Introduction of Information and Digital Literacy Workshops to Freshmen Students at Westminster International University in Tashkent

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ABSTRACT

This article examines the case of introducing Information and Digital Literacy (IDL) skills workshops to foundational level students in the format of an embedded session with a critical thinking module seminar (Strengthening Thinking and Problem Solving Skills - STaPSS) at Westminster International University in Tashkent. STaPSS mostly emphasized the content of the text and its meaning in terms of finding logical fallacies, biased opinions, etc. IDL concentrated on technical details of the source, credibility of education platforms where it could be accessed, and analyzing and evaluating the technical specifications attributed to the source. This document describes the usage of a diagnostic assessment tool by Rodney K.Marshall (Ph.D., University of Tennessee) which was applied before the workshop to discover freshmen information competency, and comparison of the results after the workshop. Additionally, a satisfaction survey was conducted to gather feedback about the content of the workshops, learning activities, teaching methods and suggestions for improvement.

This paper analyzes the adoption of innovative information literacy programs, highlighting achievements and takeaways, and continuing questions that arise in the process of integration. In addition, it reveals the necessity of such a program into the curriculum, since extracurricular activities in this sphere were found to be ineffective.

With results obtained from the study, this paper found that the introduction of IDL workshops increased the information competency of first year students and contributed to the development of their critical thinking skills. This paper may also serve as a guide for academic librarians and faculty who are attentive to 21 st century skills in today's environment.

Keywords: information literacy, digital literacy, freshmen students

INTRODUCTION

In recent decades, academic libraries were undertaking significant transformations, due to the fact that user satisfaction is based not only on the availability of resources, but also meeting with the constantly changing and expanding needs of users.

An abundance of free and easily available digital resources made the traditional image of academic libraries from decades past obsolete. Moreover, many academic libraries are shifting towards electronic resource collections and have introduced new innovative support services. In many cases, they are not only followers of other departments' demands, but initiate the changes themselves within the academic community.

A high demand for electronic resources, which are searchable and more efficient, couples with the continuous decline in circulation of print resources have made a very serious change in knowledge and skills development for the academic librarians as well as its patrons. Such is the case of Westminster International University in Tashkent Learning Resource Centre, including its students, faculty, administrative staff, researchers, and even external users.

Furthermore, academic librarians need to become guides in "information jungles", teaching users the most effective ways of finding information and leading them to the development of their research and information and digital literacy skills. There are more than 100 different approaches in defining Information Literacy. For IDL workshops, the following definition was chosen: "Information literacy is a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information" (Association of College and Research Libraries, 2000).

According to the OECD chart, along with critical and creative thinking, communication and problem solving, collaboration and team working, information and digital literacy (IDL) skills are highly on demand in the workplace. As education in the 21st century is technology driven, blended learning and technology-enhanced teaching play a leading role in development of the teaching and learning ecosystem in higher education institutions. As the COVID -19 crisis has shown, universities have to be ready to shift to online teaching in a very short period of time, without losing the quality of academic programs. Printed resources in this situation have become inaccessible and library patrons have to rely more on digital resources.

Therefore, without Information and Digital Literacy skills, and competencies it is difficult to maintain academic programs and continue to teach and assess student knowledge. Such shifts to on-line classrooms are also very important for strategic development of the university programs. As on- line education becomes an integrated part (and in some ways an indicator) of the developed academic

institution, digital literacy plays an important role in administering e-learning. “In the new millennium, students require information literacy as well as digital literacy skills to succeed in academia and beyond” (Blummer and Kenton, 2015). UNESCO (2011) stated that digital literacy is more than the ability to handle a computer (as cited in Ukwoma, Iwundu & Iwundu, 2016, p. 703). According to UNESCO’s definition, IDL is not only academic, but also a life skill, which targets all areas of present day human existence. Without IDL, it is difficult to enroll in any education program or find a job. Economies of many countries are becoming more and more digital. Moreover, graduates with IT skills have greater opportunity to access a wider scope of information and are able to assess its reliability and relevance better. This leads to progress and sustainability not only of these individuals, but the community around them and society as a whole. Such societies are much more successful in the digital economy, finances, and other advanced sectors of human enterprise.

DISCUSSION

The LRC staff has approached this topic for more than 15 years now. However, the staff members initially organized only extra-curricular activities for LRC patrons. These activities were in different formats: face-to-face training sessions dedicated to effective usage of on-line databases, using reference tools, Web of Science and Scopus analytics, embedded sessions with Level 6 “Dissertation Writing” module students regarding literature review creation, using library resources for dissertation writing, referencing using Westminster Harvard referencing style, guest lectures with representatives of electronic databases subscribed by WIUT LRC, individual consultations, webinars, conferences, and seminars.

Throughout the past three-four years, needs assessment was conducted among WIUT students and staff by using multiple sources, such as surveys, including “The LRC student satisfaction survey” organized by LRC staff members as well as third party organizations from interviews and CCM (Course Committee Meetings) feedback forms. It was found that despite all the efforts by LRC staff in organizing these activities, the number of participants still declined over the years. Some students and even academic staff members complained that they are not literate enough to use fully digital facilities provided by the LRC. Senior students, who were involved in embedded sessions, said that for them it is too late to learn about electronic resources as they are about to graduate from the university. They likewise expressed their desire to have all the methods of effective usage of information and referencing introduced in the beginning of their study program, as during all the years of their undergraduate studies they struggled with finding relevant sources and managing references.

The feedback, which was collected from different surveys, was analyzed and presented to the academic staff members, showing that Information and Digital Literacy course is necessary to include into curricular modules on Level 3 (the first year of university study). It would help improve the academic performance of

students and make them responsible and effective users of information.

As a result, in 2019 WIUT LRC has embedded a 10 weeks long workshop named Information and Digital Literacy (IDL) into the Strengthening Thinking and Problem Solving Skills (STaPSS) Module taught as a core module on CIFS (Level 3) course. This workshop was dedicated to carrying out search strategies and managing data and information from specified sources appropriate to the field of study.

This academic year (2019-2020) it was piloted by LRC academic librarians in collaboration with academic staff members and was approved as an effective and necessary program, which allows freshmen to successfully proceed with university studies and while getting valuable transferable skills.

As the STaPSS Module is dedicated to the development of 21 century skills, this task was also given to IDL workshops. All the learning activities were organized in the computer rooms and were designed, so that all students would have an opportunity to practice them by using the internet and electronic library resources firsthand.

Furthermore, the authors recognized the necessity to explore the competencies of information and digital literacy of freshmen before and after IDL sessions. Considering that, this kind of program is not taught in secondary education, first year students are supposed to have a low level of information competency. However, taking into account that they are digital natives indulged with the abundance of information, this competence can be surprisingly decent.

LITERATURE REVIEW

There is a huge number of research, dedicated to Information Literacy. Moreover, there are several journals on Information Literacy published worldwide. However, this topic has not been studied in Uzbekistan by local scientists. This is the first article which has approached the topic of IDL in this country. Therefore, in preparing the IDL workshop materials the authors have reviewed only the best practices of international experiences through available publications. In order to find credible sources, authors started their research from electronic resources subscribed by WIUT LRC, such as Emerald, Science Direct, EBSCO, and JSTOR, and also open source publications, including UNESCO, OECD, World Bank, and Association of College and Research Libraries (ACRL). Overall, authors read a sufficient number of related to IDL articles, which were reviewed here.

The first group of resources were evaluated and are connected to understanding and defining the IDL. The Library and Information Association, CILIP (2018) provided the following definition:

> "Information literacy incorporates a set of skills and abilities which everyone needs to undertake information-related tasks; for instance, how to discover, access, interpret, analyze, manage, create, communicate, store and share information. But it is much more than that: it concerns the

> application of the competencies, attributes and confidence needed to make the best use of information and to interpret it judiciously. It incorporates critical thinking and awareness, and an understanding of both the ethical and political issues associated with using information."

This definition had been used as core for IDL workshops.

Glister cited in Despo and Nikleia, (2011), defined digital literacy as the ability to understand information, and more importantly to evaluate and integrate information in multiple formats that the computer can deliver (as cited in Ukwoma, Iwundu, & Iwundu, 2016, p. 705). Warlick (2005) referred to digital literacy as the ability to locate, organize, understand, evaluate and create information using digital technology on different digital devices. The Educational Testing Service (ETS) (as cited in Rockman, 2005) defined ICT literacy as the ability to use digital technology, communication tools and/or networks appropriately to solve information problems to function in an information society. In the same way, ACRL (2000) stated that information literacy is the set of the skills needed for individual development in contemporary societies. Hobbs (2010) warned against differing access to technology with the skillful use of it. This implies that having ICT facilities should not be paralleled with having digital literacy education and training. Information and Digital literacy is defined by Becta (2010) as a combination of functional technology skills, critical thinking, collaborative skills and social awareness. These are important skills that young people need to learn to participate fully and safely in an increasingly digital world. "Technology can increase student engagement, foster independent learning, opportunity to rehearse skills and reinforce knowledge and understanding by accessing learning resources" (Stahl, 2015, p.12; JISC, 2016). For a learner to be successful in learning, a number of digital skills are required. These skills include but are not limited to communicating in different media, collaboration, self-presentation and organization, critical reading and creative expression in different media, etc. In the ACRL Framework for Information Literacy for Higher Education (2016, p.7) it is stated that,

> "Students have a greater role and responsibility in creating new knowledge and in using information, data, and scholarship ethically. Teaching faculty have a greater responsibility in designing curricula and assignments that foster enhanced engagement with the core ideas about information. Librarians have a greater responsibility in identifying core ideas within their own knowledge domain that can extend learning for students, in creating a new cohesive curriculum for information literacy, and in collaborative more extensively with faculty."

Wang (2014) stressed the necessity of integration of information literacy in higher education curriculum as it is the most effective way of providing information literacy education. He also mentioned that this integration can be done in different levels of curriculum, if it is done at the university or department level, is a top-down integration approach. When it is done at the individual course level (which is the case for IDL workshop), it is a bottom-up integration approach. However,

this process goes through different barriers; according to Derakshan and Singh (2011) “many academics do not view librarians as partners who can help them instruct information literacy skills and research strategies to students. They are reluctant to integrate information literacy into curriculum.” Curzon (2004) points out that “most of information literacy programs fail because they are parochial and eventually come to be seen only as a library effort.” Therefore, in order to establish well-designed information literacy programs, it is necessary to organize a collaboration of academic and library staff members.

Smith (2019) emphasized that librarians, as broad information literacy experts, need to be integrated into all aspects of university life. Information literacy instruction is integrated into “curriculum, orientation, partnership with other support units, and used with research consultation among faculty across all academic disciplines” (Stoeckel, 2019, p. 8).

METHODOLOGY

The reputation and distinction of sizable universities is defined by the application of new and better solutions to satisfy new requirements and by the nature of research (Stoeckel, 2019). Westminster International University in Tashkent supported the idea of integrating new Information and Digital Literacy programs into the foundation course within Strengthening Thinking and Problem Solving Skills Module, thus enabling its learners to acquire deeper knowledge and practice skills in this area. Analyzing different frameworks and models in implementing IDL designed by organizations such as ACRL, ANCIL, CILIP and SCONUL (Ellis, Rowley & Johnson, 2017), the authors have decided to adapt relevant parts from those models and adjust it to our own module learning outcomes.

The ACRL framework, for instance, contains interconnected main concepts with flexible implementation. “Authority is constructed and contextual” and “Searching as Strategic Exploration” frames were considered as the most relevant and were therefore included into the program. Moreover, following the guidance on how to use this framework, the authors have conducted the program within the particular academic program (Association of College and Research Libraries, 2016). Seven pillars of Information Literacy described in the SCONUL model also attracted the authors’ attention and was adjusted in terms of skills, competencies, attitudes, and behaviors. They are the heart of the information landscape in higher education. The process of becoming information literate is defined as a “continuing, holistic process with often simultaneous activities or processes” (Bent & Stubbings, 2011).

The program included 10 seminars and no lectures due to a special design of the STaPSS Module, where theory was integrated into examples and cases within the seminars. According to Wang (2014), Information Literacy educators can embed the program into course curriculum by integrating it to course assignments, activities, learning outcomes and even assessment. Having analyzed this model of integration and working in close conjunction with academic staff, information

literacy academics merged module learning outcomes with the Information Literacy Program learning outcomes. The Design School at Temasek Polytechnic University in Singapore uses block scheduling, where library sessions are held four times a year for new students (Wegener, 2018). In contrast to this practice of colleagues, the authors chose a semester long course for all year one students simultaneously, as there was a sufficient number of facilities, professionals, and resources. The reason for not choosing the block-scheduling format was the curriculum and the presence of other job duties of existent academic librarians, who were obliged to develop resources collection and simultaneously prepare for the book order process in the second semester. The University of Westminster in London, which is also a partner of Westminster International University in Tashkent, has also introduced Information and Digital literacy sessions. They come in the form of 30 minute lectures embedded into core modules, where the lecturer introduces an academic librarian to students as a specialist in academic and research skills development. Having worked in close collaboration with UK librarians, the authors adopted this practice and designed it not in the form of short interventions to the lectures but in separate hour long sessions following the topics of the core module.

Additionally, the authors decided to use a diagnostic assessment tool to discover information competencies of learners prior to library seminars. This instrument was substantially relevant to SCONUL's model and was promising enough to determine information skills level of novice learners.

Another assessment instrument which was reviewed but not tested was from Milikin University in the USA. This was implemented by Staley Library in 2015-2016 as an assessment report for first year students taking four critical writing, reading, and research sessions (Olsen, 2016). This assessment instrument differs from Marshall's instrument (Marshall, 2006) in several ways, such as in format, type of questions, coding, and scoring. However, it was noted that Marshall's instrument was more problematic in terms of calculations of results, and thus the authors have agreed to test the assessment from Milikin University next time.

As a diagnostic assessment, Rodney K.Marshall's assessment instrument (see Source 1 in Appendix) was used before and after the course. It was used with 1150 students initially and with 920 students by the end of the course. This diagnostic was delivered via Google Forms and comprised 40 statements, which in turn were divided into 10 categories considered of general importance for a learner. The respondents were asked to rate their feelings regarding each statement from 1 to 7, ranging from strongly disagree (1) to strongly agree (7) (Marshall, 2006).

FINDINGS

The assessment showed that 80% (see Tables 1 and 2 in Appendix) of learners enhanced their information competencies and had a better feeling towards them. The other 15% scored lower only due to low attendance during the assessment

and solely depended on the number of participants. It was also found out that although learners felt more self-assured in their research assignments after having library sessions, they still needed more hands-on activities and better application of acquired knowledge and skills. Based on diagnostic findings, it is necessary to change seminar plans to give more emphasis on practice and activities.

A course evaluation survey was also conducted to find out the weakest and strongest points in the content, delivery, and interaction of the course. 455 students shared their thoughts regarding the course, and 92% of them were satisfied in contrast to 8% who were not sure about their satisfaction due to some issues in facilities and the timetable. A gamification approach in some of the seminars also met the expectations of learners and 99% of them have benefited from those games. Among the most useful and interesting sessions, respondents mentioned “Referencing and tools” and “Critically evaluating sources”. They also had a finalizing session where they played a card game called “SEEK”, which is widely played in more than 43 countries. It raises a series of issues to help improve search strategy and skills (Walsh, 2014). The majority of learners appreciated the teaching experience, delivery methods, and interaction of academic librarians with 98% (see Table 3 in Appendix) of satisfaction and suggested having these kinds of sessions for more than one semester.

The survey also revealed that 5, 3% of learners (see Table 4 in Appendix) were not sure about the clarity and usefulness of the content, which was also reaffirmed in the last section of the questionnaire, where the comments for improvement were communicated. The content was advised to be reconsidered and be further developed by 2% of the respondents. The authors assume that it was due to the lack of experience and knowledge in this area during their studies in secondary schools.

CONCLUSION AND RECOMMENDATIONS

WIUT LRC made the first attempt among academic libraries in Uzbekistan to introduce a subject that allowed academic librarians to teach alongside academic staff members in the same module (see Table 5 in Appendix). Such practices are still quite unusual in the Central Asian region where academic libraries are mostly perceived in a traditional manner. As an essential library collection in the majority of universities, many libraries exist only in printed format, and information and digital literacy skills of many academic librarians are still in a very elementary stage. They also lack pedagogical abilities, as the local Library Science curriculum does not emphasize a necessity for the academic librarians to possess such skills and therefore be included in undergraduate and graduate Library Science studies learning outcomes. Another constraint for embedding Information and Digital literacy skill into the curriculum of Uzbek universities is their heavy emphasis on knowledge development, rather than skill development. Academic processes in local universities are highly theoretical and inquiry-based or project-based. These types of educational processes are not widely used in Uzbekistan, and

are sometimes completely unfamiliar to the local academic society. Therefore, lecturers are mostly relying on lecture notes, which are summarized by students and rehearsed during the seminar. For such a type of education, IDL is not an essential skill and can be easily omitted.

However, this situation is due to be changed in the nearest future as Uzbekistan is opening up to the world. Its higher education system, which was for many years in decline and stagnation, is now attracting a lot of attention from the government. Many universities have access to online resources through the Ministry of Innovative Development and the Ministry of Higher and Secondary Specialized Education, which dramatically enriched library digital collections. It has become obvious that libraries still need improvement and modernization to be in tune with modern days tasks. New international universities have been opening in Uzbekistan in the past three years, introducing alternative methods of education experience, and making higher education in Uzbekistan more competitive and diverse. The value of the case is that it is unique of its kind in Uzbekistan's HE organizations. It is also the first attempt to show practical solutions to issues of developing transferable skills of foundational level students within the curriculum and in cooperation with faculty. Thus, the WIUT LRC experience can be extrapolated to other institutions. In order to make this integration smooth and effective it is recommended to perform the following steps:

- To the Ministry of Higher and Secondary Education of the Republic of Uzbekistan to create a new ecosystem of higher education where all spheres of teaching and learning would be integrated and academic libraries would be included into the greater framework of higher education reforms.
- To change the paradigm of academic libraries and adopt the knowledge management framework as part of their responsibilities,
- To organize ongoing professional development processes for academic librarians by equipping them with not only printed collection management skills, but digital collection development and supervision skills.
- Strengthen the pedagogical and presentation skills of academic librarians through organization of different extracurricular events, such as training sessions, webinars, book clubs, etc.
- To the Ministry of Innovative Development of the Republic of Uzbekistan to include academic libraries in the sphere of innovations. As the Ministry provides local universities with electronic subscriptions, it is necessary to organize seminars and training for trainers sessions for the academic librarians in information digital literacy skills in order to have a core group able to disseminate skills among students and academic staff members.
- For universities' administration and faculty to change the attitude towards academic librarians, as a vast majority of administrative and academic staff are reluctant to embrace them into the curriculum teaching courses.
- Another missing link is copyright regulations and ethical use of information. These subjects need to be taught in every university, and librarians have to

be at the forefront in enforcing such laws and practices to higher education.

- In introducing IDL workshops, top-down (through university administration as standing alone workshop) or bottom-up (through academic staff to be embedded into existing modules) approaches need to be assessed and considered.
- To provide more attention to online and blended teaching models, as they require high information and digital literacy skills.

These recommendations are quite significant and would require effort from the ministries, university administration, and academic and library staff members. However, without introducing the aforementioned alterations, it is impossible to proceed further with the reformation of higher education in Uzbekistan and making it competitive internationally.

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APPENDIX

This section has 1 source and 5 tables which provide insight to data which was collected during the IDL workshops satisfaction survey and assessment session.

SOURCE 1.

This assessment instrument was taken from the following link http://jfmueller.faculty.noctrl.edu/marshalljlt2006.pdf as it is.

Diagram 1. Data from course evaluation survey

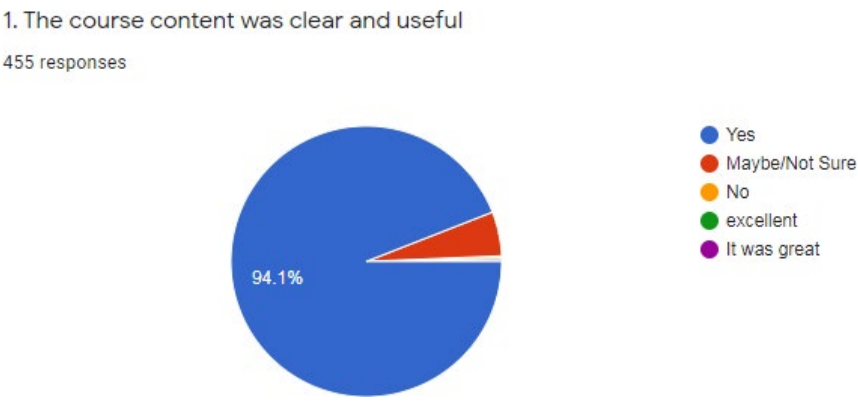

Diagram 2. Data from course evaluation survey

Table 1. Comparison of points collected before and after the library sessions by different groups

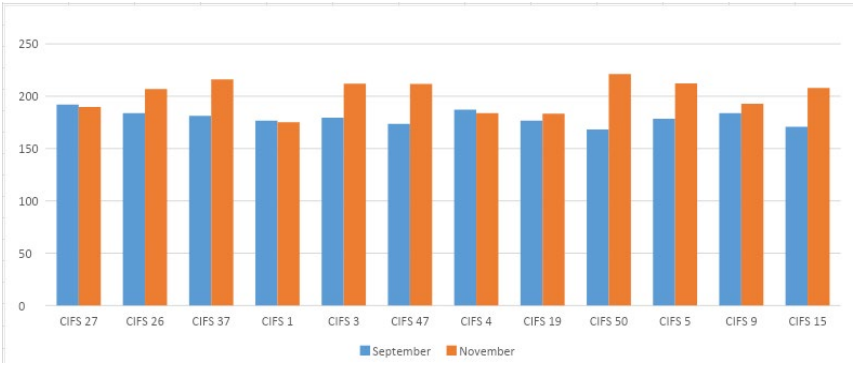

Table 2. Comparison of points collected before and after the library sessions by different groups

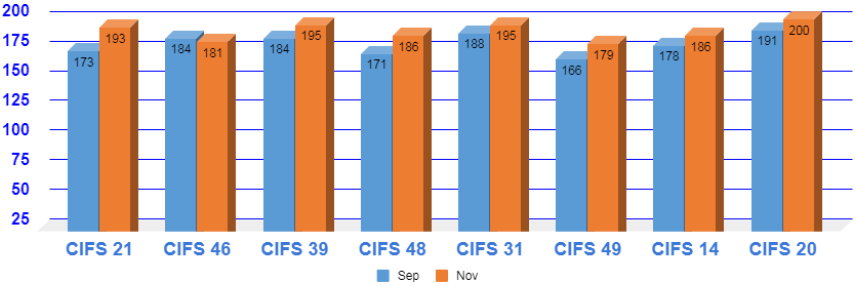

Table 3. STAPSS Integrated IDL workshops outline

TW.	Seminar	Topics/Themes	
1	1	Nature and spirit of inquiry	
	2	Nature and spirit of inquiry 2	LRC Brainstorming about information, information searching and communicating, why do we need information literacy (10-15 min). Information competency assessment (diagnostic) - with instruction for accuracy of the data (30 min)

2	3	Guidelines for Inquiry	
	4	Homework Discussion (Dating Apps) and Setting the Task	LRC Defining, accessing and searching for information - information literacy
			Cultural and scholarly record, primary, secondary and tertiary sources, 5-10 min) Defining an information need and developing a search strategy (search terms, synonyms and Boolean operators - 40 min)
3	5	Identifying an issue	
	6	Issues from different angles - is building a nuclear plant a good idea?	LRC Navigating LRC Resources Printed sources - textbooks, journals, newspapers, fiction, call numbers, WebOPAC (10min) Electronic databases: subscribed and open, open source and paid sources, Google vs databases (30 min) Digital Library: e-books, final projects, preview and download (10 min)
4	7	Understanding the Case - Context of an issue	
	8	Stakeholders, Implications and Consequences	LRC Critically evaluating information- information literacy 6 main criteria for evaluation of printed resource s (scholarly purpose, authority, audience, objectivity, accuracy and currency) or CRAAP (20 min) 4 main criteria for evaluation of web sources (publisher, purpose, aesthetic style and referencing, 10 min) Establishing relevance (at an appropriate level, appropriately explored, relatability to topic, 20 min)

5	9	Reasons and Credible Sources/Experts + Fact Checking	
	10	Being a critical listener and viewer	LRC Critically evaluating the sources- practice
6	11	How does Argumentation work?	
	12	Inductive (abductive) arguments	LRC Disseminating and communicating information- digital Copyright and licensing (intellectual property, 10 min) Creative Commons licensing (Creative Commons is a global nonprofit organization that enables sharing and reuse of creativity and knowledge through the provision of free legal tools, 40 min) Venue: PC Lab
6	11	How does Argumentation work?	
	12	Inductive (abductive) arguments	LRC Disseminating and communicating information- digital Copyright and licensing (intellectual property, 10 min) Creative Commons licensing (Creative Commons is a global nonprofit organization that enables sharing and reuse of creativity and knowledge through the provision of free legal tools, 40 min) Venue: PC Lab

7	13	Bad Reasons and Arguments: Responding to Fallacies How Good is the Evidence (intuition, personal experience, testimonials, appeals to authority)	
	14	PRESENTATION and PEER feedback - ISSUE/CONTEXT	Disseminating and communicating information- practice
8	15	Understanding Causes - are there rival Causes and reasonable Conclusions & How good is the evidence (research studies, case examples, analogies) Argument to the best explanation	
	16	Evaluating claims based on Statistical Inference Evaluating Statistically based Causal Claims	LRC Referencing and attributing sources- digital literacy (This seminar follows AE seminars on referencing in TW1) Creating your own library in Mendeley (5-10 min) Reference management tools (Mendeley, 40 min) Venue: PC Lab
9	17	Evaluate Arguments	
	18	Asking Questions.	LRC Referencing and attributing sources- practice Venue: PC Lab
10	19	Make a Judgment/Case	
	20	Oral presentations/ Debate	LRC Information competency assessment (diagnostic) - with instruction for accuracy of the data (20 min) Venue: PC Lab
11	21	Assessment Week	
	22	Assessment week	
12	23	Assessment week!	
	24	Assessment week!	