation for sensing, to ask students to study and reflect on that initial situation, to challenge each student to distill theories or principles from that situation that can be applied to analogous situations, and to allow students an opportunity to practice their learning in new situations.

To mimic the experiential learning model in the classroom requires that the student carry out assignments, then reflect on the information presented in order to distill principles or theories for action. Practicing the theories or principles in the classroom setting or society at large allows a spiraling of the learning process to a higher level of understanding *(Kronick, Cunningham, & Gourley, 2011)*. For example, Robert Cunningham, a professor of political science at the University of Tennessee, has put political science/public administration students into service-learning experiences where they learn something about the people for whom they want to create bills, policies, and laws that will influence their lives. Experiential learning, including sensing, reflecting, and acting, minimizes the possibility that knowledge gained is inert, useful in a classroom only *(Whitehead, 1929)*.

Discussion

Benson et al. *(2007)* and Kronick, Dahlin-Brown, and Luter *(2011)* describe a major portion of service-learning that is done through a university-assisted community school. The University-Assisted Community Schools initiative is centered at the University of Pennsylvania's Netter Center. The work is based on the philosophy that the university has a major role in preparing teachers and shaping K-12 education. The central idea of community schools is to turn public schools into full service centers that are hubs of community life *(Kronick, 2005)*. One cannot solve the problem of underperforming schools without simultaneously solving the problems of distressed urban neighborhoods *(Benson & Harkavy, 2000)*.

In the university-assisted community schools model, the resources of anchor institutions are applied to enhance the potential of community schools to fulfill their comprehensive intentions. Service-learning has been an important component of this approach.

John Dewey's philosophy of education shapes what occurs in a university-assisted community school. Elsie Clapp's application of Dewey's philosophy in West Virginia and Kentucky influences the Netter Center's work in West Philadelphia, a vulnerable community and home to the University of Pennsylvania (Penn). In 2010, Penn was voted the most collaborative university in the United States by the Corporation for National and Community Service in collaboration with the U.S. Department of Housing and Urban Development and the U.S. Department of Education. The university received this award in 2008 and 2012 *(J. Weeks, personal communication, February 28, 2013)*. Penn's mission specifically calls for a commitment to civic engagement. The Netter Center, along with Civic House, interfaces between Penn and West Philadelphia.

Service-learning may attempt to change conditions that lead to social problems, such as lack of access to health care, discrepancies in education, homelessness, unemployment, and myriad others. Service-learning can take a social structural approach looking for root causes and invoking a Parsonian *(1951)* understanding of systems, or an individual approach that teaches children to read. An emphasis on the first may lead to no action being taken. An emphasis on the second may lead to victim blaming and "band-aiding."

Students face many challenges as they engage in service-learning. These challenges include social class and race differences, defining the problems, and changing conditions that they experience, as well as making a good grade in the service-learning class. By definition, students have to be in a class; hence, grades are part of the process.

In the University-Assisted Community School at the University of Tennessee, students often know more about the children they encounter than anyone else at the university. This insight positions students to become change agents. Resistance from the host organization, in this case a school, is in many instances a given, complicating the change agent role. Students as change agents must deal with parameters set by their course as well as organizations, communities, or individuals with whom they work. As change agents, students must recognize power differentials as well as the

tendency to impose programs rather than work with those being served. Often programs fail because the people receiving the service neither want nor need it, and they have not been consulted regarding the offered programs.

Macro-level ideals may inform service-learning, but in practice, many service-learning projects have an individual rather than a systemic impact. Efforts aimed at individuals, such as students who need help with reading, may cease upon success at an individual level, such as once the child starts reading. Situations like this do not generally address the multiple causes that explain why children cannot or do not read. It seems that both approaches are valuable in today's society.

Service-learning begins with an identified need. For the University-Assisted Community Schools program at the University of Tennessee, the needs are non-curricular, such as food, shelter, and clothing. The lack of these necessities has impeded student learning. Once the service-learning begins, additional needs are certain to surface, making service-learning circular rather than linear. In this program, university students are discovering new needs daily. Currently, mental health services are the predominant need for the children, families, and communities being served. The idea that mental health services must be termed *behavioral services* for families to use them is an example of practical information that can be learned only from field experience.

Service-learning that focuses on needs may invoke social justice as a driving force. Social justice has the learner take a side, and that side is with vulnerable populations (i.e., people of color, women, low-income people). As anchor institutions, colleges and universities can establish the context for service-learning. Engaged institutions committed to transforming communities can encourage service-learning to strive for lasting impact in communities. This context provides institutional support for effective service-learning courses.

Service-learning should be connected to a course that stresses integration, reciprocity, and reflection. *Integration* refers specifically to the integration of theory and practice. Rather than being at the head of the class, the professor becomes a co-learner with the student. The student, by being in-field, may know more of what is going on than the professor. It is the professor's obligation to integrate the material students bring to class into theoretical models. This arrangement also introduces the student to inductive learning and qualitative research as ways of learning. This aspect of

service-learning applies to multiple disciplines, such as psychology, sociology, anthropology, economics, political science, and theology. Concepts from each of these disciplines are presented here as examples of applying service-learning in the respective fields.

- Psychology—Behaviors that are reinforced will continue and be strengthened. In urban, Title I schools associated with the University of Tennessee's University-Assisted Community School program, behaviors are often punished with little or no reinforcement. Service-learners may reinforce behaviors that teachers and staff often miss or choose not to reinforce.

- Sociology—In the looking glass self model, persons get a sense of who they are from others' reactions to them. Self-concept may be positively influenced by service-learners when they use the looking glass self *positively (Cooley, 1922).*

- Anthropology—In becoming aware of ethnocentrism, service-learners are taught the importance of knowing their own culture when they begin to serve others. This first step will then help ensure that the service-learner does not consider his or her attitudes, skills, knowledge, and values superior to those of the persons he or she serves.

- Economics—Human capital becomes social capital as service-learners interact with those who have less human capital than they. Those who are being served want the same things and often have the same goals as those who have greater levels of human capital. What they lack are socially approved opportunities to acquire human or social capital. The key is to reach culturally approved goals through socially approved means, and to act as change agents rather than create temporary solutions *(Merton, 1957).*

- Political Science—This discipline cannot be separated from economics. The policy process is not only affected by economics, but in turn will affect it. In doing service-learning, the service-learner will become acutely aware that those with power make decisions for those who do not have power. Some contend that a power elite is making decisions regardless of the arena (i.e., education, criminal justice, housing). It is imperative

that service-learners not become a tool of this power elite *(Mills, 1960)*.

- Theology—Volunteerism or mission work is often guided by a holy book like the Bible, the Koran, or the Torah. Service-learning, in contrast, is often guided by such sources as contemporary theologians Martin Buber and Thomas Merton. Buber *(1970)* speaks of God in personal terms, like "I-Thou" as opposed to "I-It." Merton's numerous writings may be used to guide volunteerism or missionary work. Theologians have guided many counseling theorists such as Carl Rogers and William Glasser.

Jonathan Kozol provides examples of attitudes, skills, and knowledge that can be taught and learned in a service-learning course. Remembering that service-learning begins when problems are identified, his works define problems in America. *Savage Inequalities (1991)* describes radical differences in schools based on socioeconomic status and race. His discussions of diversity are illuminating. He interviews teachers who describe their schools and believe that having taught three White children in 15 years qualifies as diverse. His discussion of the Supreme Court case *Rodriguez v. Texas*, a 5-4 decision that left school funding as it was, exemplifies structural explanations of school discrepancies in pupil performance. Kozol's works can inform service-learning courses of needs that can be dealt with by service-learners, especially *The Shame of a Nation (2005)*, *Amazing Grace (1995)*, and *Letters to a Young Teacher (2007)*.

Several researchers *(Benson et al., 2007; Dryfoos, 1994; Kronick, 2005; Walsh, Brabeck, & Latta, 2003)* write about full-service community schools and university-assisted community schools as hubs of communities and one-stop shops for needed services for children, families, and communities. The expanded vision and mission for schools developed by these authors are excellent avenues for implementing service-learning strategies. Reflection as a key facet of service-learning courses can be refined through journaling and through reading Robert Coles' *The Call of Service (1993)*. Coles begins his reflections by sharing his Catholic parents' views on service. At Harvard, Coles exchanged ideas with luminaries such as Erik Eriksen and Anna Freud. He was most affected by Dorothy Day, a Catholic worker who ran soup kitchens in New York, who told him he could learn more from her guests (clients) than he could from his professors, and William Carlos Williams, M.D., the

physician and poet who told him to "learn what you can where you can" *(cited in Kronick, 2005, p. 6).*

Purposeful inclusion of integration, reciprocity, and reflection should make for a sound service-learning course. The professor's academic discipline will shape how the course evolves. If service-learning is to be part of a course, the nuances will vary and the community component of the course will have to be clearly explained to the community. Service-learning may be a course in and of itself, with a free-standing curriculum or it may be a part of a course, permeating across the curriculum. Additionally, the academic discipline of the professor will influence the course, and whether the course is a service-learning course, or a course with a service-learning component. There will be variation within service-learning courses based on instructional values, such as one taught by a psychologist and one taught by a professor of agricultural economics. A service-learning course differs from a non-service learning course in that the professor may no longer be the expert because students in the class may know more of the experiences in the field than the professor does. This in no way excuses the professor from being active in the field. Structurally, the professor is no longer in the front of the classroom, but rather, becomes a co-learner with the students.

Service-learning is a developmental process that ranges from volunteerism to internship learning. These stages are easily recognized by those working in the human services (i.e., social work, psychology, counseling).

Service-learning may help students in the human services by giving them pre-practica or pre-internship experiences. For other students, service-learning may help them better understand themselves. At universities such as the University of Pennsylvania, service-learning courses have evolved into academically based community service courses (ABCS). These service-learning courses raise their institutions to the level of civically engaged universities. Through courses of this type, universities such as Penn, University of Buffalo, University of Dayton, Boston College, and University of Oklahoma–Tulsa are moving toward becoming civically engaged universities.

One question that must be answered at the beginning of the service-learning partnership is whether the community wants or needs the university involved in its problem solving. In May 2008 at the Coalition of Community Schools Biennial meeting, this issue was addressed by Dick Ferguson (University of Dayton),

Pam Pittman (University of Oklahoma–Tulsa), and Joann Weeks (University of Pennsylvania), who composed the panel for a discussion titled, "Tapping the Assets of Higher Education." This panel addressed topics that are critical for universities as anchor institutions. The following points of discussion are especially relevant to university-assisted community schools, service-learning, and the university's role in solving problems. Keep in mind that John Dewey stated the highest form of intelligence is the solving of social problems *(Benson et al., 2007)*.

According to Ferguson, Pittman, and Weeks *(2010)*, questions that must be answered include:

- Is the university a widely trusted community builder with history?

- Does the university have leaders, faculty, and staff whose roles seem to fit the project?

- If necessary, can the university participate with its own resources at least, or add resources at best?

- What does the university promote?

These are important questions regarding the civic engagement of universities as anchor institutions. Service-learning can become an essential vehicle to connect universities to communities. From our personal experience of 40 years each, the university and its faculty and staff may often go in different directions. In some cases faculty members have used communities for their own ends and moved on. Universities may not be forgiven for the "sins" of their athletic department, or may be viewed as miserable stewards of the property they own. In terms of citizenship, university history may be spotty at best. Beginning with the president, the leadership at the University of Pennsylvania has worked diligently to reverse the trend of poor citizenship by the university in West Philadelphia. University-assisted community schools are excellent examples of continued support from faculty and staff.

Resources, broadly defined, can be provided by the university, including resources in the form of human capital. Financial capital is another matter entirely. State universities may not have the requisite financial capital to invest in human service enterprises. However, they can hire people from the community and do business with those who operate within its environment.

Universities promote teaching, research, and service. Generally, it is the research that is rewarded. Service-learning can entail all three areas of scholarship. Engaged faculty members doing

service-learning are less likely to burn out and will find new ways to teach that will excite the students and themselves. If the university promotes the tenets of civic engagement and service-learning expressed in this article, it can be an anchor within its region and beyond.

Suggestions to Enhance Service-Learning

This article addresses issues regarding service-learning. The following is a concise set of lessons learned.

- Make contact with community resources the semester before the course is offered. This will take more time than the instructor may realize. This time constraint will diminish each semester.

- Realize teaching strategies for service-learning courses are different from those for other courses. Co-teaching and co-learning between faculty and students is the norm.

- Keep in mind that the course will change some students in major ways.

- Some students do not keep their service commitments. Thus, a system of attendance and accountability is a necessary component of the course.

- Students from majors such as science and engineering are more comfortable with linear thinking than with the inductive thinking that occurs in service-learning courses.

- Be prepared for the unexpected.

Conclusion

An anchor institution is a large and/or significant institution that has special importance to the remaking of a city and its future. An anchor institution has a special reason to want to be instrumental in shaping its city's future *(Maurrasse, 2007)*. It is with this sentiment in mind that this article on service-learning and university-assisted community schools is set. The University of Tennessee's current University-Assisted Community Schools program will at some point move beyond a hub of services co-located at a school. The program will move toward redesigning the community so that all parties buy into the community and want to make it a place where all want to be. The goal is for the community

to become a village that includes all children and families in its life, economically, politically, socially, and religiously.

Benson and Harkavy *(1991)* and Taylor *(1992)* aver that schools and communities must change concomitantly. Kronick *(2002, 2005)* places programs where the needs are the greatest. In the university-assisted community schools program discussed in this article, 90% of students in the community are on free and reduced lunch, and the student mobility rate is 50%.

In 2002, Kronick wrote about Billy Dahlgren, a student in a service-learning course who went considerably beyond the course requirements. The term the *Billy phenomenon* was coined to capture this experience. In the past 10 years, many students who have read about this phenomenon have acted to become a "Billy," moving beyond their service-learning course requirements. Authentic relationships depend on a commitment to one another that extends beyond the last day of class *(Kronick, Cunningham, & Gourley, 2011)*.

This article concludes with a quote from James Birge. The quote addresses the pragmatics of getting a service-learning course off the ground and doing service-learning. He also warns of ignoring the aesthetics of service-learning.

> Much of the expansion of service learning practice is due to the multiplicity of conferences, workshops, training sessions, publications, and consultants that focus on the pragmatic elements of integrating community service and academic study. These pragmatic elements include such things as syllabus design, reflection activities, assessment devices, partnership development and activities etc. *(Birge, 2005, pp. 202–203).*

We must keep in mind as we forge our way along in this business of service-learning that the episode may be finished as the semester ends, but the important work is never really done.

<div align="center">

Sit Finis Libri
Non Finis Quaerendi
(T. Merton, 1948)

</div>

References

Benson, L., & Harkavy, I. (1991). Progressing beyond the welfare state. *Universities and Community Schools, 2*, 1–25.

Benson, L., & Harkavy, I. (2000). Higher education's third revolution: The emergence of the democratic, cosmopolitan, civic university. *Cityscape: A Journal of Policy Development and Research, 5*(1), 47–57.

Benson, L., Harkavy, I., & Puckett, J. (2007). *Dewey's dream*. Philadelphia, PA: Temple University Press.

Birge, J. (2005). The aesthetical basis for service learning practice. In D. Butin (Ed.), *Service learning in higher education: Critical issues and directions* (pp. 195-204). New York, NY: Palgrave Macmillan.

Bok, D. (1982). *Beyond the ivory tower: Social responsibilities of the modern university*. Cambridge, MA: Harvard University Press.

Boud, D., Keogh, R., & Walker, D. (1985). *Reflection: Turning experience into learning*. New York: Nichols.

Buber, M. (1970). *I and thou*. New York, NY: Simon & Schuster.

Coles, R. (1993). *The call of service*. Boston, MA: Houghton Mifflin.

Cooley, C. (1922). *Human nature and the social order*. New York, NY: Charles Scribner's Sons.

Dewey, J. (1902). The school as social center. *The Elementary School Teacher, 3*(2), 73-86.

Dryfoos, J. (1994). *Full service schools*. San Francisco, CA: Jossey-Bass.

Ferguson, R., Pittman, P., & Weeks, J. (2010). *Community schools: Voices from the field*. Panel discussion at biannual conference of the Coalition of Community Schools. University of Pennsylvania, Philadelphia, PA.

Fulbright-Anderson, K., Auspos, P., & Anderson, A. (2001). *Community involvement in partnerships with educational institutions, medical centers, and utility companies*. Aspen, CO: Annie E. Casey Foundation.

Geruson, R. (1994). Higher education medical complexes: The key to revitalizing West Philadelphia. *Universities & Community Schools, 4*(1–2), 70–82.

Harkavy, I., & Zuckerman, H. (1999). *Eds and meds: Cities' hidden assets*. Retrieved from the Brookings Institution Center on Urban Policy website, http://www.community-wealth.org/_pdfs/articles-publications/anchors/report-harkavy.pdf

Kozol, J. (1991). *Savage inequalities*. New York, NY: Crown.

Kozol, J. (1995). *Amazing grace: The lives of children and the conscience of a nation*. New York, NY: HarperPerennial.

Kozol, J. (2005). *The shame of a nation*. New York, NY: Crown.

Kozol, J. (2007). *Letters to a young teacher*. New York, NY: Crown.

Kronick, R. (2002). *Full service schools*. Springfield, IL: Charles C. Thomas.

Kronick, R. (2005). *Full service community schools*. Springfield, IL: Charles C. Thomas.

Kronick, R., Cunningham, R., & Gourley, M. (2011). *Experiencing service learning*. Knoxville, TN: University of Tennessee Press.

Kronick, R., Dahlin-Brown, N., & Luter, G. (2011). Revitalizing the land grant mission in the South: One university's path to civic engagement via community schools. In T. Stewart & N. Webster (Eds.), *Exploring cultural tensions in service learning* (pp. 203-218). Charlotte, NC: Information Age Publishing, Inc.

Lewin, K. (1935). *A dynamic theory of personality*. New York, NY: McGraw-Hill.

Luter, G., & Taylor, H. (2013). *Anchor institutions and urban society: A review of the literature*. Unpublished manuscript, University of Buffalo.

Maurrasse, D. (2007). *Leveraging anchor institutions for urban success*. Chicago, IL: CEOs for Cities.

Merton, R. (1957). *Social theory and social structure*. New York, NY: Free Press.

Merton, T. (1948). *The seven storey mountain*. New York, NY: Harcourt Brace.

Mills, C. W. (1960). *Images of man*. New York, NY: George Braziller.

Parsons, T. (1951). *The school class as a social system: Some of its functions in American society*. Cambridge, MA: Harvard University Press.

Taylor, H. L. (1992). Redefining the relationship: The urban university and the city in the 21st century. *Universities and Community Schools, 3*(1–2), 17–22.

Walsh, M., Brabeck, M., & Latta, R. (2003). *Meeting at the hyphen: Schools-universities-communities-professions in collaboration for student achievement and well being*. Chicago, IL: University of Chicago Press.

Whitehead, A. N. (1929). *The aims of education*. New York, NY: Macmillan

About the Authors

Robert F. Kronick is a professor of educational psychology and counseling; director of the University-Assisted Community Schools Project; and faculty associate in the Howard H. Baker Center for Public Policy at the University of Tennessee. His research interests include civic engagement of universities, communities, and schools; at risk youth; community schools; and service-learning. Kronick earned his Ph.D from the University of Tennessee.

Robert B. Cunningham is professor emeritus of political science at the University of Tennessee. His research interests include public policy, the policy process, and middle eastern politics. He has worked with the community school project for 14 years, so he is also interested in service-learning. Cunningham earned his Ph.D. from Indiana University.