iCERi 2021

14TH INTERNATIONAL CONFERENCE OF EDUCATION, RESEARCH AND INNOVATION

CONFERENCE PROCEEDINGS

8-9 NOVEMBER 2021
iated.org/iceri

iCERi 2021

14TH INTERNATIONAL CONFERENCE OF EDUCATION, RESEARCH AND INNOVATION

CONFERENCE PROCEEDINGS

ICERI2021 Proceedings
14th International Conference of Education, Research and Innovation
November 8th-9th, 2021

Book cover designed by
J.L. Bernat

ICERI2021 COMMITTEE AND ADVISORY BOARD

Agustín López	SPAIN	*João Monteiro*	PORTUGAL
Aileen Cotter	IRELAND	*John Craft*	UNITED STATES
Akihiro Maeda	JAPAN	*Jose F. Cabeza*	SPAIN
Alia Ammar	UNITED STATES	*Jose Luis Bernat*	SPAIN
Amparo Girós	SPAIN	*Joseph Agbenyega*	UNITED ARAB EMIRATES
Ana Paula Lopes	PORTUGAL	*Kari Krell*	CANADA
Ana Tomás	SPAIN	*Kay Gallagher*	UNITED ARAB EMIRATES
Anna Romagnuolo	ITALY	*Laila Nordstrand Berg*	NORWAY
Antonio García	SPAIN	*Lorena López*	SPAIN
Breno Deffanti	BRAZIL	*Luis Gómez Chova*	SPAIN
Catherine O'Donnell	UNITED KINGDOM	*Luis Roseiro*	PORTUGAL
Chelo González	SPAIN	*Luke Raeside*	IRELAND
Christopher Evans	UNITED KINGDOM	*Mª Jesús Suesta*	SPAIN
Craig Loewen	CANADA	*Maria Porcel*	SPAIN
Craig Walker	UNITED STATES	*Maria Rudneva*	RUSSIAN FEDERATION
Cynthia Rosas Magallanes	MEXICO	*Martha Leal-Gonzalez*	MEXICO
Daniel Abrahams	UNITED STATES	*Matome Mashiapata*	SOUTH AFRICA
Darren Falconer	AUSTRALIA	*Mayaugust Finkenberg*	UNITED STATES
David Jennings	IRELAND	*Miguel Peiró*	SPAIN
David Martí	SPAIN	*Mike Hillis*	UNITED STATES
Eladio Duque	SPAIN	*Norma Barrachina*	SPAIN
Elmaziye Özgür	CYPRUS	*Orlando Belo*	PORTUGAL
Ewa Bogacz-Wojtanowska	POLAND	*Paul Hunter*	SWITZERLAND
Fedor Duzhin	SINGAPORE	*Peter Gabor*	CANADA
Fernando Enrique Ortiz Rodriguez	MEXICO	*Peter Haber*	AUSTRIA
Filomena Soares	PORTUGAL	*Pia Palotie*	FINLAND
Frank Brosow	GERMANY	*Remigijus Bubnys*	LITHUANIA
Helmut Wöllik	AUSTRIA	*Rosa Cendros Araujo*	CANADA
Hiroyuki Obari	JAPAN	*Salman Azhar*	UNITED STATES
Ignacio Ballester	SPAIN	*Sergio Pérez*	SPAIN
Ignacio Candel	SPAIN	*Sinéad McCotter*	UNITED KINGDOM
Ineta Helmane	LATVIA	*Sylvia Dempsey*	IRELAND
Iván Martínez	SPAIN	*Taija Votkin*	FINLAND
James Mackay	NEW ZEALAND	*Taketoshi Yokemura*	JAPAN
Jaroslaw Kujawski	POLAND	*Tammy Ladwig*	UNITED STATES
Javier Domenech	SPAIN	*Thomas Lavery*	UNITED KINGDOM
Javier Martí	SPAIN	*Victoria Kompanets*	FINLAND
Joanna Lees	FRANCE	*Wendy Gorton*	UNITED STATES
Joanna Richardson	UNITED KINGDOM	*Xavier Lefranc*	FRANCE

CONFERENCE TRACKS & SESSIONS

DIGITAL TRANSFORMATION OF EDUCATION

Data Science & AI in Education
Learning Analytics
Digital Technologies and Resources for Learning under Lockdown
Digital Transformation
21st Century Skills
Educational Programming & Robotics

DIGITAL & DISTANCE LEARNING

Distance Education in COVID-19 Times
MOOCs & Open Educational Resources
Blended & Mobile Learning
e-Learning Experiences
Learning Management Systems & Virtual Learning Environments
Post-Pandemic Scenarios in Education

INNOVATIVE EDUCATIONAL TECHNOLOGIES

AI, Chatbots & Robots
Virtual & Augmented Reality
Technology Enhanced Learning

MULTICULTURALITY & INCLUSION

Inclusive Education
Special Educational Needs
Multicultural Education
Diversity Issues

ACTIVE & STUDENT-CENTERED LEARNING

Gamification & Game-based Learning
Active & Experiential Learning
Problem & Project-Based Learning
Pedagogical Innovations
Soft Skills Development

ASSESSMENT, MENTORING & STUDENT SUPPORT

Assessment & Evaluation
Rethinking Assessment in COVID-19 Times
Mentoring & Tutoring
Student Engagement & Wellbeing in COVID-19 Times
Student Support & Motivation

EDUCATIONAL STAGES & LIFE-LONG LEARNING

From Pre-school to Secondary Education
Higher Education & Labour Market Transition
Vocational Training
Non-formal Learning
Developing Entrepreneurship in Education
Life-long & Workplace Learning

QUALITY & IMPACT OF EDUCATION

Quality in Education
Curriculum Design Experiences
Sustainability & Environmental Awareness
Social Impact of Education
University-Industry Collaboration
Educational Trends & Globalisation

TEACHER TRAINING & ED. MANAGEMENT

ICT & Digital Skills
Teacher Training and Support
Professional Development of Teachers
Educational Management

STEM EDUCATION

Mathematics & Statistics
Engineering Education
STEM Experiences
Computer Science

LANGUAGE LEARNING AND TEACHING

Foreign Languages
Language Learning & Translation Studies
New Technologies in Language Learning

DISCIPLINE-ORIENTED SESSIONS

Architecture & Interior Design
Health Sciences Education
Business and Marketing Education
Legal Education

ABOUT ICERI2021 Proceedings

HTML Interface: Navigating with the Web browser

This USB Flash drive includes all presented papers at ICERI2021 conference. It has been formatted similarly to the conference Web site in order to keep a familiar environment and to provide access to the papers trough your default Web browser (open the file named "ICERI2021_Proceedings.html").

An Author Index, a Session Index, and the Technical Program are included in HTML format to aid you in finding conference papers. Using these HTML files as a starting point, you can access other useful information related to the conference.

The links in the Session List jump to the corresponding location in the Technical Program. The links in the Technical Program and the Author Index open the selected paper in a new window. These links are located on the titles of the papers and the Technical Program or Author Index window remains open.

Full Text Search: Searching ICERI2021 index file of cataloged PDFs

If you have Adobe Acrobat Reader version 6 or later (www.adobe.com), you can perform a full-text search for terms found in ICERI2021 proceedings papers.

Important: To search the PDF index, you must open Acrobat as a stand-alone application, not within your web browser, i.e. you should open directly the file "ICERI2021_FrontMatter.pdf" with your Adobe Acrobat or Acrobat Reader application.

This PDF file is attached to an Adobe PDF index that allows text search in all PDF papers by using the Acrobat search tool (not the same as the find tool). The full-text index is an alphabetized list of all the words used in the collection of conference papers. Searching an index is much faster than searching all the text in the documents.

To search the ICERI2021 Proceedings index:
1. Open the Search PDF pane through the menu "Edit > Advanced Search" or click in the PDF bookmark titled "SEARCH PAPERS CONTENT".
2. The "ICERI2021_index.pdx" should be the currently selected index in the Search window (if the index is not listed, click Add, locate the index file .pdx, and then click Open).
3. Type the search text, click Search button, and then proceed with your query.

For Acrobat 9 and later:
1. In the "Edit" menu, choose "Search". You may receive a message from Acrobat asking if it is safe to load the Catalog Index. Click "Load".
2. A new window will appear with search options. Enter your search terms and proceed with your search as usual.

For Acrobat 8:
1. Open the Search window, type the words you want to find, and then click Use Advanced Search Options (near the bottom of the window).
2. For Look In, choose Select Index.
3. In the Index Selection dialog box, select an index, if the one you want to search is available, or click Add and then locate and select the index to be searched, and click Open. Repeat as needed until all the indexes you want to search are selected.
4. Click OK to close the Index Selection dialog box, and then choose Currently Selected Indexes on the Look In pop-up menu.
5. Proceed with your search as usual, selecting other options you want to apply, and click Search.

For Acrobat 7 and earlier:
1. In the "Edit" menu, choose "Full Text Search".
2. A new window will appear with search options. Enter your search terms and proceed with your search as usual.

COPYRIGHT IN THE MEDIA AS A NEW KNOWLEDGE IN THE UNIVERSITY ENVIRONMENT – RESULTS OF A SURVEY AMONG STUDENTS

Evelina Zdravkova, Gosho Petkov

University of Library Studies and Information Technologies (ULSIT) (BULGARIA)

Abstract

Introduction: The media actively participate in the dissemination of and bringing to every citizen the set standards in every sphere of life, to influence, educate, impose patterns of behavior and help them become an element of behavior turned into traditions. In the modern world, freedom of speech in the media is an open door to infringements of intellectual property rights, in particular the copyright of citizens. What is the copyright literacy of students in university education, how can it be increased? These are some of the questions we are looking to answer with an analysis of a survey under the project "Model for research and increase copyright literacy at the media in the university environment", funded by the National Science Fund of the Ministry of Education and Science of the republic of Bulgaria, led by Eng. Evelina Lyubomirova Zdravkova-Velichkova, PhD. The aim is to study and summarize the opinion of the students on the topic of the project.

Presentation: As part of the research, a survey was conducted among 455 students at 8 universities, where journalism, communications, arts, law are studied. The questions in the survey examine how often students make critical analysis and evaluation of the information and media content in the media they follow; To what extent are they interested in media copyright issues; To what extent does the profession for which they study in higher education require knowledge in the field of copyright and intellectual property? Some of the questions examine the trust in the press, the thematic preferences of students as readers and their attitude to mixing serious information with gossip news and copyright competence as a prerequisite for higher awareness of modern users of media content. In the obtained results it is established and confirmed the tendency that copyright is not sufficiently represented in the curricula of higher education. The analysis show that media, as an invariable element of the modern everyday life of students, plays a huge role in their views and opinions. It influences, sets patterns, sets trends. Its role is to inspire attitudes, to build ideas, to give opportunities. Intellectual property rights with a focus on copyright in the media are little represented in curricula. This requires a new model of training on communication with the media and increasing copyright literacy. The conclusions are directly related to the formation, validation and update of students' attitudes to intellectual property in the media and the resulting attitudes and evaluations of the media.

Conclusion: The university audience needs to be trained on media copyright issues. The merit of the research is that it re-evaluates certain facts about the media and examines familiar phenomena from new aspects. The obtained research results confirm the importance of the problem of copyright literacy in the university environment, the way the media is perceived by students, their attitude to modern media. In all this, the interest in changing the curriculum is justified, and the current study is the basis for creating a model through which to increase the copyright competence of students.

Keywords: Media, copyright, intellectual property, university, higher education.

1 INTRODUCTION

The world is on pause - the pandemic of COVID shifted life from in person to communicating online. In the conditions of a new (not)normal, a new behavioural model is set - both in everyday life and in academic circles. As all such problems that concern modern society go through the media, because through them we speak, write, read, even politicians govern through social networks, special attention should be paid to media content. How do we form it and how do we use it? And the issue is not only ethical, but to a large extent also legal. The media actively participate in the dissemination of and bringing to every citizen the set standards in every sphere of life, to influence, educate, impose patterns of behavior and help them become an element of behavior turned into traditions. In the modern world, freedom of speech in the media is an open door to infringements of intellectual property rights, in particular the copyright of citizens. In the media, everyone can say anything and use other people's work without thinking about the author's work invested in the creation of said media content. The main mission

of journalism is to inform, reflect, educate, and in today's world - to be a corrective to power, to limit its bad practices, despite the desire of governments in all societies to put journalists under control.

Media as a field of information is a tribune of knowledge, a window to the understanding of the world, expressed by the authors who think, analyze, synthesize, consider, perceive, realize, explain the information about the world around us. This reflection of the processes in reality is intellectual work, summarizing semantic and mental laws, and has a price.

Students in higher education receive the necessary theoretical knowledge and professional skills in the specialties they study. In terms of media culture, they are trained in courses that include media creation, editing, features of the creative process, trends in print and electronic media, gain knowledge and skills on how to work as a reporter, commentator, presenter, screenwriter of television or radio programs and others. But the ability of the modern person to understand, to be able to detach, to solve problems on the basis of his own knowledge, to appreciate the works of the spirit, is poorly represented in university programs. What is the copyright literacy of students in university education, how can it be increased? These are some of the questions we are looking to answer with an analysis of a survey under the project "Model for research and increase copyright literacy at the media in the university environment", funded by the National Science Fund of the Ministry of Education and Science of the republic of Bulgaria, led by Eng. Evelina Lyubomirova Zdravkova-Velichkova, PhD. The aim is to study and summarize the opinion of the students on the topic of the project.

2   METHODOLOGY

As part of the research, a survey was conducted among 455 students at 8 universities, where journalism, communications, arts, law are studied. The questions in the survey examine how often students make critical analysis and evaluation of the information and media content in the media they follow; To what extent are they interested in media copyright issues; To what extent does the profession for which they study in higher education require knowledge in the field of copyright and intellectual property? Some of the questions examine the trust in the press, the thematic preferences of students as readers and their attitude to mixing serious information with gossip news and copyright competence as a prerequisite for higher awareness of modern users of media content.

In the study we use our own survey tools focused on copyright in the media as part of intellectual property and higher education. The application of the research methodology takes into account the curricula of the eight universities where the respondents study. Sought is the connection between the interests of the students, the offered education on the problems of copyright, the commitment of the universities on the issues, policies and practices of application of what has been learned about intellectual property in the university environment and abroad. The questionnaire, made according to the characteristics of the university community, aims to measure the level of knowledge, the degree of awareness, the sources of knowledge; to establish the reasons for the established level of knowledge, the main reasons for this and how - ways and possible means to change it; to analyze the educational policy in the field of higher education and to recommend a model for increasing copyright literacy in the university environment. Respondents are given the opportunity in the form of open-ended questions to make recommendations and express opinions on the questions asked. The survey provides information on students' opinions regarding copyright in the media. The study was conducted in a pandemic, when the world was transforming. In this sense, it can be assumed that the answers of the respondents are indirectly influenced by the socio-political debate on new knowledge in a new environment. In this sense, the study establishes the current level of the problem copyright in the media and copyright in the university environment. The findings and conclusions will be used as a starting point for creating a model for increasing copyright literacy in the media in the university environment. The main task at the end is to create conditions for a change in the attitudes, assessment and evaluation of intellectual work among students in the university environment, as well as in the future to take initiative for specific measures to change higher education policies in connection with protection of intellectual property in the media. Because it is a fact that in the obtained results it is established and confirmed the tendency that copyright is not sufficiently represented in the curriculum of higher education.

3   RESULTS

The analysis show that media, as an invariable element of the modern everyday life of students, plays a huge role in their views and opinions. It influences, sets patterns, sets trends. Its role is to inspire

attitudes, to build ideas, to give opportunities. Intellectual property rights with a focus on copyright in the media are little represented in curricula.

In connection with the restrictions imposed by the order of the Minister of Health, the data for the survey were collected using an electronic form distributed on the Internet. Subsequently, a logical inspection and control of the materials was performed, and the raw data were subjected to statistical analysis using IBM SPSS Statistics 26.

The demographic block contains three questions that gather information about the gender, university and educational qualification of the respondents. Of the 455 students who participated in the study, 35.2% are male and 64.8% were female. The respondents are from eight universities where creative specialties are studied, which is a guarantee for a relatively high level of representation in terms of the results of the survey among students. And according to the educational-qualification degree they are distributed as follows: Bachelor's degree - 79.5%; Master's degree - 13.6% and PHD degrees- 6.9%.

It is important to note that the respondents answered all the questions from the questionnaires. The logical inspection and control did not identify invalid questionnaires. Obviously, those belonging to the target group showed a strong interest and commitment to the study. Even this fact alone emphasizes its importance, as well as the need to implement such initiatives.

As a guide in the situation with the use of author's materials, the research team was interested in the channels through which the respondents receive information about the events in our country and around the world. It turned out that the respondents use the full range of opportunities, of course with different frequency, to find or use the information they need: television, radio, periodicals, the Internet, books and phones. In the ranking of the media, of course, the highest rank is the Internet and television, as the most accessible and operational in terms of providing information. As can be seen from the answers to the question "How often do you critically analyze and evaluate information and media content?" The respondents give answers as follows (see Table 1.) The last answer "Once a month" is not preferred by any of the respondents.

Table 1.

Answer	Number	%
Everyday	209	46,5
Every other day	126	28,1
Twice a week	42	9.4
Once a week	72	16,0
Once a month	0	0

Whether media users are aware of copyright is a question of the answers to which depends the relationship between authors and the "audience" of what they create. It is logical to assume that the degree of knowledge of the legal framework determining the rights of authors is not a guarantee that the use of their works will be carried out in the manner prescribed by the rules, but it is still a condition that with strict control and enforcement of the envisaged sanctions will optimize the relationship between authors and users. Asked about the extent to which respondents are familiar with copyright, encouraging responses were received, as a quarter of respondents' responses were in the positive part of the continuum. By degrees, graded in the questionnaire, in percentages, they are distributed as follows: "Very small" - 3.3%; "Small" - 18.0%; "Average" - 52.1%; "High" - 22.9%; "Very high" - 3.6%, which presents a scale for assessing knowledge of the issue (question 6. To what extent are you familiar with copyright?). It should be taken into account here that the answers were given not as a test of the actual knowledge of the respondents about the legal aspects of intellectual property, but in a procedure of data collection such as "Self-reporting method", which significantly reduces their reliability. It is assumed that students who actively create and enjoy the protection of intellectual property, in particular copyright, have given an answer in the positive part of the scale.

With regard to the interest expressed in the survey on copyright issues, the distribution of answers is similar to those already commented. To the question "To what extent are you interested in the issues related to copyright in the media?", The respondents answered: "Very low" - 10.5%; "Low" - 18.9%; "On average" - 43.9%; "In high" - 20.3%; "In very high" - 6.5%.

The preservation of the trend in the position of the surveyed persons confirms the interpretation above. The distribution of the answers to the two questions indicates the outcome of the situation. And it consists in the need for a timely development of programs and initiatives to increase both the interest and the level of literacy of users of media content. Naturally, this cannot happen all at once and cover everyone at once. Therefore, in the programs of all educational levels should be included in accordance with the level and specifics of training content that prepares future users for morally justified and legally compliant work in the media environment.

The question "Are you interested in copyright in the media ...?", Although similar to the previous one, directly connects the respondent's attitude towards copyright with the use of the media on the Internet. Here the answers are as follows: "I'm not interested at all" - 10.9%; "I'm a little interested" - 24.9%; "As much as I am interested, so much I am not interested" - 20.7%; "I am interested" - 35.0%; "I am very interested" - 8.5%. It is an encouraging fact that, although insignificant, the values of the respondents in the positive part of the continuum increase slightly. Of course, more detailed research is needed, but it can be assumed that the increase is at the expense of those interested in copyright issues on average (43.9%). Probably the direct contact with the media information and the knowledge, although incomplete, that it has an author whose rights are protected by legal norms, activates the manifestations of moral and possibly assimilated legal norms, which can be read in such results. It is also clear that such processes alone should not be relied upon, but that work on disseminating copyright law should be stepped up.

Similar to the attitude commented here, the opinion expressed by the respondents is that the media themselves should be involved in the promotion of copyright issues. It is quite possible that, as a stakeholder, they are perceived to a lesser extent as sources of influence. To the question "To what extent are you interested in media initiatives to raise your awareness of copyright issues?", The answers almost coincide with the answers to the previous question. They are: "I am not interested at all" - 12.2%; "I'm a little interested" - 24.7%; "As much as I am interested, so much I am not interested" - 19.2%; "I'm interested" - 37.6%; "I am very interested" - 6.2%. The answers of the respondents given so far and the interpretation of their distribution outline a chronic lack of knowledge about the functioning of the media environment and the legal framework that guarantees its optimal functioning.

It was concluded that it is necessary to increase knowledge about copyright and its observance in the use of media content, as well as strengthening the educational impact on users of media content and motivating their interest in the legal framework that addresses this issue.

The next block of questions in the questionnaire is aimed at collecting information about the sources from which the respondents draw information about the legal framework on copyright, as well as the treatment of this problem in the curriculum in the studied disciplines.

To the question "To what extent is the problem of copyright in the media covered in the study content you study?" The respondents gave the following answers: "Very low" - 16.3%; "Low" - 27.6%; "The lower, the higher" - 26.9%; "In high" - 23.8%; "In very high" - 5.3%. If it is assumed that in the middle zone there are people who cannot judge (26.9%), then only about 30% claim that they are sufficiently concerned with the problems of copyright in the disciplines they study. Against the background of the deficit of knowledge and the reduced interest registered in the first block, the above is obviously insufficient.

The situation is similar with the formed readiness of the users to pay for the work of the author, whose products they use.

To the question "To what extent are you willing to pay for the media product you need?" The answers of the respondents are distributed as follows (see Table 2).

Table 2.

Answer	Number	%
"Very Low"	35	7,8
„Low"	103	22,2
„Neither Low, Neither High"	216	48,1
„High"	75	16,7
„Very High"	20	4,5

The distribution of responses is indicative, as only 20% are willing to pay for the product they use. Here the stipulation is the same as above, that we interpret only a stated intention. From it to the actual action, a number of factors can appear that hinder the legal attitude towards the author's product. Behind this data is a way of thinking that does not presuppose normal relations in the media field. The information that still appears there, insofar as it is available, is perceived as freely usable, i.e., free of charge. It is obvious that we should work in this direction as well, namely, the media content should be seen as a value created by someone and the work of that person should be valued and rewarded accordingly. There is probably a long way to go to form an adequate way of thinking that puts both parties, on the one hand - the author of the content and, and on the other - the user of that content in a protected media environment with predictable behaviour on both sides.

Many of these answers echo the view that the Internet is a place for free use of content, where anyone can use anything. Many of these findings are accepted by the respondents as an indisputable fact and are not questioned. In this sense, it is important to be active in communication with students, providing sufficient and understandable information about intellectual property and the functioning of the media, the formation of legal culture and new state policies regarding higher education.

The recommendations regarding the results of the survey are related to the need to increase copyright literacy in the university environment, in-depth communication with an emphasis on intellectual property as new knowledge in the new times of the world order of society.

This requires a new model of training on communication with the media and increasing copyright literacy. The conclusions are directly related to the formation, validation and update of students' attitudes to intellectual property in the media and the resulting attitudes and evaluations of the media.

4   CONCLUSIONS

The university audience needs to be trained on media copyright issues. The merit of the research is that it re-evaluates certain facts about the media and examines familiar phenomena from new aspects. The obtained research results confirm the importance of the problem of copyright literacy in the university environment, the way the media is perceived by students, their attitude to modern media. In all this, the interest in changing the curriculum is justified, and the current study is the basis for creating a model through which to increase the copyright competence of students.

ACKNOWLEDGEMENTS

REFERENCES

[1]   Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/ https://data.europa.eu/eli/dir/2019/790/oj

[2]   Council conclusions on intellectual property policy and the revision of the industrial designs system in the Union, 10 November 2020. URL: https://www.consilium.europa.eu/media/46671/st-12750-2020-init.pdf

[3]   N. Chomsky. *Hegemony or Survival*. Sofia/Bulgaria: Bard, 2003.

[4]   M. Traykov, M. Trencheva, R. Mavrevski, A. Stoilov, I. Trenchev, "Using Partial Differential Equations for Pricing of Goods and Services, Scientific Annals of Economics and Business", vol. 63, no. 2, pp. 291-298, 2016.

[5]   T. Trencheva, Information Literacy in the Framework of Higher Education: Focus on Intellectual Property Training // In Conference Proceedings: 14th International Technology, Education and Development Conference, 2-4 March 2020, Valencia, Spain, INTED 2020, pp. 6555-6561.

[6]   T. Todorova, Copyright Literacy – a Component of the Information and Media Literacy. // Conference Proceedings: Seventh ed. of the Int. Conf. „New Perspectives in Science Education", Florence, Italy, 22-23 March 2018. – Florence, pp. 274-278, 2018.

[7]   P. Mukanova, S. Eftimova, K. Mincheva, Facebook and Bulgarian libraries: the challenges of modern information environment. // Conference Proceedings: 12th annual International Conference on Education and New Learning Technologies EDULEARN20 Conference, 6th-7th July 2020. – Virtual conference, pp. 980-989.

[8]   T. Trencheva, T. Todorova, E. Tsvetkova. Intellectual Property Training of Library and Information Management Bachelor's Students. // Information Literacy: Key to an Inclusive Society: 5th European Conference on Information Literacy (ECIL): *Revised Selected Papers*. Eds. by S. Kurbanoğlu et. al., ECIL, Saint Malo, 2017, Springer-Verlag, Heidelberg, **2017,** pp. 294-302. - (Communication in Computer and Information Science, Vol. 810).

[9]   Trenchev. I., Mavrevski R., Traykov M., Stoykov D. Mathematical approaches for creation of complex 3d models and their application in education. *In:* Conference Proceedings ICERI2019, pp 4909 – 4914.