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# READING LITERACY IN THE CONTEXT OF MEDIA LITERACY WITH REGARD TO INFORMATION BEHAVIOUR OF UNIVERSITY STUDENTS

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## Abstract

The article deals with mutual interaction of reading, information and media literacy and their relations to information behaviour. In the theoretical part the authors outline the relation between reading, information and media literacy. In the research part they examine the interconnection between the media literacy level of university students and their information behaviour, i.e. the way of choosing information sources during studies. The research method they choose is a questionnaire and tests for reading literacy.

*Keywords:* reading literacy, media, literacy, information, behaviour

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## 1. Introduction

The issue of literacy in individual stages of society development has been predominantly related to the skills of writing and reading. “Literacy has become generally achievable for every man; it is no longer the privilege of wealthy classes, scholars, intellectuals, offices and clergymen.” [1] The requirements related to reading have changed over the years. Nowadays we no longer consider a man to be literate only if he masters reading techniques or can reproduce a text. The ability to assess and critically evaluate a read text or deduce have been added. Current definitions of reading literacy cover mainly the ability to understand a text, to identify important information in it and to adopt an attitude.

International evaluation study PISA (Programme for International Student Assessment) defines reading literacy as “comprehension and use of written texts and thinking about them when achieving individual’s goals, developing one’s knowledge and skills and participating in the life of a society” [2]. We can find a detailed elaboration of reading literacy in the latest volume of *The Dictionary of Pedagogy*. “Reading literacy is a complex of knowledge and skills of an individual which enable him to deal with written texts appearing in everyday life. It is not only about reading skills, i.e. the ability to read and understand; it is also about the skill to find information included in the text and work with it.” [3]

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Studies summarizing the results of international researches are important materials dealing with this issue. In the international evaluation study PIRLS (Progress in International Reading Literacy Study – Programme for international evaluation of pupils in examining the reading literacy level of pupils in the 4<sup>th</sup> grade at basic schools) the reading literacy is defined as “the ability to understand written language forms and use them as required by a society and/or those which have a value for an individual. Young readers may construct the meaning of various texts.” [J. R. Campbell, D. L. Kelly, I.V.S. Mullis, M.O. Martin and M. Sainsbury, *Framework and Specifications for PIRLS Assessment*, [http://timssandpirls.bc.edu/pirls2001i/pdf/PIRLS\\_frame2.pdf](http://timssandpirls.bc.edu/pirls2001i/pdf/PIRLS_frame2.pdf)]

Another dimension of this literacy is the use of skills and abilities as a complex of competencies necessary in various spheres of life, e.g. in studies, career, profession or personal life. Reading literacy perceived in this way is called functional literacy. Theoretical outcomes of functional literacy have also been applied in the methodology of international research PISA. Its authors define functional literacy as “life competence, ability to use printed and written text to satisfy various needs of a man at home, in his free time activities, at work, etc., it is a tool for broadening one’s knowledge and development of personality’s potential” [2, p. 18]. In a narrower sense it is defined as the ability to process information in text and use the acquired information to solve a practical problem. In this sense it is a multi-subject skill which is to be primarily developed when teaching a mother tongue and appropriately also in the teaching and educational processes within the cognitive focus of each subject during school attendance. Bonderup Dohn states: “According to the PISA reports the aim is to assess the students’ knowledge and skills for life (the title of the PISA 2000 report, OECD, 2001); their learning for tomorrow’s world (the title of PISA 2003 report, OECD, 2004). This aim is to be understood against the background of a conception of literacy in the three major domains, a conception which is concerned with the capacity of students to apply knowledge and skills and to analyse, reason and communicate effectively as they pose, solve and interpret problems in variety of situations.” [4] Reading literacy as a complex set of reading skills creates conditions for the development of other forms of literacy and represents their basis – it develops the ability to learn to learn.

The importance of reading literacy is proven also by a huge interest in this issue in form of various international researches (OECD – PISA, IEA – PIRLS). To five key competencies necessary to achieve a full comprehension of texts PISA study adds also the acquisition of information. In current information and knowledge society it gets new dimension and refers to information literacy. Even though we analyse this interdisciplinary issue in our article more from the point of media literacy, terminology basis has been set on the results and knowledge in the areas of library and information science [5, 6].

Information literacy is tightly connected to communication and interpretation processes, i.e. knowledge and use of communication channels, which enable the search for information, its evaluation, understanding, processing and presentation. Out of the listed definitions it is obvious there is a

tight connection between reading and information literacy. Without the ability to read and understand a text at a relatively high level are searching, evaluating and processing practically impossible.

Information science characterizes information behaviour in broader sense as “behaviour of a man, system or organism in relation to information sources and information. Here the information behaviour becomes part of a system’s, organism’s or man’s reaction to a stimulus.” [7] On general level the information behaviour of a man is part of social communication and it is considered to be the interaction of people with information systems and sources in social situations.

The issue of the level of reading literacy is also very interesting in terms of theological and biblical texts and their interpretation. Because of the interpretative complexity and the use of symbols and imagery, it requires a specific approach which places greater demands on the level of reading literacy. Our contribution touches marginally on this topic, especially with regard to highlighting the need to increase the level of reading literacy, but also the interpretative skills in relation to theological education. The so-called grammatical and critical exegesis plays a specific role, representing an effort to perceive text in the context of both the original language in which it was written, but also the specific cultural and social context of the time in which the text was created.

In terms of the second part of our research - information literacy - in the context of theological texts, for example, there is an interesting question of the correctness of theological and religious texts on the Internet and the ability to choose from these types of information sources. There is an issue of typology of religiously oriented websites. One of the most used was created by Ch. Helland [8]. He distinguishes between ‘religion online’ (sites that are supported by official religious institutions) and ‘online religion’ (a space for communication interaction with the possibility of active participation of users in discussions). The ‘online religion’ is an interesting opportunity to discuss the correctness of religious texts on the Internet, but also the issues of conflict and authority [9]. Internet provides a rampant space for the dissemination of opinions and ideas, which would otherwise not be possible to disseminate on such a mass scale due to limitations or censorship. The problem, of course, affects not only the texts of religious character or theme. However, in this case the topic is even more sensitive, because it often provides space for the presentation of various marginal religious groups whose relationship with official religious institutions can be controversial and their activities on the Internet can be counterproductive, for example, in terms of spreading religious ideas. It also reduces the possibility of verification of these texts on the Internet and increases the risk of manipulation. The problem is complicated by the fact that religious institutions have no reliable mechanisms to verify the value and sincerity of different sources and religious texts. If text comes from the official website of an official religious institution, it can be regarded as reliable. The correctness is guaranteed, for example, by an approval of the text by the religious institution. Nevertheless, the internet user is confronted with a number of texts, discussions, ideas that

have not been approved and are not official and they must be able to critically evaluate. And here again we return to the essence of the problem, which relates to the use of any text from any media – the ability to access them critically. The status of media literacy in this chain therefore clearly points out the need for raising the level of all literacies that are interlinked.

## **2. Research problem and research focus**

As far as teaching process is concerned, shaping the interest for independent learning, reading and use of information in self-realization is very important. These interests are determined by long-term active contact with information behaviour and at the same time they are prerequisites for a potential contact with information behaviour.

While reading with comprehension the reader interacts with the text. A reader is an active subject who may learn his reading, be aware of it, think about it, change it, etc. These procedures are known as ‘learning one’s own learning’, i.e. ‘metacognition’. Metacognitive abilities (when working with a text) make it for a pupil possible to learn and observe not only the content of a text but also his/her comprehension of the text [10].

Managing more difficult situations requires the use of more difficult reading strategies when interpreting a text corresponding to various levels of reading literacy. A developed reading strategy demands the ability to work with a text from the very basic decoding of meanings up to the metainterpretation of a text. OECD PISA follows various development levels of the 7 reading skills: alphabetization, fluent reading, reading with comprehension, text analysis, interpretation of text’s meaning, metainterpretation, evaluation of text [11].

Reading literacy is primarily developed and used in teaching Slovak language and literature. It is developed in learning in any other course/subject of a cognitive nature. The educational standard for the subject Slovak language and literature includes reading literacy in cognitive and linguistic competencies which are the reading technique and public presentation of a text, memory, classification and application skills, analytical and interpretation skills, creative skills and information skills. The interconnection between three basic skills – reading with comprehension, writing and speaking described in details in the educational standard of a linguistic part in the subject Slovak language and literature is perceived as another important change creating better conditions for a practical use of knowledge which a pupil acquires when studying language and literature. It is important to direct teaching of reading with comprehension in an equivalent interconnection with speaking and writing since the majority of pupils have problems with fluent speaking, deducing from text and arguments or evaluation of content and form of a text.

Another phenomenon plays an important role within these aspects – critical thinking. Reading becomes an irreplaceable tool for the acquisition of new information. However, the reader must be able to assess them critically and efficiently, i.e. use them functionally. Reading becomes not only a constituent

but mainly a condition for acquisition of other skills which we have to manage in order to act within a society, if we want to participate actively in social life and make use of all achievements of technological progress. Petranová points out: "Almost everybody is media literate, i.e. he/she can access media, extract the information and be entertained. However, not everyone is competent to interpret media contents – actively select relevant messages from media offerings, make a sensitive distinction between his/her own interests and the interests of the media owners, and critically analyze media information." [12]

New possibilities related to information are also presented by the media. It is necessary to know the principles of creating media products, the working of media, to know various manipulative techniques used by the media to manipulate audience. When using the information from media it is important to understand the system of media, know the ethical and legal norms and methods by which a recipient may protect him/herself against negative influence of media. More and more people, not only professionals, participate in mass communication that significantly influences lives of individuals and society. Readers, listeners or viewers then cannot reveal the core information without having certain training in media literacy.

Hradiská states: "...for young people it is much harder to focus on one activity only and their attention always requires a stimuli. This leads to superficiality and loss the ability to analyse things more deeply." [13] Definition base for media literacy proceeds mainly from perception of media as important educational objects and tools. Vrabec distinguishes four basic parameters of media literacy which represent the basis of the most important competencies. Every man attempting to raise his/her media literacy should acquire them. Among them we find "the ability to acquire the access to information from media, analyse them, and evaluate them and the ability to create information independently" [14].

### **3. Research methodology**

The following part of the paper is focused on the level of reading literacy of university students and the results of the test are presented in the relationship to the results of the questionnaire survey on information behaviour of the same group of students. The survey was divided into two parts and within its implementation the same survey sample was worked with. The sample consisted of all present-day students (B.A., M.A.) of the program applied media studies (focused on a non-pedagogic media education), Faculty of Mass Media Communication, University of SS. Cyril and Methodius in Trnava. We hold the group of respondents appropriate mainly because it is assumed that their level of media literacy is higher than in the case of students of other study programs. At the same time, the survey regards students of the first program with such orientation in Slovakia.

All students of internal and external study, total of 138, were included into the survey. Results of individual groups are not indicated in this paper; the whole survey sample is considered to be one complex. However, comparison of the results of specific groups of students according to the year of study or type of study can be a subject to further interpretation of the survey results in the future. Considering the focus of this paper we believe that division into survey segments within the sample is not necessary, while we aim for interpretation of complex results. A detailed division and representation of individual groups of the survey sample is presented here: numbers of students participating in the survey: 1<sup>st</sup> B.A. – 68, 2<sup>nd</sup> B.A. – 56, 2<sup>nd</sup> M.A. – 14, total – 138.

As it was already mentioned, the first part of the survey focused on the level of reading literacy. The survey was grounded on a similar research conducted by P. Gavora and P. Matúšová; the results were published in the journal *Pedagogika* in 2010 [15]. The authors suggest in their paper that until now researchers on reading literacy have been focused predominantly on children. They point out that there exists a little information on the level of reading literacy of adult population. The situation has changed to a certain extent recently. The international research project of OECD entitled PIAAC (Programme for International Assessment of Adult Competencies) added to the change. The research results have not been published yet, but its aim is to find out how inhabitants of concrete countries, which participated in the research, are prepared for life in the modern society. The research is a more extensive continuation of the research SIALS (Second International Adult Literacy Survey), which the Czech Republic took part in, too, in 1998–1999; the research was the second part of International Adult Literacy Survey (IALS) from 1994. Similarly to Gavora and Matúšová, considering several research methods, we chose to apply PISA reading literacy tasks (originally appointed for 15 years old students). It is a tried and valid research tool; moreover, its application enables comparison with another target group (the results of 15 years old students; the results of university students from the research by Gavora and Matúšová). Naturally considering the comparison of results of the 15 years old students, we expected significantly better results in the case of university students.

Within testing we made use of the tasks from 2009, which were published by National Institute for Certified Educational Measurements in 2011. From the perspective of text form these were continuous, non-continuous and a combination of continuous and non-continuous) texts and compound texts (they consist of several independent texts). From the perspective of text type the most frequent were description, narrative, exposition, argumentation, manual, protocol, report. This type of tests was selected because the tasks take into consideration also the evaluation of reading of electronic texts (the medium that the texts are distinguished by: on paper or in a digital form), which gave us more detailed data in connection to the evaluation of information behaviour of students (it was focused also on usage of electronic resources). Moreover, the PISA tests, which were used, also took into consideration interaction of readers.

From the perspective of activity the tests were oriented to application of the following strategies while reading: finding and retrieving information, integration and interpretation, reflection and evaluation. According to purpose it regarded reading for private use, reading for public use, reading for work and reading for education. There were 26 questions in the tests altogether. Evaluation took place through the requirements on reading skills, which are represented by reading literacy levels (1–6). In this series of tests the levels that have been used so far were supplemented by level 6; level 1b was added for respondents with the lowest performance and the original level 1 was labelled 1a. Within the evaluation we used the overall score on the scale 0–100 (according to Gavora, Matúšová [15]). Testing was carried out in smaller groups that were instructed and directed throughout the test taking.

The second part of the survey, which was carried out after testing the reading literacy on the same sample of respondents, was a questionnaire survey focused on information behaviour of university students. The questions were oriented to students' preferences with regard to language, format of the information source (in case of electronic information sources), frequency of usage of the concrete type of information source, advantages and disadvantages of concrete type of information sources, strategies of selection of the sources, etc.

#### **4. Results and discussion**

The majority of the students reached the overall score around 90 points. Our results were a bit better than in the above mentioned research (the research sample consisted of almost the same number of students); however, it was also proved that university students have considerable flaws in reading literacy. In the following evaluation average points values will be worked with.

A detailed inspection of results revealed that regarding the form of text the respondents coped better with continuous texts and the worst with non-continuous texts. They worked a bit better with combined and compound texts. From the perspective of the type of texts the least difficult were narrative and protocols. Worse results were reached in the case of exposition and argumentation. An interesting finding was a fact that the students reached better results in tasks where the source stated was the Internet. Regarding the character and the survey sample this result cannot be generalised, but it can be certainly considered interesting, also in relation to the information behaviour of the sample, which will be dealt with later. While assessing mental strategies we met with the following: the students processed best those tasks that were focused on finding and retrieving information. Integration and interpretation followed and the worst results were reached in tasks aimed at reflection and evaluation. Differences of points in the results were not significant though. Despite insignificant differences, there occurred cases when students reached only 48.7 points on average in the tasks focused on evaluation and reflection (the lowest score in this group).

Within the situations of reading, the respondents were the most successful in the tasks with texts oriented to work purposes, followed by texts intended for private purposes, texts intended for education and texts intended for public purposes.

The majority of the students stated in the questionnaire that while searching for specialist and scientific information (e.g. for studying or seminar work or theses writing) they prefer electronic information sources (52%). According to us, this number is alarming and we suppose that it is related to weaker results in the test on reading literacy in the first part of the research. Again, the results cannot be generalised; however, it is obvious that regarding information sources the students prefer easier search on the Internet, which many times does not provide quality information. The students are likely to be satisfied with easily found information; they are not forced to undergo a more complex information evaluation and verification.

The students stated in the questionnaire that regarding the information sources they mostly use universal search engines (Google, Yahoo, Bing, etc.). These were followed by specialised search engines (Google Scholar, Scirus), catalogues and web pages of libraries. Usage of specialist databases was stated only by 2% of respondents. Thus, the second question results proved that regarding the information sources the students mostly use the Internet and universal or specialised search engines. However, universal search engines are not able to select information the way the specialised search engines or specialist databases are; and majority of students cannot even work with them. Despite the fact that catalogues and web pages of libraries are used only by 11% of respondents, 95% of them stated in next question that they can use online library catalogue for searching for literature.

Broadening one's horizons through foreign literature is not a strong point of the participants of the survey. 65% of the students state that while searching for information they focus on Slovak information sources. In connection to the most frequently used type of a format within usage of electronic information sources pdf (67%) dominates. Other frequently used formats are doc (17%), jpeg (7%), gif (4%), png (3%), mpeg (2%). 75% of the students stated that they work with electronic information sources regularly, 11% of the respondents use this type of information with the intention to orient themselves in new problems, 9% in the case of solving a new work task. Only 5% of the respondents stated that they use electronic sources sporadically, irregularly. We assumed that majority of students use electronic information sources. However, at the same time we expected that minimum of them is aware of the need to educate themselves in the field of searching and working with electronic sources, that's why we inserted a question that was supposed to find out where the respondents gain knowledge on searching and processing information from. Majority of students (48%) educate themselves in this field individually. It is interesting that the students also stated the study at primary school (13%) and secondary school (9%), but knowledge acquisition of this kind through courses at university was stated only by 5% of the respondents. Knowledge on searching and processing

of information is next searched for by the students on the Internet (10%) or from classmates (17%). Only 3% of the respondents stated as a source of such knowledge a course held by the library or information materials of the library. Our additional inquiry revealed that the reason of this result is not the fact that the university library would not provide such services; students are simply not interested in it.

A list of factors that the respondents consider to be the biggest advantages and disadvantages of electronic information sources (the biggest advantage – 1) was designed based on the results of further questions of the questionnaire.

*Ranking of the advantages of electronic information sources*

1. They spare time necessary for gaining the access to a particular document;
2. They are available at any time and any place;
3. In real time several ‘readers’ can ‘read’ them;
4. They are available online much sooner than the print versions and they are more current;
5. Free of charge;
6. They offer such options of searching that are not possible in the environment of printed publications (searching for text chains, links to other related pages, multimediality, etc.);
7. No threat of loss, theft and vandalism;
8. Being ecological (saving paper, etc.).

*Ranking of disadvantages of electronic information sources*

1. Quality of their content is often uncertain and the access to valuable information is often limited by restrictions and high fees;
2. Coverage is not always complete in comparison to printed versions (specialist journals);
3. Technical problems sometimes cause temporal inaccessibility of electronic sources;
4. Libraries do not have a sufficiently controlled access to electronic sources in comparison to printed forms;
5. Manipulation with an electronic document is less comfortable;
6. Their usage presupposes a certain skill;
7. They add a little to the social interaction of users.

The results confirm previous findings mainly in the fact that the students do not consider to educate themselves in the field of usage of electronic information sources to be necessary. It is likely that majority of the Internet users hold, for example, searching for information, for an activity that is not conditioned by any knowledge; at most by the ability to open up a search engine, sign in or manipulate with web pages.

A list of factors that the respondents take into account the most frequently while selecting an information source was created on the basis of the questionnaire results (criterion taken into account the most frequently – 1).

*Ranking of criteria of selection of information source*

1. Existing experiences with a page;
2. Recommendation from a friend or a classmate;

3. Availability;
4. Page provides exhausting information on the given issue;
5. Page was recommended in newspapers, magazines, electronic reporter, etc.;
6. There are opinions and reviews of users or ratings of the content on the page;
7. Quotations are provided for each article;
8. The content on the page is in accordance with user's preferences;
9. There are links provided on the page that reference to reliable sites;
10. None;
11. Gained acknowledgements are provided on the page;
12. Physical address of the organisation, telephone number, email address are provided on the page;
13. Definition of the politics of privacy protection of the user;
14. Page finds out that it has been already visited by the user;
15. Page has more language mutations;
16. URL address ends in .org.

## **5. Conclusions**

Based on the above mentioned results, we came to the following findings within our survey.

The respondents gained worse results in the test on reading literacy than we presupposed. It can be caused by an insufficient ability to understand a text, which was one of the causes of weaker results in the case of testing of the 15 years old students, too.

From the perspective of a text type it was narrative and various protocols that were the least difficult for the respondents. Worse results were reached in the case of exposition and argumentation.

They achieved better results in tasks where the source stated was the Internet.

Tasks that were focused on finding and retrieving information were processed the best. They were followed by integration and interpretation and the worst results were achieved in tasks focused on reflection and evaluation (there occurred cases, when the students reached only 48.7 points in the tasks focused on evaluation and reflection).

Within the reading situations the respondents were the most successful in tasks with texts oriented to work purposes. While searching for specialist and scientific information (e.g. while studying or writing seminar works and theses) majority of the students prefer electronic information sources.

The students almost do not use specialist databases while searching for information. Majority of students prefer Slovak information sources while searching for information.

The students do not consider educating themselves in the field of searching for and working with electronic sources to be important. They believe that they can evaluate correctness of information on the basis of their individual

experiences. Some of them believe the study at primary or secondary school to be a good source of knowledge in this field. According to the answers in the questionnaires, they claimed not to gain such knowledge throughout the study at university and in courses.

An interesting area in connection with the reading literacy regards undoubtedly theological texts, whose interpretation requires some specific skills. In view of the results of our research, it also seems that the best results were achieved by students in relation to texts for business and private purposes, which by their nature are very different from religious texts. In case of such texts more attention should be paid to the interpretative skills. Moreover, in the context of studying subjects or disciplines with a focus on Theology, such teaching methods and strategies should be applied that support students' ability to work with these kinds of texts. Their specificity and a challenge for experts in the field of interpretation of theological texts or for educators who are dedicated to education in Theology, is to take into account the fact that, for example, the biblical text is characterized by distinctive symbolism, imagery and the use of means of expression of its time. All this complicates the interpretation of such texts. Moreover, the current trend in the hermeneutics emphasizes the role of the reader in determining the meaning of the text and material aspects of the text, its matter-of-factness, remain in the background. This places even greater demands on the reader, therefore, on its ability to interpret a text. Given the results of our research which have proven that students are best placed to understand just the texts that are pragmatic and matter-of-fact, it turns out that in the context of theological texts it is necessary to pay more attention to their interpretation. It should also be borne in mind that none of the methods or approaches to the interpretation of most theological texts can, in a comprehensive manner, clarify their message, and individual subjective values that the reader can find in these texts play a big role. This over-interpretation of the text that is looking for the meaning of the text in subjective connotations thus represents a specific level of the ability to interpret theological texts.

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