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Teaching cataloguing after RDA 3R project: Lessons learned

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ABSTRACT
This paper describes how RDA 3R was incorporated into a two-semester cataloguing course syllabus for first-year students and investigates students' perceptions and feelings about the courses taught. The information gathered will guide the further development and improvement of the course to fully meet the needs of students and the requirements of the market, especially with the emergence of new resource description standards. Following the course teacher's approval, the researchers distributed questionnaires during class hours. This method ensured that all students participated. The questionnaire was completely anonymous. It included two demographic questions and the CEQ 23 instrument with a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Besides that, a self-assessment questionnaire was employed to better understand their confidence in the knowledge gained. Quantitative analysis was carried out on the data related to 63 individual students. The quantitative analysis employed the statistical package SPSS. The findings revealed that students are reasonably confident in their new skills but prefer more practice over theory. Finally, they mentioned that they would like more precise goals and an extension of the courses to three semesters, as the workload is quite heavy. Overall, students feel relatively confident about the knowledge gained and believe they can catalogue in a library setting. The CEQ 23 instrument can be used in various knowledge organisation courses. It can provide a better understanding, with the ultimate goal of changing the curriculum or repurposing information organisation courses, allowing any Library and Information Science (LIS) school to judge the future of studies and their direction.

KEYWORDS
Cataloguing courses; RDA Toolkit; CEQ23; Teaching and Evaluation; Students' performance.

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Introduction

Cataloguing and classification are considered the two pillars of librarianship and they have always been at the very heart of library and information work (Sibiya & Shongwe, 2018). This could be attributed to the fact that a quality catalogue will help patrons search, retrieve, identify, locate, and effectively use library resources. Cataloguing has arguably become increasingly vital as technology has become omnipresent and libraries have evolved into technological hubs, yet job postings for cataloguers do not appear to be diminishing (Turner, 2020).

In this direction, several Library and Information Science (LIS) schools are offering cataloguing courses into their curricula and it is considered a core course in the discipline (Chen & Joyce, 2019). It is a complex and challenging course in which students must comprehend and use various tools and instructions. More specifically, future cataloguers must use a variety of cataloguing standards to create descriptive records (the well-known surrogates) for items in the library collection (e.g. Resource Description and Access – RDA, MAchine Readable Cataloguing – MARC, Library of Congress Subject Headings – LCSH, etc.). An additional challenge that adds to the complexity of the course is the fact that there is an extra difficulty in understanding, using and studying these tools and guides, especially for people whose first language is not English. For example, in Greece, there is no official translation of the basic tools for cataloguing.

Cataloguing is not a new course in library and information studies curricula (Snow & Hoffman, 2015). Some principles or rules for the description and categorisation of library items and collections appeared from the beginning of their development. This became even more pronounced with the emergence of the discipline in the late 19th century. Over the years, the cataloguing rules and the tools used have evolved to better meet the needs of describing items in library collections and thus facilitate users in searching and retrieving information.

Nowadays, with the advancement of technology and the creation of new forms of resources (e.g., electronic publications, video, websites, and diverse continuing resources, etc.) and new ways of describing knowledge (e.g., Resource Description and Framework – RDF, etc.), cataloguing standards and rules had to be updated and amended to satisfy the changing needs of users. In this context, the cataloguing guidelines and the RDA Toolkit were redesigned entirely in 2020 in both the software and the content (the so-called Resource Description and Access Restructure and Redesign (RDA 3R) project). The project resulted in the substitution of the previous edition of the RDA Toolkit (called from now on original RDA Toolkit) and the new RDA Toolkit took the name official RDA Toolkit. The new RDA guidelines (official RDA) are based on the most recent bibliographic conceptual model, the IFLA Library Reference Model (LRM) standard, and its structure differs from that of its predecessors, which included many numbered rules and explicit instructions. The instructions are now more abstract, giving the cataloguer more flexibility in representing the resource information. Hence, cataloguing guidelines have been restructured and redesigned in such a way that cataloguing courses must be updated to reflect these changes. A report on approaches to teaching RDA in the LIS classroom (Sze, 2022) identified this problem in introducing RDA after 3R and the new official RDA Toolkit, as well as what cataloguing teachers should keep in mind and what approaches educators who have already used the new RDA 3R Toolkit have followed.

Considering the aforementioned, the new RDA Toolkit was introduced in cataloguing courses at the University of West Attica's Department of Archival, Library, and Information Studies (ALIS)

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for the academic year 2022-23. The course was offered to the department's undergraduate students over two semesters so that they could understand all of the cataloguing concepts and tools. Along these lines, this study seeks to elicit information about the course taught and students' thoughts and feelings about cataloguing after completing the two-semester course. The information gathered will guide the further development and improvement of the course to fully meet the needs of students and the requirements of the market, especially with the emergence of new resource description standards.

To achieve this, students were given a questionnaire at the end of the second semester to evaluate the courses in terms of difficulty, learning outcomes, comprehension of curricular concepts, and recommendations for enhancing the courses. The survey was based on the Course Experience Questionnaire (CEQ) (Ramsden, 1991) and it was expanded with additional questions (self-assessment questionnaire) mainly focusing on students' perceptions of the course and suggestions for improvement (Kyprianos et al., 2022).

Related work

This section will focus on previous works about the evaluation of cataloguing courses in general with the original RDA, what constitutes an efficient cataloguing course, and what are the core competencies that a future cataloguer should have, since no similar surveys relating to the application of the new official RDA Toolkit into the curriculum have been conducted. When it comes to teaching cataloguing, it appears that several surveys have shown that students prefer more exercises and practical examples than theory (Kyprianos et al., 2022; Chen & Joyce, 2019; Engelson, 2019; Snow & Hoffman, 2015; Al Hijji & Fadlallah; 2013; Mugridge, 2008).

Moreover, instructor effectiveness is one of the key topics identified in cataloguing course surveys. Snow and Hoffman (2015) state that the instructor's effectiveness involves attitude, knowledge, enthusiasm, teaching skills, and engagement. Furthermore, Engelson (2019) stated that educators must find the right balance between theory and practice when teaching cataloguing, which is a key concern. Another consideration for instructors is that the cataloguing course needs analytical thinking and questioning learning abilities rather than simple memorisation of factual knowledge (Chen & Joyce, 2019). Having this in mind, clear explanations, approachability, and responses to student questions all contribute to favourable assessments of instructor effectiveness.

Additionally, the course content also impacts the positive evaluation of cataloguing courses. Students appear to like courses that cover a wide range of cataloguing topics, such as principles, standards (e.g., MARC, RDA), metadata, and classification systems. The applicability of the course content to real-world scenarios and practical applications is also highly valued in this regard (Engelson, 2019; Sibiya & Shongwe, 2018; Snow & Hoffman, 2015). Hence, course organisation and structure also appear to impact the cataloguing course evaluation. In particular, students prefer clear instructions and access to supplemental resources that enhance their knowledge, well-organised course materials, and logical progression of topics taught (Chen and Joyce, 2019; Kyprianos et al., 2022).

Furthermore, the placement of cataloguing in the actual environment of a library appears to alter students' attitudes regarding cataloguing courses. According to Snow and Hoffman (2015),

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putting cataloguing in the real world of a library means demonstrating how cataloguing benefits users, providing authentic items and examples for cataloguing practice, giving students access to cataloguing tools used in practice, analysing local practices, and gaining experience with an Integrated Library System (ILS). Chen and Joyce (2019) support this assumption by tying classroom activities to themes students see impacting their future roles as librarians.

To continue, various studies have been conducted in this regard over the years about cataloguing courses offered in the curriculum and job requirements for cataloguing and metadata experts (Al Hijji & Fadlallah, 2013; Sibiya & Shongwe, 2018; Chen & Joyce, 2019; Monyela, 2021; Sibiya & Chuma, 2021; Zhang, 2023). More specifically, it seems that traditional cataloguing standards are still in great demand when posting a librarian job and many schools around the world are still offering information organisation courses, particularly library cataloguing, and classification in their curriculum. Moreover, Turner (2020), who studied the cataloguing job market, concluded that cataloguing jobs are still in great demand.

Here, it should also be mentioned that through the years several core competencies that a future cataloguer should conquer have been proposed. According to the Cataloguing Competencies Task Force (2017), Snow et al. (2023) and Frederick (2018) students of Library and Information Schools should have specific core competencies to become cataloguing and metadata professional librarians. The three necessary competencies are a) knowledge competencies, b) skill and ability competencies, and c) behavioural competencies. The first competence is related to the ability of students to be aware of the foundational cataloguing and metadata principles, the systems and the technology related to these systems, and the trends in the cataloguing and metadata profession. Following that, the second competency is related to the ability of students to synthesize and use all the guidelines, standards, and systems to create bibliographic data. Finally, the last competency focuses on the ability of students and future librarians to achieve interpersonal communication, be able to solve problems and be user-centred and user-oriented.

Course description

The two-semester cataloguing course is available to first-year students in the Department of Archival, Libraries and Information Studies at the University of West Attica. These courses are offered in the school's first and second semesters, and students can acquire all the skills and knowledge required to work as cataloguers in libraries. In this context, students should obtain the essential basic (theoretical) knowledge (i.e., applicable terminology, the theoretical framework for cataloguing, historical overview.), as well as the specialised knowledge (i.e., tools and standards) necessary to perform cataloguing. Therefore, when considering the course structure, it was decided that the first semester should cover the theoretical background students should gain. In contrast, the second semester will introduce students to the tools required for cataloguing and address them with more practical exercises and real-life scenarios. The decision was made having in mind initially Dobreski's (2019) webinar 'Teaching RDA after 3R', in which he pinpointed that some teaching materials, examples, and labs will need to change, especially in relation to the Toolkit's new interface, LRM, and the new Relationships. Secondly, Sze's (2022) report on approaches to teaching RDA in the LIS classroom gave the educators interesting insights for creating the structure of the courses. Finally,

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the third factor that influenced the course curriculum modification was the results from previous research by Kyprianos et al. (2022) where an evaluation of the cataloguing course was performed and the results revealed that the students prefer more cataloguing practice (creation of bibliographic records), balancing theory and practice, and transferring cataloguing in the real world.
In this line of thought, the students are offered a mixed course of 5 hours (3 hours of theory and 2 hours of practice) per week for 13 weeks each semester, meaning that the students have 26 weeks of cataloguing. In general, the course covers the theories, principles, and methods of bibliographic description and the application of international standards to create library catalogues. Furthermore, it covers the fundamental concepts of descriptive cataloguing, such as the elements of bibliographic description, the description of all types of library resources, the selection of access points, the creation of authorised access points, the principles and practices of authority work, and the application of encoding standards. The structure of the two courses is outlined in Table 1.

Introductory cataloguing course	
Week 1	Introduction to the course
Week 2	Library catalogues and terminology related to cataloguing
Week 3	Historical overview of cataloguing, libraries, and tools related to cataloguing
Week 4	Introduction to Entity-Relationship Models
Week 5-6	Introduction to IFLA LRM
Week 7	Introduction to Linked Data
Week 8	Introduction to the functionality of RDA Toolkit
Week 9	General instructions and recording methods
Week 10	RDA implementation scenarios and RDA controlled vocabularies
Week 11	RDA Toolkit – Describing manifestations
Week 12	RDA Toolkit – Describing carriers
Week 13	Final examination
Advanced cataloguing course	
Week 1	Introduction to the course and revision of the topics covered in the previous semester
Week 2	RDA Toolkit – Identifying works and expressions
Week 3-5	RDA Toolkit – Identifying persons, families, and corporate bodies and recording relations
Week 6	Creating application profiles for bibliographic descriptions of any resource
Week 7	Introduction to Bibliographic MARC21
Week 8	Introduction to MARC21 Authorities
Week 9	Introduction to ILS Koha
Week 10	Introduction to the subject description
Week 11	RDA Toolkit – Diachronic works
Week 12	RDA Toolkit – Cases of other works (movies, music, maps, etc.)
Week 13	Final examination

Table 1. Course syllabus.

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According to the curriculum, students must complete the first-semester course with at least a passing mark to attend the second-semester course. Such a decision was made since the course difficulty increases, and if students do not understand the fundamental concepts taught in the first semester, they would be unable to cope with the expectations and needs of the second-semester course.

More specifically, the objectives of the course can be summarised as follows:

- Recognise the significance of descriptive cataloguing in libraries.
- Learn the fundamentals of cataloguing terminology.
- Use descriptive cataloguing's core concepts, principles, and objectives.
- Learn the fundamentals of creating bibliographic metadata for information resources.
- Learn the fundamentals of creating authority metadata.
- Understand the connection between descriptive cataloguing and information discovery.
- Use standards and tools in descriptive cataloguing.
- Employ controlled vocabularies commonly associated with descriptive cataloguing.

Here, it should be noted that the course heavily relies on descriptive cataloguing with only one week out of 26 that refers to subject cataloguing because the latter is being taught thoroughly in the third semester of the curriculum. Upon completion of that course, students are able to use subject indexing systems (e.g., Library of Congress Subject Headings (LCSH), Dewey Decimal Classification (DDC), Universal Decimal Classification (UDC), Library of Congress Classification System (LCC), etc.), to understand the process of assigning subjects and organizing content by subject, and associate the subject with the classification number. Thus, for the needs of the cataloguing course, students are given pre-prepared subject headings and classification numbers to insert into the corresponding MARC fields. This way, students at the end of the course can create a full bibliographic record based on cataloguing standards and guidelines.

Methodology

As mentioned earlier in this paper, this quantitative survey was based on the CEQ instrument since it is a useful tool to get insights about teaching quality and can help teachers understand the efficiency of the curriculum and how they can improve it (Byrne & Flood, 2003). Additionally, the instrument was expanded with the employment of a self-assessment questionnaire (Kyprianos et al., 2022) allowing the teachers to identify exactly the difficulties of the course taught and how they can address these problems. The CEQ is an instrument developed in Australia where it is extensively used as a performance indicator of teaching quality (Byrne & Flood, 2003). More specifically, it was designed in the context of a teaching and learning theory in which students' perceptions of curriculum, teaching, and assessment are recognized as influencing their learning approaches and the quality of their learning outcomes, implying that it is an excellent tool for evaluating the cataloguing course. The original CEQ contains 30 items, but the most widely used version is the short form, which includes 23 questions (Asonitou et al., 2018).

Having the above in mind, the questionnaire was distributed electronically to the students enrolled in the two-semester cataloguing course and it was optional (only students who wished to complete the questionnaire could do so). Since this research was considered a course evaluation,

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it did not require the approval of the university's ethics committee. According to the results, all students who took the course completed the questionnaire (63 students). Data were collected at the end of the second semester (June 2023), when students had finished their courses and had a firm grasp on the content delivered. Following the teacher's approval, the researchers distributed questionnaires during class hours. This method ensured that all students had the opportunity to participate in the survey. The questionnaire was completely anonymous. It included two demographic questions and the CEQ 23 instrument with a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

More specifically, according to the CEQ 23 instrument, five scales were included: (1) the Good Teaching Scale (GTS), containing six items measuring teacher efforts to increase student interest and provide feedback to students for motivating and guiding them toward success, (2) the Clear Goals and Standards Scale (CGSS), with four items on the students' perceived degree of clarity concerning graduation requirements, (3) the Appropriate Workload Scale (AWS) including four items for assessing the perceptions of sustainability of the overall academic workload, (4) the Appropriate Assessment Scale (AAS) having three items capturing student perceptions of the assessment methods' adequacy, and (5) the Generic Skills Scale (GSS) containing six items measuring the level of development of student analytic, problem-solving and communication skills (Byrne & Flood, 2003).

After completing the CEQ 23 questionnaire, students were given a self-assessment questionnaire using an agreement/disagreement 5-point Likert scale to better understand the knowledge acquired by the courses and the level of confidence that students have in their cataloguing skills. The 19-question self-assessment questionnaire was based on prior work by Kyprianos et al. (2022) and modified accordingly to meet the needs of evaluating the new official RDA Toolkit. Finally, an open-ended question was included in the questionnaire, asking participants what suggestions they had for improving course instruction.

Results

Sample profile

The majority of the sample were females (71.4%), while the ratio for males was 1:4 (25.4%), and 2 respondents (3.2%) did not want to answer this question. Additionally, the participants were asked to indicate their year of study. More specifically, as shown in Figure 1, most of the participants are in their first year of studies (35%), while the fewest participants are in their fourth year of study (8%). This is justified by the fact that the course is addressed to freshmen students, but the course's difficulty forces them to repeat it for the next few years of their academic careers. As previously stated, the course's complexity (many tools and guidelines are used in conjunction to achieve the creation of bibliographic descriptions and data), the fact that this course is offered to freshmen who have no prior knowledge of terminology or experience with libraries, and the practices they follow, and the lack of Greek translations of the tools used for cataloguing are all factors that interfere with students' performance. Finally, according to the correlation analysis, it seems that the year of study and the gender of the respondents do not affect the participants' responses.

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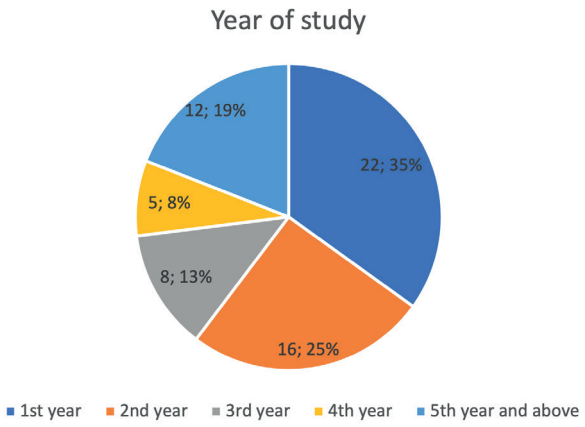

Figure 1. Year of study

Reliability and validity of CEQ

The internal consistency of each instrument's scale was measured using Cronbach's coefficient alpha. The alpha can range from 0 to 1; the higher the value, the stronger the internal consistency. However, because reliability varies with the number of items on the scale, the alphas for different scale lengths are not directly comparable (Ainley, 2001). More specifically, the overall Cronbach's coefficient alpha is 0.729, while the separate values of each scale are GTS 0.818, CGSS 0.754, AAS 0.340, AWS 0.715, and GSS 0.796 (see Table 2). The low result of the AAS scale comes as no surprise since it contains a few items, and it is generally known that the number of items influences Cronbach's coefficient value (Cronbach, 1951). The other values are adequate for getting reliable results, according to Nunnally (1978).

	Cronbach's coefficient
GTS	0.818
CGSS	0.754
AAS	0.340
AWS	0.715
GSS	0.796
Overall	0.729

Table 2. Cronbach's coefficient

Additionally, exploratory factor analysis was applied to the CEQ following the approach in previous validation studies (Ramsden, 1991; Wilson et al., 1997; Byrne & Flood, 2003). Kaiser-Meyer-Olkin (KMO) and Barlett Sphericity tests were employed to determine data compatibility for factor analysis. More specifically, the sampling appropriateness KMO value was determined to be 0.713. According to Field (2009), this value is deemed sufficient when it is greater than 0.50 and

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is considered "good" when it is between 0.70-0.80. Moreover, the Bartlett test of sphericity (x^2 = 722.706, $p < .001$) also showed the adequacy of the sample.

Principal Components Analysis and Oblique Rotated Component Matrix were chosen as the factor analysis to reveal the scale's factor design (Field, 2009; Asonitou et al., 2018). According to the findings, six factors were identified explaining 67.3% of the overall variance. The first factor accounts for 30%, the second for 12%, the third for 9.5%, the fourth for 6.2%, the fifth for 5%, and the sixth for 4.6%. Table 3 shows the distribution of the items according to the factors and their factor loads. As shown in Table 3, all the items have factor loads above 0.40. According to Field (2009), values above 0.40 are accepted as ideal. Consequently, the items contributed significantly to the factors.

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
GTS						
7					-0.837	
16				0.512		
15	0.614					
19	0.663					
3	0.611					
17	0.593					
CGSS						
1	0.578					
23	0.857					
13			0.458			
6	0.633					
AWS						
22			0.655			
20		-0.623				
4		-0.805				
14						0.473
AAS						
8				-0.422		
12			0.799			
18				-0.878		
GSS						
2						0.685
5						0.854
10						0.704

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9				0.452		
11						0.432
21						0.653
Eigenvalues	**6.934**	**2.748**	**2.174**	**1.414**	**1.151**	**1.060**
Variance explained	**30.149**	**11.947**	**9.451**	**6.147**	**5.004**	**4.608**
Total variance explained	**67.307**					

Table 3. Factor structure of CEQ item scores

A closer look at the data shows that factor 1 has 7 items from two scales. Items 15, 19, 3, and 17 from the Good Teaching Scale (GTS) and items 1, 13, and 6 from the Clear Goals and Standards Scale (CGSS) relate this way to the teachers' motivation and explain things to the students with the students' performance. Moving on, factor 2 has two items from the Appropriate Workload Scale (AWS), items 20 and 4. These two reverse-coded items explain the negative value, indicating that the workload was not too heavy and there was no pressure on the students. Next, factor 3 contains three items (22, 12, 13) from different scales, connecting the expectations of the cataloguing course with the comprehension of the curriculum taught. Additionally, factor 4 has four items (16, 8, 18, 9) from three scales. According to factor 4, students have related the teachers' feedback with the assessment scale and the memorisation of the curriculum taught. Factor 5 has only one item (15) related to the time the teachers spent commenting on the exercises performed by the students. Finally, factor 6 contains 5 items (2, 5, 10, 11, 21) from the Generic Skills Scale (GSS) and one item (14) from the Appropriate Workload Scale (AWS), meaning that the time given during the semester was enough for the students to develop their general skills.
From the above analysis, it is understood that items of scales are not fitted correctly based on the instructions of the CEQ 23 instrument. However, Cronbach's alpha of the overall questionnaire met the criterion of 0.729, and only the Appropriate Assessment Scale (AAS) was lower (0.340). Consequently, our tool is adequate for drawing results.

Descriptive data

After studying the validity of CEQ 23, we move on to the descriptive analysis of the data collected. More specifically, according to the first scale of CEQ 23 (i.e., GTS), students appear to be rather satisfied with the teaching staff and the effort they made to understand the difficulties that the students had with the course (Q15, mean 4.11) and the helpful feedback that was given to them regarding their development (Q16, mean 4.11). Additionally, similar results have been recorded in Q3 (mean 4.00) regarding student motivation. Despite their satisfaction with the feedback, the respondents need more comments and directions regarding their work (Q7, mean 3.27). Moreover, the students want their teachers to explain things more clearly (Q17, mean 3.65) and to make the lesson more interesting (Q19, mean 3.81) (see Table 4).

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GTS	N	Mean	Median	Mode	Std. Deviation	Percentage
3. The staff of this course motivated me to do my best work	63	4.00	4.00	5	1.032	63.49%
7. The staff put much time into commenting on my work	63	3.27	3.00	3	0.954	51.90%
15. The staff made a real effort to understand the difficulties I might be having with my work	63	4.11	4.00	4	0.918	65.24%
16. The staff normally gave me helpful feedback on how I was going	63	4.11	4.00	4	.863	65.24%
17. The staff was extremely good at explaining things	63	3.65	4.00	3	1.050	57.94%
19. The staff worked hard to make their subjects interesting	63	3.81	4.00	4	0.981	60.48%

Table 4. Good Teaching Scale

Moving on to the next scale of CEQ 23 (i.e., CGSS), the participants responded cautiously to questions 1, 6, 13, and 23 (mean 3.02, 3.56, 3.03, and 3.67, respectively), indicating that the courses' goals and standards were unclear (see Table 5). This could be attributed to the fact that students had to learn many new terms and theories in a short period to be able to learn cataloguing in two semesters. This is even more challenging when cataloguing courses are taught during the first semesters of school when students have yet to grasp the fundamental notions and concepts of the school to which they have been admitted. Especially when cataloguing requires synthetic thinking while considering many different tools and guidelines (e.g., IFLA LRM, RDA Toolkit, Controlled Vocabularies, MARC21, and Koha).

CGSS	N	Mean	Median	Mode	Std. Deviation	Percentage
1. It was always easy to know the standard of work expected	63	3.02	3.00	4	1.143	47.94%
6. I usually had a clear idea of where I was going and what was expected of me in this course	63	3.56	4.00	4	1.089	56.51%
13. It was often hard to discover what was expected of me in that course	63	3.03	3.00	3	1.107	48.10%
23. The staff made it clear right from the start what they expected from students	63	3.67	4.00	4	1.136	58.25%

Table 5. Clear Goals and Standards Scale

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The third scale of CEQ 23 is AWS (see Table 6). According to the participants' responses, they felt that they needed more time to comprehend the notions and topics covered in this course (Q14 mean 3.14, and Q22 mean 3.11). This is justified by the fact that students must absorb a large amount of knowledge quickly to perform cataloguing. On the contrary, the students stated that the workload and the pressure to perform well in this course was moderate (Q4 mean 3.05, and Q20 mean 2.92).

AWS	**N**	**Mean**	**Median**	**Mode**	**Std. Deviation**	**Percentage**
4. The workload was too heavy	63	3.05	3.00	3	1.054	48.41%
14. I was generally given enough time to understand things I had to learn	63	3.16	3.00	4	1.110	50.16%
20. There was a lot of pressure on me to do well in this course	63	2.92	3.00	3	1.126	46.35%
22. The sheer volume of work to be got through in this course meant it couldn't all be thoroughly comprehended	63	3.11	3.00	3	1.166	49.37%

Table 6. Appropriate Workload Scale

Next, the fourth scale of CEQ 23 is AAS (see Table 7). The responses reveal that the participants recognise that learning to catalogue requires critical thinking since they stated that to do well in this course, they do not need a good memory (Q8, mean 2.49), and they believe that the teachers were focusing more on what they had understood rather than on what they had memorised (Q12, mean 2.40).

AAS	**N**	**Mean**	**Median**	**Mode**	**Std. Deviation**	**Percentage**
8. To do well in this course, all you really needed was a good memory	63	2.49	2.00	2	1.076	39.52%
12. The staff seemed more interested in testing what I had memorised than what I had understood	63	2.40	2.00	3	1.171	38.10%
18. Too many staff asked me questions just about facts	63	3.29	3.00	3	0.923	52.22%

Table 7. Appropriate Assessment Scale

Finally, the fifth scale of CEQ 23 is GSS (see Table 8). More specifically, the students stated that the course improved their analytical skills (Q5, mean 3.70). This could be attributed to the fact that the students were confronted with cataloguing problems in real-life examples and had to think about how to deal with the problems to describe the resources. On the other hand, a

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low score was received for the question related to the ability to work as a team (Q9, mean 2.87). This can be justified because the course exercises were done individually. Furthermore, the participants need to be more confident about their problem-solving skills (Q2, mean 3.17 and Q10, mean 3.19) or their ability to plan their work (Q21, mean 3.25). Finally, the participants do not feel that the course particularly enhanced their writing communication skills (Q11, mean 2.90).

GSS	**N**	**Mean**	**Median**	**Mode**	**Std. Deviation**	**Percentage**
2. The course developed my problem-solving skills	63	3.17	3.00	3	0.871	50.32%
5. The course sharpened my analytical skills	63	3.70	4.00	4	0.891	58.73%
9. The course helped me develop my ability to work as a team member	63	2.87	3.00	3	1.157	45.56%
10. As a result of my course, I feel confident about tackling unfamiliar problems	63	3.19	3.00	3	0.877	50.63%
11. The course improved my skills in written communication	63	2.90	3.00	3	1.088	46.03%
21. My course helped me to develop the ability to plan my own work	63	3.25	3.00	3	1.150	51.59%

Table 8. Generic Skills Scale

Self-assessment questions

The following part of the questionnaire contains 19 questions that assess the knowledge gained by the students during the two-semester course (see Table 9). Most of the concepts taught in the course appear to have been grasped by the participants, based on their responses, which are mostly above average (mean 3.40-3.94). The sole question with the lowest mean score (3.27) was SA16, which assessed students' understanding of the relationship between IFLA LRM and RDA. This result is noteworthy because the training began with the IFLA LRM presentation so that students could comprehend the logic and structure behind the guidelines in the official RDA Toolkit. However, such a result contradicts participants' responses to question SA9, which refers to students' ability to use the RDA Toolkit (mean 3.94). Teaching the IFLA LRM helped students understand the RDA's structure even though they may not have comprehended the entire connection.

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	N	Mean	Median	Mode	Std. Deviation	Percentage
SA1. I understand the notion of "information organisation"	63	3.76	4.00	4	0.962	59.68%
SA2. I understand the cataloguing guidelines and tools	63	3.71	4.00	4	0.941	58.89%
SA3. I understand the operation of the Electronic Catalogue (OPAC)	63	3.70	4.00	4	1.042	58.73%
SA4. I understand the types of resources	63	3.87	4.00	4	0.924	61.43%
SA5. I understand the methods of describing resources	63	3.70	4.00	4	0.978	58.73%
SA6. I can identify the authorised access points	63	3.75	4.00	4	0.933	59.52%
SA7. I understand the cataloguing rules	63	3.51	3.00	3	0.948	55.71%
SA8. I can apply the cataloguing rules to create a bibliographic record	63	3.56	4.00	4	0.929	56.51%
SA9. I understand how to use the RDA Toolkit	63	3.94	4.00	4	0.982	62.54%
SA10. I understand the entities in the RDA Toolkit	63	3.90	4.00	4	0.946	61.90%
SA11. I understand the relationships in the RDA Toolkit	63	3.60	4.00	4	1.025	57.14%
SA12. I understand the MARC21 standard so I can create a bibliographic record	63	3.73	4.00	4	0.937	59.21%
SA13. I understand the relationship between subject headings and classification number	63	3.40	3.00	3	1.009	53.97%
SA14. I understand the necessity of standardisation of Persons and Corporate Bodies	63	3.75	4.00	4	0.950	59.52%
SA15. I understand the ways of representing information in the RDA Toolkit (structured, unstructured information, etc.)	63	3.48	3.00	3	1.148	55.24%
SA16. I understand the relationship between the IFLA LRM and the RDA	63	3.27	3.00	4	1.167	51.90%
SA17. I understand the relationship between bibliographic MARC21 and authorities MARC21	63	3.48	4.00	4	1.075	55.24%
SA18. Using Koha helped me understand how to create bibliographic records using rules and guidelines	63	3.73	4.00	4	1.081	59.21%
SA19. I understand the MARC21 standard so I can create an authorised record	63	3.70	4.00	4	1.010	58.73%

Table 9. Self-assessment questions

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Open-ended question

At the end of the questionnaire, an open-ended question allowed students to share their ideas and recommendations for making the course more understandable and easier for them. The majority of participants said that they preferred more practice over theory, which is consistent with earlier studies on cataloguing courses (Engelson, 2019; Kyprianos et al., 2022; Snow & Hoffman, 2015; Snow et al., 2018; Chen & Joyce, 2019).

Furthermore, many participants stated that they would like more cataloguing courses because they had to cover a lot of information in a short time. Results that are in compliance with research performed by Snow et al. (2018).

Finally, some participants stated that they would like to perform cataloguing in Koha earlier in the second semester because that way, they could understand different concepts and instructions better and faster. Such a statement contradicts the course syllabus's rationale: teachers believe that theoretical background should be taught first so that students can later apply what they have learned.

Discussion

This study examines the learning results of a two-semester cataloguing course at the University of West Attica's Department of Archival, Library, and Information Studies. After teaching the new RDA guidelines for the first time, the CEQ 23 provided valuable insights into students' learning outcomes and perceptions.

According to the findings, students believe their teachers motivate them to do their best work. Such a result complies with the statement of Chen and Joyce (2019), who believe that the motivation of students is essential to achieve better student learning outcomes (see Table 4, Q3, mean 4.00). Moreover, the students rated favourably that they received feedback on the laboratory exercises while applying the theory (see Table 4, Q16, mean 4.11). This result is also confirmed by the research performed by Veitch et al. (2013).

Moving on to instructor effectiveness, according to Snow and Hoffman (2015), the most crucial characteristic of instructor effectiveness is his/her ability to provide explicit and practical instruction. Students notably stated that they were generally satisfied with the course syllabus and what was expected of them in this course (see Table 5, Q6, mean 3.56). Such a result could be justified because students are in their first year of study and, in most cases, are unfamiliar with the terminology, tools, and tasks performed in a library.

In line with the results from similar surveys, which revealed that students need to have critical and reflective thinking to perform cataloguing (Kyprianos et al., 2022; Chen & Joyce, 2019), the present study confirmed the belief that the course of cataloguing does not require pure memorisation (see Table 7, Q8 mean 2.49, and Q9 mean 2.40). The students have to learn how to use the specific tools that are needed to perform cataloguing rather than memorise specific rules and guidelines. Students perceive such a process after the first lessons when they are asked to apply what they have learned in theory to real-life scenarios with varying degrees of difficulty and characteristics (e.g., works in various forms (books, journals, online resources.), works with multiple or no creators).

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Additionally, comparing the self-assessment questions to the previous work of Kyprianos et al. (2022), the course has enhanced students' confidence in the knowledge gained. As seen from Table 10, the students in the present study seem to understand better information organisation in general and the tools needed to perform cataloguing. A significant improvement has been performed in question SA12, which refers to understanding the MARC21 standard for creating bibliographic records (i.e., previous study mean 2.94, present study mean 3.73).

	Previous study (mean)	**Previous study (%)**	**Present study (mean)**	**Present study (%)**
SA1. I understand the notion of "information organisation"	3.56	56.51%	3.76	59.68%
SA2. I understand the cataloguing guidelines and tools	3.44	54.60%	3.71	58.89%
SA3. I understand the function of the Electronic Catalogue (OPAC)	3.1	49.21%	3.7	58.73%
SA4. I understand the types of resources	3.29	52.22%	3.87	61.43%
SA5. I understand the methods of describing resources	3.29	52.22%	3.7	58.73%
SA6. I can identify the authorised access points	3.07	48.73%	3.75	59.52%
SA8. I can apply the cataloguing rules to create a bibliographic record	3.22	51.11%	3.56	56.51%
SA12. I understand the MARC21 standard so I can create a bibliographic record	2.94	46.67%	3.73	59.21%
SA14. I understand the necessity of standardisation of Persons and Corporate Bodies	3.1	49.21%	3.75	59.52%

Table 10. Comparison of self-assessment question to the previous study from Kyprianos et al. (2022)

Therefore, it seems that the modification and restructuring of the course curriculum benefited the students and helped them to understand many concepts that may have been challenging for them in previous years, meaning that the implementation of RDA after 3R has been rather successful. Such a result can also be justified by the fact that students performed better at the cataloguing course in 2023 as compared to the findings of the previous study by Kyprianos et al. (2022). According to Figure 2, more students passed the course in 2023 with a grade of 50 or above, whereas approximately 40 students failed the course in 2021.

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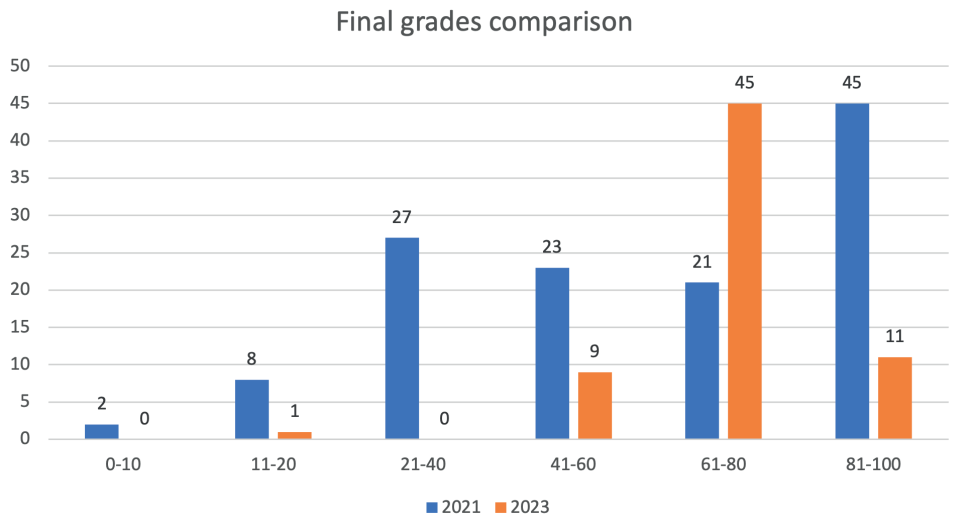

Figure 2. Final grades comparison

Finally, the students prefer practice over theory based on their responses to the open-ended question. This topic has sparked much debate (Chen & Joyce, 2019; Engelson, 2019; Snow & Hoffman, 2015; Moulaison, 2012; Intner, 2002). Furthermore, the students said they would like to take further cataloguing courses. In this context, teachers should consider adding more laboratory exercises and an extra cataloguing course to the department's curriculum in the future.

Conclusions

This study used the CEQ 23 instrument, which measures student satisfaction with teaching outcomes in their course of study (Ramsden, 1991). CEQ 23 has been widely used by various institutions and disciplines worldwide (Asonitou et al., 2018) and can provide valuable information regarding the courses under consideration. The CEQ is designed to evaluate entire degree programs rather than specific courses, units of study, or teachers (Asonitou et al., 2018), but in our case, it can serve as a prototype for the evaluation and validation of similar cataloguing courses, or it can be expanded to evaluate the curriculum of related departments and schools throughout Greece or abroad. In addition, the presentation of the content of the cataloguing course and its successful implementation can serve as a model or basis for the creation of similar courses in other library and information science departments that wish to integrate a cataloguing course using the new RDA Toolkit into their curriculum. Given the recent introduction of the new RDA Toolkit, this research could serve as a springboard for other related research.

The survey's main findings are as follows: (1) clearer goals should be stated at the beginning of the courses, primarily because the courses are aimed at non-cataloguing freshman students with no prior knowledge of library science; (2) the creation of an extra cataloguing course to reduce the workload during the two semesters; (3) finding the right balance between theory and practice, as well as introducing more real-world scenarios; and (4) improving the collaboration between students.

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The self-assessment questionnaire revealed that the students feel relatively confident about the knowledge gained and believe they can catalogue in a library setting. The findings are significantly better than previous research (Kyprianos et al., 2022), indicating that curriculum improvements have enhanced students' skills and competencies.

Future work should focus on developing new approaches to teaching cataloguing to first-year students and finding the correct balance of theory and practice, mainly when teaching RDA after the 3R project, where a robust theoretical background is required to perform cataloguing.

Finally, the CEQ 23 instrument can be used in various knowledge organisation courses such as metadata, digital libraries, and subject access systems. This will provide a better understanding, with the ultimate goal of changing the curriculum or repurposing information organisation courses in general. The CEQ 23 can also be applied to all courses in the school to provide a comprehensive curriculum assessment. This will allow the department to judge the future of studies and their direction.

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