

CRUCIAL INSTITUTIONAL INNOVATIONS: EVOLUTIONARY CHANGE IN HIGHER EDUCATION

Leah MacVie

July 12, 2016

Union Institute & University, Cincinnati, OH
Canisius College, Buffalo, NY
macviel@canisius.edu

ABSTRACT

In 1969, Erich Jantsch published his paper about the disruptive forces affecting higher education and society. He was serving as a research associate at MIT and studying the futures of MIT and the American University at the time. Students, he said, were concerned about whether the college curriculum was relevant (p. 6). Meanwhile, society was concerned about the degrading side effects of technology on the systems of human living, cities, and the natural environment (p. 7). Lastly, Jantsch pointed to the rising concern about the lack of systems and futures thinking (p. 7). He coined these concerns “disruptive forces” and believed that the university was well positioned to assume a new leadership role in society in order to assist in transforming these concerns. Jantsch predicted (hoped for) five crucial institutional innovations in order to transform disruptions into “cohesive forces”. He passed away ten years after the publication of this document and did not have the opportunity to see if his ideas came to fruition. Using a mixed methods approach, this study will explore the evolution of higher education institutions by posing questions that revolve around Jantsch’s five crucial innovations, including a new purpose for the university, socio-technological system engineering, altering the structure of the university, re-orienting the operational principles of the university, and a more active relationship between the new university and society. Three small institutions highly referenced for their innovation will be invited to participate in this research. Up to three offices on each campus will be interviewed. Jantsch’s five “crucial innovations” frame this investigative study. The conceptual framework consists of the concepts of disruptive forces, the three functions of higher education, self-renewal, and strategic planning.

Keywords: Erich Jantsch, higher education, disruptive forces, self-renewal, integrative planning, innovation

Crucial Institutional Innovations

The following paper is an evolving document that will be edited once the study is complete. The study will take place during the Summer of 2016. The researcher hopes to discuss preliminary findings at the 2016 ISSS Conference.

INTRODUCTION

1969 was a technologically impactful year in human history. Humans landed on the moon twice, the Boeing 747 made its maiden flight, the microprocessor was invented, and the US military began piloting what would become known as the Internet. Perhaps due to the military tensions of the Cold War and the impending Vietnam War, many individuals began to question how technology would reshape society. In the same year, Erich Jantsch, an Austrian astrophysicist who was serving as a Research Associate at MIT, began studying the futures of MIT and the American University. His interest grew and led to the publication of a paper about the disruptive forces affecting higher education and society. Many of his guiding concerns remain about higher education and technology's impact today. At the time, Jantsch (1969) said students wondered whether the college curriculum was relevant (p. 6). Meanwhile, society was bothered by the degrading side effects of technology on the systems of human living, cities, as well as the natural environment (p. 7). Lastly, Jantsch pointed to the rising debate about the lack of systems and futures thinking (p. 7). He coined the concerns "disruptive forces" and believed that the university was well positioned to assume a new leadership role in society to assist in transforming these concerns. Universities, he said, have the "unique potential for enhancing society's capability for continuous self-renewal" (p. 9). In order to serve in this role, however, Jantsch proposed, or rather hoped for, five crucial innovations, including a new purpose for the university, socio-technological system engineering, altering the structure of the university, re-orienting the operational principles of the university, and a more active relationship between the new university and society. Jantsch passed away ten years after the publication of this 1969 document and did not have the opportunity to see if his ideas came to fruition. Higher education is still rocked by disruptive forces today, however, and it is worth examining whether or not Jantsch's crucial innovations can be found in the steps institutions have taken to adapt.

The purpose of this multicase study is to explore whether or not Erich Jantsch's 5 crucial innovations can be found to some extent in innovations at three small institutions of higher education (IHE). Little research has been done to explore Erich Jantsch's contributions to higher education and as well as the application of these ideas presented in his 1969 report. It is anticipated that the knowledge generated from this inquiry could add to his legacy, provide insight to the field of systems thinking, and inform innovation in higher education. This research will employ a mixed methods, multicase study to explore the presence of the 5 crucial innovations to varying extents. Three small IHE will be selected to participate in this study. Three-to-five individuals per institution will be purposefully identified and chosen to provide information on behalf of their institution.

This chapter begins with a section that provides background and contextual information that will frame the study. The second section focuses on the purpose of the study and includes information about the problem, purpose and research questions, as well as discussion of the research approach and assumptions. The final section of this first chapter discusses the researcher's background, the significance of the study and key terms.

Crucial Institutional Innovations

BACKGROUND AND CONTEXT

Higher education is a centuries old institution made up of three main functions: education, research and service. These three functions are present in all IHE, though not all institutions carry these functions out in similar ways. Because this study seeks to study small IHE specifically, it must be acknowledged that there are differences in the ways small institutions carry out the education, research and service functions. Where universities address the masses in the state and region, small institutions have a direct connection with their surrounding communities. They are the “largest economic engine [communities] have to supply prosperity, jobs, and cultural activities to the businesses surrounding the college” (Docking and Curton, 2015, pp. 1-2). When faced with similar challenges, small institutions have had to innovate differently from their university counterparts. Some of these innovations involve college-community partnerships. Early American higher education evolved to follow the German-born Humboldtian model in the twentieth century. As this model began to sweep across Europe and eventually to the United States, colleges began to partner with their local communities to use their community as a “laboratory” (Brockliss, 2000, p. 160). Many of these ties between local colleges and communities remain today, though they may appear in different forms. For example, they can be found in urban areas (Maurrasse, 2001, p. 2), even areas that have not prospered over the past century. Even as some surrounding neighborhoods experience hardship (housing, crime, dilapidation), colleges remain because they simply can’t move; their acreage and “geographical interest vested in their surrounding communities” (Maurrasse, 2001, p. 20) is too much.

The balance between the three functions of higher education and college work in the community is always at an impasse with disruptive forces. For example, today we see student unrest in the form of racial and lifestyle movements. There is a resurgence of the sentiment “that the current type of education may no longer be relevant” (Bok, 2006, p. 6). The issue of the costs associated with higher education comes up time and time again in higher education studies (Bok, 2006; Bowen, 2013; Selingo, 2013). Teaching, learning and the curriculum are accused of not adapting to meet the needs of today’s students (Thorp and Goldstein, 2012). The recent disruption of the Internet is even extraordinary because it challenges the very notion of the role of instructors and of IHE (Christensen and Eyring, 2011).

Disruptive forces affecting higher education are not new. Disruptive forces affecting society and higher education in 1969 were, in fact, the rationale for Jantsch’s 1969 report. He said “we are baffled by the sudden appearance in the educational system by student unrest and by the notion that the current type of education may no longer be relevant” (p. 6). At the same time, “we are confused by the degrading side effects of technology on the systems of human living, in the cities as well as within the natural environment” (p. 7). Third, he says that we are “ridden with doubts” (p. 7) about the lack of systems and futures thinking. Universities, he says, are especially affected by these pressures for change through its three functions: education, research and service. Jantsch argued that these three functions were “patched together” (p. 16), which also caused a lot of the internal disruptive forces present in 1969 and still today. These disruptive forces include student unrest, disagreement on university structure and government, disagreement about the type of research universities should perform, and the dilemma between specialization and generalization. This patching, he says, caused a “blurring” of the “purpose of

Crucial Institutional Innovations

the university” (p. 17). Jantsch offered his own suggestion, “we have to look at changes, and pressures for change, in all three of the primary functions of the university” (p. 19). He proposed, or rather hoped for, five crucial innovations for higher education, including a new purpose for the university, socio-technological system engineering, altering the structure of the university, re-orienting the operational principles of the university, and a more active relationship between the new university and society. Therefore, this study seeks to uncover traces of Jantsch’s five crucial innovations present in the innovations of small institutions today.

PROBLEM, PURPOSE & RESEARCH QUESTIONS

Higher education institutions have faced many challenges over the last few decades. Though many large institutions have the resources needed to respond to these challenges, small institutions have had to be innovative in the ways in which they have adapted. There are similarities between the external challenges that institutions face today and the challenges they faced in 1960s and 70s, and it is worth examining whether or not the predictions and suggestions made by scholars in this time period offer insight in regards to the innovation found in small institutions today. This dissertation will explore the work of Erich Jantsch in 1969, in the context of higher education innovation today. The mixed methods, multicase study will explore whether or not Erich Jantsch’s five crucial innovations can be found to some extent in the innovations of three small institutions of higher education.

The purpose of this multicase study is to explore whether or not Erich Jantsch’s five crucial innovations can be found to some extent in the innovations of three small institutions of higher education. A better understanding of the innovations of small institutions may shed light on whether Jantsch’s predictions were well founded.

To explore the problem, the following research questions will be addressed:

- To what extent are Erich Jantsch’s five crucial innovations found in the innovations of three small institutions today?
- What role has leadership played in these innovations?
- In what ways do the innovations today respond to present-day disruptive forces?
- In what ways are these innovations helping institutions to evolve?
- In what ways are institutions integrating innovation in their institutional planning processes?

METHODOLOGY

With the approval of the university’s institutional review board, I will study the perceptions of 3-5 individuals at three small IHE. Because Jantsch’s five crucial innovations all share a similar base of college-community work, these individuals will be selected based on their contribution and involvement in college-community endeavors. This inquiry will represent a multicase study using a mixed methods approach.

Following a survey for eligibility, colleges will be asked to participate in the study. Methods of data collection will include document and Web resource review, surveys, one-on-one interviews, and follow-up statements to determine if traces of Jantsch’s crucial innovations are present to

Crucial Institutional Innovations

some extent in institutional innovations. Jantsch's five crucial innovations were used to create a qualifying survey, institutional survey, interview questions, and a prompt for follow-up statements.

This research focuses on one question; "To what extent are Erich Jantsch's five crucial innovations found in the innovations of three small institution today?" Institutions chosen for this study will be selected based on their size of less than 10,000 FTE (full time equivalent). The researcher has a connection at each institution and will ask this participant to suggest other individuals in the institution who could partake in the study to offer perspectives from their area of work in the college. In this way, multiple perspectives can contribute to the body of information collected on each institution. Participants will be provided with a summary of Erich Jantsch's background and his five crucial innovations before participating in the study. Methods of data collection will include surveys, documents and Web resources, one-on-one interviews, and follow-up statements.

The information obtained for each institution will form the basis for the overall findings of the study. Each participant will be identified by office or formal title; no names will be mentioned. All interviews will be recorded and transcribed verbatim. Transcription will then be coded for key themes. The section on findings will present case studies for each of the three institutions that compile the information gathered. The discussion will present, on a case-by-case basis, to what extent the five institutional innovations are found in three small institutional endeavors. It will also add depth by connecting the findings to current higher education systemic innovation research.

LIMITATIONS, FINDINGS & ASSUMPTIONS

Limitations

This section will describe the limitations (the conditions that weaken the study) and delimitations (scope of the study) of the study. One limitation in this study is the concern with sample size. Though there are similarities between small IHE, they all have their own circumstances and makeup. Though it is assumed that the 3 institutions selected represent small institutions in the United States in general, there are different characteristics found in every IHE. Similarly, the selection of institutions was made due to accessibility. There may be other institutions in the United States that possess more applicable innovations worth examining. Third, there is always the question about the reliability of the data gathered. Although all necessary precautions will be taken to gather in different formats as much data as possible so that the information can be triangulated, this does not mean that all of the necessary data was reported or that it was reported fully. Lastly, because the 1969 report did not feature many examples, there is the limitation of interpretation of Erich Jantsch's five crucial innovations. Jantsch's definitions are being interpreted for today's circumstances and language. Some meaning may be lost.

Crucial Institutional Innovations

Findings

The findings will be reported in the form of multiple case studies (multicase) that report on the institutional profile, innovations researched, and the findings in relation to the research questions. Yin (2013) points out that case study research is a preferred method when the study is a contemporary phenomenon and the questions are “how” questions (p. 2). This study would include multiple cases (multicase) (p. 2) to report on the phenomenon present at each institution. A common example for multicase studies, according to Yin (2013) is studying innovations in schools (p. 56). That is precisely the focus of this study. The replication and reporting of the studies in each institution will follow the same procedures described by Yin (p. 63).

Assumptions

Based on the researcher’s experience as a higher education administrator and systems scholar, certain assumptions are made. First, it is assumed that Erich Jantsch’s five crucial innovations can be found to some extent in some institutions today. Similarities can be found in, not only the disruptive forces of 1969 and today, but also between Jantsch’s predicted five crucial innovations and the endeavors found in some institutions today. Current disruptive forces are influencing the kind of innovation needed to take place in institutions today, so it is also assumed that innovations will vary per institution. Second, it is assumed that the discovery of the five crucial innovations is important to Jantsch’s legacy, the fields of systems and futures thinking, as well as to higher education innovation research. While Jantsch is oftentimes cited, he is rarely the focus of dissertations and scholarly work. His work forms the roots to several scholarly fields and this study puts his work in the forefront. The information gathered will also be of interest to other small institutions considering innovation and may suggest alternative innovative approaches or ignite an interest in looking at other fields for innovation inspiration. Third, it is assumed that the three sample institutions are representative of the different types of small institutions found in the United States. While it is acknowledged that every institution is different, three small institutions were specifically selected because they are similar in size and resources. Their limitations, as compared to large research institutions, make them an interesting study because of how they have approached their evolution. Fourth, it is assumed that participants will present all of the relevant information needed for the study. Also, the information provided will be subjective and multiple. Hopefully, relying on a variety of sources will help to triangulate the information provided. Finally, using a mixed methods approach to the study will provide complementary methods of data collection and analysis. This approach was selected to produce a wide variety and amount of information for each case study.

SUMMARY

This multicase study will explore to what extent, if any, Erich Jantsch’s five crucial innovations can be found in the innovations of small institutions of higher education (IHE). This will be accomplished through four phases: a qualifying survey, a survey packet, interview, and a follow-up reflection statement. Three small IHE will be selected to participate and at each institution, three to five individuals will be recommended at each institution to submit survey responses. In addition to the surveys that campus

Crucial Institutional Innovations

representatives will complete, contextual information will be gathered using a document and Web site review. All of the data will be submitted and collected electronically and will be presented in the form of case studies.

REFERENCES

- Al-Qarawiyyin Mosque and University. (n.d.). Retrieved June 17, 2016, from <http://www.muslimheritage.com/article/al-qarawiyyin-mosque-and-university>
- Altbach, Philip G., Liz Reisberg, and Laura E. Rumbley. "Trends in global higher education: Tracking an academic revolution." (2009).
- Baer, Walter S. "Will the internet transform higher education?." (1998).
- Beere, C. A., Votruba, J. C., & Wells, G. W. (2011). *Becoming an engaged campus: A practical guide for institutionalizing public engagement*. San Francisco, CA: Jossey-Bass.
- Bell, W. (1998). Making People Responsible The Possible, the Probable, and the Preferable. *American Behavioral Scientist*, 42(3), 323-339.
- Blackstone, A. (2014). *Principles of sociological inquiry: Qualitative and quantitative methods*. Place of publication not identified: publisher not identified.
- Blanchard, L. W., Hansmann, C., Strauss, R. P., Belliard, J. C., Krichbaum, K., Waters, E., & Seifer, S. D. (2009). Models for faculty development: What does it take to be a community-engaged scholar. *Metropolitan Universities*, 20(2), 47-65.
- Bloomberg, L. D., & Volpe, M. (2015). *Completing your qualitative dissertation: A road map from beginning to end*. Sage Publications.
- Bok, D. C. (2006). *Our underachieving colleges: A candid look at how much students learn and why they should be learning more*. Princeton, N.J: Princeton University Press.
- Bolman, L. G., & Deal, T. E. (2003). *Reframing organizations: Artistry, choice, and leadership*. San Francisco: Jossey-Bass Publishers.
- Boston University / Chelsea Partnership. (n.d.). Retrieved June 17, 2016, from <http://www.chelseaschools.com/cps/community/bu-chelsea-partnership.htm>
- Bowen, W. G. (2013). *Higher education in the digital age*. Princeton, N.J: Princeton Univ. Press.
- Brockliss, L. (2000). Gown and town: the university and the community in Europe, 1200–2000. *Minerva*, 38(2), 147-170.
- Christensen, C. M., & Eyring, H. J. (2011). *The innovative university: Changing the DNA of higher education from the inside out*. San Francisco: Jossey-Bass.
- Christensen, C. M., Horn, M. B., & Johnson, C. W. (2008). *Disrupting class: How disruptive innovation will change the way the world learns*. New York: McGraw-Hill.
- Creswell, J. W., & Clark, V. L. P. (2007). *Designing and conducting mixed methods research*.
- Crow, M. M., & Dabars, W. B. (2015). *Designing the new American university*.
- Davidson, C. N. (2012). *Now you see it: How technology and brain science will transform schools and business for the 21st century*. New York: Penguin Books.
- Davidson, C. N., & Goldberg, D. T. (2010). *The future of thinking: Learning institutions in a digital age*. Cambridge, Mass: MIT Press.
- Docking, J. R., & Curton, C. C. (2015). *Crisis in higher education: A plan to save small liberal arts colleges in America*.
- Florida, R. L. (2012). *The rise of the creative class, revisited*. New York: Basic Books.
- Forrester, J. W. (1971). *World dynamics*. Cambridge, Mass: Wright-Allen Press.

Crucial Institutional Innovations

- Gardner, J. W. (1964). *Self-renewal: The individual and the innovative society*. New York: Harper & Row.
- Hacker, A., & Dreifus, C. (2010). *Higher education?: How colleges are wasting our money and failing our kids:and what we can do about it*. New York: Times Books.
- Harvard at a Glance | Harvard University. (n.d.). Retrieved June 17, 2016, from <http://www.harvard.edu/about-harvard/harvard-glance>
- Holland, B. A. (2001). Toward a definition and characterization of the engaged campus: Six cases. *Metropolitan Universities*, 12(3), 20-29.
- Holland, B. A. & Sandy, M. (2006). Different worlds and common ground: Community partner perspectives on campus-community partnerships. *Michigan Journal of Community Service Learning*, 13(1).
- Home | INFONewHaven. (n.d.). Retrieved June 17, 2016, from <http://www.infonewhaven.com/>
- Jantsch, E. (1967). *Technological forecasting in perspective*. OCDE.
- Jantsch, E. (1969). Integrative planning of society and technology: The emerging role of the university. *Futures*, 1, 3, 185-190.
- Jantsch, E. (1972). *Technological planning and social futures*. New York: Wiley.
- Jarvis, J. (2009). *What would Google do?*. New York, NY: Collins Business.
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, 33(7), 14-26.
- Lipman-Blumen, J. (2000). *Connective leadership: Managing in a changing world*. [Kindle DX version]. Retrieved from Amazon.com
- Martin, J., & Samels, J. E. (2012). *The sustainable university: Green goals and new challenges for higher education leaders*. Baltimore [Md.: Johns Hopkins University Press.
- Maurrasse, D. J. (2001). *Beyond the campus: How colleges and universities form partnerships with their communities*. New York: Routledge.
- McCarthy, M. C. (2011). *History of American higher education*. New York: Peter Lang.
- McWeeny, J. (2016). *The Metaphysics of Social Justice: Coalitional Activism at the Intersections of Sexism, Racism, and Heterosexism*.
- Nussbaum, M. C. (1997). *Cultivating humanity: A classical defense of reform in liberal education*. Cambridge, Mass: Harvard University Press.
- Ollhoff, J., & Walcheski, M. (2002). *Stepping in wholes: Introduction to complex systems : topics in process adaptive systems*. Eden Prairie, MN: Sparrow Media Group.
- Rhodes, F. H. T. (2001). *The creation of the future: The role of the American university*. Ithaca: Cornell University Press.
- Selingo, J. J. (2013). *College (un)bound: The future of higher education and what it means for students*.
- Shirky, C. (2009). *Here comes everybody: The power of organizing without organizations*. New York: Penguin Books.
- Slaughter, R. A. (1993). Futures concepts. *Futures*, 25(3), 289-314.
- Taylor, M. C. (2010). *Crisis on campus: A bold plan for reforming our colleges and universities*. New York: Alfred A. Knopf.
- Thorp, H. H., & Goldstein, B. (2010). *Engines of innovation: The entrepreneurial university in the twenty-first century*. Chapel Hill: University of North Carolina Press.
- Toffler, A. (1980). *The third wave*. New York: Morrow.
- Von Bertalanffy, L. (1973). *General System Theory: Foundations, Development, Applications: Rev. Ed.* George Braziller.

Crucial Institutional Innovations

- University Park Campus Master Planning. (n.d.). Retrieved June 17, 2016, from <http://upcmasterplan.usc.edu/>
- Witt, S. W. Knowledge management for social science information: organizational and technical solutions to bridging disciplinary structures. In 2012-10-25]. <http://conference.ira.org/sites/default/files/files/papers/ifla77/142-witt-en.pdf>.
- Wong, A., & Green, A. (2016). Campus Politics: A Cheat Sheet. Retrieved June 17, 2016, from <http://www.theatlantic.com/education/archive/2016/04/campus-protest-roundup/417570/>
- Yin, R. K. (2013). *Case study research: Design and methods*. Sage publications.
- Zolli, A., & Healy, A. M. (2012). *Resilience*. London: Headline Business Plus.