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Citation for the original published paper (version of record):

Cult of the "I": Organizational symbolism and curricula in three Scandinavian iSchools with comparisons to three American.
*Journal of Documentation*, 73(1): 48-74
https://doi.org/10.1108/JD-04-2016-0042

Access to the published version may require subscription.

N.B. When citing this work, cite the original published paper.

Permanent link to this version:
http://urn.kb.se/resolve?urn=urn:nbn:se:lnu:diva-59563
Cult of the “I” – Organizational symbolism and curricula in three Scandinavian iSchools with comparisons to three American.

Structured Abstract:

Purpose: The purpose of the research reported in this article is to analyze three Scandinavian iSchools in Denmark, Norway and Sweden with regard to their intentions of becoming iSchools and curriculum content in relation to these intentions. By doing so, a picture will be given of the international expansion of the iSchool concept in terms of organizational symbolism and practical educational content. In order to underline the approaches of the Scandinavian schools, comparisons are made to three American iSchools.

Methodology: The study is framed through theory on organizational symbolism and through the intentions of the iSchool movement as formulated in its vision statements. Empirically, the study consists of two parts: (1) Close readings of three documents outlining the considerations of three Scandinavian LIS schools before applying for the iSchool status, and (2) statistical analysis of 427 syllabi from master level courses at three Scandinavian and three American iSchools.

Findings: All three Scandinavian schools analyzed have recently become iSchools, and though some differences are visible it is hard to distinguish anything in their syllabi as carriers of what can be described as an iSchool identity. In considering iSchool identity, it is instead benefits on a symbolic level that are most prominent, such as branding, social visibility and the possible attraction of new student groups. The traditionally strong relation to national library sectors are emphasized as important to maintain, specifically in Norway and Sweden.

Research limitations/implications: The study is made on iSchools in Denmark, Norway and Sweden with empirical comparison to three American schools. These comparisons face the challenge of meeting the educational system and programme structure of each individual country. Despite this, findings prove possible to use as ground for conclusions, although empirical generalizations concerning, for instance, other countries must be made with caution.

Practical implications: This study highlights the practical challenges met in international expansion of the iSchool movement, both on a practical and symbolic level. Both the iSchool Caucus and individual schools considering becoming iSchools may use these findings as a point of reference in development and decision making.

Originality/value
This is an original piece of research from which the results may contribute to the international development of the iSchool movement, and extend the theoretical
understanding of the iSchool movement as an educational and organizational construct.

**Keywords:**
iSchools; Organizational Symbolism; Library and Information Science education; Sweden; Norway; Denmark

**Article Classification:**
Research paper

1. Introduction and background

There is something elusive about the iSchool movement. On the one hand there is an openness which allows for any department dealing with information to apply for membership, and on the other there are well defined criteria that need to be met by a school or department in order to come into consideration by the governing iCaucus. Initially, the criteria included “requirements that the chief academic officer (typically a dean) report to the Provost, that the school was active in research, offered a Ph.D. program, and attracted at least a million dollars of external funding per year to support its research” (Larsen 2016, p.14). These criteria were designed to match requirements of the US system for higher education and research funding, yet the expansion of iSchools today primarily takes place outside of the USA, making it, defined as a "movement", a highly international as such. In 2016 the criteria were updated to a less rigid framework and now include “substantial sponsored research activity, engagement in the training of future researchers (usually through an active, research-oriented doctoral program), and a commitment to progress in the information field” (iSchools Organization, 2014; see also Seadle 2016, p.27). Today there are more iSchools outside the US than those within the US.

Furthermore, while most American iSchools are in fact ALA (American Library Association) accredited programmes in Library and Information Science (LIS), the idea of iSchools is based on an interdisciplinarity in programmes and research "harnessing the power of information and technology, and maximizing the potential of humans” (iSchools Organization, 2014). The iSchools began in the United States in the late 1990s and comprised former library schools that “recognized that ‘information’ was not an established field. If they were to succeed as information
schools, they needed to create a discipline” (Seadle 2016, p.26). It is the curricular content that is central to this paper, rather than research and external funding.

When iSchools have been the interest of scientific study, the question of what is unique about them has often been in focus. Specifically, the relation to their library oriented heritage has proved to be ambivalent (Bonnici et al., 2009). Wedgeworth (2013; 2014) shows that there are significant differences between non-iSchool LIS schools and iSchools in terms of, for instance, size of faculty, size of ALA Master’s degree enrolment, total school income, total school external income, types of courses in the ALA Master’s programmes, types of research degrees held by full-time professorial faculty, quantity of research by full-time professorial faculty, the range of journals in which faculty research was published, and the level of journal co-citation among the full-time professorial faculty. Other studies point in different directions. In a major curriculum study Chu (2012) has shown that, in terms of what is actually taught, there is little difference between iSchools and ALA accredited non-iSchools in the USA. This result is supported by Heting (2012) who analyzed five iSchools and five other LIS schools offering ALA-accredited Master degrees, and compared them for programme requirements, core courses, concentrations and specializations and other related parameters, observing few distinctive differences; the differences were in more course offerings by the iSchools and more concentrations/specializations by other schools.

Within the iSchool movement itself there is a spectrum of views on what iSchools actually are, not least in relation to more traditional LIS. Bruce (2011, p.5) defines iSchools as "intellectual communities” and a "welcoming venue” working primarily on a symbolic level, stating that “the clarity of messaging an iSchool value proposition has also been a factor of success of individual iSchools”. Commenting on international expansion, he argues that LIS schools are joining the iSchools Organization to establish “their own identity and the quality and impact of their work” (Bruce 2011, p.6).

At the other end of the spectrum iSchools are seen as something new and exclusive with a need to develop a unique iSchool ideology followed in practice by a change in curricula at various levels. Seadle and Griefeneder see this as particularly important in relation to traditional library schools and LIS departments. They define the character of iSchools as LIS schools that have their focus beyond paper and media library collection to embrace “information in the broadest sense that includes
potentially everything in the internet and every form of information found in the world” (Seadle and Griefeneder 2007, no pag.). Where Bruce argues for a curriculum based on “information as a thing”, with reference to Buckland (1991), consisting of information behaviour, information needs, seeking and use, knowledge organization, information systems evaluation and the study of information contexts such as libraries, Seadle and Griefeneder state clearly that iSchools preparing students for “leadership positions in tomorrows information infrastructure which they fully intend to help create” (ibid.). Similarly, the recent special issue of the Bulletin of the International Society of Information Science and Technology (Golub et al. 2016) points at several places to specific focus of iSchools. For example, the broad definition of the iSchool field addresses “questions of design and preservation across information spaces, from digital and virtual spaces such as online communities, social networking, the World Wide Web, and databases to physical spaces such as libraries, museums, collections, and other repositories” (Larsen 2016, p.13). It is noted that an explicit difference between ALA-accredited programmes in Library and Information Science and those at iSchools does not seem to be present at a curricular level; and that the distinction pertains to institutional interest and research intensity, as particularly evidenced by doctoral programmes (ibid.). However, the curricula at iSchools are evolving to embrace “the changing role of library and information professionals to support a highly dynamic and challenging information landscape” (p.14) and iSchools “seek to establish an emerging field of information that is recognized and studied as a distinct academic discipline” (p.15).

Somewhere in between these positions, Budd and Dumas (2014) attempt to legitimise new knowledge claims of the iSchool movement by problematizing what is referred to as ”epistemic multiplicity”, as they argue that iSchool scholars must, in order to meet the requirements of the movement, use semiotic and communicative modelling in order to ”clarify the disciplinary positions and the possibilities for forging integrated interdisciplinary work” (p.28). This “epistemic multiplicity” has shown empirically present in Lili (2013) who conducted a content analysis of faculty online profiles for determining faculty members’ rank, PhD field, teaching and research descriptions, and then conducted a survey on interdisciplinary experiences in teaching and research. It was shown that iSchool faculty members have diverse backgrounds and engage in interdisciplinary activities mostly in order to address the nature of research problems. The biggest perceived challenge are disciplinary gaps of
knowledge among team members. Wu et al. (2012) support these findings in a study of 25 iSchools, as they conclude that iSchools share the vision and mission of working on relationships between information, people and technology and approach this integration through their interdisciplinary research teams.

In this article we report on a study of three Scandinavian LIS schools that have recently been accepted as iSchools. The ambiguity shown in the literature as demonstrated above, makes it reasonable to wonder whether or not the iSchool movement is to be regarded as a construction of a kind of “elite” among LIS departments, in the USA as well as internationally. If the latter is the case, what does that actually mean and what bearing does it have on the decisions in a school or department to apply for membership? Most of the studies on iSchools are done on American institutions, but what happens when we leave that very distinct educational environment and guide the analysis towards a different context, such as the Scandinavian one?

2. Purpose of study and methodological outline

2.1 Purpose and aims
The purpose of this work is to establish any potential differences between American and Scandinavian iSchools. This is conducted through a statistical analysis of curricula from both American and Scandinavian iSchools, complemented by an examination of documents and statements about basic considerations on becoming an iSchool in the Scandinavian sample. Research questions are as follows:

1. What symbolic and practice related aspects are considered when Scandinavian LIS schools prepare applications to become iSchools?
2. What similarities and differences in categories of courses offered to Master students in the American versus Scandinavian iSchools exist?
3. Does the iSchool identity work on a primarily symbolic or practical level in Scandinavian educational environments?

2.2 Sample
The sample includes six iSchools, three Scandinavian and three US. The three Scandinavian iSchools, equalling the whole population of iSchools in Denmark, Norway and Sweden, are:
1. Department of Archivistics, Library and Information Science, Faculty of Social Sciences Oslo and Akershus University College of Applied Sciences, Norway (in further text: Oslo);
2. The Royal School of Library and Information Science in Copenhagen, Denmark (in further text: Copenhagen); and,
3. The Swedish School of Library and Information Science in Borås, Sweden (in further text: Borås).

Of American iSchools, 3 were chosen using simple random sampling from those rated as the top 10 graduate schools in Library and Information Studies by the U.S. News & World Report (2013):
1. University of Illinois—Urbana-Champaign, Champaign, IL (in further text: Illinois);
2. Indiana University—Bloomington, Bloomington, IN (in further text: Indiana); and,
3. Simmons College, Boston, MA (in further text: Simmons).

The most important reason for the composition of this sample is to make it possible to compare the curriculum character of the US schools with that of the three Scandinavian schools, in the way that would allow us to distinguish certain traits which could be considered as “Scandinavian”, or attributed to a non-American educational tradition. While comparing the American and the Scandinavian schools, it will be the latter ones that are the prime objects of interest, which is why of Scandinavian documents on joining the iSchools Organization are analysed additionally. However, in order to get a coherent foundation for conclusions, the curricula of all six schools will be given identical statistical analysis.

2.3 Methods
The empirical study is divided into two parts:
1. A study of reasons for becoming an iSchool in Scandinavia through close readings of two internal reports and one published talk. This part of the study corresponds to the first research question; and,
2. A statistical comparison of curricula with focus on courses in the six chosen iSchools. This part of the study corresponds to the second research question.
In order to answer the third research question and to be able to make a balanced assessment and analysis of the results of both empirical parts we turn to organisational theory, which provides us with a conceptual framework concerning symbolic and practice levels in organizational development and identity. The conceptual framework is basically put together by two sets of theoretical consideration, firstly by Alvesson (1991) focussing on general organizational theory, and secondly by Kamens (1977) addressing educational organisations. Methods used will be discussed in detail as introduction to the results in each part.

3. Organizational symbolism and educational practice

The iSchool movement can be said to find its place in the tension between organisational symbolism (the "iField") and the formal structures of the higher educational system and its organisations, first and foremost in the USA, but in recent years in many other countries as well. As educational structures differ significantly between the international iSchool members, this tension is worth looking at when we want to create an understanding for why, in this case, Scandinavian LIS departments apply for membership, and what a subsequent membership does to these departments. When research or fields of research move symbolically and ideologically they usually do so for a reason (or several of them). Alvesson (1991) recognizes eight categories that are necessary to take into consideration when analysing the ideology and practice of such symbolic movements. He divides them into two clusters:

- Social factors; and,
- Theoretically related factors.

Social factors include:

- The researcher’s social autonomy;
- The socio-political relevance of a research field;
- The ideological usefulness of the field; and,
- The field’s social fashionability.

These categories are not necessarily mutually exclusive, but can instead be compared to the concept of "logic of appropriateness", brought forward in institutional and public policy theory by March and Olsen (2006). Together these socially defined factors stress the character of a movement in ideology as being in line with prevalent social and political values determining the value and "fashionability” of a field of
research. By adapting the logic of appropriateness of LIS departments on an organisational level to become a part of the iSchool movement, the ideological usefulness of the iField becomes stronger and thus also its social legitimacy for confirming the present social order which it allows to develop. This is a thought that is well worth keeping in mind when analysing the international expansion of the iSchool movement as both political structures and the general technological level differ between various parts of the world.

Alvesson’s second cluster is more theoretical in scope, alas not uninteresting for our purposes. It focuses more on how a research field creates a self-image in relation to a kind of tension between the definition of its research agenda and the surrounding social interests that both influence and are influenced by the research being conducted within the field. The categories within this cluster are defined as:

- The existence of hidden sectional interests within the field;
- A pseudo-objective style of self-description;
- Absence of self-reflection; and,
- A lack of reflection on social forces governing research interest.

As with the first cluster, these categories are not of any exclusive character; instead they all relate to the (real or imagined) autonomy of the research field that is the basis on which the field (the "iField") is symbolically constructed. If this autonomy can be perceived in any sense as "real", it may well correspond to a desired logic of appropriateness in the first cluster; that is, the iField, as defined within the iSchool movement, is really a development of the more traditional LIS discipline into something better equipped to cope with both symbolic and practical conditions of contemporary higher education system as well as the perceived needs in society, both nationally and globally. If not, the iSchool movement may just be seen as an attempt to create a sort of levelling (an A-team and a B-team) among Information Studies departments of all sorts, primarily however within the LIS community.

Kamens (1977) in a classical article in organizational studies analyses processes leading to the formation of elite departments in educational settings. When analysing the expansion of the iSchool movement, both within the USA and internationally, we need to consider this as an analytical option as well. Kamens brings forth two ideas as a point of departure for his analysis of "legitimating myths" in educational organisations, and we quote in extenso:
“(1) a major effect of schools and colleges is to symbolically redefine graduates as possessing special qualities and skills gained through attendance. This redefinition occurs independently of whether or not any actual changes in competency, etc. have occurred. (2) The legitimacy of this status transformation must be negotiated with important audiences in society, e.g., employers, and this necessitates the development of legitimating myths about the quality of students’ educational experience. These ideas are validated by the organization of schools. Organizational structure is, therefore, important in legitimating the idea that initiates have been changed in specific directions by the school experience, independent of any actual changes” (p.209).

If we apply these ideas to a relatively loose and ambiguous organisational structure, such as the iSchool movement, we can see the importance of maintaining an image of providing something new to the "iField” or LIS in order for society at large to trust in the quality and contemporary relevance of the educational programmes and research activities provided, while it is less important for any actual coherent change homogenisation to take place among its members. This is especially interesting while considering the international expansion, since these ideas seem to provide a way out of the problem of translating the original US criteria required for iSchool membership in other educational and political environments.

4. Empirical study, part 1: considerations concerning iSchool movement membership among Scandinavian LIS schools

The current international expansion seen today in the iSchool movement is by no means surprising. Instead we see its original ambitions, by way of defining an iField, as fundamentally international. However, the practical implementation of iSchools outside of the USA meets economic and political conditions on both regional and national levels that differ from those constituting the requirements of admission within the USA. It is therefore scientifically legitimate to look closer at the considerations made by LIS departments before submitting applications to become iSchools, in relation to their specific conditions. Looking specifically at Sweden, Norway and Denmark we will analyse the first question of this study by pursuing a
discourse-oriented close reading of three documents that can shed light over the initial considerations and reasons for becoming an iSchool. Two of them are internal reports, the Swedish iSchools iCaucus – innebörd krav och refarenheter (Doracic, 2012) and the Norwegian iSchools-rapport (Dahl et al., 2013). From Denmark, no internal report has been retrieved, but instead we use the article ”The case of the Royal School of Library and Information Science: a European iSchool” (Borlund, 2011) as this basically covers the same topics as the Swedish and Norwegian reports, albeit in a more adapted way. In reading these documents the following issues are of specific relevance and interest:

- View of the iSchool movement;
- Definitions of ones own LIS environment/tradition;
- Problems of addressing the defined iSchool criteria for acceptance; and,
- Advantages of becoming an iSchool in the local and regional political and economic environment.

The following sections discuss each document individually before they are addressed jointly, providing a basis for the subsequent analysis of master level curricula.

4.1. Sweden

The report from Borås is addressing several questions, based on previous research and a number of telephone interviews. Its primary aim is to provide a point of departure for the school in its forthcoming decision on whether to become an iSchool or not. Borås is said to have three basic reasons for wanting to become an iSchool:

- To maintain and develop its leading position within LIS in Sweden;
- To develop its net of international contacts;
- To contribute to the international development of LIS related fields and professions in society (p.3).

Borås sees the iSchool movement as a formal organisation rather than a network or movement in a more loose sense, thus an application for membership is only partially a question of ideological or policy based coherence, but a sharp decision to be a part of an international educational organisation. Borås is thereby defining the iSchool movement in a perhaps more strict sense than what is discernible from, for instance, the “vision” statement at the iSchool website.
Discussing the terms for membership, the report emphasises its demands for cross-disciplinary research, described as a "latent demand for membership" (p.13) and the demand for a certain level of external funding. The issue of a defined figure of external funding needed is problematized and said to relate to the American educational structure, which differs significantly from that in Sweden, and the Borås School is recommended in the report to look further into this as there are no indications on how to "translate" this into educational environments outside of the USA.

Discussing the presumed advantages in becoming an iSchool, the report emphasises five aspects:

(1) A re-positioning within the "iField" and a change of fundamental values "from libraries to information";
(2) Branding;
(3) Facilitated opportunities to establish international research environments;
(4) New forms for increased international contacts on all levels, research as well as education; and,
(5) The expected good publicity comes relatively cheap in strictly economical terms.

Of these presumed advantages, (2) and (5) are said to be the most visible advantage and the two that cannot be achieved in any other way than through membership.

In a discussion of the presumed disadvantages, the report focuses on primarily three issues:

(1) The changes of values;
(2) An expected move towards a more technical research agenda of the SSLIS; and,
(3) The significance of the pecuniary demands raised in the application forms.

In weighing the pros and cons, the report refers previous research that in many aspects indicates that iSchool membership does not make any real difference.

4.2. Norway

The Norwegian report builds explicitly on the report from Borås. Its aim is to supplement the Swedish report with aspects relevant for the Norwegian situation. The first thing it tackles is the relation between the LIS education, the Norwegian Library
Law and librarianship as a profession. This is relevant to the issue of repositioning in the LIS field from focus on libraries to focus on information. Furthermore, the issue of required external research funding is addressed. Referring an interview with the Dean at the Royal School of LIS in Copenhagen, the report concludes that it is a complicated demand, but as more international departments and schools will join it is likely that the criteria defining external funding requirements for membership will disappear or be reformulated in the future.

The Norwegian report agrees with the Swedish one in most cases, but stresses the issue of identity somewhat more. In its conclusion, it is stated that a drift away from the library identity to a more information based brand will likely confuse many potential students, as Library Studies is attracting ”a certain kind” of student corpus (p.10). However, rebranding in accordance to the iSchool ideals is said to perhaps attract students that otherwise would not consider LIS as an option when choosing their path of study. At the end, the report states that this kind of re-branding is seen as advantageous by both Borås and Copenhagen. In conclusion, the most notable issue in the Oslo report is the concern about the status of traditional library and culture studies within the programs of the department, and how the library sector will react to the iSchool branding, both nationally and locally.

4.3. Denmark

Borlund (2011) discusses the situation that led the Royal School of Library and Information Science in Copenhagen to the decision of becoming an iSchool. The article primarily discusses the School’s problematic ”pre-iSchool-situation”. This can be said to consist of a lack of national visibility, where the school had difficulties coming through to the public, both with its programmes as such, but also with the political and social relevance of its educational direction. This had led to a significant decrease of student interest and application, something which was further underlined by the fact that the Royal School of Library and Information Science was under the Danish Cultural, instead of the Educational, Ministry, placing the School somewhat beside the mainstream routes for students’ search for educational careers and programmes to study. On the back of this, Borlund formulates the membership in the iCaucus, which was accepted in April 2009, primarily as a matter of re-branding. The name of the School changed, a new logo was created and ”further branding initiatives” were taken, including ”minimizing the use of the word 'library’ in the
description of the educations offered by the Royal School of LIS” (p.15). As another concrete result of becoming an iSchool, a deep collaboration with the iSchool at Humboldt University in Berlin is mentioned.

4.4. Concluding remarks
The reasons for the chosen Scandinavian schools to become iSchools vary. What is common between them is a wish to be part of the international movement that is seen as future oriented in a society which is, from an information market point of view, increasingly complex. The Swedish report is the most thorough of the three, weighing the pros and cons for Borås in a relatively neutral manner, whilst the Oslo report is the most cautious, fearing a development that would marginalize the library and cultural study-oriented parts of the school. As a sharp contrast to this stands the Danish decision, based on the need to meet a complicated situation nationally, both in terms of economy and reputation. The rebranding of the school is seen as the major reason for entering the iCaucus and in this process the marginalization of library and cultural study-oriented parts of the curricula is seen as necessary.

Taken from these three documents, different in character as they may be, the most important aspect that is emphasised is the branding aspect of iSchools. By attaining the right to label themselves as iSchools, advantages are seen in relation to the surrounding society, as well as in relation to the LIS sector in which the schools are already working. The consequences of this, in terms of curriculum changes or redirection of research content, are regarded differently by the three schools. When it comes to increased network opportunities and research collaboration, it is only emphasised in the Swedish report as a major benefit from membership.

Conclusions can be drawn that the Scandinavian schools in this study all find benefits from iSchool memberships, and that this is put in relation to what is already given in terms of research activities and curricular content. Although not explicitly defined, it seems clear that there is a library and cultural studies-branch of Scandinavian LIS that is seen as special and that should either be "guarded" (Norway) or "discarded" (Denmark) creating various national relations to the membership in the US inspired, but international, iSchool environment.

These brief conclusions correspond well also if we see the development of LIS education in Sweden, Denmark and Norway in a longer historical perspective, where vocational training has had a relatively dominant position up until relatively recently.
A more “modern”, research based, LIS agenda did not emerge until the late 1980’s in Denmark, and about a decade later in Sweden and Norway. As this development took off, Denmark has been the country that has had the most problematic relation between the “Information side” and the “Library side” of the discipline. That the iSchool move “from L to I” is emphasised in Denmark is therefore of no surprise – it had been well prepared at the national level (Harbo, 1998). In Norway and Sweden, the relation to the library sector as well as an existing heritage within the adult educational sector, has been more held in reverence (Spangen, 1998; Enmark & Seldén, 1998). In the light of a longer perspective, the decisions to become iSchools should be seen as important steps in relation to the institutional self-image of the three Scandinavian schools here studied. The needs of a traditionally very influential library sector is constantly present, and dealt with differently in the three countries, not least in relation to how the disciplinary boundaries of LIS are set, and pushed, internationally.

5. Empirical study, part II: statistical curriculum comparison

In this part, we will continue the empirical study by looking into the actual curricula of the three Scandinavian iSchools. In order to get a point of departure for analysing them in relation to the ideas of organisational symbolism and to the American implementation of iSchool ideals, we compare them to curricula from the three American iSchools. The analysis is done in exactly the same way in order to attain as high degree of comparability as possible, due to the different structures of programmes that exist between the four countries involved. The analysis is structured as follows.

5.1. Choice of courses

As the first step, all courses available to Master students in library and information science programmes of the six iSchools were recognized from official online course listings in the first few months of 2015.

For Illinois, 198 graduate courses were selected for Master in information science and for Master in library science, from listing available at https://www.lis.illinois.edu/academics/courses/catalog, including those specified as awarding either undergraduate or graduate points as well as several doctoral courses allowing graduate students on permission of instructor. Courses excluded from our analysis were those specified as only awarding undergraduate points; those specified
as awarding no points (neither undergraduate nor graduate) like introductory freshmen courses; research methodology courses; free topics courses like special studies on a selected topic, advanced study on selected topics; doctoral courses that allow only doctoral students; WISE courses (wiseeducation.org).

For Indiana, 81 courses were selected from listing available at http://www.soic.indiana.edu/graduate/courses/index.html. Three categories of courses are listed: computer science, informatics and information and library science. We included the latter in our analysis. We excluded those starting with code Z7, as we were learned from our contacts there that those were doctoral level course. One course G901 Advanced Research also seemed to be a doctoral level from the basic description and was thus also excluded.

For Simmons, 88 courses marked as graduate were selected from https://www.lis.illinois.edu/academics/courses/catalog. Courses excluded from our analysis were: those specified as no awarded points (neither undergraduate nor graduate), like introductory freshmen courses, final project courses, research methodology courses, internship courses, free topics courses like special studies on a selected topic, advanced study on selected topics and free readings.

Turning to the Scandinavian schools we see a fundamentally different system for structuring programmes on master level, resulting in significantly fewer courses. In Borås the full Master’s programme in LIS consists of 13 courses (http://www.hb.se/Vill-studera/Program-och-kurser/Program-HT-2016/Masterprogram-i-Biblioteks--och-informationsvetenskap-distansutbildning/#syllabus). In Copenhagen the total number of courses in the Master’s programme is 76, selected from the Copenhagen University course catalogue (http://kurser.ku.dk/). The Danish Royal School of Library and Information Science has been a long time a two campus school. Therefore the 23 courses at the Aalborg campus are not considered. Furthermore, courses on projects were also deselected. The final number of courses analysed is 39. In Oslo, all existing 8 non-thesis courses in the LIS Master programme are selected (http://www.hioa.no/Studier-og-kurs/Fagomraade-arkiv-bibliotek-og-informasjonsfag/Arkiv-bibliotek-og-informasjonsfag#Master).

5.2. Assignation of classes to courses
As the second stage of analysis, the total of 427 courses selected in the first step as described above were assigned one major class from the JITA Classification System of Library and Information Science (http://eprints.rclis.org/view/subjects/) (in further text: JITA) (Barrueco Cruz et al., 2002). Of the freely available controlled vocabularies in library and information science, JITA was chosen to be most appropriate to our task in comparison to, for example, LISA Classification Codes (http://proquest.libguides.com/id.php?content_id=3028387), as it seemed to represent LIS courses more appropriately than the others and was at the right level of detail for our purposes. JITA contains the total of 85 classes, out of which 12 classes are at the first classification level, while the remaining 73 are at the second hierarchical level.

The classification process consisted of two steps. First, two of the authors each assigned classification codes, one author to Scandinavian schools, and the other to the US schools. They marked courses for which they were unsure of as to the choice of class. Second, the courses with ‘uncertain classes’ (153 courses or 36%) were discussed at meetings between all the three authors, resulting in 100% inter-coder agreement. In many cases, the reason for the uncertainty was that the concept was not predicted in the current version of JITA. Therefore, a significant number of those courses (52 or 34%) were assigned a “None of these, but in this section” class in their appropriate major class – each of the 12 major JITA classes at its second-level classes ends with “None of these, but in this section” class. For example, courses on digital libraries were decided to belong to this subclass of class “Information technology and library technology”.

We will now proceed to describe the classified courses from each of the chosen iSchools, commencing with the three American, followed by the three Scandinavian.

5.2.1 US iSchools
5.2.1.1 Illinois
Illinois offers a considerable flexibility when it comes to degree specialisations. According to its website (https://www.lis.illinois.edu/academics/degrees/), the Master of Science includes the following specialisations:

- Certificate in Community Informatics;
- Specialization in Data Curation;
• K-12 School Librarianship;
• Socio-technical Data Analytics;
• Special Collections Certificate; and,
• Certificate in Youth Services.

This flexibility is also in line with the fact that there are only two required courses:

• LIS 501: Information Organization and Access; and,

Additional courses may be required depending on the specialization.

With the total of 198 courses, Illinois is the iSchool with more courses than any other institution in the sample, and is the only iSchool that has all the 12 major classes from the classification scheme represented. In particular, class Housing technologies is not covered by courses in any of the other iSchools in the sample.

As seen from Table 1 below, which shows distribution of courses belonging to the 12 major classes, most courses at Illinois belong to the following six classes (here defined as those which represent 10% or more of all the courses):

1) Information treatment for information services (32 out of the total of 198 courses, or 16%);
2) Information sources, supports, channels (30 or 15%);
3) Information technology and library technology (26 or 13%);
4) Information use and sociology of information (23 or 12%);
5) Libraries as physical collections (21 or 11%); and,
6) Users, literacy and reading (20 or 10%).

Other classes represented by still a significant number of courses ranging between 6 and 15, and representing between 3% and 8% of the total, are:

1) Publishing and legal issues (15 or 8%);
2) Management (12 or 6%);
3) Theoretical and general aspects of libraries and information (10 or 5%); and,
4) Technical services in libraries, archives, museums (6 or 3%).

The least represented classes are Housing technologies and Industry (2 or 1%), profession and education 1 or (1%).

Table 1. Distribution of courses over the main JITA classes at Illinois
At a deeper level of analysis, including both hierarchical levels of the JITA classification schemes, the total of 70 out of possible 85 JITA topics were found to be represented (82%).

Table 2 below lists most common individual JITA topics in Illinois courses, here defined as those that represent the ratio of at least 3% out of all individual JITA topics covered. The first column lists class names: if the class is at the first hierarchical level, only that level is listed; if the class is at the second hierarchical level, it is preceded by its main hierarchical level class in order to provide a better understanding of the ‘aboutness’ of the class, and the class at the second hierarchical level is preceded by the colon sign.

Top five topics will be discussed in more detail. The most commonly occurring topic refers to subclasses of Information sources, supports, channels, but these are not specifically listed by JITA; therefore, they had to be placed to the class None of these but in this section. Such courses are, among others, Literature and Resources for Children, Literature and Resources for Young Adults, Information Sources and Services in the Sciences. The second place is shared between courses belonging to Cataloguing, bibliographic control and a subclass of Information use and sociology of information, which is not specifically listed by JITA, but instead the courses are assigned to the class None of these but in this section. Examples of such courses include: Social Computing; The Digital Divide: Policy, Research, and Community Empowerment; Information Ethics.

The following most common topic belongs to the None of these but in this section subclass of Information technology and library technology class with the following courses as examples: Geographic Information Systems, Digital Libraries, Sociotechnical Data Analytics, Digital Humanities. The fifth most represented topic is User categories: children, young people, social groups from the main class Users, literacy, reading. Examples are courses such as Youth Services Librarianship, History of Children’s Literature, Information Services for Diverse Users.

Table 2. Distribution of courses over all the JITA classes at Illinois where the ratio of courses per topic is at least 3%
5.2.1.2 Indiana

Indiana offers seven Master degrees in related areas:

- Bioinformatics;
- Computer science;
- Data science;
- Human-computer interaction;
- Information science;
- Library science; and,
- Security informatics.

Of these, courses for Master students in information science and for Master students in library science were included in the study. Both programmes offer an option of dual degrees as well as a number of specialisations; both in:

- Chemical information;
- Data science;
- Digital libraries; and,
- Information architecture.

Additionally, library science offers specialisations in:

- African studies librarianship;
- Archives and records management;
- Art librarianship;
- Children’s and young adult services;
- Library technology management;
- Music librarianship, and,
- Rare books and manuscripts librarianship.

Programme Master in Information Science (as of Spring 2015) requires 36 credits in coursework, half of which are the following required courses (each course has 3 points):

- Introduction to Information Science;
- Database Design;
• Information architecture;
• Human computer interaction;
• A choice between Organizational Informatics or Systems Analysis and Design; and,
• A programming requirement that can be accommodated through different courses or a pre-existing experience.

Programme Master of Library Science (as of Spring 2015) also requires 36 credits in coursework, half of which are the following required courses:

• User Services and Tools;
• Representation and Organization;
• One of the following three: Library Management, Academic Library Management, Public Library Management;
• One of the following three: Evaluation of Resources and Services, Introduction to Research, Evaluation of Information Systems;
• One out of 14 offered technological courses; and,
• An internship course.

The total of 81 courses represents 11 out of 12 main JITA classes; class Housing technologies is not covered.

As seen from Table 3 below, which shows distribution of courses belonging to the 12 major classes, most commonly courses at Illinois belong to the following six classes (those which represent 10% or more of all the courses):

1) Information use and sociology of information (16 out of the total of 81 courses, or 20%);
2) Information sources, supports, channels (13 courses or 16%);
3) Libraries as physical collections (11 courses or 14%);
4) Information treatment for information services (11 courses or 14%); and,
5) Information technology and library technology (8 courses or 10%).

Other classes represented by still a significant number of courses ranging between 5 and 6, and representing between 6% and 7% of the total, are:

1) Management (6 courses or 7%);
2) Users, literacy and reading (5 courses or 6%); and,
3) Publishing and legal issues (5 courses or 6%).
The least represented classes are: Theoretical and general aspects of libraries and information; Industry, profession and education; and, Technical services in libraries, archives, museums, each with 2 courses or 2% per class.

Table 3. Distribution of courses over the main JITA classes at Indiana

At a deeper level of analysis, including both hierarchical levels of the JITA classification schemes, the total of 41 out of possible 85 JITA topics were found to be represented (48%).

Table 4 below lists most common individual JITA topics in Indiana courses, those that represent the ratio of at least 3% out of all individual JITA topics covered. The first column lists class names: if the class is at the first hierarchical level, only that level is listed; if the class is at the second hierarchical level, it is preceded by its main hierarchical level class in order to provide a better understanding of the ‘aboutness’ of the class, and the class at the second hierarchical level is preceded by the colon sign.

Top five topics will be discussed in more detail. The most commonly occurring topic refers to a subclass of Information sources, supports, channels that is not listed in the existing subclasses specifically listed by JITA: instead, all such courses belong to the class None of these but in this section. Such courses are, among others, Humanities Information, Social Science Information, and Business Information.

The second place belongs to the subclass User interfaces, usability of the main class Information use and sociology of information, with course examples including Human Computer Interaction, User Interface Design for Information Systems, and Information Architecture. The third rank is shared between class Information use and sociology of information (course examples: Social Aspects of Information Technology; Communication in Electronic Environments), and None of these but in this section subclass of Libraries as Physical Collections (course examples: Law Librarianship; Music Librarianship). The fifth place is occupied by Management, with
courses like: Management for Information Professionals; Collection Development and Management.

Table 4. Distribution of courses over all the JITA classes at Indiana where the ratio of courses per topic is at least 3%

5.2.1.3 Simmons

Simmons offers three Master degrees:
- Master of Arts in Children's Literature;
- Master of Fine Arts in Writing for Children; and,
- Master of Science degree in the field of Library and Information Science (LIS).

Within the latter, there are five concentrations:
- Generalist LIS;
- Archives Management;
- School Library Teacher;
- Cultural Heritage; and,
- Information Science & Technology.

Within the generalist programme one may choose to pursue one of the following tracks:
- Information Organization;
- Management and Leadership;
- Preservation Management;
- Reference and Information Services; and,
- Youth Services.

There are three obligatory courses for all students in each of the programmes:
- Foundations of Library and Information Science;
- Information Organization; and,
- Reference/Information Services
The students also need to choose one course from their Technology Suite and a Capstone Experience. Students then choose seven additional courses for their degree depending on academic programme.

The total of 88 courses represents 10 out of 12 main JITA classes; class Housing technologies and class Industry, profession and education are not covered.

As seen from Table 5 below, which shows distribution of courses belonging to the 12 major classes, most commonly courses at Simmons belong to the following 5 classes (those which represent 10% or more of all the courses):

1) Libraries as physical collections (17 out of the total of 88 courses, or 19%);
2) Information technology and library technology (14 courses or 16%);
3) Users, literacy and reading (13 courses or 15%);
4) Information sources, supports, channels (9 courses or 10%); and,
5) Information treatment for information services (as above, 9 courses or 10%).

Other classes represented by still a significant number of courses ranging between 5 and 7, and representing between 6% and 8% of the total, are:

1) Information use and sociology of information, and Technical (7 courses or 8%);
2) Technical services in libraries, archives, museum (as above, 7 courses or 8%);
3) Publishing and legal issues (6 courses or 7%); and,
4) Theoretical and general aspects of libraries and information (5 courses or 6%).

The least represented class is Management, with 1 course or 1% per class.

Table 5. Distribution of courses over the main JITA classes at Simmons

At a deeper level of analysis, including both hierarchical levels of the JITA classification schemes, the total of 43 out of possible 85 JITA topics were found to be represented (51%).
Table 6 below lists most common individual JITA topics in Simmons courses, those that represent the ratio of at least 3% out of all individual JITA topics covered. The first column lists class names: if the class is at the first hierarchical level, only that level is listed; if the class is at the second hierarchical level, it is preceded by its main hierarchical level class in order to provide a better understanding of the ‘aboutness’ of the class, and the class at the second hierarchical level is preceded by the colon sign.

Top five topics will be discussed in more detail. The most commonly occurring topic is the subclass User categories: children, young people, social groups of main class Users, literacy and reading (8 courses or 9%) with courses like Library Programs and Services for Young Adults; Literacy and Services to Underserved Populations: Issues and Responses. School libraries, a subclass of Libraries as physical collections, form the second most dominant topic (7 courses or 8%), examples of courses being Curriculum and the School Library Teacher; Management of School Library Media Programs. The third place belongs to a subclass of Information sources, supports, channels that is not listed in the existing subclasses specifically listed by JITA: instead, they all belong to the class None of these but in this section. Examples of courses included here are Legal Information Sources; Literature of Science and Technology. Archives, another subclass of Libraries as physical collections, occupies the fourth place (5 courses, 6%) (e.g., Introduction to Archival Methods and Services). With 4 courses (5%) is User training, promotion, activities, education, a subclass of Users, literacy and reading (e.g., Instructional Strategies for the School Library Teacher; Archives and Cultural Heritage Outreach).

Table 6. Distribution of courses over all the JITA classes at Simmons where the ratio of courses per topic is at least 3%

5.2.1.4 Comparison of US iSchools
Table 7 and Figure 1 below compare distribution of courses at Illinois, Indiana, and Simmons over the top 12 JITA classes. Generally, calculating correlation indicates significant similarity between Indiana and Illinois (Pearson r = 0.84 at alpha = 0.01) as well as between Illinois and Simmons (Pearson r = 0.70 at alpha = 0.05); Indiana and Simmons are less similar (Pearson r = 0.52 at alpha = 1.0).

The figure shows that there are more similarities than differences between the three iSchools, the biggest similarities being in Publishing and legal issues, Industry, profession and education, Housing technologies, where standard deviation is smallest (1%); these are closely followed by Theoretical and general aspects of libraries and information (standard deviation 2%). The biggest difference is that of 6% in standard deviation in Information use and sociology of information. Other classes show standard deviation of 3% and 4%.

On average, most courses belong to class Libraries as physical collections (15%), followed by Information sources, supports, channels (14%). Third place (13%) is shared by three classes: Information treatment for information services, Information technology and library technology, and Information use and sociology of information. In the latter class, however, the variety is bigger than in any other classes and ranges from 8% in Simmons to 20% in Indiana (standard deviation is 6%). Fourth place goes to Users, literacy and reading (10%), followed by Publishing and legal issues (7%), Management (5%). Technical services in libraries, archives, museums and Theoretical and general aspects of libraries and information each take 4%. Least represented are Industry, profession and education (1%) and Housing technologies (mean of 0%).

Table 7. Distribution of courses at US iSchools
A Theoretical and general aspects of libraries and information
B Information use and sociology of information
C Users, literacy and reading
D Libraries as physical collections
E Publishing and legal issues
F Management
G Industry, profession and education
H Information sources, supports, channels
I Information treatment for information services
J Technical services in libraries, archives, museums
K Housing technologies
L Information technology and library technology

Figure 1. Distribution of courses over the main JITA classes at US iSchools

Due to the highly individualised structure of the programmes, all three iSchools manage to include most of the classes in the JITA classification, thus offering a broad spectrum of subfields and concrete issues to students. The differences appear more in proportion than in actual priorities between different parts of LIS. At all three iSchools students have the opportunity to study both “classical” LIS courses with librarianship, libraries and cultural studies in focus, while also being able to focus more information laden courses. Buying into the iSchool catch-phrases, one may conclude that the studied American iSchools move “from L to I” while keeping the “L”.

5.2.2 Scandinavian iSchools
5.2.2.1 Borås

The Master in Library and Information Science at the Swedish School of Library and Information Science is a two-year programme. The programme builds on a bachelor degree in any subject. The programme comprises 120 credits; 30 credits each of the four semesters. The concluding semester is reserved for the Master’s thesis which amounts to 30 credits, leaving 90 credits for courses. Six courses are offered in alternative pairs. The rationale is to stream students with a LIS background into continuation courses. Only 3 courses to the amount of 22.5 credits are elective.

The total of 13 courses represent 5 out of 12 main JITA classes. As seen from Table 9 below, three most commonly occurring classes are:

1) Information use and sociology of information;
2) Users, literacy and reading; and,
3) Information treatment for information services.

Each class is represented by 3 courses or 23%.

The second place is shared by:
1) Management; and,
2) Technical services in libraries, archives, museums.

Each of these two classes is represented by 2 courses or 15%.

The following are not represented by any courses: Theoretical and general aspects of libraries and information; Libraries as physical collections; Publishing and legal issues; Industry, profession and education; Information sources, supports, channels; Housing technologies; and, Information technology and library technology.

Table 9. Distribution of courses over the main JITA classes at Borås

<table>
<thead>
<tr>
<th>Class</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information use and sociology of information</td>
<td>3</td>
<td>23%</td>
</tr>
<tr>
<td>Users, literacy and reading</td>
<td>3</td>
<td>23%</td>
</tr>
<tr>
<td>Information treatment for information services</td>
<td>3</td>
<td>23%</td>
</tr>
<tr>
<td>Management</td>
<td>2</td>
<td>15%</td>
</tr>
<tr>
<td>Technical services in libraries, archives, museums</td>
<td>2</td>
<td>15%</td>
</tr>
<tr>
<td>Theoretical and general aspects of libraries and information</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Libraries as physical collections</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Publishing and legal issues</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Industry, profession and education</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Information sources, supports, channels</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Housing technologies</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
At a deeper level of analysis, including both hierarchical levels of the JITA classification schemes, the total of 7 out of possible 85 JITA topics were found to be represented (8%). Apart from the classes at the first hierarchical level mentioned above, two classes were found to be represented at the second hierarchical level: Use and impact of information, and User interfaces, usability, both subclasses of Information use and sociology of information.

5.2.2.2 Copenhagen
The Master of Science in Information Science and Cultural Communication is a two-year programme. The programme builds on a bachelor degree from the Danish Royal School of Library and Information Science. The programme comprises 120 credits, 30 credits each semester. The concluding semester is reserved for the Master’s thesis amounting to 30 credits and leaving 90 credits for courses.

Three specialisations are offered:
- Information Architecture and User Studies;
- Culture, media, and digitality; and,
- Knowledge production and knowledge processes.

Three types of courses are offered: compulsory constituent, constituent and elective; compulsory constituent and constituent courses comprise 60 credits; 30 credits are elective. Elective courses are either 15 or 7.5 credits; a maximum of 4 electives is possible within each specialisation.

The total of 39 courses represent 9 out of 12 main JITA classes. As seen from Table 10 below, by far the most commonly occurring class is Information use and sociology of information (14 courses or 36%). The second place is shared between:

1) Users, literacy and reading; and,
2) Management.

Each is represented by 6 courses or 15%.

The third rank is shared by:

1) Publishing and legal issues;
2) Information sources, supports, channels; and,
3) Information treatment for information services, each represented by 3 courses (8%).

Less represented are Information technology and library technology (2 courses or 5%), Theoretical and general aspects of libraries and information, and Libraries as physical collections (each with 1 course or 3%).

The following are not represented by any courses: Industry, profession and education; Technical services in libraries, archives, museums; Housing technologies.

Table 10. Distribution of courses over the main JITA classes at Copenhagen

<table>
<thead>
<tr>
<th>Class</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information use and sociology of information</td>
<td>14</td>
<td>36%</td>
</tr>
<tr>
<td>Users, literacy and reading</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>Management</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>Publishing and legal issues</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>Information sources, supports, channels</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>Information treatment for information services</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>Information technology and library technology</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Theoretical and general aspects of libraries and information</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Libraries as physical collections</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Industry, profession and education</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Technical services in libraries, archives, museums</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Housing technologies</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>39</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

At a deeper level of analysis, including both hierarchical levels of the JITA classification schemes, the total of 21 out of possible 85 JITA topics were found to be represented (31%).

Table 11 below lists most common individual JITA topics in Copenhagen courses, those that represent the ratio of at least 3% out of all individual JITA topics covered. The first column lists class names: if the class is at the first hierarchical level, only that level is listed; if the class is at the second hierarchical level, it is preceded by its main hierarchical level class in order to provide a better understanding of the ‘aboutness’ of the class, and the class at the second hierarchical level is preceded by the colon sign.

Top five topics will be discussed in more detail. The most commonly occurring topic is main class Users, literacy and reading (10 courses or 17%) with courses like Books and reading: from Papyrus to e-books; main class Management (8
courses or 14%), a course example being Principles of management and leadership for information professionals; Information use and sociology of information and Information treatment for information services, each 7 courses or 12%; course example History of knowledge and media. Only the fifth place is owned by a subclass None of these but in this section of Information use and sociology of information with 5 courses (8%).

Table 11. Distribution of courses over all the JITA classes at Copenhagen where the ratio of courses per topic is at least 3%

<table>
<thead>
<tr>
<th>Class</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users, literacy and reading</td>
<td>10</td>
<td>17%</td>
</tr>
<tr>
<td>Management</td>
<td>8</td>
<td>14%</td>
</tr>
<tr>
<td>Information use and sociology of information</td>
<td>7</td>
<td>12%</td>
</tr>
<tr>
<td>Information treatment for information services</td>
<td>7</td>
<td>12%</td>
</tr>
<tr>
<td>Information use and sociology of information: None of these but in this section</td>
<td>5</td>
<td>8%</td>
</tr>
<tr>
<td>Theoretical and general aspects of libraries and information</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>Publishing and legal issues</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>Information technology and library technology</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>Information use and sociology of information: Use and impact of information</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Information sources, supports, channels</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Technical services in libraries, archives, museum</td>
<td>2</td>
<td>3%</td>
</tr>
</tbody>
</table>

5.2.2.3 Oslo

The Master Programme in Library and Information Science is a two-year programme. The programme builds on a prerequisite of specific bachelor courses in library and information science. The programme comprises 120 credits, 30 credits each semester. The Master’s thesis comprises 45 credits, leaving 75 credits for courses. Two courses are compulsory; the thesis and Theory of science and research methods, constituting 60 credits and half the programme. Elective courses constitute the other half of the programme; each comprises 15 credits, leaving 4 electives.

A seen from Table 12 below, the total of 8 courses represent 6 out of 12 main JITA classes. Two most commonly occurring classes are:

1) Users, literacy and reading; and,

2) Information treatment for information services.

Each is represented by 2 courses or 25%.

The second place is shared by:
1) Theoretical and general aspects of libraries and information;
2) Information use and sociology of information;
3) Libraries as physical collections; and,
4) Information technology and library technology.

Each is represented by 1 course or 13%.

The following are not represented by any courses: Publishing and legal issues; Management; Industry, profession and education; Information sources, supports, channels; Technical services in libraries, archives, museums; and, Housing technologies.

Table 12. Distribution of courses over the main JITA classes at Oslo

<table>
<thead>
<tr>
<th>Class</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users, literacy and reading</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Information treatment for information services</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Theoretical and general aspects of libraries and information</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Information use and sociology of information</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Libraries as physical collections</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Information technology and library technology</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Publishing and legal issues</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Management</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Industry, profession and education</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Information sources, supports, channels</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Technical services in libraries, archives, museums</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Housing technologies</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8</td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

At a deeper level of analysis, including both hierarchical levels of the JITA classification schemes, the total of 7 out of possible 85 JITA topics were found to be represented (8%). Apart from the classes at the first hierarchical level mentioned above, two classes were found to be represented at the second hierarchical level: a subclass None of these but in this category, of class Information use and sociology of information; and, Index languages, process and schemes, a subclass of Information treatment for information services.

5.2.2.4 Comparison of Scandinavian iSchools

The Scandinavian iSchools tend to closely control the subject content of their Master’s programmes, allowing for very limited student choices. In the cases of Oslo
and Borås, the control is imposed by means of offering a limited number of courses. In Copenhagen there are offers for specialisations with a considerable number of courses, but alternatives within each specialisation are limited. Peculiar to Oslo are the courses dedicated to fiction and sociology of literature and also to the national institutions. Peculiar to Borås is its being open to students with no previous LIS background.

Table 13. Distribution of courses at Scandinavian iSchools

<table>
<thead>
<tr>
<th>Class</th>
<th>Borås</th>
<th>Copenhagen</th>
<th>Oslo</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information use and sociology of information</td>
<td>23%</td>
<td>36%</td>
<td>13%</td>
<td>24%</td>
<td>12%</td>
</tr>
<tr>
<td>Users, literacy and reading</td>
<td>23%</td>
<td>15%</td>
<td>25%</td>
<td>21%</td>
<td>5%</td>
</tr>
<tr>
<td>Information treatment for information services</td>
<td>23%</td>
<td>8%</td>
<td>25%</td>
<td>19%</td>
<td>9%</td>
</tr>
<tr>
<td>Management</td>
<td>15%</td>
<td>15%</td>
<td>0%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Technical services in libraries, archives, museum</td>
<td>15%</td>
<td>0%</td>
<td>0%</td>
<td>5%</td>
<td>9%</td>
</tr>
<tr>
<td>Theoretical and general aspects of libraries and information</td>
<td>0</td>
<td>3%</td>
<td>13%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Libraries as physical collections</td>
<td>0</td>
<td>3%</td>
<td>13%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Publishing and legal issues</td>
<td>0</td>
<td>8%</td>
<td>0%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Industry, profession and education</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Information sources, supports, channels</td>
<td>0</td>
<td>8%</td>
<td>0%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Housing technologies</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Information technology and library technology</td>
<td>0</td>
<td>5%</td>
<td>13%</td>
<td>6%</td>
<td>7%</td>
</tr>
</tbody>
</table>
What is notable when comparing the three Scandinavian iSchools in Table 13 and Figure 2 is that there is much less correlation than among the American ones, as standard deviation is high. This is probably due to the fact that there are significantly fewer courses which makes deviation more sensitive. Calculating correlation indicates significant similarity between Borås and Copenhagen (Pearson r = 0.64 at alpha = 0.05); while other pairs do not seem correlated (for Borås and Oslo, Pearson r = 0.53 at alpha = 0.1; for Copenhagen and Oslo, Pearson r = 0.30 at alpha = 0.35).

5.2.2.5 US versus Scandinavian i-Schools
Classifying curricula is one way of addressing dissimilarities in educational structures that enable analysis in the least common level, course level, which to a certain extent can be seen as autonomous from overall structures, in terms of ideology and even programme definitions. Still we face interesting challenges in making our chosen American and Scandinavian schools meet in course level analysis. We see some traits as necessary to address: first of all, there are significantly more courses in the American Schools. Of the 427 courses analysed and classified, 60 are from the Scandinavian schools. This naturally leads to a higher degree of first level, general courses in Scandinavia. One might even go so far as to say that in the USA iSchool programmes consist of mosaics of courses creating a large variety of content based on
the students’ choices while in Scandinavian iSchools programmes are (to various
degrees) uniform, making studies less individual and more collective in terms of
students experiences. All this means that while Scandinavian programmes consist of
fewer, but wider courses, they may contain more of the classes in the JITA
classification than shown in this analysis. Several issues may be embedded in a wider
first level course description, while the American courses seem to be very literal in
titles and description.

Comparing means, the results become even more emphasised:

Figure 3. Mean distribution of courses over the main JITA classes at Scandinavian
and American iSchools

Calculating correlation between the means of the US and Scandinavian course ratios
also shows low overlap (Pearson r = 0,38 at alpha = 0,221 which is far from 0,05).

Still, in many ways the picture may seem to correlate between the two sets of
schools. They both give priority to content that relates to rather traditional LIS
subfields such as Information use and sociology of information (B), Users, literacy
and reading (C), and Information treatment for information services (I) being basically Knowledge Organisation and Information Retrieval. Limited priority is given content leaning towards private sector related issues in Industry, profession and education (G) and, specifically in Scandinavian schools, Technical services in libraries, archives and museums (J). In Sweden, Denmark and Norway, Management (F) and Information sources, support and channels are given lower priority than in the US schools.

6 Conclusion
In the beginning of this article, we mentioned that the picture of iSchools that arises from previous studies is ambiguous. Aspects considered by Scandinavian LIS schools while applying for iSchool membership and the similarities and differences between their Master level course offerings does seem to corroborate this ambiguity. In both Borås and Oslo internal reports offer an insight to the hesitant points of departure that characterise their reasons for applying to become iSchools. In Copenhagen, we find a different, more progressive approach, as there seems to have been a unique set of problems to which an iSchool identity was seen as a solution.

The analysis of Master level programmes through syllabi and course descriptions seems to reproduce the relation between symbolic and practical level concerns in all three countries. What this means is basically that it is very difficult to pinpoint anything that distinguishes these programmes as carriers of any iSchool identity. Also when compared to three US iSchools, this picture remains. In fact it is strengthened, as the correspondence between various prioritised and de-prioritised subfields of LIS is more or less the same across the sample. The major difference that emerges from the data is the significantly wider variety of courses offered by the American schools compared to the Scandinavian, something which is expected as a result of different educational systems – also between the Scandinavian countries.

Still, the pattern seems to confirm previous studies such as Chu (2012) and Heting (2012) in that no immediate iSchool identity is discernable from the curricula from any of the schools in this study. So where does that leave us? Is the iSchool concept primarily symbolically applicable, whilst it is LIS programme “business as usual” on a practical level? Is it all about adopting to a “cult of the I”, defining a role for LIS as a discipline in a more competitive position – in a neo-liberal sense – than is possible for traditional library related LIS?
This study seems to support positive responses to these questions in the fact that the symbolic level is of major importance to all three Scandinavian schools. The iSchool brand is used, as described by Alvesson (1991) in his cluster of social factors influencing symbolic moves in organisations, to visualise the socio-political relevance of the iField (and its ideological usefulness). This, in various senses, is expected to gain social and political fashionability to respective school in educational systems presently under increased influence from similar neo-liberal ideas of education that have developed in the USA over several decades. These factors are seen particularly articulated in Denmark, but also in Sweden. In Norway, they are formulated with a greater concern about the effect on the traditional, and law-restricted relation between LIS education and the library sector.

We have shown examples, such as Seadle and Griefeneder (2007), where attempts are made to redefine the qualities and skills of graduates in iSchools compared to traditional LIS, well in line with Kamens’ (1977) analysis of “legitimating myths”. This does not seem to be a big issue in the Scandinavian schools. It is touched upon, with different emphasis, mostly described with the “from L to I”-type of metaphor. The practical value of this is, however, hard to determine; Norway present significant scepticism, while the Danish argument must be considered as fundamental for the entire iSchool process and something that can be seen already from the mid 1980’s (Harbo, 1998).

The iSchool concept in Denmark, Norway and Sweden shows to be primarily of symbolic nature. This might indicate a number of things:

1. Not only educational environments differ from the American, the basis from which iSchool ideas were first formulated, but also society at large in terms of information markets.
2. The expectations on LIS programmes from students and libraries. Scandinavian iSchools work in a soil with deeply rooted connections between libraries and a more or less vocational LIS tradition.
3. The systems for research funding as being required by the iSchool movement. This criterion for membership is a source of concern which may be the reason for the apparent emphasis on symbolic issues like branding and community.

These factors explain, in part, why we see a gap between the symbolic significance of becoming iSchools and the apparently traditional LIS curricula offered.
by the studied schools. Results indicate that a similar gap exists in US iSchools as well although that conclusion is beyond the scope of this study. The main mission of the iSchool movement is to create an educational structure that is fit to meet the requirements of a “new” society, promoting a neo-liberal educational agenda, built around information. One question that arises from the results of this study is whether the mission is realistic when the tight connection to traditional LIS is maintained in its implementation.

Perhaps a new approach is needed, taking the iSchool concept beyond LIS and librarianship also in practical terms, building iSchools from empirical challenges such as seen in developments in Big Data, Digital Humanities and new patterns of scientific and socio-political communication. To deal with such issues, however, a new kind of interdisciplinary approach seems to be needed, backed by programmes that can build on contemporary LIS experience, however not necessarily on its tradition.

**Acknowledgments**

The authors would like to thank the representatives from all six iSchools in the sample, who helped find the appropriate courses and attain the correct syllabi for analysis. Many thanks also to Boris Badurina for his constructive feedback on the initial manuscript.

**References**


