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## Information Literacy in Learning Academic Writing

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### Abstract

Nowadays information literacy is an indispensable competence as information is ubiquitous and overwhelming. This competence is required in all spheres and should be constantly improved. The article aims to pinpoint the opportunities of integrating information literacy into academic writing as the latter is one of the fundamental skills that students acquire and develop throughout most of the university courses. To achieve the goal the authors reviewed various interpretations of the term "information literacy" stated by different researchers, designed and realised assignments aimed at integrating information literacy and academic writing, carried out a preliminary analysis of the results obtained, and formulated perspectives for further research. The results proved that academic writing can not be taught without information literacy and their integration leads to a synergetic effect on the instruction. Information literacy is an integral part of bachelor, master, and PhD courses. It can be implemented in all educational forms, namely, individual, pair, group, and class activities. One of the fruitful prospects for further research is designing courses and programmes for teachers to involve them in more active information literacy integration into the educational process.

**Keywords:** information literacy, media literacy, media studies, academic writing, librarian, faculty.

### 1. Introduction

Today's world is overloaded with various information; information is everywhere and people perceive it in different ways. Modern media offer an overwhelming amount of news, facts, and opinions which are not always trustworthy and, therefore, should be checked. That is why information literacy (IL) plays a crucial role in the forming of people's horizons and makes the basis of education.

However, the concept of IL is not clearly defined and is still debated. The last two decades have witnessed a considerable rise in information and media domain research. Thus, Fedorov defines IL as "the ability to analyze and synthesize reality, the ability to read the information text, knowledge of the basics of information culture" (Fedorov, 2017: 13). Talking about media literacy (ML) he claims that it is "the results of the media education process, i.e., abilities to select, use, perceive, create, analyze, evaluate and transmit media texts (messages), to understand the socio-cultural and political context the functioning of the media, etc." (Fedorov, 2017: 19).

The key problem of much of the literature related to this issue is trying to outline similarities and differences between these literacies and discover which one has a broader scope. Chinese researchers studied this question by analyzing the Web of Science article database of the 1956–2012 period. According to their results, IL is a considerably larger field than ML, and it is mostly connected with library science and technology. ML, in turn, is much broader and corresponds to

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communication, health, leisure, and cultural issues. The authors found out that neither literacy can be called a part or subcategory of the other as both have different backgrounds and affairs and educate people in diverse ways. However, the main thing that unites IL and ML is their aim – to grow educated people capable to make decisions based on the use of various information (Lee, So, 2014). Two years later Silverblatt defined IL as “the ability to access and assess information” and admitted the concurrence in applying critical thinking skills for the development of IL and ML. At the same time, he claims that both are separate domains according to the purpose of their application as IL uses them to assess the information, and ML to choose the source of the channels of mass communication (Silverblatt, 2016: 55). This point of view is also supported by Russian authors (Fedorov, Mikhaleva, 2020).

One more scientist (Storksdieck, 2016) distinguishes IL and data literacy, regarding the former to be a higher skill than the latter. According to the researcher, data literacy comprises knowledge about the source, validity, and reliability of data. IL embraces the way of data interpretation, the doer and the conditions of such interpretation, and the availability of other valid interpretations. The application of critical thinking in IL allows people to detect bias and misleading information. Audrey and Marc Powers (Powers, Powers, 2019) propose IL being a part of literacy along with numeracy and data, digital, media, computer, and visual literacies. For this reason, they recommend supplementing teaching IL with teaching these literacies. Some Indian authors consider that IL comprises digital, media, computer, and network literacy (Sweta et al., 2021).

Baird and Soares investigated the process of developing information literacy of first-year students (Baird, Soares, 2020). They interviewed 16 faculty members involved in IL teaching and studied their understanding of the IL concept. Most staff presented it as an ability to find, locate, evaluate, discern, discriminate, and distinguish information, detect bias, and determine reliability, accuracy, and relevancy. The number of words in the definition varied from 7 to 77. This fact demonstrates that the understanding of this notion is still vague.

Association of College and Research Libraries pays great attention to the role IL plays in students' academic careers and in 2016 offered an expanded definition which states that IL is “the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning” (Framework..., 2016: 8). In 2018 UK's library and information association CILIP emphasized the current significance of IL redefining it as “the ability to think critically and make balanced judgements about any information we find and use”. This definition distinguishes five main situations where IL can be applied: finding information online, understanding the world around us, developing critical thinking skills at all stages of education, enhancing employability, and finding reliable sources of health information (CILIP, 2018). This knowledge allows people to become sensible citizens and active participants in life.

As in the 21<sup>st</sup> century people acquire information from multiple sources, some researchers offer other terms which combine different concepts of literacy. Mackey and Jacobson introduced the term “metaliteracy” (Mackey, Jacobson, 2011). Being the basis for media, digital, ICT, and visual literacies, it gives the opportunity not only to access, evaluate, and analyze information but also to produce and share content through a wide range of media. More recent studies (Jacobson et al., 2021; Mackey, Jacobson, 2021) suggest that a metaliterate learner should be an informed, collaborative, participatory, reflective, civic-minded, adaptable, open, and productive person. The authors claim that metaliteracy influenced the revised version of IL offered by the Association of College and Research Libraries (Framework ..., 2016) and show a connection between metaliterate learner characteristics and related knowledge practices and dispositions.

Thus, in a wide range of media today it is vital to know not only where and how to find the necessary information, but more importantly, how to set apart the truth and lies, to detect and reject misinformation, fake news, and, based on this knowledge, create new, trustful information. In this sense, IL is merging with media literacy and becomes a fundamental part of general literacy.

## 2. Materials and methods

This paper aims to study the ways IL is developed in Academic Writing acquisition. First, we examined the concept of IL from the point of view of researchers and noted some new characteristics that may be added to the term nowadays. Then we analysed teachers' and other educators' roles in the process of IL instruction. Data collected from open Internet articles on the topic allowed highlighting the most interesting examples of teaching IL in diverse educational

institutions. In the Results section we presented a set of assignments to interweave teaching IL with academic writing, which was tested at Northern (Arctic) Federal University (Arkhangelsk, Russia). During the research, we used content analysis of the sources and generalization of our teaching experience. It should be noted that all three levels of higher education (Bachelor, Master, and PhD programmes) were involved in the research.

### 3. Discussion

It is impossible to teach academic writing to an information illiterate person. Teachers usually realize the necessity of teaching IL but not all of them implement this knowledge in their courses. The major role in teaching IL used to and still continues to belong to librarians (Julien, 2016; Diao, 2020), special experts, or specialized learning centres (DaCosta, 2010; Kamilova, Yap, 2020). Although the role of experts in such centres often comes to general workshops, advertisements of their centres, and individual consultations (Harris, Ashton, 2011), advanced librarians are becoming active implementors and users of new methods and techniques (Diao, 2020).

DaCosta (DaCosta, 2010) undertook the investigation of how faculty of two higher education institutions in the United States and Great Britain identified IL. The results reflected a huge gap between the teachers' requirements for students' information literacy skills and the actual situation. The author suggested including IL skills in different discipline syllabi in accordance with their contexts.

Townsend et al. considered fundamental ideas and processes in IL necessary to comprehend the subject and proposed six threshold concepts for IL instruction: Authority, Format, Information Commodities, Information structures, Research Process, and Scholarly Discourse. Whereas the authors have found the model to be effective in the process of teaching IL, they expect the emergence of other threshold concepts in the process of education (Townsend et al., 2016).

Moyo and Okemwa studied what students at two Universities in the Eastern Cape province of South Africa thought about IL and how they valued its importance. Most of the respondents were sure that IL skills were significant to their academic success (Moyo, Okemwa, 2022).

There is a mutual relationship between IL skills and the use of electronic information resources such as databases, digital libraries, archives, etc. To fulfill this process successfully, students have to possess tool, critical, social-structural, publishing, and emerging technology literacy (Odede, Zawedde, 2018).

Nowadays a growing number of investigators claim that teaching IL should be shifted from librarians or literacy experts to lecturers within their courses and embedded into the curriculum (DaCosta, 2010; Macnaught et al., 2022). Others feel the necessity of librarians to support educators with the tools to teach IL to their students (Cowan, Eva, 2016) and to collaborate, offering a "librarian-as consultant-model"—in which a librarian becomes involved in curriculum planning, crafting assignments, and assessments, and, in some cases, teaching; "an expert-lecturer model" (Harris, Ashton, 2011), and "librarian-instructor co-teaching" (Powers, Powers, 2019).

While examining the relationship between faculty and librarians in teaching IL Breland revealed that they understand their roles in the process differently. Direct instruction and coursework assignments were considered the prerogative of the faculty and librarians were in charge of the research process. The results of the study also show the necessity of collaboration between educators (Breland, 2022).

Macha (Macha, 2020) explored the process of teaching and learning Information and Library Literacy at Science and Technology University in Central Botswana. The Department of Academic Literacy and Social Sciences collaborated with the library of this university and they included the IL component in the Technical Writing and Academic Literacy curriculum. The main aim of the study was to find out whether such partnership promoted a better understanding of IL, and how students realized their process of learning. While questioning and interviewing the sample audience, the author revealed that the vast majority of respondents benefited from the course and considered it helpful to their study skills during their time at the university. Despite some limitations of this study, its results concur well with previous researchers who recommend to combine efforts and teach IL in partnership with librarians and staff (DaCosta, 2010; Powers, 2019).

In the Russian Federation, there is no single policy on teaching IL in educational institutions. Nevertheless, educators admit the significance and necessity of implementing it in the best variants (Burenina et al., 2021). Universities from China, Kazakhstan, Russia, Ireland, Germany, and

Slovakia participated in the project *Developing Trans-regional information literacy for lifelong learning and the knowledge economy*, supported by European experts. During three years the participants elaborated on the problem of IL understanding and the best ways of teaching it. As a result, they created several modules with the best practices for teaching IL in higher education systems of the Russian Federation, Kazakhstan, and China (DIREKT).

An interesting example of implementing games in teaching IL was offered by Glenn Koelling and Alyssa Russo (Koelling, Russo, 2020). They created the Mystery Room on the base of a game, which consists of several stages where players have to do some tasks or solve a problem before getting to another stage. The main goal of Mystery Room was to introduce research information formats such as newspapers, magazines, scholarly books, and scholarly journals. The game's plot was constructed on the story of the theft of an academic manuscript. Students had to find it with the help of clues left by the thief. While trying to locate the document, participants solved puzzles, searched databases, filled in crosswords, and used the library catalogue. The game turned out to be very rewarding, students got acquainted with information formats in the most exciting and efficient way.

One more technique in IL classroom is case-based learning. A well-made case serves multiple educational purposes but its good design requires a lot of time and effort. However, the use of subject-oriented cases in IL enhances students' confidence, and competence in the studied area and facilitates their critical skills (Diao, 2020).

Generation Z is the first generation that was born and has lived in the digital world. They cannot imagine their lives without gadgets and the Internet being sometimes more literate in modern technologies than their instructors. That is why educators and teachers constantly offer a number of strategies, software, and applications to improve IL for people of all ages beginning from children to adults (Canuel, Chrichton, 2020; Lin, Chang, 2020; Wade et al., 2020).

Schmidt et al., working jointly with the library and faculty, developed and implemented a mobile digital tool to teach IL to university students. Thirteen lessons conducted with the help of this tool demonstrated positive feedback, namely, new learning experience, easy accessibility to the study material, and availability of gadgets (Schmidt et al., 2018).

Stadler and Conyers described a methodology for integrating thesis writing into college students learning (Stadler, Conyers, 2020). The course presented both face-to-face and online, presupposed instructions to develop a research question, find scholarly material using a library database, find background information on a topic, break down a topic in a concept map, and craft a thesis statement. During learning the researchers applied Blackboard instructional technology, self-made or academic institution videos, the think-pair-share technique, and peer and instructor feedback.

IL is a crucial skill and it can and should be measured. When students know that they are going to be assessed they become more responsible for the process of study. The assessment methods usually include tests, quizzes, examinations, individual and group assignments. However, when librarians conduct classes in IL, they usually do not have access to the results, which makes the teaching process incomplete. In this case, the way out can be a partnership between faculty and librarians (Moyo, Okemwa, 2022).

There are also some barriers to IL learning including time, inadequate high school preparation, lack of students' knowledge of their gaps, inability to develop one's voice, inability to analyze sources and literature, overconfidence, and too much information (Baird, Soares, 2020). To add this list is the lack of computer skills (Moyo, Okemwa, 2022).

#### 4. Results

To integrate IL into the educational process coherently, we aligned several academic subjects throughout the bachelor's, master's, and PhD programmes. Within the bachelor's programme, IL was introduced in the coursework and graduation paper writing (both subjects are realized in Russian). Master students had a course of Academic Writing and Speaking in English. They had to write a motivation letter, and an essay, and give a presentation. As for PhD students, the assignments were to prepare a research proposal and a research article within the course of English for Scientific Research. The assignments were tested and endorsed at the Northern (Arctic) Federal University (Arkhangelsk, Russia) over the period of three years.

*Information literacy for Bachelor students*

Both assignments (coursework and graduation paper) bachelor students complete within their studies are similar in a way as they suppose research skills, critical thinking, and writing skills, but they imply increasing complexity.

Firstly, together with the supervisor students decide upon the topic of their research. This can be done through discussions with teachers and peers, in work groups, and during brainstorming. It is important to define the scope of the research and research questions. In order to do it, a literature overview is required to highlight the gap the research will cover. At this stage, students register and get acquainted with a number of search engines and databases available. Currently, they explore the options of Scientific Electronic Library (<https://elibrary.ru>), Google Scholar (<https://scholar.google.com/>), ScienceDirect (<https://www.sciencedirect.com/>), and ResearchGate (<https://www.researchgate.net/>). To design the research, students need to get an awareness of the topic, define key concepts and terms, and coordinate consistent and coherent steps of the study.

Secondly, an understanding of an array of types and information source formats should be formed. It is indispensable to comprehend how information, namely, research papers are organized, produced, disseminated, and accessed. It is a must to identify the purpose and target audience of the paper. Students must realise the differences among primary, secondary, and tertiary sources and the consistency of dealing with them. As access to some resources and papers is paid, the student should ponder over the costs and benefits of acquiring such papers.

Thirdly, the student starts a literature search. At this stage it is important to identify keywords and synonyms to make the retrieval of the information productive; to use different search systems and engines for the search; to assess the amount and relevance of the search results; to continue the search if some information gaps were identified; to decide upon the system to organise and store the information retrieved.

Fourthly, it is the stage of the literature study as it is. Students evaluate sources and information critically; highlight the essence of the paper studied and summarise, paraphrase, or restate textual concepts, conclusions, and findings; synthesise main ideas to construct new concepts or conclusions, and set hypotheses for their own research. From the very beginning of the desk study the citation system should not be missed. The issue of plagiarism is discussed in class and the idea of continual citation must be stuck to. To simplify this meticulous process a number of resources are to be referred to, for example, <https://scholar.google.com>, <https://owl.purdue.edu>, <https://www.mybib.com>. These resources allow quoting the paper cited according to the required style: MLA, APA, Harvard, Chicago, GOST, etc. Students should understand the differences among the styles as in the research process they are highly recommended to write and submit an article on the topic of their research to a local, regional, or national conference or a journal.

These steps seem to be obvious for experienced researchers but students need thorough, consistent, and understandable guidelines determining their research.

*Information literacy for Master students*

The first graded assignment Master students face in the course of English is to write a motivation letter. This assignment seems quite simple for students but does not turn out to be so afterwards.

Firstly, we start with a group discussion trying to clarify the following questions: 1) who has already had the experience of writing a motivation letter and submitting it for a project (let it be a Master's programme, mobility programme, or a grant proposal); 2) what was the structure or the content of the motivation letter; 3) what challenges they encountered while writing and editing the motivation letter; 4) what were the results of the submission and possible arguments for acceptance or denial of the application. This task allows students to highlight and compare knowledge, assumptions, and stereotypes concerning the motivation letter in general.

Secondly, students are offered a link to a website where they find numerous motivation letters. For instance, following the link <https://reachingdigital.com/motivational-letter-for-university/> they read the text "Motivational letter for university: 12 Examples & Sample Included". The task is to study all the samples provided for different reasons (for example, a motivation letter for university, for master's programme in management, for a university exchange programme, for PhD in computer science, etc.) and identify the common structure and elements of all of them. Completing this assignment, students activate their analytical and critical skills, argumentative skills, and communicative skills as they have to present and discuss their findings in class.

Thirdly, right after finishing the previous task, students follow another link (we often refer to the website <https://novoresume.com/cover-letter-templates>) in order to get acquainted with some explanations, recommendations, and a wide range of motivation letter samples. After studying the information, the students are encouraged to compare and contrast their previous findings with the conclusions made within the current assignment. The recurrent comparison allows students to identify, highlight, revise, and memorise the structure of the motivation letter and its features.

Finally, students are to examine the requirements of the university programme or exchange programme, or grant proposal within the framework of their research or research interest, write the motivation letter for the chosen project, present the letter to the class for peer assessment, and after some corrections, if any, submit this motivation letter for teacher's evaluation.

Studying and writing a motivation letter implies that students work with the resources offered by the teacher. The latter has the opportunity to give students some questionable motivation letter samples in order to stimulate students' critical skills and invite them to propose an improved version of the motivation letter in question.

On completion of the motivation letter students proceed to the next assignment "Writing an essay". By this stage, students have already written a number of essays while studying at school. But the thing is that students mostly remember the general structure of the essay (introduction-body-conclusion) without paying attention to a variety of essay types and components of the general structure.

To start with, the topic is embarked upon with a conversation about the essay structure that seems to be quite apparent. Further on, the teacher asks students to specify what elements each part of the essay could involve. Relying on previous knowledge and personal experience students assume a number of variants. After that, they watch the video "Basic essay structure" from the playlist "Academic writing" on Smrt English channel ([https://www.youtube.com/watch?v=eGWO1ldEhtQ&list=PLN3kZ8bfmMJN2-EdLyE7\\_rOZo8o3IpFlv](https://www.youtube.com/watch?v=eGWO1ldEhtQ&list=PLN3kZ8bfmMJN2-EdLyE7_rOZo8o3IpFlv)) and discuss how they understand and interpret the content of every element. Thus, the students debate what can be regarded as a "hook" in the essay and what "hooks" can be more capturing for different target groups; what information is required to clarify the *background* of the topic in question; how to formulate the *thesis* to guide the audience attention and help them understand the logic of the text they are going to read. At this stage students skip the content of the main part of the essay and structure the conclusion that involves *a summary* of the main part; a *restated thesis* as in academic writing repetition of the words, collocations, and constructions used previously would not be an asset; and *a final comment* reflecting the lesson learned, prediction, or advice.

The next step is aimed at understanding the structure, function, and features of different types of essays. Students are asked to compile as many essay types as they can. These can be an opinion essay, an advantages/disadvantages essay, a general-specific essay, a cause and effect essay, etc. The home assignment at this moment is to find at least four essays of various types, analyse their structures, and fill in the table trying to formulate the elements of every type. Depending on the language proficiency of the students they can be offered or not an example of how to cope with the task (Table 1). Moreover, students should be conscious and critical about web pages or e-resources where they take the required essays, make a short analysis of the resources concerning its scope, target audience, layout, etc., and present the findings during the next class.

**Table 1.** Basic essay structure

	Opinion essay	Advantages/ disadvantages essay	Problem solution	Discursive essay
Introduction Paragraph 1		Stating the topic		
Main part	Paragraph 2	Advantages / arguments for		
	Paragraph 3	Disadvantages / arguments against		
Conclusion Paragraph 4		Balanced consideration or own opinion without personal words		

Writing an essay requires a thorough study of such aspects as academic vocabulary, paragraph structure, parallel structures, redundancy, punctuation, references, and others. All these aspects are

considered in the course of “Academic writing and speaking” relying mostly on media texts and resources, some of which have already been mentioned above, others will be regarded further.

The course "Academic writing and speaking" is finalised by an academic presentation delivered in the class. The aim is to help students create an understandable, coherent, and memorable presentation within the framework of their master's research. The steps completed while preparing the presentation are the following:

1) to discuss the previous experience (from both points of view: the designer and the audience);

2) to consider a few ready-made presentations expressing intuitive perception and evaluation (for instance, a wide range of presentations on a variety of topics can be found following the link <https://www.slideserve.com/search/academic-ppt-presentation>);

3) to hypothesise the essence of the 10/20/30 and 666 rules of presentation;

4) to scrutinise a number of recommendations leading to a successful and effective presentation (some of which can be found in various sources: <https://slidepeak.com/blog/8-rules-of-effective-presentation>; <https://visme.co/blog/how-to-make-a-presentation/>; <https://blog.thenounproject.com/the-golden-rules-of-presentation-design/>; <https://monsterspost.com/10-rules-successful-powerpoint-presentation/>, etc.);

5) to highlight and justify the recommendations to be followed considering the field of study, target audience, the aim of the presentation, time limit, etc.;

6) to study functions and options of the most widely used presentation software and tools such as MS PowerPoint, Prezi, Google Slides, Canva, Slido, and QR code generator and share this knowledge with the class;

7) to get acquainted with the phenomenon of 3MT (three-minute presentation). For instance, <https://threeminutethesis.uq.edu.au/resources/3mt-competitor-guide> offers step-by-step concise tips for effective three minute presentations, namely, 3MT drafting, 3MT slide, 3MT presentations, and a plenty of filmed examples of 3MT presentations in different fields of study;

8) to design and create own presentation and deliver it to the class. It is desirable to share the presentation online using a QR code for every viewer could get access to the presentation whether s/he has a particular interest in the content, references, or further collaboration with the speaker.

#### *Information literacy for PhD students*

Teaching IL to postgraduate students can be challenging, as these students have to be more independent and self-directed in their research. Postgraduate students are expected to produce original research, so it is important to emphasize ethical considerations, such as proper citation practices, avoiding plagiarism, and using credible sources.

When starting a PhD course, students have already learned to write academic papers, specifically, coursework, essays, motivation letters, and bachelor's and master's theses. They have already participated in conferences delivering their presentations. But this level of higher education requires more scrupulous and advanced competencies, it is more time-consuming and painstaking.

PhD students are quite competent in literature search, they deal with various databases and search engines, and they have achieved a certain proficiency in academic writing. However, at this stage, some new requirements should be met. For instance, while searching for academic papers several criteria are to be considered. First of all, students are recommended to take into account the level of the paper retrieved. It means that publications by bachelor or master students can be considered as an exceptional case as the focus should be laid on papers of more experienced researchers. Secondly, in order to ensure the reliability and validity of theoretical background students should pay attention to some scientometrics, the year of publication, and the impact-factor of the journal, to name a few. It is also advisable to study journals indexed in the Russian Science Citation Index, Web of Science, Scopus, or included in the VAK-list (the list of journals recommended for articles to be published for those pursuing PhD or doctoral degree).

Another aspect to account for is the requirements of the particular journal, research institution, or grant foundation. Students should understand that it is not enough to know the IMRaD structure and to follow the requirements of the journal provided in the guidelines for authors. Before writing an article, it is recommended to read thoroughly a range of articles from several issues of the chosen journal as it will ensure a better understanding of the structure and style of the paper.

Postgraduate students are usually provided with ongoing support through one-on-one consultations, online tutorials, and resources. Active learning techniques, such as group

discussions and problem-based learning, can help to engage postgraduate students and reinforce their understanding of IL concepts. All these considerations can help to ensure that postgraduate students produce high-quality, ethical research that is valued in their respective fields.

## 5. Conclusion

Students are to carry out research and write academic papers throughout all their studies at the university. To accomplish this task, they cannot do without literature and information sources. Nowadays these sources are available online but in order not to get lost in the avalanche of information, to evaluate it critically and responsibly, and to produce a coherent and argumentative text they should master their IL skills. As new information and communication technologies, new information sources, new scientific paradigms, new societal requirements, etc. constantly appear, it means that absolute IL does not exist and everyone should develop IL skills throughout life. In our experiment we tried to form the basis of IL and guide its development within academic writing as integrated together they produce a synergetic effect. Through the sequence of assignments offered at the bachelor level, continued at the Master's programme, and completed in the PhD course students obtain theoretical knowledge and practical experience in the domain of IL.

Unfortunately, we have not completed the whole cycle (no students have undergone the experiment from undergraduate studies to postgraduate ones by now) but preliminary results show that students have a better understanding and proficiency in IL even if they accomplish two levels of education (bachelor's-master's or master's-PhD). At the same time, it gives perspectives for further research: to complete the whole cycle, to broaden the range of assignments, and to compare what formats yield better results (group work, individual work, project work, etc.).

We consider IL as a crucial element of any educated person as it includes developing life-learning skills, helping control self-education, forming better academic writing skills, improving and facilitating educational progress. Thus, we would suggest to have a unified approach to IL throughout the entire educational process, to integrate the IL programmes into university courses that cut across all disciplines as applicable, to offer courses and programmes for teaching staff to be more flexible and work as part of a team, to intensify all stakeholders' collaboration to ensure the efficient development of IL.

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