

# Mapping the Relevance of Library Science Curriculum and Graduates Competencies: A Survey

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## ABSTRACT

Higher education should continuously ensure the link and match between curriculum and the work competency of the graduates. This study uses a survey method to foster the level of relevance of the LIS curriculum with the work competency of the LIS graduates. Seventy-six graduates participated in this survey to map the level of relevance of the 30 major courses of the LIS curriculum with their work competency. The result of this study shows that Computer Applications and Internet (92.3%), and cataloging for a monograph (91.5%) have a very high level of relevance with the work competency of the graduate. It indicates that the teaching materials on information organization and ICT use in the library should comprehensively and deeply be presented in LIS courses to strengthen such competencies. Similarly, Library Internship (91.3%), a course required to enhance any work competency of a LIS graduate, is Highly relevant to the work competency of the graduate. This means that the majority of LIS courses should involve a significant amount of the practical component. Bibliometric and Secondary Literature only show 47.8% and 50.5% of relevance for the two themes, respectively. The teaching materials for Bibliometric and Secondary Literature should not be described in as much length as other courses within the LIS curriculum because of the neutral degree of relevance of these two courses.

**Keywords:** Library science curriculum; librarians competencies

## 1. INTRODUCTION

Mapping the level of relevance of the library science (LIS) curriculum with the work competency of the graduates through a survey is a kind of tracer study. The goal of the tracer research is to strengthen the connection and alignment between the output of higher education institutions – in this case, the library science graduates of UIN Alauddin Makassar – and the job competency demanded by employers. An effective way to assess the quality of the growth of graduates' work competency would be to use the necessary information by asking how relevant the courses are to the graduates' work competency (Ministry of Research, Technology, and Higher Education of the Republic of Indonesia, 2018).

The curriculum strongly shapes the competency obtained by the graduates because it is a guideline that contains objectives, content, learning strategies, and evaluation in organizing learning and teaching activities (Quality Assurance Unit of the State Institute for Islamic Studies of Purwokerto, 2017). The contents of the teaching materials of the curriculum reflect the

structure of the courses which are taught by lectures to achieve the graduate profiles of a study program (University of Nahdatul Ulama of Indonesia: 2020).

The curriculum of the undergraduate program in the Library science included in this survey is only limited to 30 courses, excluding courses from university-level dan faculty level. Those 30 courses are designed to prepare students to have the knowledge, skill, and attitude related to the seven key competencies of LIS graduates stipulated in the Indonesian National Work Competency Standards (SKKNI) that employers generally require. The 30 courses included in this survey are not only technical courses but also non-technical courses as well.

The curriculum, as the spirit of a study program, has to be carefully designed, consistently implemented, and continuously evaluated to ensure its alignment not only with the work competencies required by employers but also with the development of science, technology, and communication (Junaidi, 2020). Therefore, the tracer study becomes necessary for the school administrator because it enables them to foster how relevant their curriculum is to the work competency needed by industries. Tracer study is also considered an embedded element in quality management of the outputs of higher educational institutions. (Ministry of Research, Technology, and Higher Education of the Republic of Indonesia, 2018).

The improvement of the quality of the graduates in higher educational institutions will strongly be affected by the quality management strategy. It should clearly state the steps that need to be taken to ensure the output of the higher educational institution in obtaining the knowledge, skills, and competency required by the labor market. Identifying and analyzing the curriculum relevance with the graduate's work competency through a tracer study is a preceding step to verify that the students possess such capabilities (Ministry of Research, Technology, and Higher Education of the Republic of Indonesia, 2018).

From a range of viewpoints, research has been done on the degree of relevance of the curriculum. Some studies pay more attention to the issue of the curriculum's consistency between a vocational school and a higher education setting. For example, a study entitled the coherence of the vocational school curriculum majoring in sanitation building construction, the curriculum of the undergraduate school majoring in building engineering education (Rustanti, Murtinugraha, & Saleh, 2021), and the alignment of the STKIP PGRI West Sumatra history education study program's curriculum with high school students' interest in history undergraduate study programs (Mimi, 2019).

The other lens used in studying curriculum relevance is the connectivity between the curriculum and the existing standards. For instance, a study on the cohesiveness between the Indonesian National Work Competency Standards (SKKNI) and the LIS curriculum of the State Islamic University of Raden Fatah Palembang (Dayantri, 2019), and the coherence between the competency standards of the undergraduate level of Library science program, the University of Diponegoro with its curriculum (Suryani & Ati, 2014). Another study by Rasyid (2018) stated the link and match between LIS courses at the Faculty of Adab and Literature in Universitas Islam Negeri Ar-Raniry Aceh. it does not elaborate in detail on how relevant each LIS course is to the work competency of the graduates because the research only explains the level of relevance of technical and non-technical LIS courses with the graduate's jobs.

Therefore, this study intends to explore in detail how relevant the courses offered in LIS curriculum at UIN Alauddin Makassar are to the work competency of the graduate through a survey. In order to fully strengthen the connection and alignment between the LIS curriculum and the work competency required by the labor market. It is intended that the research's findings will be used as a guide for assessing the LIS curriculum.

## 2. METHODS

This research quantitatively describes the level of relevance of the library information science (LIS) curriculum and the work competency of the graduates. 30 questions are designed to measure the relevant level of the LIS curriculum courses with graduates' work competency. The courses included in the questionnaire are only the majors-courses. The questionnaire link is distributed to participants through social media. The participants are required to rate each course's relevance level using the Likert Scale. Correlation product-moment and Cronbach Alpha formula are used to validate the questionnaires and to test the reliability of the instruments. Two questions were taken out from the survey questions as they did not meet the validity and reliability criteria.

In 2021, the survey was carried out in August and September. 76 recent graduates took part in this survey. The data is administered by using the formula  $T \times P_n$ , where T is the number of respondents connected with the specified Likert scale and  $P_n$  is the Likert score from 5 to 1. This yields the total score for each question of the instrument. The data is then administered using the following formula to determine the degree of relevance of the courses with respect to the graduates' level of work capability, as follows.

$$p = \frac{\text{Total score}}{\text{Maximum score}} \times 100\%$$

Where:

P = Percentage

Total Scores = The total score of the Likert scale frequency multiplied by the Likert score.

Maximum score = The maximum Likert score multiplied by the number of respondents (5 X 76 = 380)

The result of the formula from each item questionnaire is then interpreted into the level of relevance between the LIS courses and the work competency by using the interval level of percentage as set out below:

Highly relevant	: 81% - 100%
Relevant	: 61% - 80%
Neutral	: 41% - 60%
Not relevant	: 21% - 40%
So irrelevant	: 0% - 20%.

## 3. RESULTS AND FINDINGS ANALYSIS

### *Respondents Profile*

Seventy-six (76) graduates participate in this survey. Most respondents are female, constituting 82.8%, while the rest (32.2%) are male. Based on the types of information centers they work, more than half of the respondents (53.9 %) work in the university library, followed by (35.7%) of the respondents work in the library school. Some (5.3%) work in libraries and archival centers, and a few (2.6% and 1.3%) work in special and public libraries.

Correspond to the year of graduation, the majority of the respondents (67%) are graduated in the year 2015 – 2020, some of them (25%) are graduated in the year 2009 - 2014 and the rest of them (8%) were graduated in the year 2003 – 2008. In relation to the number of years of experience, the majority of respondents (65.8%) have between 0 – 5 years of work experience, some of them (21.1%) have between 6 – 10 years of work experience, and the rest

of them (13.2%) have worked between 11 – 20 year work experience. Correspond to the geographical area of places they work, most of the respondents (85.5%) work in Sulawesi, some of them (7.9%) work in Nusa Tenggara Barat, a few of them (3.9%) work in Kalimantan and the rest of them (1.3%) work in Irian Jaya and other places. Details information as seen in the table 1.

Table 1: The demographic characteristics of the respondents

Demographic characteristics	category	Percentage
Gender	Male	38.2
	Female	61.8
Year graduated	2003 - 2008	7.8
	2009 - 2014	25.0
	2015 - 2021	67.1
Workplace	University library	53.9
	School library	35.5
	Library and archival institution	5.3
	Public library	1.3
	Special Library	2.6
	others	1.3
	Work area	Sulawesi
Nusa Tenggara Barat	7.9	
Kalimantan	3.9	
Irian Jaya	1.3	
Other places	1.3	
Yearly work experience	0-5 years	65.8
	6-10 years	21.1
	11-20	13.2

### *The Level of Relevance of The LIS Curriculum*

The research's findings indicate three levels of relevance (Highly relevant, relevant, and neutral) for the LIS courses offered in UIN Alauddin Makassar's Library Science Program. 40% of the LIS courses are highly relevant to the graduates' ability to do their jobs. 34.6% of the LIS courses are pertinent to the graduates' workplace proficiency. And just 23.3% of LIS courses have a neutral level of relevance to the graduates' ability to perform their jobs.

Of the 30 major courses of the LIS curriculum listed in the survey (see table 2), twelve courses or 40 % demonstrate a Highly relevant level (81-100%) with the work competency of the graduates. Of the 12 courses in that category, three courses exhibit above 90% level of relevance to the work competency of the graduates. The courses are Cataloging for Monograph, Computer Application and Internet, and Library Internship. Of the 12 courses in that category level of relevance as well, three courses exhibit between 86% to 90% level of relevance to the work competency of the graduates. The three courses are History of Library (89.7%), Reference Services (87.1%), and Ethics for Librarian (86.3%). The rest of the courses in that category exhibit between 81% to 85% level of relevance. Those courses are Library Philosophy (82.3%), Introduction to Statistics (83.9%), Psychological Aspect of Library Users (82.8%), Preservation of Library Materials (83.9%), and Classification (82.5%). All courses that

point to a highly relevant level with the work competency of the graduate can be inferred that the graduates widely use knowledge and skill gained from the courses.

The table also shows that there are eleven LIS courses whose level of relevance point is between 61–80% (relevant) with the work competency of the graduates. One course of the 11 courses, Promotion and Library Services Design, reaches 80.2% of the relevance level with the graduates' work competency. Another course of the 11 courses, Library Collection, reaches a 77.6 % level of relevance with the work competency of the graduates. Four of the 11 courses point between 70%-75%. These courses are Information Retrieval System ((70.0%), Repackaging Information (72.6%), Law Aspect of Information (70.5%), and Islamic Information Resources ((71.5%). Four courses of the 11 reach points between 60% to 65% of relevance. These courses are Index Vocabulary (63.4%), Digital Library (65.0%), Archive Management (63.9%), and User Education (64.4%). The 11 LIS courses are still relevant to the graduates' work competency. Still, the knowledge and skill obtained from the courses are not as widely used as the courses whose relevant level demonstrate highly relevant level (81%-100%).

The table also shows that there are 7 courses in the LIS curriculum whose relevance to the work competency of the graduates demonstrates a neutral level of relevance (41%-60%). Two of the 11 LIS courses point between 56% to 60% of relevance. Developing Reading Habits (58.4) and Library Management (58.6%) are the two courses. 4 of the 11 courses point between 50% to 55% of the relevance level with the graduates' work competency. The four courses are Graphic and Publishing (52.8%), Secondary Literature (50.5%), Bibliographic Tools (52.1%), and Cataloging for Non-Book Materials (54.2%). One course of the 11 LIS courses in this category, however, Bibliometrics point at 47.8% only. Therefore, the knowledge and skill gained from the 11 courses may or may not apply to the work competency of the graduates.

Table 2: the level of relevance of 30 courses in the LIS curriculum to the graduates' work competency

No	Library science courses	(%)	Relevant level
1	Classification (DDC)	82.5	Highly relevant
	Classification (UDC)	50.0	Neutral
	Classification (2X) for Islamic studies literature	65.0	Relevant
2	Cataloging for monographs	91.5	Highly relevant
3	Library Collection Development	77.6	Relevant
4	Preservation of Library Materials	83.9	Highly relevant
5	Index Vocabulary	63.4	Relevant
6	Information Retrieval System	70.0	Relevant
7	Repackaging of Information	72.6	Relevant
8	Library Management	58.6	Neutral
9	Computer Application & Internet	92.3	Relevant
10	Digital Library	65.0	Relevant
11	Management of Archives	63.9	Relevant
12	Bibliometrics	47.8	Neutral
13	Cataloging for Non-book Library Materials	54.2	Neutral
14	Introduction to Information Organization	89.2	Highly relevant
15	Bibliographic Tools	52.1	Neutral
16	Promotion & Library Service Design	80.2	Relevant
17	Law Aspect of Information	72.6	Relevant
18	Reference Services	87.1	Highly relevant
19	Psychological Aspect of Library Users	82.8	Highly relevant

20	Secondary Literature	50.5	Neutral
21	Developing Reading Habits	58.4	Neutral
22	Library Automation	70.5	Relevant
23	Graphics and Publishing	52.8	Neutral
24	User Education	64.4	Relevant
25	Islamic Information Resources	71.5	Relevant
26	Introduction to Statistics	83.9	Highly relevant
27	Ethics for Librarian	86.3	Highly relevant
28	History of Library	85.7	Highly relevant
29	Library Philosophy	82.3	Highly relevant
30	Library Internship	91.3	Highly relevant

#### 4. DISCUSSION

12 (40%) of the 30 courses in the LIS curriculum are highly relevant (81-100%) to the work competency of the graduates. Of the 12 courses above, three courses, namely Cataloging (91.5%), Introduction to Information Organisation (89.2%), and Classification (82.5%), are the courses that aim to build the competency of LIS graduates related to information organization. One course, Reference Service (87.1%), aims to build LIS graduates' competency in library services. The other course, library material preservation (83.9%), aims to build the competency of LIS graduates related to the preservation of library materials. Another course of the LIS curriculum, Computer Application and Internet (92.3%), which aims to build competency related to ICT use in the library, is also highly relevant to the work competency of the graduates. The ICT use competency required by the graduates is related to the ability to perform library tasks using ICT and the ability to implement and develop library automation system (Indonesian Ministry of Labour, 2019). Furthermore, according to American Library Association (2009), the ICT subjects in the LIS curriculum should be discussed from many perspectives: firstly, the ICT use in information organization and information service delivery; secondly, the effect of ICT on information resources, service delivery, and benefits of the library; thirdly, professional ethics and norm related to ICT; fourthly, the methods of assessing the cost efficiency of technology-based products and services; lastly, the principle and techniques to identify emerging technologies and innovations to recognize and implement relevant technological improvements in the library.

The objectives of the six LIS courses which are highly relevant to the work competency of the graduates, are to build four of the seven key competencies of LIS graduates stipulated in SKKNI. The four key competencies are information organization, library services, library materials preservation, and the library's ICT use. The relevant level of the Collection Development, the LIS course which aims to build competencies related to library collection development, is only 77.6 % (quite relevant). Moreover, Bibliometric and library management the lis courses which aim to build the competencies related to professional development and library management are only 47.8% and 58.6%, respectively (relevant).

According to SKKNI, LIS graduates should have seven key competencies. These seven key competencies are collection development, information organization, library services, preservation of library materials, professional development, library management, and ICT use in the library (Indonesian Ministry of Labor Regarding of SKKNI; 2019). Accordingly, the courses which have objectives to build these four key competencies are highly relevant to the work competencies needed by the labor market.

Library Internship Project (91.5) is also a course that is highly relevant to the workplace. This course is designed to prepare students with working experience through practicing what they have learned from lectures in class. This implicitly suggests that the LIS curriculum should proportionally consist of theoretical and practical aspects of LIS courses. This finding supports the previous study on the LIS curriculum conducted by Mzwandile Shongwe and Dennis Ocholla (2004;) which recommends including an internship program to cater to Information Science students. Another study by George Theodore et al. (2018) suggests substantially including practical skills in the LIS curriculum. Cataloging and Classification (Chipeta, George Theodore and Chawinga, Winner Dominic, 2018; Shongwe, Mzwandile, and Ocholla, Dennis N, 2011; Edith Lutmawa, 2004;), Collection Development, Abstracting and Indexing (Shongwe, Mzwandile, and Ocholla, Dennis N, 2011) are among of LIS courses recommended to significantly include practices for the work competency building of the graduate.

Other courses highly relevant to the graduate's work competency are the courses associated with the character and attitude building demanded by LIS graduates to perform library tasks. Ethics for Librarians (86.3%), Psychological Aspect of Library User (82.8%), and the History of Library (89.7%) are among the LIS courses intended to shape the graduate's character and attitude required in their library tasks. Introduction to statistics (83.9) is another course that is highly relevant as well with the work competency of the graduate. This course is designed to strengthen the graduates' work competency, particularly in preparing library administration reports.

11 out of 30 LIS courses (36.6%) exhibit relevant level (61-80%) with the work competency of the graduate. Three courses out of the 11, Index Vocabulary (63.4%), Information Retrieval System (70.0%), and Archive Management (63.9%) are the courses related to competency building on information organization. Five courses out of the 11, Repackaging Information (72.6%), Promotion and Library Service Design (80.2%), User Education (64.4%), and Islamic Information Resources (71.5%) are the courses needed to build competency related to library services. 2 courses out of the 11, Digital Library (65.0) and Library Automation (70.5%) are the courses designed to build work competency on ICT use in the library. A subject named Law Aspect of Information (72.6%) is to raise the graduate's awareness of law related to his profession as an information navigator. Accordingly, the 11 LIS courses above remain relevant to preparing graduates' work competency, particularly related to information organization, library services, and ICT use in libraries.

7 out of 30 LIS courses (23.3%) exhibited a neutral level (41-60%) with the work competency of the graduate (see table 2). 2 out of the 7, Cataloging for Non-Book materials (54.2%) and Secondary Literature (50.5%) are the courses focused on competency building connected to information organization. This indicates that the particular competencies of the information organization from these two courses may or may not be demanded by the labor market. Similarly, 2 out of the 7, Reading Habit Development (54.4%) and Bibliographic Tools (52.1%) are the courses directed to competency building linked to library services. The percentage number of these two courses then implies that the competencies related to library services from these two courses may or may not be required by particular employers. The other 3 courses: Graphics and Publishing (52.8%) is the course designed to build graduate competency on ICT use in the library; Library Management (58.6%) is the course intended to support the graduates in managing library; Bibliometric (47.8) is the course aimed to empower the graduates with professional development are also classified into the neutral level. This shows that the competencies gained by the LIS graduate from these three courses may or may not be relevant to the work competency of the graduate.

## 5. CONCLUSION

The LIS school administrators can confidently decide which courses should be included or excluded in the LIS curriculum as well as the scope and detail of each LIS course with the help of an understanding of the relevant level of the courses with the work competencies of degree holders. This will ensure that the LIS curriculum courses strongly survive and thrive with the work competency required by the labor market. Although some LIS courses (23.3%) are in the neutral level of relevance with the work competency of the graduate but the majority of the LIS courses are highly relevant (40%) and relevant (36.6%) with the. The courses designed to build certain work competencies are not automatically at the same level of relevance. For example, Monograph Cataloguing and Non-Book Material Cataloguing are the courses intended to build work competency in information organization, but the two courses' relevant levels are different. Monograph Cataloguing (91.5%) reaches a Highly relevant level while Non-Book Material Cataloguing (54.2%) exhibits a neutral level.

Two LIS courses, Computer Application and Internet, and Monograph Cataloguing, which reach more than 90% level of relevance with the work competency of the graduate, indicate that employers widely need the work competencies gained from the courses. Conversely, two courses, Bibliometric which is designed to build professional development, and Secondary Literature, which is aimed at building competencies associated with library services, only reach 50% below. This implicitly denotes that employers do not widely demand the work competencies gained by the graduates from these two courses.

Surprisingly, the Library Internship Project, a course designed to give students work experience, also reaches more than 90% of the level of relevance with the work competency. This shows that LIS courses should significantly incorporate the practical component of what students learn in class.

As the setting of this study is in the eastern part of Indonesia, the expected work competencies of graduates from employers may also be different from other employers in other parts of the world. However, the finding of this study remains relevant to other LIS study programs where the working places of their graduates have some commons with the workplace where this study is undertaken. Hence, further research on this issue is recommended to involve graduates as participants from many different LIS schools to get a more comprehensive picture of the link and match between the LIS curriculum and the work competencies needed by employers worldwide.

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