Current Perspectives
in Social Media Supported E-Learning

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Abstract. In recent years, classrooms have rapidly become virtual environments for knowledge and experience exchanging through active usage of digital tools. When access to a learning environment is difficult or even impossible, the digital environment remains the only one possible for online classes in schools and universities. Parts of the preferred toolkits are social media. They have actively penetrated the daily lives of Internet users around the world and have become a necessary tool for communication, organizing and attending events, even training sessions. Our experience as university lecturers shows that all educators must constantly apply modern tools for knowledge exchange and teaching because of the highly changing business environment's requirements. The authors of this paper are interested in researching the accumulated international experience in e-learning, which integrates social media. In this regard, the aim of the publication is to outline perspectives in social media supported e-learning well-founded on an international research aspect. To achieve this, we developed an online study involving 138 students from 12 different countries. The study used within-subject design. There are observed two dependent variables: the ratings of social media and their benefits in e-learning context reported by the survey participants. The study procedure is based on online questionnaire consisting of four groups: Participants Data, Social Media Usage, Social Media Adoption: E-learning Context and Closing Remarks. As a result of the study, we can share some insights. The most frequently used social media are Facebook, Instagram, YouTube, WhatsApp, and Viber. 68.8% of respondents said they check their social media accounts daily, and 17.4% - hourly. Students suggest e-learning integration of the social media: YouTube (37.2%), Facebook (17.1%), Discord (13.2%), WhatsApp and Viber (4.5% each), LinkedIn and GitHub (3.7% each). According to the younger generation uses them mainly to communicate with family and friends, to follow celebrities and to read news. As a conclusion, we can summarize that the social media cannot be used as main tool for e-learning organization.

Keywords: social media, e-learning, student – teacher communication, Moodle

Introduction

The fourth industrial revolution caused fundamental changes in people's lives and work and the overall way of living. The processes of digitalization that it imposes are developing exponentially and at the same time "it pays the way for development of socioenvironmental sustainability functions" (Ghobakhloo, 2020). The Industry 4.0 refers to the active entry of advanced digital technologies and physical assets as big data (Solodovnikova and Niedrite, 2020; Stoyanova et al., 2021), artificial intelligence (AI) (Petrova and Sulova, 2020; Cioffi et al., 2020), virtual reality (VR) (Umachandran et al.,

2019; Gudoniene and Rutkauskiene, 2019), internet of things and cloud computing (Cotrino et al., 2020), as well as the tools for their development (Nikiforova, 2020). They brought several advantages to both businesses and consumers. Some of them are related to increased knowledge sharing and collaborative working, improved productivity, efficiency, customer experience and innovation opportunities (Moran, 2018). These technologies give businesses the advantage to communicate better with their customers and partners, to store, process and analyze the information collected in the field, to make well-informed decisions (Deloitte, 2020). The same source states that "some associate these advanced technologies mainly with efficiency, cost cutting, and profit maximizing" (Deloitte, 2020). Along with the benefits of introducing trending technologies (e.g., big data, AI, VR), there are some significant challenges that still make it difficult to fully integrate Industry 4.0 products into everyday life. These are: a gap in technical skills, data sensitivity, interoperability, security, handling data growth (Stefanini Group, 2021). To overcome these obstacles, methods and tools shall be applied for optimization and automation for enhancing productivity, real-time monitoring in a real-time economy for better working conditions (Stefanini Group, 2021).

Imposed changes by Industry 4.0 are necessary not only for business but also in education. Part of the toolkit used in communication between different actors is social media. They are a dynamically changing phenomenon that requires the continuous application of innovative approaches to the study of the relationships of subjects (people) and social objects (text and multimedia content) shared by them. According to the European Commission (2019), the term "social media" is used to refer to online technologies and practices for sharing content, opinions, and information, encouraging discussions, and building relationships. It includes tools and services that are a combination of technology, telecommunications, and social interaction. They can use a variety of formats, including text, images, audio, and video. In their publication, Kaplan and Haenlein (2010) conduct an in-depth analysis of the concept of "social media", distinguishing between different types, presented at levels and based on the social presence / richness of media content and opportunities for self-expression. The authors divide them from a technical point of view into joint projects (e.g., Wikipedia); blogs; content creation communities (e.g., YouTube); social networking sites (e.g., Facebook); virtual game worlds (e.g., World of Warcraft) and virtual social worlds (e.g., Second Life). In this article, we support the view that social media is a tool for creating a variety of digital content, which aims to make personal and professional contacts between as many Internet users as possible.

The use of social media in everyday life is diverse. Some of the goals that organizations strive to achieve through social media are: building a brand; brand reputation management; increase sales; collecting customer / market information; identification of the leading companies in the sector; customer service; attracting qualified staff; improving communications within the company, etc. (WEB, a; WEB, g). 73% of all marketers ranked "increased acquisition of new customers" as their top outcome for social in 2021, compared to only 46% last year, marking a 58% year-over-year increase (WEB, a). According to the same source, 64% of the businesses increased brand awareness and 45% of them drove conversions (leads; purchases; product enquiries) through social media in 2021. They are so used in education as teaching support tool (WEB, f).

In this regard, the aim of this publication is to outline perspectives in social media supported e-learning well-founded on an international research aspect. To achieve this, we developed an online study involving 138 students from 12 different countries.

1. Literature review

Cognitive and behaviour scientists study the importance of social learning and social pedagogy for decades. One of the leading scientists, who laid the foundations of modern social learning theory, is Albert Bandura who defined its key tenets (Bandura, 1999; Bandura, 1972; Bandura, 1977; Bandura and Walters, 1963):

- Learning is social cognitive process;
- Learning may be based on new behavioural patterns acquired through direct experience or by observing the behaviour of others;
- Social learning patterns can be extracted from interminable series of trial-and-error processes and in the course of life complex responses (that is so called "reinforcement effect");
- Learning assumes observation, information extraction from those observations, and decision making about the behaviour (that is so called "modelling");
- Observational learning can occur through observation of modelled behaviour and accompanying cognitive activities without extrinsic reinforcement;
- Social learning occurs based on casual or studied observation of exemplary models.

Based on these studies, it can be pointed out that socially oriented learning is the basis for creating more dynamic and prosperous societies, which are a key factor for economic growth and recovery. We can refer to a publication at the World Economic Forum stating that "holistic skills and innovative pedagogies at the core of learning and create a more inclusive paradigm that is more closely aligned to the needs of the labour market and societies more broadly" (WEB, e). The article also shares a forecast that 50% of the workforce will be reskilled by 2025, which is a sign that more needs to be invested in education, including lifelong learning. The labour market requires changes in education as well. People will invest time and money to improve their skills and knowledge to fit newly created job roles. There is already talk of Education 4.0, which stems from the need to respond to the changes imposed by the fourth industrial revolution (James, 2019). Educational institutions need to train students prepared for modern living conditions, it is undoubtedly necessary to change the approach to teaching and redesign the entire educational system of the countries. Education 4.0 puts learners at the centre of the educational process. The changes in education are required so that people around the world can take advantage of the opportunities created by new technologies. Innovative teaching approaches are being formed, which must meet the new requirements of Education 4.0. Some of their characteristics are: reinforced interaction; active collaboration; social networking; self-broadcasting; and massive sharing (Zdravkova, 2016).

Education 4.0 will also provide students with one-to-one learning opportunities based on their abilities. This means that there will be individual learning processes for each student. This will undoubtedly have a positive impact as it allows students to learn at their own pace which will lead to a better understanding of concepts and a better overall result. This will also help educators to identify the strengths and weaknesses of each student individually and guide them accordingly.

On the other hand, the United Nations (2021) also emphasizes the social challenges in Education 2030 through Goal 4 of the Sustainable Development Goals. Goal 4 is related to inclusive and equitable education and promote lifelong learning opportunities for all (United Nations, 2021). According to the United Nations (2021), the pandemic has significantly affected education, with almost 90% of all students were out of classrooms due to school closures. The quality of education was affected, especially in least developed countries around the world. Only 34% of students in low-income countries have been able to complete their education successfully, which is a sign that education systems in these countries have not been prepared for emergencies, including flexible teaching approaches. United Nations' (2021) data show that about 500 million students did not have access to remote learning.

In order to reach the full potential of young people, to develop their critical thinking, adaptability to change and soft skills, to increase their motivation to actively participate in the learning process, it is necessary for teachers to apply accessible and inclusive tools (Salmi, 2018), a result of technological progress. Some of these tools are social media. Some researchers studied their positive and negative impact on society (Akram and Kumar, 2017; Damota, 2019; Kolhar, Kazi and Alameen, 2021; Braghieri, Levy and Makarin, 2021). In the studies of (Sleeman et al., 2020; Brocca, 2020; Faizi and El Fkihi, 2018; Kolan and Dzandza, 2018; Zdravkova, 2016; Delello et al., 2015; Al-Mukhaini et al., 2014; Pătruţ and Pătruţ, 2013; Paulsen and Tække, 2013) the advantages of their active use for educational purposes are presented, some of which are:

- enhancing communication, collaboration and students' engagement in different educational activities;
- providing new learning experiences and simultaneously removing or reducing the obstacles the new media environment means for students' academically attention;
- collaborative and interactive content creation;
- online and in class role-playing;
- engaging with their everyday fascinations and obsessions;
- helping learners access their knowledge easily and share it anytime and anywhere;
- encouraging more participation through the introduction of mobile phones that support social networks applications;
- representing a highly personal learning environment.

Along with the advantages, we can point out some disadvantages, including:
- lack of communication between people;
- reducing face-to-face meetings;
- reduction of concentration during training due to interactions with non-learning content;
- sharing irrelevant content with the teachers or other students.

Despite the shortcomings, we believe that social media are suitable for the application of the social learning theory and some of the concepts underlying Education 4.0. In this regard, we conducted international research of the students' attitudes from different higher education fields regarding the social media adoption in education.

2. Research Methodology

2.1. Design

The study used within-subject design. The dependent variables were the ratings of social media and their benefits in e-learning context reported by the survey participants, as detailed further. It is necessary to make different sections of the obtained results to perform a more detailed analysis.

2.2. Study Procedure

We have developed a questionnaire consisting of four groups. Some of the questions included option "Other" that gave opportunity to the users to add their own answers.

- *(G1) Participants Data* – it contained questions about the country of residence, age, current level of education, year of study, and field of study.
- *(G2) Social Media Usage* – several questions were included:
  - (Q1) *Which of the following social media website do you currently have an account with?* – 21 social media were listed. The summary is shown in the Results section.
  - (Q2) *Considering your complete experience with social media websites, how likely are you to recommend it to your family and friends?* – 21 social media were listed. 5-point likert scale level of measurement were used, where 1 was very unlikely and 5 - very likely. 0 was added for marking not applicable answers.
  - (Q3) *How often do you check-in to your social media accounts?* – possible single choice options were: Daily; Every other day; Every two days; Once a week; Every hour.
  - (Q4) *In a week, which of the following social media websites do you visit most frequently?* – 21 social media were listed. The summary is shown in the Results section.
  - (Q5) *Which of the following device types do you use most often to check your social media accounts?* – possible single choice options were: Smartphone; Tablet; Laptop; Desktop.
  - (Q6) *How often do you perform the following activities on social media?* – possible answers were: Post comments; Post pictures; Post videos; Post polls; Communication with friends and family; Reading news; Following famous people; Selling goods or services; Digital marketing; E-learning; Publishing educational materials; Real estate activities. User could rate answers according to the scale: N/A; Never; Very Rarely; Rarely; Occasionally; Frequently; Very Frequently.
  - (Q7) *On an average how much time do you spend on social media?* – possible single choice options were: Less than 30 mins; An hour; 1-2 hours; 3-4 hours; Other.
- *(G3) Social Media Adoption*: *E-learning Context* – the following questions were included:
  - (Q8) *Are you inclined to use social media for educational purposes?* – possible single choice options were: Yes; No; Other.

- o (Q9) *What kind of sharing channels would you like to integrate to e-learning?* – possible multichoice answers were: Wikis; Social network pages; Social network groups; Media sharing networks; Discussion forums; Bookmarking and content curation networks; Blogging and publishing networks; Interest-based networks; Other.
- o (Q10) *Would you share e-learning materials on social media?* – possible single choice options were: Yes; No; Other.
- o (Q11) *What e-learning materials or publications would you share most often?* – possible multichoice answers were: Scientific articles related to the courses' topics; Popular science websites for students; Video tutorials; Video materials developed by me; Flipping books or other text-based tutorials; Educational animations; Personal achievements; Questions to the lecturers; Nothing, I will read other people's publications; Other.
- o (Q12) *What materials do you expect teachers to share on social media?* – possible multichoice answers were: Course syllabus; Semestrial tests; Practical cases; Video tutorials; Text-based tutorials; Books; Scientific articles; Lectures; Practicle classes instructions; Study programme related professional news (e.g., field specific innovations); Course-related discussions; I do not expect them to share information; Other.
- o (Q13) *How would you rate the benefits of using social media in e-learning?* – possible single choice answers, that could be rated according to 5 level likert scale, were: Improving the quality of educational process; Increasing my interest in the course; Increasing satisfaction with my participation in the course; Increasing creative thinking; Exchange of experience and knowledge with lecturers; Exchange of experience and knowledge with other students; Quick connection with lecturers; Getting timely information about semester tests; Getting timely information about exams; Getting to know the other students in the program; It seems useless to me.
- o (Q14) *Can social media completely replace e-learning management platforms, such as Moodle?* - 5-point likert scale level of measurement were used, where 1 was very unlikely and 5 - very likely. 0 was added for marking not applicable answers.
- o (Q15) *Which of the following social media do you think is the most suitable to be integrated in e-learning?* - 21 social media were listed (single choice answer).

- • *(G4) Closing Remarks* – students shared their recommendations on the successful integration of social media at the e-education.

We used University of Economics – Varna and Liepaja University's e-learning systems and communication channels (students' emails and MS Teams courses) to distribute the questionnaires among the students.

2.3. Participants

The survey was developed only in English language to unify the answers and to produce adequate results. The number of all participants is 138. They are from different countries: Latvia, Bulgaria, France, Germany, Italy, Poland, Portugal, Russia, Ukraine, India, Pakistan, Guinea and Bangladesh. 9 of them did not give their agreement for processing their data for the purposes of the survey. For this reason, in the current paper,

we only report the percentage distribution of results among participants who have consented to data processing. Most of the participants are from Bulgaria (64.34%), Latvia (17.83%) and Poland (6,98%). The rest are represented by between 1 and 3 people. Unfortunately, the distribution of the participants in the survey by countries is uneven and for this reason adequate comparisons of the results of the survey in this factor cannot be made.

Dividing participants by age, they are between 18 and 45 years old (mean - 23.612, mode - 21, SD - 5.517). Their distribution by field of study is in Business Administration, Computer Science, Economics, Engineering and Tourism related university bachelor, master, and doctoral programmes. We assume that the total of 129 students is 100%. The distribution of the individual groups is shown in Fig. 1.
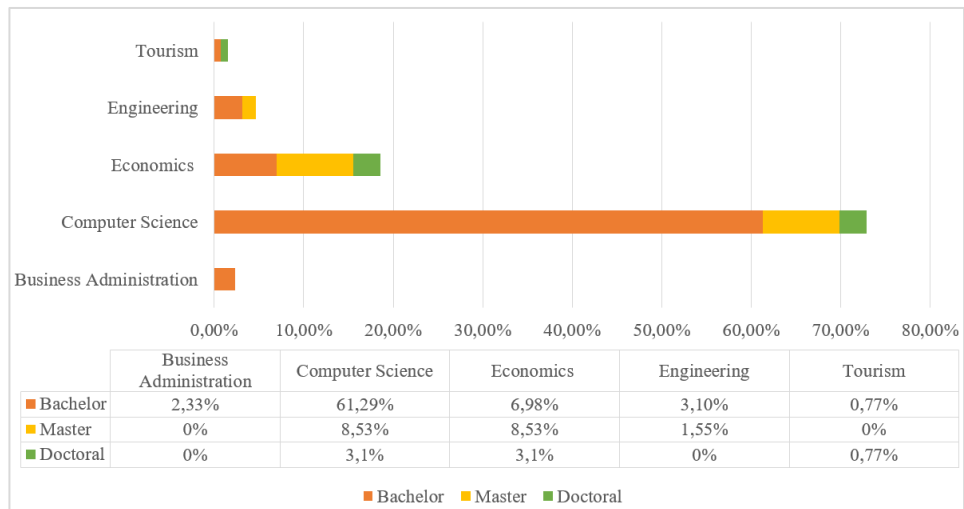

	Business Administration	Computer Science	Economics	Engineering	Tourism
■ Bachelor	2,33%	61,29%	6,98%	3,10%	0,77%
■ Master	0%	8,53%	8,53%	1,55%	0%
■ Doctoral	0%	3,1%	3,1%	0%	0,77%

■ Bachelor ■ Master ■ Doctoral

Fig. 1. Distribution of participants by field of study and degree level
Source: Own Elaboration

We notice that the number of Computer science students participating in the study is the largest – 72.87% of all participants (61.24% bachelors, 8.53% masters and 3.1% PhD students). Students of Economics are the second largest group – 18.6% of all respondents (6.98% bachelors, 8.53% masters and 3.1% PhD students). The representation of the participants from Business Administration (2.33%), Engineering (4.65%) and Tourism (1.55%) is the smallest.

The group of Computer science students were the most responsive to participate in the study, while the students in Tourism and Business Administration were too few to draw generalizations based on their answers. Here is the place to mention the main limitation of our research, namely the insufficient representation of students in Tourism and Business Administration. For this reason, it is not appropriate to make data sections by level of education or program.

3. Results

The results of the survey in group G2 aim to study the opinion of students in relation to the social media they use and the activities they most often perform online through this type of communication tools. As a result, within question Q1 students share that they have accounts in: Facebook (96,1%); YouTube (88.9%); Instagram (85.3%); WhatsApp (68.1%); Viber (58.7%); Pinterest (50.7%); Snapchat and Tik Tok (48.6% each); Twitter (39.1%); Discord (32.6%); LinkedIn (31.2%); Telegram (25.4%); GitHub and Reddit (19.6% each). Less than 20 people reported using: Flickr, hi5, Stack overflow, Tumblr, WeChat, Wikipedia and XING. The results are comparable to question Q4 - the most frequently visited accounts are again those on Facebook, Instagram, YouTube, WhatsApp and Viber (Fig. 2).
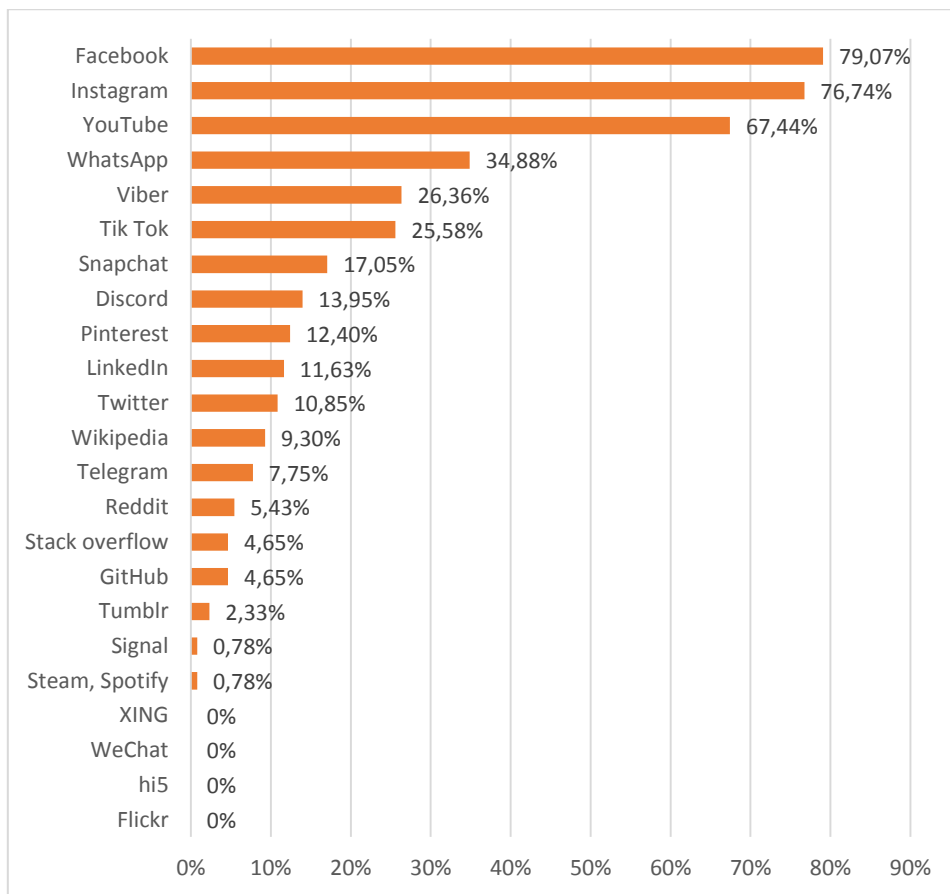

Fig. 2. The most visited social media websites (Q4)
Source: Own Elaboration

Based on their experience, the respondents assessed the user experience from the use of the reported social networks (Q2). A 5-point Likert scale was used, with 1 being very unlikely and 5 being very likely. The mode of the first five of the above-mentioned

social networks' ratings is as follows: Facebook - 4; YouTube - 5; Instagram - 5; WhatsApp - 5; and Viber - equal 4 and 5. Through their assessments, the participants share that they have the biggest negative experience with Snapchat, Tik Tok and Tumblr - the mode is 1.

In question Q3, 68.8% of respondents said they check their social media accounts daily, and 17.4% - hourly. There are a few cases (less than 2%) where users check their accounts every other day, once a week or once a month.

86.9% of students said on question Q5 that they most often check their social media accounts via a smartphone, while 8% via a laptop and 4.4% via a personal computer. Only one person uses a tablet for this purpose.

Interesting are the results of question Q6, in which participants shared the purposes for which they use their social media profiles. We can summarize them as follows:

- Post comments, pictures and videos – the mode for all of them is very rarely;
- Post polls, selling goods or services, digital marketing, real estate activities, publishing educational materials – the mode for all of them is never;
- Communication with friends and family – the mode for all of them is very frequently;
- Reading news – the mode is very frequently;
- Following famous people – the mode is frequently;
- E-learning - the mode is very frequently.

From the first six questions in group G2 follow the results of question Q7, to which 36.2% of students answered that they spend between 3 and 4 hours a day on social networks. 30.4% said they spend between 1 and 2 hours a day, 19.6% - no more than an hour, 8.7% - no more than 30 minutes. The remaining 5.1% noted that they are constantly logged in to their accounts.

The distribution of Q6 results by field of study is interesting. For example, Computer Science students often use social media to communicate with friends and family, to e-learning activities, and to read news online. Let us also mention the opinion of the smallest groups of participants, without generalizing according to a program. Economics students use them occasionally for e-learning purposes, while very often for communicating with friends and family, following famous people, and reading news online. Business administration students often post videos, communicate with friends and family, read news, and follow celebrities through their social media accounts. Engineering students often use social media to conduct e-learning activities, read news and connect with family and friends. Tourism students use social media very often to communicate and read news.

Given the purpose of the present study, we surveyed students' views on social media adoption in e-learning context through the G3 questions. As mentioned above, students in computer science, economics, and engineering use social media for this purpose as well. They express this unequivocally through their answers to question Q8. 90.6% of the participants would use social media for the purposes of e-learning. If social media is integrated into e-learning, students suggest doing so through social network groups and pages, discussion forums and wikis (Q9). The results are shown on Fig. 3. In question Q10, 63.5% would share materials on social networks that will be used in the training process, while 36.5% do not consider it necessary.
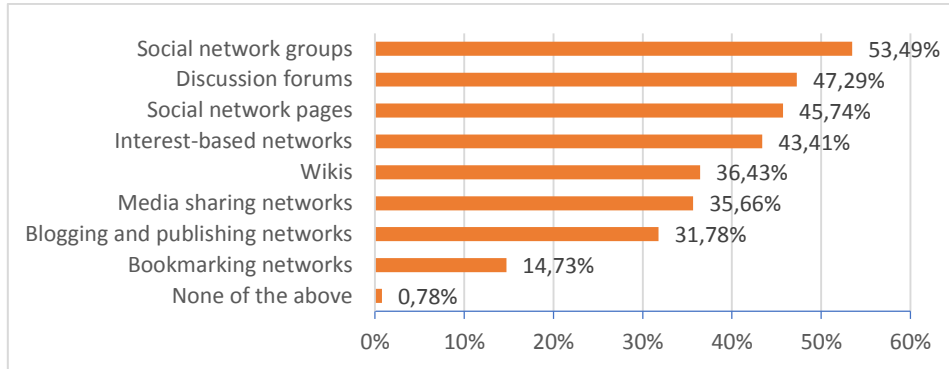
Fig. 3. The most preferred sharing channels for integration to e-learning (Q9)
Source: Own Elaboration

To question Q11, respondents answered that they would most often share video tutorials (48.1%), scientific articles related to the courses' topics (34.6%), educational animations (33.8%), popular science websites (31.6%) and questions to the lecturers (24.8%). 32.3% of the participants are reluctant to share e-learning materials on social networks, but only to read publications.

In question Q12, students shared their expectations for the materials that will be shared by teachers (Fig. 4). These are: video tutorials (82.95%), lectures and practical cases (62.79% each). Between 40% and 47% of students expect their teachers to share semester tests, text-based tutorials, books, practice classes instructions and course-related discussions. Between 32 and 35% expect to read syllabus course, scientific articles, and news. Only 7% or only 9 people indicated that they do not expect their teachers to share posts on social media.
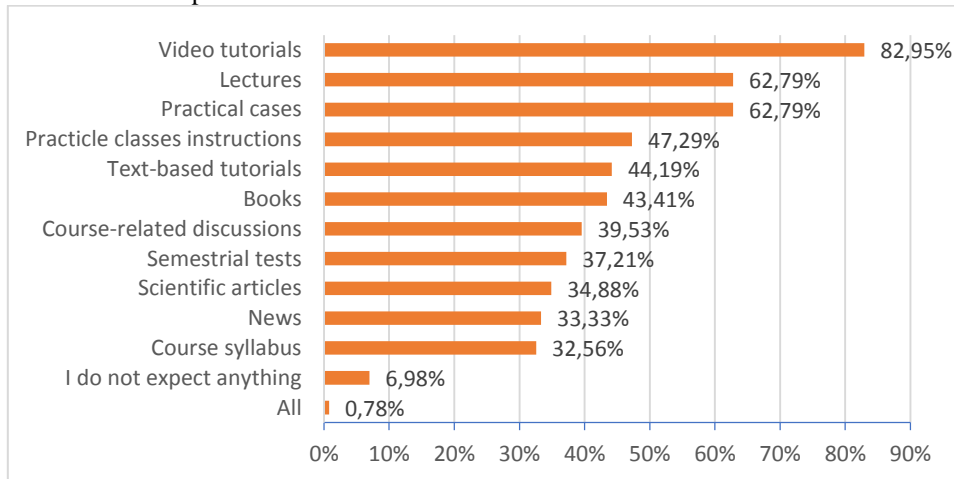

Fig. 4. The expectations about the most shared materials on social media (Q12)
Source: Own Elaboration

Respondents expect the integration of social media in e-learning to bring the following benefits (Q13):

- Improving the quality of educational process – 84.5%;
- Increasing my interest in the course – 79.1%;
- Increasing satisfaction with my participation in the course – 75.2%;
- Increasing creative thinking – 74.4%;
- Exchange of experience and knowledge with lecturers – 85.3%;
- Exchange of experience and knowledge with other students – 82.9%;
- Quick connection with lecturers – 87.6%;
- Getting timely information about semester tests - 82.9%;
- Getting timely information about exams – 86%;
- Getting to know the other students in the program – 71.3%.

Despite the stated expectations for the shared information and advantages of social media, over 50% are of the opinion that they cannot completely replace learning management systems (Q14). The actual rating is visible on Fig. 5.
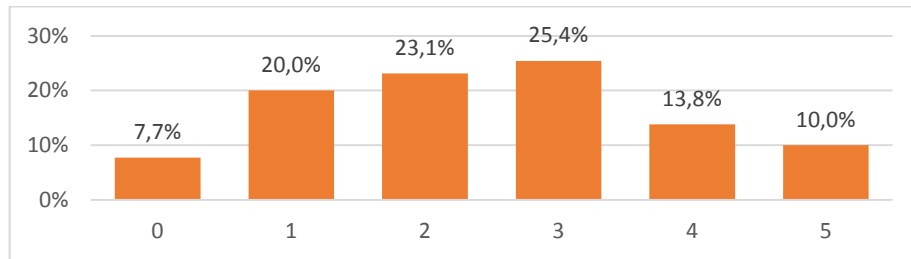

Fig. 5. The expectations about the most shared materials on social media (Q14)
Source: Own Elaboration

Through the last question Q15, students suggest the social media that would be most suitable to be integrated into the e-learning process. In the first five places are: YouTube (37.2%), Facebook (17.1%), Discord (13.2%), WhatsApp and Viber (4.5% each), LinkedIn and GitHub (3.7% each). Compared to the results of question Q4, students do not find Instagram as a suitable social media that can be integrated into the e-learning process. Instead, they suggest using Discord.

4. Discussion

Data from our study show that students tend to use social media in the e-learning process, but not to completely replace platforms such as Moodle. However, respondents are generally open to receiving and sharing most often multimedia content (videos and animations), books and articles related to the subject. Our experience as university lecturers and the results of the survey show that students seek frequent contact with teachers through social networks, including receiving feedback on the overall organization of the learning process.

In our opinion, social media cannot be used as main tool for e-learning organization. According to the results of our study, the younger generation uses them mainly to communicate with family and friends, to follow celebrities and to read news. According to some researchers, the social media usage can be expanded by adding a business perspective (Perez and Gomez, 2011; Zhechev, 2016; Koleva and Ivanov, 2019; Madra-

Sawicka, Paliszkiewicz and Nord, 2020; Hruska and Maresova, 2020; Stefanov, Georgieva and Vasilev, 2022). For example, these are: promotion of business services and products; human resources related activities such as talent searching and hiring; consumer-oriented activities. Specific business goals are again related to communication, but between business and customers. In accordance with the above-mentioned state, social media can only support e-learning in the direction of communication with the audience, but not completely replace specialized platforms such as Moodle. They can be used by teachers to add an element of gamification (Stoyanova, 2018; Bankov, 2020) and to introduce interactivity in the learning environment, to apply approaches to mobile learning (Todoranova and Penchev, 2020) or generally apply learner-oriented to teaching approaches (Kuyumdzhiev, 2020).

We must also consider the views expressed by the G4 participants. According to computer science students, "it is important that only one platform is used." This will ensure uniformity in the learning process and teachers and students can interact. Students will share "interesting topic related materials, innovations, new technologies, new studies, tips and tricks, different helpful sources of information, seminars and lectures, presented at their cities, events, advice from leading company managers and so on ". Economics students suggest using social media to increase student engagement by assigning tasks to receive "rewards". This adds the game element to the e-learning process.

The authors of this article believe that to provide greater satisfaction with the learning process, teaching methods and tools that meet the needs of the audience should be applied. Given the above considerations and studies of (Lamberson and Fleming, 2008; Gülbahar et al., 2017; Konstantinou and Epps, 2017), we can point out an integration of e-learning platforms with two of the most preferred social media from students - YouTube and Facebook. This can be done by installing plug-ins to extend the functionality of learning management systems.

For example, there is Moodlebook plugin for Moodle that emulates the look and feel of Facebook (WEB, b). Through it, the standard look of the e-learning system will get a new look and will be closer to the everyday life of users. It can be supplemented by the Facebook comments plugin, which adds like and comment box, share button, individual box for each page or one throughout the site (WEB, c).

On the other hand, Moodle maintains compatibility with YouTube through the MyTube plugin. It allows users to record or upload videos directly into YouTube, and to select videos directly from the users account for insertion into Moodle (WEB, d).

By integrating such tools into the learning environment, a socially oriented approach to learning should be implemented, which will ensure prominence in the digital age (Petrov et al., 2020). Emphasis is also placed on the development of soft skills (Veleva, 2020) in learners, which every young specialist in the workplace needs (Antonova and Ivanova, 2018).

Conclusion

In summary, we can point out that educational approaches are transformed over the years to motivate students to actively participate in the learning process. In order to meet the current needs of the audience, teachers need to conduct opinion polls and adapt the applied approaches. We conducted an international study on the acceptance of social media in the learning environment. Its results unequivocally show that students are open

to the use of such teaching aids in education. They would mainly use them to communicate with teachers and other students, to receive timely feedback on the organization of the learning process, to obtain shared multimedia content on the topics studied. In this way, teachers should put into practice the theory of social learning by strengthening the teacher-student relationship.

Acknowledgements

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