

The i-School Phenomenon: History and Present Situation

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Summary:

This paper introduces the movement of i-Schools and the grounds of its origin, focusing on the fundamental elements of i-Schools and the i-Model. The role of i-Schools will be illustrated by the diversity of the fields of studies they encompass, and by the new opportunities that have thus opened up. Upon introducing several projects that have innovated the Library and Information Studies curricula, the paper explains the role of the steering and coordinating i-Caucus committee, and the importance of the i-Conferences. Furthermore, the paper presents an analysis of issues relevant to the interdisciplinary character and the identity of i-Schools. The study concludes with an overview of the research activities of i-Schools, and the prospects of this movement in the Czech Republic.

Keywords: i-School movement, i-Field, interdisciplinarity, i-Identity, i-Schools research

Introduction

The iSchool or i-School movement originated in the USA. Although it may seem that the movement concerns other, foreign countries rather than directly affecting the Czech Republic, it appears to be manifesting itself in research and the visions of the future of Information and Library Studies. The movement impacts the profiling of academic programs whose graduates go on the job market. The graduates, in turn, influence the way in which the information environment evolves. This article examines the origins and evolution of the movement, seeking answers to the following questions: What is the i-School movement? What is its structure and how does it work? What goals has the movement set for itself? Does the intellectual impact of the i-School movement affect research and education in the Czech Republic?

This article presents the i-School movement and its goals to academics and other specialists working in the information field. New kinds of interaction and opportunities for growth in the field are highlighted in this study as areas of high interest as regards their integration into the Information and Librarianship degree programs in this country. Upon a short summary of the history of i-Schools, this article focuses on the conflict between the fields of information science and librarianship, which has ultimately generated a greater focus on the innovation of the schools of Information Studies and their curricula. Having grown during the conflict into its present shape as an organization, the i-School movement is characterized here with regard to its basic supporting structure, a model of the disciplinary studies, and shifts in the educational focus. Chapters 4–6 give an account of the steering committee of i-Schools, including membership criteria, conferences related to the field, and the relevant social part that i-Schools play. The interdisciplinary character of i-Schools, their identity-forming activities concerning the information field, and their focus on applied research are the most characteristic features of i-Schools. These

are brought to focus toward the end of this article, in chapters 7, 8 and 9. My conclusion addresses the prospects of the movement in the Czech Republic.

This article uses the English term, i-School, which may prompt the straightforward Czech translation as i-Škola. However, this form does not comply with the rules of the Czech language use. The better-suited form of iŠkola is, however, also problematic when it comes to the beginnings of sentences. For this reason, "i-škola" is used, which complies with the Czech language rules and resolves the systemic problem as regards sentence beginnings; that is, the issue of capitalization is eliminated. Other derived terms are used in a similar way (e.g.; i-obor), with the exception of the term, i-Caucus, which is used for the committee of i-Schools that forms a small core of i-Schools, setting the standards and representing the movement.

1. The Information Field

The information field (i-Field) is experiencing rapid growth and radical changes, opening up new horizons in ways that many information professionals will find surprising. The evolution of information and communication technologies, and the changes concerning information management have prompted different pressures, while new interest groups are being formed, affecting the evolution of the information field. The US and Canadian i-School movements are the fastest-growing ones, rapidly expanding to Europe and other continents. They import new focus to academic researchers, a whole new range of information jobs, and changes to the information degree programs. The i-Schools are also called Information Schools. H. Bruce describes them as "intellectual communities made up of researchers and scholars from diverse academic and practice-based contexts, who apply different methods and theories to understand a wide range of Information issues."¹ The following chapter will focus on the evolution of i-Schools and the concepts that have affected their formation and focus.

1.1. The Formation of i-Schools

In 1988, the deans of the US universities of Pittsburgh, Syracuse, and Drexel University (Philadelphia) formed the Gang of Three, chaired by Toni Garbo. The group was looking for ways to develop curricula for their study programs and to start collaboration among their schools. At the same time, they sought a way in which to promote and highlight the significance of Information Studies before their rectors. Due to the collective engagement of scientists from different fields and practice-based professionals who were interested in information studies and the ways in which to make information management more effective, an intellectual community was formed. Gradually, the work of this group began to attract attention. By 2003, the group grew by seven other schools. The informal members' meetings would take place every six months. However, the continuous expansion of its activities forced the group to establish a central steering body whose title would clearly convey the core message of the group.

The group, known as the i-School Movement or the i-School Project, has adopted the more formal title of "i-School Caucus" (the i-School Committee). Upon the establishment of the i-

¹ BRUCE, Harry. The Audacious Vision of Information Schools [online]. *International Symposium on the Transformation & Innovation of Library and Information Science*, November 16–17, 2010, Taipei, Taiwan. [cit. 2014-23-06]. Available from: <http://www.glis.ntnu.edu.tw/2010conference/docs/proceeding039-045.pdf>.

Caucus, the movement has kept growing, expanding to other universities. Furthermore, the movement has succeeded in forging collaboration with the CRA Deans (Computing Research Association Deans)—a sister group of informatics specialists that has been joined by many other deans if the i-Schools.² These days, the community of i-Schools is formed by institutions that have evolved from Information and Library Studies schools, and by institutions that came to existence by the merging of different study programs, or by the forging of a “green field” study program; that is, a newly-formed program taught by external faculty.³

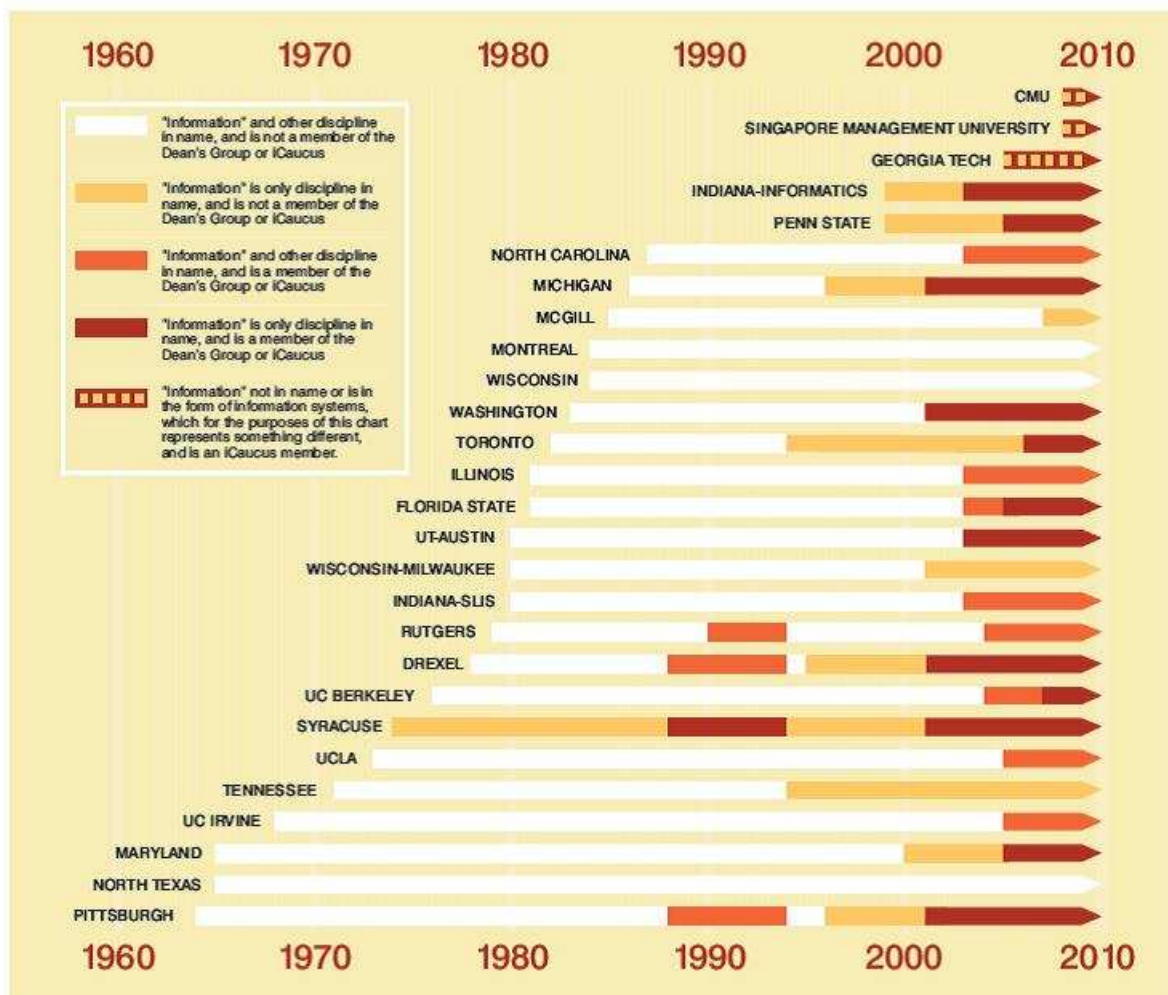


Figure 1. Evolution of i-School Names (Adapted from: OLSON, Gary M., Grudin, Jonathan. *The Information School Phenomenon*. *Interactions*. 2009, (16)2, p. 17, ISSN 1072-5520)

² LARSEN, Ronald L. iSchools. In BATES, Marcia J. – MAACK, Mary Niles (Eds.). *Encyclopedia of Library and Information Sciences*. 3. ed. Boca Raton: CRC Press, 2010, pp. 3018–3023. ISBN 0-8493-9712-x. BRUCE, Harry. The Audacious Vision of Information Schools [online]. *International Symposium on the Transformation & Innovation of Library and Information Science*, November 16–17, 2010, Taipei, Taiwan. [cit. 2014-23-06]. Available from: <http://www.glis.ntnu.edu.tw/2010conference/docs/proceeding039-045.pdf>.

³ KING, John Leslie. Identity in the I-School Movement. *Bulletin of the American Society for Information Science and Technology*. 2006, 32(4): 13. ISSN 1550-8366.

A number of information-librarianship i-Schools have ceased using the word “librarianship” in their titles, focusing instead on “all forms of information necessary for the development of business, education and culture.”⁴ Besides the more narrow community of i-Schools, which have been accepted as i-Caucus members, a broader community of i-Schools that focuses on “social aspects of information technologies”⁵ is being formed. The following is a list of the reasons why the i-School community has been formed:

- as the result of the efforts to mutually engage scientists from different disciplines who research the phenomenon of information;
- as the result of the conflicts, and curricula experiments performed by the US schools that used to offer Information and Library Science degree program;
- as an attempt to use the newly-formed opportunity for greater excellence and interdisciplinary research;
- to forge new job opportunities in the context of information industry and knowledge management.

The i-School movement is driven by its vision of being a clear-cut identifier for employers who seek experts trained in the basic forms of information analysis, processing and management, able to interpret the results of their work in the broader context of societal development.

2. Identity Crisis and Curricula Development

A successful accreditation process requires clearly defined core courses that offer future graduates basic knowledge and skills of the profession that will help them to specialize later on. Defining the curriculum becomes an increasingly important, recurring issue in the context of the fast and dynamic evolution of information science. Facing the complexities of different specializations and emphases of various perspectives, some professionals are beginning to talk about a crisis in the education of Information Studies experts. In fact, this is a crisis of the identity of the field. The signs of the crisis are particularly visible in the penultimate stage of education in the field, where Library and Information Science (LIS) have begun to merge. In his study from 1986, L. A. Grotzinger demonstrates that the integration of library and information science was not flawless. However, the integration helped avoid the danger of the dropping numbers of students who were more interested in schools offering computer and information science. The integration also prompted adjustments of library studies curricula to the emerging information technologies, which used to be problematic in library studies tracks. While information science studies were often established separately from library studies, several meeting points were

⁴ The iSchools Caucus [online]. [cit. 2010-08-09]. Available from: <http://www.ischools.org/>. A.Dillon argues that this trend is visible in the study programs of Information and Librarianship studies (LIS programs), 30% of which use titles such as Information School or Information Studies; the word “Library” having been removed from the titles. DILLON, Andrew. What it Means to be an iSchool. *Journal of Education for Library and Information Science*. 2012, **53**(4): pp. 267–273. ISSN 0748-5786.

⁵ DURRANCE, Joan. C. Competition or Convergence? Library and Information Science Education at a Critical Crossroad. 2004. S. 195.

upheld in the form of course electives.⁶ Eight years later, G. Marko maintains that at the same time as the traditional curriculum fell apart because many schools of library studies had ceased to offer key core courses, a new, unified curriculum has failed to appear. Courses serving as the meeting points between the disciplines have not been established as core courses, and so the universities continue offering those as electives, which does not guarantee that their students will have acquired relevant basic knowledge upon their graduation. Miksa analyzes the paradigms, curriculum interpretation, and the values embedded in a hidden curriculum, arguing that the ensuing differences mean that the core of information science (I-World) differs from the core of library science (the so-called L-World).⁷ B. Cronin maintains that “the term library science is an oxymoron,” because organization of information in itself is not science; he argues that “library studies is the correct term.” At the same time, he points out that there are academic reasons for the “elimination of library studies programs from research universities, and their placement in institutions offering vocational education.”⁸ Cronin calls for intellectual integration via interdisciplinary approach. The future interdisciplinary collaboration ought to be forged between information science on the one hand, and cognitive psychology, computing science, communications, and cultural anthropology on the other. The 1998 results of the yearly business meeting of ALISE represent a turning point in the disciplinary focus. At the meeting, the members of the association⁹ agreed to leave out the word “library” from the mission statement of the association, changing at the same time the titles of their degree programs.¹⁰

N.A. Van House and S.A. Sutton examine the ecological perspectives of the field.¹¹ They notice that the increasingly strategic economic significance of information changes the ecology of the information environment. In the context of ecology, the authors define the field as a species that has to gain its right to survive, comparing it to the panda that is condemned to extinction because of its traditional, narrow focus on ecologically specific environment (the so-called niche). A highly turbulent environment, with growing competition in the form of other fields that are interested in taking part at information management, necessitates a change in the survival strategy. In the midst of the expanding information market, where libraries form an insignificant part of the information industry and workforce, with dropping numbers of library jobs, and an increasing number of interdisciplinary issues, the field must be capable of dynamic adaptation. House and Sutton recommend that the field responds to the current situation by adaptive radiation—by spreading into new areas of specialization—via differentiating between students and programs. New areas of specialization may lead to divergence, which would mean a move away from traditional accreditation. Furthermore, they recommend that the field is made into a hybrid by adopting the characteristics of other successful fields, and by increasing the size of

⁶ GROTZINGER, Laurel A. Curriculum and Teaching Styles: Evolution of Pedagogical Patterns. *Library Trends*. 1986, Vol. 34, No. 3, pp. 458–459.

⁷ MARCO, Guy A. The Demise of the American Core Curriculum. *Libri*. 1994, 44(3) pp. 175–189. ISSN 0024-2667

⁸ MIKSA, Francis L. pointed out the core, nearly paradigmatic differences in Library and information science: two paradigms. In: VAKKARI, Pertti – CRONIN, Blaise (Eds.). *Conceptions of library and information science. Historical, empirical and theoretical perspectives*. London: Taylor Graham, 1992. pp. 229–252. ISBN 0-947568-52-2. CRONIN, Blaise. Cutting the Gordian Knot. *Information Processing & Management*. 1995, Vol. 31, No. 6, pp. 897–902.

⁹ LIFER, Evan St. – ROGERS, Michael. ALISE. Cutting “L” Word from Mission. *Library Journal*. 1998. Vol. 123, No. 3, p. 97.

¹⁰ KRISTL, Carol. UCLA Library School Drops the “L” Word. *American Libraries*. 1999, Vol. 30, No. 6, s. 34–36. Michigan University was the first to change its name to School of Information in 1996.

¹¹ Van HOUSE, Nancy A. – SUTTON, Stuart A. The Panda Syndrome: An Ecology of LIS Education. *Journal of Education for Library and Information Science*. 1999, Vol. 37, No. 2, pp. 131–147

those programs that support interdisciplinary activities and diversity growth.¹² J. N. Berry and M. Gorman, on the other hand, have repeatedly rejected the idea of a crisis. The authors argue that information studies have pushed out library studies, redirecting research in the field; the focus on libraries has been replaced with focus on communication technologies.¹³ A. Dillon and A. Norris¹⁴ reject the parasitical relationship between information studies and library studies. They argue that their examination of peer-reviewed articles and dissertations has clearly demonstrated that both the faculty and the doctoral candidates present research results from areas of library science. Dillon and Norris conclude by again rejecting the idea of crisis and by maintaining that the field is evolving and prospering. They argue that the notion of crisis is generated by unawareness of new job opportunities, low self-esteem, and by insufficient focus on quality graduate program applicants (low admission criteria), new faculty (evidence of excellent scholarly publication history pursuant to bibliometrics), and courses (courses that students from other disciplines find interesting).¹⁵

2.1 Projects of Curricula Innovation in the USA

The phenomenon of i-Schools evolved in the context of HRISM and KALIPER innovation projects. The 1990 HRISM project (Human Resources for Information System Management) was followed by KALIPER (The Kellogg-ALISE Information Profession and Education Renewal Project) that took place in the USA in 1998-2000 under the sponsorship of W. K. Kellogg. HRISM aimed to support innovation in education. The innovations focused on “development of a broader base for information research, increase of interdisciplinarity and improvement of information technology infrastructure, effective use of curricula-supporting technologies, development of curricula innovation, greater effectiveness of distance learning, greater flexibility of supplied programs, and development of a more user-friendly curricula.”¹⁶ Within the HRISM project, experiments were conducted at five universities: Drexel University introduced a software engineering track specializing in information technologies;¹⁷ the Illinois University developed a distance-learning program and revised its core curriculum; Florida State opened an information

¹² Van HOUSE, Nancy A. – SUTTON, Stuart A. The Panda Syndrome: An Ecology of LIS Education. *Journal of Education for Library and Information Science*. 1999, Vol. 37, No. 2, pp. 131–147.

¹³ BERRY III, John N. We Must Have *Library Education*. *Library Journal*. 1998, Vol. 123, No. 3, p. 82. BERRY III, John N. Don't Dis the LIS "Crisis": Gorman is right to focus his ALA term on library education. *Library Journal*. 2004, Vol. 129, No. 16, p. 10. GORMAN, Michael. Whither library education? *New Library World*. 2004, Vol. 15, No. 9–10, pp. 376–380.

¹⁴ DILLON, Andrew – NORRIS, April. Crying Wolf: An Examination and Reconsideration of the Perception of Crisis in LIS Education. *Journal of Education for Library and Information Science*. 2005, Vol. 46, No. 4, pp. 280–298.

¹⁵ DILLON, Andrew – NORRIS, April. Crying Wolf: An Examination and Reconsideration of the Perception of Crisis in LIS Education. *Journal of Education for Library and Information Science*. 2005, Vol. 46, No. 4, pp. 280–298.

¹⁶ KALIPER Advisory Committee. *Educating Library and Information Science Professionals for a New Century: The KALIPER Report* [online]. Executive Summary. July 2000 [cit. 2010-06-14]. Available from: <http://durrance.people.si.umich.edu/TextDocs/KaliperFinalR.pdf>.

¹⁷ CHILDERS, Thomas A. Adventures with the “L” Word: The Drexel Chronicle. *Library Journal*. 1998, Vol. 123, No. 3, pp. 112–113.

technologies and network management undergraduate program,¹⁸ and a center for the analysis of applicability; in addition to library studies, the graduate program of Michigan University began to offer information systems management, man-computer interaction, records and archives management, and architecture of future systems.¹⁹ The University of Maryland was the fifth participant at the project. The ensuing KALIPER project, lead by K. Pettigrew, analyzed the educational trends of the field at nearly half the universities of North America (USA and Canada). Six basic trends were identified:²⁰ focus on larger information environment and information issues; multidisciplinary, user-friendly curricula; incorporation of ICT into the curricula, increased investment in state-of-the-art equipment and research laboratories; restructuring of specializations; flexible forms of study programs; broadening of programs. Due to these trends, new interdisciplinary research teams are being established. New Schools of Informatics with departments of Computer Science are being formed, as well as Library and Information Science Studies, and other departments that share their interest in applied information technologies.²¹ The US and Canadian schools that have broadened their interest in this direction are also joining the community or the movement of i-Schools.²² In addition to the newly forming discipline of informatics, the US and Canadian schools also focus on knowledge management, information architecture and digital libraries. As regards related disciplines, it is computer science, information technology and information systems that currently rank among the most influential in the field.²³ Case studies, role-play, project designing,²⁴ and problem solving are the most frequent methods; labs equipped with modern technology are also used.

3 The i-School Movement

The exponential increase of digital information is shocking news for many professionals. Because of the flood of digital information, one may say that our society has turned digital. Large amounts of information make information management ever more relevant; at the same time, the

¹⁸ DURRANCE, Joan. C. Competition or Convergence? Library and Information Science Education at a Critical Crossroad. *Advances in Librarianship*. 2004, Vol. 28. p. 175.

¹⁹ MARCUM, Deanna B. Transforming the Curriculum; Transforming the Profession. *American Libraries*, 1997, Vol. 27, No. 1, p. 35.

²⁰ PETTIGREW, Karen E. – DURRANCE, Joan C. KALIPER: Introduction and Overview of Results. *Journal of Education for Library and Information Science*. 2001, Vol. 42, No. 3, pp. 170–180.

²¹ DURRANCE, Joan. C. Competition or Convergence? Library and Information Science Education at a Critical Crossroad. *Advances in Librarianship*. 2004, Vol. 28, pp. 171–198. KALIPER Advisory Committee. *Educating Library and Information Science Professionals for a New Century: The KALIPER Report* [online]. Executive Summary. July 2000 [cit. 2010-06-14]. Available from: <http://durrance.people.si.umich.edu/TextDocs/KaliperFinalR.pdf>.

ROEGGE, Kathy. Trends in Library and Information Science Education Programs. *Metropolitan Library System* [online]. 2009, Vol. 3, No. 11 [cit. 2010-06-14]. Available from: http://www.mls.lib.il.us/enounce/2009/03_11/trends.asp. TENOPIR, Carol. Educating Tomorrow's Information Professionals Today. *Searcher* [online]. 2002, Vol. 10, No. 7 [cit. 2010-06-14]. Available from: <http://www.infotoday.com/searcher/jul02/tenopir.htm>

²² A number of specialized disciplines is being established; e.g.; social informatics, community informatics, cognitive informatics, medicine informatics, healthcare informatics, caretaking informatics, organization informatics, education informatics, business informatics, etc.

²³ MEZICK, Elizabeth M. – KOENIG, Michael E. D. Education for Information science. In CRONIN, Blaise (ed.). *Annual Review of Information Science and Technology*. Medford: Information Today, 2008. Vol. 42, No. 1, pp. 593–624. ISBN 987-1-57387-308-6.

²⁴ GROTZINGER, Laurel A. Curriculum and Teaching Styles: Evolution of Pedagogical Patterns. *Library Trends*. 1986, Vol. 34, No. 3, p. 463.

complexity of issues concerning digital society is becoming apparent. Complex matters such as privacy, credibility, security, accessibility, information management and organized knowledge necessitate collaboration of specialists from multiple disciplines. As the meeting points of different disciplines, i-Schools forge a multi-disciplinary environment²⁵ where professionals from different fields may find their place within an intellectual community, and, together, thoroughly analyze issues relating to the phenomenon of information and to technologies that facilitate its effective processing and communication. The i-Field expands the domain of information science by “information and users beyond the institutional LIS model.”²⁶ Although some participating schools are prestigious, none of the Ivy League, such as Harvard, Stanford, and Yale offers education in the information field. According to Dillon, the study programs of i-Schools do not formally differ from traditional, LIS programs, being instead “examples of the types of programs into which more and more LIS programs will evolve.”²⁷ In addition to the universe of registered information,²⁸ models of interactions among information users during various activities, and designs of tools to increase their effectiveness have also become the domain of the i-Field. The process of information use is examined in the societal context of its potential effect on “science, business, education and culture.”²⁹ The i-Schools hire faculty members who hold their degree in different disciplines. At first, common terms are used differently, and so the professionals are forced to find their common language of communication. In time, a common discourse is established across the disciplines, as is new academic culture. The faculty working in the diverse and highly dynamic environment cannot afford to stagnate and close themselves off within the confines of their discipline; to the contrary, they remain active students themselves. The i-Schools focus on current issues. However, history specialists have recently also been trying to take part, pointing out that the significance of historical perspective has been underrated although it helps us understand the current trends. For this reason, the Berlin i-Conference considered the proposal of an organization committee to examine the history of the information field – History Information Caucus.³⁰

²⁵ Besides “library science and information science, it is computer science, linguistics, communications, management and business, managerial information systems, law, politics and public administrative, man-computer interaction, psychology, etc.,” are among the disciplines that i-Schools encapsulate. ZHANG, Ping – BENJAMIN, Robert I. Understanding Information Related Fields: a Conceptual Framework. *Journal of the American Society for Information Science and Technology*. 2007, **58**(13): 1934. ISSN 1532-2890.

²⁶ DILLON, Andrew. What it Means to be an iSchool. *Journal of Education for Library and Information Science*. 2012, **53**(4). ISSN 0748-5786. p. 267.

²⁷ Ibid

²⁸ BATES, Marcia J. The Invisible Substrate of Information Science. *Journal of the American Society for Information Science*. 1999, **50**(12): pp. 1043–1050. ISSN 1532-2890.

²⁹ BRUCE, Harry. The Audacious Vision of Information Schools [online]. *International Symposium on the Transformation & Innovation of Library and Information Science*, November 16-17, 2010, Taipei, Taiwan. [cit. 2014-23-06]. Available from: <http://www.glis.ntnu.edu.tw/2010conference/docs/proceeding039-045.pdf>.

³⁰ HABERMANNOVÁ, Hana – LORENZ, Michal. iConference 2014: i-Školy, i-obor i Berlín. *Inflow* [online]. 2014. ISSN 1802-9736. [cit. 2014-06-24]. Available from: <http://www.inflow.cz/iconference-2014-i-skoly-i-obor-i-berlin>.

3.1 The i-Model and Its Basic Elements

The i-School domain is formed by the mutual interaction of people, information, and technology. Zhang and Benjamin add a fourth element of “organization/society” in their model of the information field (the i-Model). The individual elements integrate diverse forms of information into a unified discipline; their interaction grants the field its dynamics, balance, and its characteristic interdisciplinary nature.³¹ However, D. Madsen criticizes the model as an insufficient framework for the purposes of the i-Field description. She argues that the given i-Model flattens the depth of the integration of the information sub-fields that are not necessarily interdisciplinary but interspersed in the continuum evolving from multidisciplinary to transdisciplinary fields. This important distinction then delineates a clear and firm conceptual base of the i-Field.³²

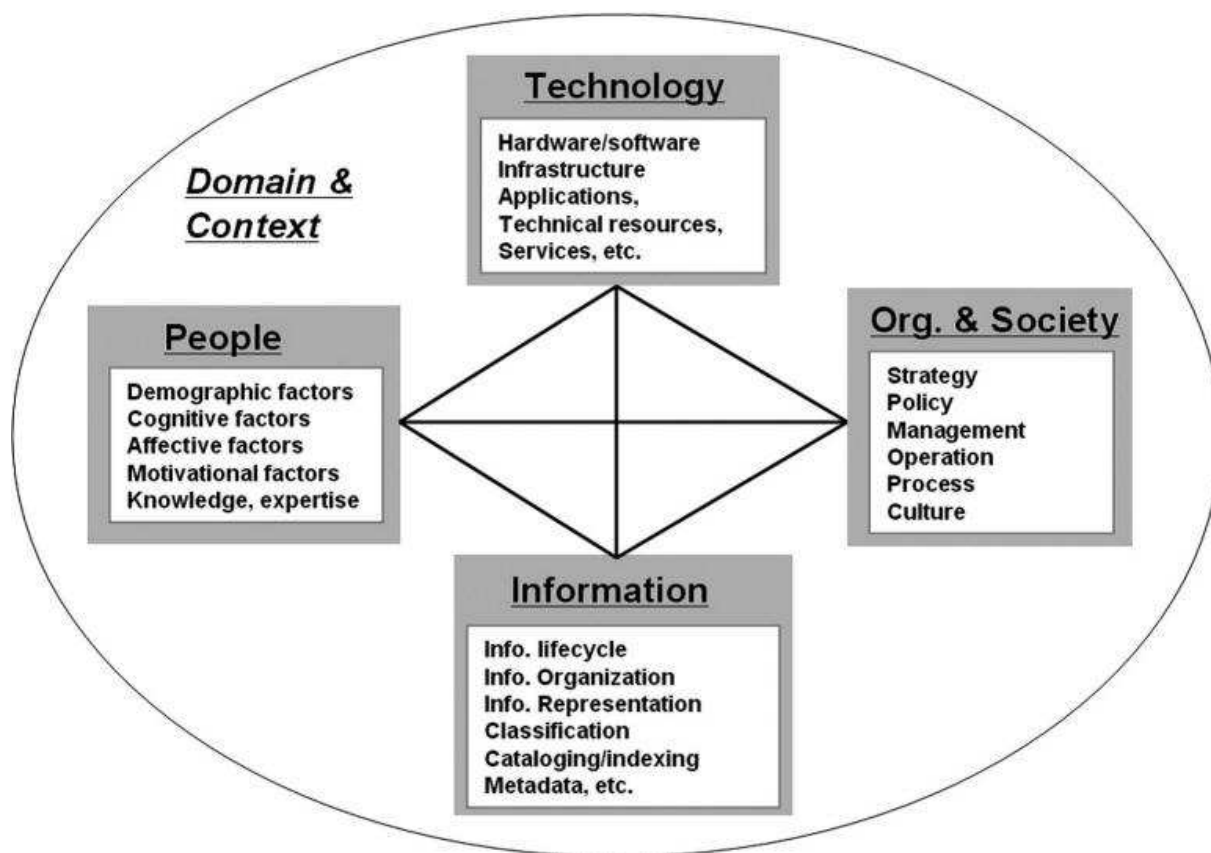


Figure 2 Information Model by Zhang and Benjamin (ZHANG, Ping – BENJAMIN, Robert I. Understanding Information Related Fields: a Conceptual Framework. *Journal of the American Society for Information Science and Technology*. 2007, **58**(13): pp. 1934–1947. ISSN 1532-2890.)

³¹ ZHANG, Ping – BENJAMIN, Robert I. Understanding Information Related Fields: a Conceptual Framework. *Journal of the American Society for Information Science and Technology*. 2007, **58**(13): pp. 1934–1947. ISSN 1532-2890.

³² MADSEN, Dorte. Interdisciplinarity in the Information Field. *Proceedings of the American Society for Information Science and Technology*. 2012, **49**(1): pp. 1–7. ISSN 1550-8390.

The richness of the interaction among the basic elements of the i-Field forges a great diversity of topics that are taken up by the i-Schools academics. The diversity and interdisciplinarity of the topics have also prompted a revival of the system theory. Digital abyss, globalization and information technologies of the developing countries in the context of social, political and ethical issues, digital services, credibility and trustworthiness of the online environment, increase of productivity, assessment of investment yields, leadership and support, technology in social-economic systems, information ecology, and many other issues have become the new research topics.

3.2 The i-School Education

Human-computer interaction (HCI) is becoming one of the core i-School courses. Being situated within the framework of the basic elements (information—people—technology), the course has found its permanent place in i-Schools where it is likely that its educational and research potential will be cultivated.³³ The HCI principles of usability and user-centered design are appreciated even by students whose disciplines may not necessarily engage in analyses of usefulness. The principles are often brought up in individual courses that have become core courses in the i-Schools curricula.³⁴ Service science, “examining service systems that vary in their scope (ranging from individuals to companies, organizations, governments and nations) and involve people, information, organizations and technologies”³⁵ is the most recent addition to the curricula of i-Schools. Due to the evolution of e-Science, other fields that address issues concerning cybernetic infrastructure are claiming their place in i-Schools. Archival studies that has been tackling issues concerning digital archives, for example, is also vying for its place in the information field.³⁶ Courses on digital libraries figure more prominently in the curricula of the i-Schools these days than in those of LIS and Schools of Informatics (Computer Science Schools).³⁷ Because of the omnipresence of information technologies and the bounty of relevant topics, the role of i-Schools is changing. Professional work with information at the forefront of science and technology advancement situates i-Schools into an economically strategic position, opening new markets to their graduates. Because i-Schools now represent a strong brand and have quality public relations, the number of their students keeps growing. Each i-School

³³ OLSON, Gary M. – GRUDIN, Jonathan. The Information School Phenomenon. *Interactions*. 2009, **16**(2). ISSN 1072-5520. p. 19.

³⁴ 93 % of surveyed graduates from usability courses argue that they use the basic principles, taught in the course, in their work. BIAS, Randolph G. – MARTY, Paul F. – DOUGLAS, Ian. Usability/User-Centered Design in the iSchools: Justifying a Teaching Philosophy. *Journal of Education for Library and Information Science*. 2012, **53**(4): 274–289. ISSN 0748-5786.

³⁵ LYONS, Kelly A. Service Science in iSchools. In: *Proceedings of iConference 2010* [online]. 3–6 February 2010, Illinois Urbana-Champaign, USA [cit. 2014-18-06]. Available from: <https://www.ideals.illinois.edu/bitstream/handle/2142/14946/KLyons-final-submitted-iConference-service-science-ischools.pdf?sequence=2>

³⁶ COX, Richard J. – LARSEN, Ronald L. iSchools and Archival Studies. *Archival Science*. 2008, **8**(4): 307–326. ISSN 1389-0166.

³⁷ WILDERMUTH, Barbara M. – POMERANTY, Jeffrey – OH, Sanghee - YANG, Seungwon – FOX, Edward A. I-Schools as a Natural Home for Digital Libraries Education. In: *Proceedings of iConference 2009* [online]. 8 – 11 February 2009, North Carolina, USA [cit. 2014-23-06]. Available from: https://www.ideals.illinois.edu/bitstream/handle/2142/15337/DL_in_i-schoolspaper-final2009-01-27.pdf?sequence=2

curriculum is a specific blend of the interests of its faculty and the possibilities of the industry. Services and the life-cycle functions of information are the typical points of interest. Emphasis is placed on professionalism and responsibility, and on technologies that support the skills and procedures of problem-solving in the field. The i-Schools do not so much intend to substitute traditional library and information sciences as expand their interests and usability beyond the limitations of one kind of institution, addressing other professional areas, memory institutions, and user-information needs outside the institutional framework. Their approach at the same time promises to reconcile the tension between the academia and professional practice, which has been haunting the academic programs of Library Studies. That is also why emphasis is placed on the interconnectedness of faculty career advancement with research, that is, on productivity instead of educational practice and service activities.³⁸ Even so, library science professionals voice their concerns regarding the i-School movement which in their opinion diverts education from Library Studies to another kind of education of information professionals. D.P. Wallace counters the above opinion with occupational schools student registration data from 1979—2008. While the number of students registered with the ALA-accredited schools grew in 2008, the total number of students registered with occupational schools had slightly decreased. This means that the trend of increasing numbers of students is determined by the students registered with the ALA-accredited schools, while their abandonment of traditional LIS education is not supported by facts.³⁹ The process of turning the information field into a hybrid is also helped by select i-Schools that have joined the WISE consortium (Web-based Information Science Education). That is why certain i-Schools do not limit themselves to offering solely their own courses. This platform for distance learning offers external courses taught by the member schools of the consortium, while thus received credits are accepted within the home curriculum.⁴⁰ The i-Schools also use online instruction more frequently than the ALA-accredited schools. According to J. Kampov-Polevoi and J. Mustafa, 14 out of 19 US i-Schools offer a form of online education, of which nine schools offer their degree programs online. These degree programs usually require a short-term (4–10 days) campus stay at the beginning of the term, while the rest of the instruction takes place online. The percentage of online courses offered by ALA-accredited schools falls within the national average; 38% of these schools offer online courses, as compared to the 48% of i-School online courses. The ALA schools that use online instruction also combine different technologies; online broadcasting and videoconferencing in particular are widely used. On the other hand, the majority of i-Schools use commercial or open source systems for their course management (CMS). Blackboard, Moodle, Sakai, eCollege and ANGEL learning are among the most popular sources. Web-conference software is also gaining popularity; however, only one university uses it as its main instruction tool: combining different technologies is therefore less usual.⁴¹

³⁸ DILLON, Andrew. What it Means to be an iSchool. *Journal of Education for Library and Information Science*. 2012, **53**(4): 267–273. ISSN 0748-5786

³⁹ WALLACE, Danny P. The iSchools, Education for Librarianship, and the Voice of Doom and Gloom. *The Journal of Academic Librarianship*. 2009, **35**(5): 405–409. ISSN 0099-1333.

⁴⁰ For more information, visit WISE - Web-based Information Science Education. [online]. [cit. 2014-28-07]. Available from: <http://www.wiseeducation.org/>.

⁴¹ KAMPOV-POLEVOI, Julia – MOSTAFA, Javed. Online Learning at iSchools – Review of Current Offerings. In: *Proceedings of iConference 2009* [online]. 8 – 11 February 2009, North Carolina, USA [cit. 2014-18-06]. Available from: <https://www.ideals.illinois.edu/bitstream/handle/2142/15330/iConfJKP26JMfinal.pdf?sequence=2>

4 The i-Caucus

The i-Caucus is the main steering and coordinating body of the i-Schools, steering the advancement of the movement and providing a space where deans and other i-School managers can meet. The i-Caucus was formed from former i-Schools that decided to take part at organizing and steering the information field; they were also willing to make financial investments into the promotion of the i-School brand. Upon its formation, the i-Caucus served as a communication platform for the i-School deans who would meet for informal talks that also included other faculty members. At the meetings, they would inform one another about the composition of their curricula and about their current research. Administrative changes and program issues concerning the position of the i-Schools at their respective universities would also be discussed. Collaborative research was also planned at the meetings. In 2005, the i-School constituents adopted the i-Caucus Charter that clearly stipulates the motives, goals and purposes of the group. The i-Caucus members are elected by the officially recognized i-School members. However, not every school is represented in the i-Caucus since the i-Caucus members try to keep the steering committee optimally sized so that important decisions can be made.

4.1 The Criteria for Joining the i-Schools

An i-School that asks to be officially recognized must fulfill the following criteria:

- the institution is research-oriented, and its research is mostly sponsored;
- the school has an accredited doctoral program to train future experts in the field;
- the institution has committed to support and develop the information field;
- the dean of the school reports directly to the highest-ranking academic administration person of the mother institution; the school has a unique university structure.

Each recognized i-School pays a yearly fee, and provides information about its programs and about the school itself on the i-School webpage.⁴² The school also contributes news to the RSS aggregate and sends its representatives to cast their votes during the i-Caucus member election. The recognition of the aspiring i-School is contingent on a report prepared by the member committee. The school must be voted in by all the members, and pay the membership fee. The requirement that the research is financed externally, which used to serve as evidence of the research-based profile of the school, has lost its purpose because more often than not, it is the state agencies that are now sponsoring research. The research-oriented profiling of the schools is, however, still considered highly important because of its effect on the hiring of new employees and the character of the instruction, and on the job placement of the program graduates.⁴³

⁴² see iSchools. Leading and promoting the information field. [online]. [cit. 2014-07-30]. Available from: <http://ischools.org/>.

⁴³ DILLON, Andrew. What it Means to be an iSchool. *Journal of Education for Library and Information Science*. 2012, **53**(4): pp. 267–273. ISSN 0748-5786.

5 The i-Conference

In view of the diverse nature of the i-Schools, the movement is beginning to seek its own identity. A series of yearly conferences, aptly called i-Conferences, has significantly contributed to the identity-shaping of the movement. The conference originated within the framework of a yearly i-Caucus meeting of the deans, in 2005. The first conference took place at the Penn State University in Pennsylvania, the second in Michigan.⁴⁴ G. Harmon identifies four main reasons why the first i-Conference took place:

- to examine the constituting baseline of the information field
- to determine the main social issues that the i-Schools may help resolve and to examine the possibilities of future advancement
- to seek the field and administrative meeting points between i-Schools and their university
- to find common topics that form the identity of i-Schools.⁴⁵

The i-Conferences mostly serve the i-Schools employees and their students. Other interested parties may sign up for the conferences as observers and discussion participants. The conferences examining the phenomenon of information have played an important role in the identity-forming of information science; now they represent an important part of its history. A. Debons and G. Harmon find the predecessors to the i-Conferences in the information science advanced-studies conferences that took place at the NATO Advanced Study Institutes in 1972-1983. The field has since matured, and so questions concerning its identity have in some respects radically changed. But in other respects, they remain open. The following are the features shared by both events:

- both the activities of the NATO Institute and the i-Conference have multidisciplinary character;
- the NATO Institute engages issues similar to those of the i-Conference;
- so far, no agreement has been reached as regards the nature of information. No agreement has been reached on the mission of i-Schools, either. However, ambiguity is not considered a negative, progress-impeding factor; to the contrary, it is considered a healthy symptom;
- because new opportunities have been created by user needs that have been, in turn, caused by the information explosion that has prompted changes in communication, decision-making and problem-solving, the activities of both institutions focus on generating new jobs;
- system theory has played the role of the integrative framework in the forming of information science. System theory is now experiencing a revival because of the interconnectedness of the chaos theories and the metaphor of living systems with the i-School information processing subsystems.

The events differ from each other as follows:

- the studies produced by the NATO Institute were international, while the first i-Conference was national (taking place in the USA). At present, i-Conferences are international;

⁴⁴ OLSON, Gary M. – GRUDIN, Jonathan. The Information School Phenomenon. *Interactions*. 2009, 16(2), pp. 15–19. ISSN 1072-5520.

⁴⁵ HARMON, Glynn. The First I-Conference of the I-School Communities. *Bulletin of the American Society for Information Science and Technology*. 2006, 32(4): pp. 9–10. ISSN 1550-8366.

- the studies of the NATO Institute were funded by the NATO Science Committee, while the i-Conferences are sponsored both by i-Schools and by the U.S. National Science Foundation;
- the NATO Institute is concerned with the identity of the newly-forming information science, while the i-Conferences examine the identity of their multidisciplinary field;
- the information science of the 1960s and the 1970s seeks its place in the academia; it is absorbed by already existing traditional schools and universities. Information science is thus viewed pursuant to the criteria of more traditional disciplines, regardless of its uniqueness. The i-Conferences, meanwhile, host visionaries from other fields and disciplines, offering them a place in a relatively established field. At the moment, the field incorporates and absorbs other fields and disciplines.⁴⁶

The multidisciplinary environment of the i-Conferences requires that certain basic rules be observed in order to foster inspiring conversation that helps steer the entire movement. However, H. Bruce, D. Richardson and M. Eisenberg⁴⁷ argue that any attempt to define the field for the sake of providing unified i-School core course material may be controversial; for this reason, the i-Conference participants as a rule leave the core of the information field largely undefined. Every voice has to be heard, and no single perspective may be prioritized in a multidisciplinary environment. That is why the i-Conferences cultivate all-inclusive atmosphere, in which no group of experts defends the borders and the inherited orientation of their field from its competition. An environment that lacks territorialist tendencies may then foster mutual collaboration across the disciplines.⁴⁸

6 Social Role of i-Schools

The i-Schools openly declare their responsibility for their social role by their commitment to ethical values that engender the society. They further commit to seeking solutions to large-scale information issues, and to being able to secure funding for relevant research in order to be at the frontline of progress: a force that represents innovative leadership and progress in “science, business, education, and culture.”⁴⁹ The i-Schools ought to be placed in the center of academic, research and service programs, their objective being the interactions of man—ICT, the understanding of the use and the users of information, and the character of ICT and their application. On this basis, the i-Schools intend to develop, design and assess information technologies, services and systems. This necessitates an active research program in the form of doctoral studies. The so-called basic applied research is given preference over other types of research, because theories may be developed and experts from other field, interested in their own information issues, may be drawn in to examine society and culture from the perspective of the i-Schools, asking questions about the ways in which to project and represent information, and

⁴⁶ DEBONS, Anthony – HARMON, Glynn. The I-Conference in Retrospect. *Bulletin of the American Society for Information Science and Technology*. 2006, **32**(4): pp. 19–21. ISSN 1550-8366.

⁴⁷ BRUCE, Harry – RICHARDSON, Debra J. – EISENBERG, Mike. The I-Conference: Gathering of the Clans of Information. *Bulletin of the American Society for Information Science and Technology*. 2006, **32**(4): pp. 11–12. ISSN 1550-8366.

⁴⁸ DILLON, Andrew – RICE-LIVELY, Mary Lynn. Passing the Taxi-Driver Test. *Bulletin of the American Society for Information Science and Technology*. 2006, **32**(4): pp. 22–23. ISSN 1550-8366.

⁴⁹ iSchools. Leading and promoting the information field. [online]. Charter [cit. 2014-07-30]. Available from: <http://ischools.org/>.

support its use. If the i-Schools are to play the role of innovative leaders in the information field, they have to achieve their above-mentioned independence from the institution of which they are a part. The i-Schools then become extra-organization units that via academic experimentation test the issues of interdisciplinarity and collaboration, reporting directly to the dean. The i-Schools hire other i-School graduates and export their own graduates to other fields. The information field is equally relevant to the academic world and to the local, national and international communities. Usefulness, collaboration with the industry, interdisciplinarity, collegiality, flexibility, innovation, adaptability, creativeness, training of future graduates for management positions, willingness to take risks, and building of workplaces of the future are some of the basic values. The graduates are trained in abstract and critical thinking and in high effectiveness.⁵⁰ The curricula ought to be dynamic, adjustable in accordance with the most pressing societal issues. R. Heckman and J.Snyder emphasize the importance of the humanities that ought to be incorporated into the curriculum as frequently as are the technical disciplines. The authors call for the inclusion of aesthetic experience and art interaction, which complement the rationalistic and scientific model of education. The technical competences are thus extended by those of the humanities, forging “cross-functional” competences (e.g.; thinking globally) that are useful to the information professionals when tackling the complex issues of the modern society. Teamwork, problem-solving, global consciousness and basic communication skills are among the above competences. Mastering those helps the students interpret ambiguous situations, interact with experts from other fields, and constructively self-evaluate their output. The competences groom intuition and empathy, and enhance the students’ abilities to work with metaphors and analogies. Being complementary to the analytical competences, soft skills contribute to the formation of holistic points of view. The very nature of the information field justifies the presence of the humanities, because they engender our ability to synthesize, integrate, and focus on relationships, interconnections, and context.⁵¹ Moreover, there is an element of danger embedded within an exclusive business focus, as it undermines the social role of the i-Schools. A corporate university model that understands the i-School as no more than a for-profit subject, shifts the mission of the i-School from the enhancement of public good to the enhancement of business. The university ceases to educate, instructing instead, and giving up its role as a social institution to that of a production-oriented machine. The audits, report and productivity measurements consume up the faculty time which would otherwise be devoted to teaching and research; more and more money is swallowed up by branding and marketing; academic degrees are not gained, but represent products for sale.⁵²

⁵⁰ HARMON, Glynn. The First I-Conference of the I-School Communities. *Bulletin of the American Society for Information Science and Technology*. 2006, **32**(4): pp. 9–10. ISSN 1550-8366. BRUCE, Harry – RICHARDSON, Debra J. – EISENBERG, Mike. The I-Conference: Gathering of the Clans of Information. *Bulletin of the American Society for Information Science and Technology*. 2006, **32**(4): pp.11–12. ISSN 1550-8366. THOMAS, James – DRAN, Ray von – SAWYER, Steve. The I-Conference and the Transformation Ahead. *Bulletin of the American Society for Information Science and Technology*. 2006, **32**(4): pp.16–18. ISSN 1550-8366.

⁵¹ HECKMAN, Robert – SNYDER, Jaime. The Role of the Arts in an iSchool Education. In: *Proceedings of iConference 2008* [online]. 28 February – 1 March 2008, California, USA [cit. 2013-17-6]. Available from: http://www.ideals.illinois.edu/bitstream/handle/2142/15078/PA3-1_iconf08.pdf?sequence=2.

⁵² COX, Richard J. – MATTERN, Eleanor – MATTOCK, Lindsay – RODRIGUEZ, Raquel – SUTHERLAND, Tonia. Assessing iSchools. *Journal of Education for Library and Information Science*. 2012, **53**(4). ISSN 0748-5786. p. 314.

7 Interdisciplinarity

Interdisciplinarity is one of the core characteristic features of the i-Schools. At the same time, the concept of interdisciplinarity remains unclear, since different authors view the character of the i-Schools differently. Many authors do not distinguish between interdisciplinarity and multidisciplinary, using the two words as synonymous⁵³ regardless of the differences in the forms of collaboration that the words represent. In their specialized articles, some authors speak of the cultivation of transdisciplinarity,⁵⁴ multidisciplinary,⁵⁵ and interdisciplinarity.⁵⁶ According to Holland, a terminology thus undistinguished lessens the understanding among the scientists, prevents detailed research and effective comparison of research results, and lowers the effectiveness of communication, which also affects the practice related to information science.⁵⁷ Holland argues that interdisciplinarity is characterized by integration; that is, by interconnecting and synthesizing of theories, concepts and methods by virtue of which a space without disciplinary borders is established, where new knowledge and innovative solutions may be found, and a new discourse is constituted. On the other hand, multidisciplinary is characterized by proximity (closeness) but not by transformativeness. In other words, multidisciplinary research may be characterized as parallel work of experts from different fields who are addressing a common, more general issue without attempting to merge their methods and conclusions. The experts adapt their methods and conclusions to their own needs, rarely borrowing from other disciplines; the fields themselves never change. While multidisciplinary research is suitable for finding fast, effective solutions, interdisciplinary research generates new theories, methods and integrative frameworks, discovering new opportunities.⁵⁸ In the long run, interdisciplinarity is therefore more useful for the information field. The interdisciplinary environment of i-Schools has to be actively supported and cultivated. Interdisciplinarity is not natural; that is why conditions for its development have to be forged. The way in which the universities are structured these days may slow down this process, and so the i-Schools are seeking ways to “step outside” while at the same time remaining parts of their universities. Forging a space within the traditional disciplines brings them closer together and opens up ways to address pressing intellectual, practical and

⁵³ MADSEN, Dorte. Interdisciplinarity in the Information Field. *Proceedings of the American Society for Information Science and Technology*. 2012, 49(1): pp.1–7. ISSN 1550-8390. Concerning this type of confusion, see, for example, THOMAS, James – DRAN, Ray von – SAWYER, Steve. The I-Conference and the Transformation Ahead. *Bulletin of the American Society for Information Science and Technology*. 2006, 32(4): pp.16–18. ISSN 1550-8366.

⁵⁴ e.g.; LARSEN, Ronald L. iSchools. In BATES, Marcia J. – MAACK, Mary Niles (Eds.). *Encyclopedia of Library and Information Sciences*. 3. ed. Boca Raton: CRC Press, 2010, pp. 3018-3023. ISBN 0-8493-9712-x.

⁵⁵ LYONS, Kelly A. Service Science in iSchools. In: *Proceedings of iConference 2010* [online]. 3 – 6 February 2010, Illinois Urbana-Champaign, USA [cit. 2014-18-06]. Available from: <https://www.ideals.illinois.edu/bitstream/handle/2142/14946/KLyons-final-submitted-iConference-service-science-ischools.pdf?sequence=2>.

⁵⁶ KING, John Leslie. Identity in the I-School Movement. *Bulletin of the American Society for Information Science and Technology*. 2006, 32(4): pp. 13–15. ISSN 1550-8366. OLSON, Gary M. – GRUDIN, Jonathan. The Information School Phenomenon. *Interactions*. 2009, 16(2), pp. 15–19. ISSN 1072-5520.

⁵⁷ HOLLAND, George Adam. Information science: an interdisciplinary effort? *Journal of Documentation*. 2008, 64(1): pp. 7–23. ISSN 0022-0418.

⁵⁸ *ibid*

social issues.⁵⁹ The interaction among the fields and disciplines furthermore necessitates coordination because of their differing values and economies. Other fields and disciplines contribute to the information field by their theories, conceptual models and design principles. M. Eisenberg points out that whereas today's i-School faculty is rather multidisciplinary, it is their students who will become the truly interdisciplinary professionals.⁶⁰ The new generation of information professionals will be able to design tools that simplify information interaction on the one hand, and form relevant social and political structures that affect information technologies, advise on planning, discuss legislation on grounds of scientific expertise, and explain the advantages and the disadvantages of planned alternatives on the other. In addition to issues concerning the conceptualization and implementation of interdisciplinarity, i-Schools have to figure out ways of presenting their interdisciplinary research, because it is unclear which discipline ought to own the interdisciplinary research results. The i-Schools do not have their own peer-reviewed journal, and so they have to pick and choose among other specialized journals, which, however, may reject their research as marginal or irrelevant to their own discipline. Oftentimes, a research article, though excellent, ends up being rejected by all journals. A similar situation occurs when i-Schools are ranked because it is unclear which category is applicable to their study program.⁶¹

8 Identity of the i-Schools

The identity of the i-Schools is a frequently discussed issue. The above-given reasons make it clear that their identity is necessarily flexible. The i-Schools try to avoid a dominant research paradigm, pointing out the issue of pragmatic legitimacy. According to Bruce and coll., determining the identity of the field may be controversial, because there is the danger that voices may be silenced, important partners may be alienated, and artificial barriers to collaboration may be raised. At the same time, too great an openness might mean superficial and simplifying views of the i-School movement. However, the i-Field is not only a conflux of other fields and disciplines; it is an autonomous field with its own theoretical bases and principles. The identity of the field states what the field is about and what it aims to achieve.⁶² L. King also views the situation concerning i-Schools as paradoxical, comparing it to Joseph Heller's novel, *Catch 22*. King maintains that there are two kinds of identities of the field: the identity inherited from the

⁵⁹ WIGGINS, Andrea – SAWYER, Steven. Intellectual Diversity and the Faculty Composition of iSchools. *Journal of the American Society for Information Science and Technology*. 2012, **63**(1): pp. 8–21. ISSN 1532-2890.

⁶⁰ HABERMANNOVÁ, Hana – LORENZ, Michal. iConference 2014: i-Školy, i-obor i Berlín. *Inflow* [online]. 2014. ISSN 1802-9736. [cit. 2014-06-24]. Available from: <http://www.inflow.cz/iconference-2014-i-skoly-i-obor-i-berlin>.

⁶¹ According to Cox et al., 15 out of 17 US schools that refer to their placement in the ranking school systems on their webpages, use the US News and World Report system. There is an LIS category in the Carnegie classification; however, due to the interdisciplinary character of fields such as information technologies and telecommunications, this category does not seem adequate for the purposes of comparison. In accordance with their character, the i-Schools then fall into the category of prestigious and prestige-seeking institutions, which is, this time, contrary to the rhetoric of the i-Schools Movement that promotes collaboration as the prerequisite of integration and thus interdisciplinarity. For more information, see COX, Richard — J. JMATTERN, Eleanor – MATTOCK, Lindsay – RODRIGUEZ, Raquel – SUTHERLAND, Tonia. Assessing iSchools. *Journal of Education for Library and Information Science*. 2012, **53**(4): pp. 303–316. ISSN 0748-5786.

⁶² BRUCE, Harry – RICHARDSON, Debra J. – EISENBERG, Mike. The I-Conference: Gathering of the Clans of Information. *Bulletin of the American Society for Information Science and Technology*. 2006, **32**(4): pp. 11–12. ISSN 1550-8366.

founding group of i-Schools that banks on the critical mass, which gives the movement its current strength, and the identity of the emerging integrity that advocates new visions for the future. On the one hand, i-Schools want to resemble the preceding type of schools to be able to establish a discipline that other academics would legalize; on the other hand, the i-Schools want to differ from already established disciplines so as to gain the status of a new school. King argues that the i-School identity is less contingent on how the i-School academics define themselves than on how the i-Schools are viewed by those who want to use the schools, or assess them. The fastest way to formulate the identity of the i-Schools may be “when the i-School movement members find out what it is that the world wants from the i-Schools.”⁶³ Burnett and Bonnici also feel negatively about defining the identity of the i-Schools. They argue that the current organization of the i-Field is rhizomorphic, built on a “collective ideology” of open networks,⁶⁴ and so any “crystallization of the field identity” would disturb the rhizomorphic (plurality) structure and cause “stagnation of the dynamics, openness and mutual interconnectedness.”⁶⁵

9 The i-Schools as Research Subjects

The i-Schools highly emphasize research, preferring basic research for the purposes of instant use, while often responding to the needs of the industry. This research aims to address issues concerning the real world, and be of practical use. Given that the i-Schools, as independent academic units, represent an experiment in the areas of science and interdisciplinarity, they have become the subjects of research themselves. At present, numerous research studies are being conducted on the i-Schools. The research studies of D.Wu et coll., addressing the research profiling of the i-Schools and their collaboration, is of particular interest. The first study of D. Wu et coll. examines the webpages of 27 i-Schools and Web of Science in order to determine the original educational tracks of their faculty members, their research interest, publication history, and the names of the agencies that have funded their research.⁶⁶ The educational tracks of most faculty were either Information Science studies, Library Science Studies, or Computer Science, represented in equal rates. Other faculty received their education degree in Economics, technical disciplines, Pedagogy, Arts and Humanities, Psychology, Mathematics, Physics, Communications, and Social Studies. Altogether, the group identified 46 research topics. Upon dividing the i-Schools into three categories — Information Studies and Librarian Studies LIS (19 schools, 14 of which hold ALA accreditation); Informatics (4 schools) and Economics/Management (4 schools) — the most frequent subjects mentioned in the LIS

⁶³ KING, John Leslie. Identity in the I-School Movement. *Bulletin of the American Society for Information Science and Technology*. 2006, **32**(4). ISSN 1550–8366. p. 15.

⁶⁴ A rhizomorph is a metaphor denoting the multidimensional, multilingual, meta-political and socio-technical character of the i-Schools, which are interconnected through all points, based on relationships rather than fixed points, dynamically and constantly changing, without hierarchies and without the outside-inside distinction; that is, featuring an open network structure. BURNETT, Kathleen – BONNICI, Laurie J. Rhizomes in the iFiled: What Does it Mean to be an iSchool? *Knowledge Organization*. 2013, **40**(6): pp. 408–413 ISSN 0943-7444.

⁶⁵ BURNETT, Kathleen – BONNICI, Laurie J. Rhizomes in the iFiled: What Does it Mean to be an iSchool? *Knowledge Organization*. 2013, **40**(6). ISSN 0943-7444. S. 413.

⁶⁶ Danish and German i-Schools were not included for lack of information sources. WU, Dan – HE, Daqing – JIANG, Jiepu – DONG, Wuyi – VO, Kim Thien. Academic Research in iSchools: State and Implications. In *Proceedings of the 2011 iConference*. ACM: New York, 2011, pp. 203-201. ISBN: 978-1-4503-0121-3.

category were the following: theory and practice of education, information theory, culture, reading, information literacy, library management, management of information sources, management of organizations, and information search. In the category of informatics, the following subjects are mentioned: intelligent systems, adaptive systems, HCI and human-centered design, user modeling, decision-making support systems, and neural networks. E-commerce, HCI and human-centered design, social web, and collaborative work are listed in the category of economics. The i-School faculty publish mostly in the following peer-reviewed journals: *Journal of the American Society for Information Science and Technology*, *Library and Information Science Research*, and *Information Processing and management*. Of the 20 highest-ranking journals, nine specialize in LIS, and six in informatics. The keyword frequency in the research articles suggests that information search, algorithms, knowledge management, HCI, security, privacy, and social networks are the most popular research topics. In their second study, D. Wu et coll. state that i-School offer the most study programs relating to LIS (16 total), information technologies (11 total), and information management (6 total). Information theory, management of information sources, and information search rank among the most popular research topics. The following are the primary sponsors of projects dating from 2005-2010: Federal institutions (604 out of 2000), private companies (98 projects), and nonprofit organizations (87 projects). The National Science Foundation (NSF), Institute of Museum and Library Services (IMLS), National Institutes of Health/National Library of Medicine (NIH/NLM), military and medical agencies, nonprofit foundations, and LIS associations are the most frequent federal sponsors. IBM, Google, Intel, HP, Microsoft and others are the largest companies supporting the i-School research. There exists strong cooperation among the i-Schools; only a few i-Schools are isolated (e.g.; the Berlin University).⁶⁷ Wiggins et coll. examined the ranking of i-Schools according to their prestige and their hiring process network. High reputation is a part of the school's identity, and affects the hiring process. The authors examined the faculty members of the i-Schools who received their PhD degrees as the minimum requirement. The 2007 study was conducted on a sample of 674 employees. Similar data on the hiring process was obtained from the highest-ranking Schools of Computer Science. The data was used in two network models rendering the institutional belonging of the academics; the models were then compared. Via information entropy, the diversity of the origins of the academics (their degree programs) and the diversity of their specializations were measured. The first result shows the diversity and at the same time the tightness of the connections among the universities, the second demonstrates the level of their interdisciplinarity. Although the i-Schools and Computer Sciences hiring network models appear to be structurally similar, the network of the i-Schools is less dense, finding sources in a greater variety of workplaces. While this diversity increases the prestige of the i-Schools, it decreases the reputation of Computer Science. The social exchange structure of Computer Science is tighter and more predictable. All i-Schools, with the exception of the School of Information of the University of Washington, hire new faculty from within — 13% on average. Of those, 64% come from Information and Library Science with the exception of UCLA (University of California, Los Angeles), where the majority of the newly hired faculty hold their degree in Pedagogy. The majority of the i-School faculty hold their PhD in Computer Science and Information Science (43%)⁶⁸ and in Library Science (14%). According to the results of the information entropy analysis, there are only two hiring strategies. One of them supports a broad

⁶⁷ WU, Dan – HE, Daqing – JIANG, Jiepu – DONG, Wuyi – VO, Kim Thien. The state of iSchools: an analysis of academic research and graduate education. *Journal of Information Science*. 2012, 38(1): pp. 15–36. ISSN 0165-5515.

⁶⁸ The graph wrongly identifies the percentage of faculty holding their PhD in Informatics and Information Science. 43 % is the correct percentage, not 39 %.

interdisciplinarity (e.g.; Michigan University and Syracuse University), the other prefers narrowly defined, yet in-depth specializations (e.g.; North Carolina and Toronto universities specializing in Library Science, Computer Science and Information Science).⁶⁹ M. E. Pollack examined the social identity of i-Schools by analyzing the publications of academics and their co-authors. She analyzed the records of CiteSeer, and their webpages. The sum total of the data encompasses 1357 publications by 41 academics. The author obtained her final results by performing a social network analysis. Pollack observed the effect that social identity may have on the formation of cliques.⁷⁰ The conclusion of her study demonstrates that there is a strong correlation between a group membership, the formation of cliques, and a tight collaboration network. The faculty members of a school who hold their degree in the same field have the tendency to collaborate with one another more frequently than with faculty from other fields.⁷¹ The questions of how to cultivate and promote interdisciplinarity at workplaces, and how to measure and report the effectiveness and influence of interdisciplinary research teams still remain to be answered.

10 The i-Schools In the Czech Republic — Prospects and Perspectives

At the moment, 15 European universities, some of which are of the highest rank, are members of the i-School movement; in Great Britain, it is Dublin University, Sheffield University, London University, and Glasgow University; other European universities include Boras University in Sweden, Amsterdam University, Oslo University in Norway, Copenhagen University in Denmark, Tampere University in Finland, Humboldt University in Germany, NOVA and Porto universities in Portugal, Open University of Catalonia in Spain, Polytechnic University in Italy, and Telecom Bretagne in France. In the Czech Republic, the Division of Information and Library Studies of Masaryk University, Brno, offering Information Services Design, Education Technology and Information and Data Management specializations, is an affiliate of the i-School movement. The Institute of Information Studies and Librarianship of Charles University in Prague, focusing on the fields of Information, Librarianship and Library Science, and offering New Media Studies in their program, is also interested in the i-School movement. None of the Czech universities meet the criteria for i-School membership; nevertheless, both above-given institutions are showing their interest in the evolution of the movement, as evidenced by the number of their representatives at the Berlin i-Conference. A lack of research sponsored by industrial subjects, presents the main problem. The research topics that approximate the Division of Information and Library Studies of Masaryk University to the i-Schools are the following: information behavior of webinar participants, assessment of e-learning courses effectiveness, research data management, and social factors that affect the formation of learning community. The Institute of Information Studies and Librarianship of Charles University focuses its research on the user-aspects of information systems with particular consideration of HCI and the relationship of information technologies to social context. Both institutions are limited by conservative environment and by the lack of human resources because there are few active experts working in the areas of the newly-forming disciplines and information jobs. In future, both

⁶⁹ WIGGINS, Andrea – SAWYER, Steven. Intellectual Diversity and the Faculty Composition of iSchools. *Journal of the American Society for Information Science and Technology*. 2012, **63**(1): pp. 8–21. ISSN 1532-2890.

⁷⁰ this term is adopted from sociology, denoting informal social groups that form within formal groups.

⁷¹ POLLACK, Martha E. Reflection on the Future of iSchools from a Dean Inspired by Some Junior Faculty. *Interaction*. 2010, **17** (1), pp. 66—68. ISSN 1072-5520.

the Division and the Institute will need to concentrate their efforts on promoting their missions to other academics. The field has to be further promoted by research results and by activities that provide support to the university and other fields; for example, lectures on work with information, doctorate program workshops on bibliometrics, the building of cybernetic infrastructure of a university, and the development of information services for the digital research in humanities (digital humanities). High visibility of the field on the level of academia secures the support of the university management and makes it possible to attract the attention of experts who are interested in information within their own field. Attracting the experts opens up a space for research and increases interdisciplinarity along the borders of the field.

Conclusion

The i-School movement is a community of scientists from different fields and disciplines joined together to examine the phenomenon of information and address issues concerning the information society. The i-School is a brand of information schools that promotes interdisciplinary research and trains new professionals in adopting relevant approaches to complex issues as regards the information society and information industry. Relevant issues and the identity of the i-Schools are situated at the cross-section of three elements: people—information—technology. The i-Caucus is the main steering and coordinating body of the i-Schools; the i-Caucus sets the criteria for the core i-School circle membership of the aspiring academic units. Not all i-School members have their representatives in the i-Caucus. The i-Caucus organizes yearly conferences that are open to i-School affiliates and professionals from other fields. It is the goal of i-Schools to respond to research on the interaction between people and technology by developing services and tools that satisfy the information needs of society. By addressing issues of basic research, the i-School movement aims to work for the good of society. By placing emphasis on interdisciplinarity in applied basic research, the i-Schools stand out in the academic environment as an experiment in its own right. By adopting this strategy, i-Schools aim to attain innovative leadership in the information field. The influence of i-Schools has triggered responses in the Czech Republic. The Division of Information and Library Studies of Masaryk University, with its graduate studies tracks, is an affiliate of the i-Schools. The study programs of the Institute of Information Studies and Librarianship of Charles University also reflect the trends of the i-Schools. The influence of the perspectives of the i-Schools is also present in the research topics of the above-mentioned academic places.

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