# Use of Social Media in Higher Education Institutions – an Empirical Study Based on Bulgarian Learning Experience

Silvia Parusheva [1], Yanka Aleksandrova [1], Antonio Hadzhikolev [1]

[1] *University of Economics – Varna, Knyaz Boris I Blvd. 77, Varna, Bulgaria*

*Abstract* – **Social media have enormous power and trigger changes in whole spectrum of businesses, as well as learning and education. A study of students' adoption of social media at the University of Economics – Varna (UE-Varna), Bulgaria, has proven its significant impact on young people. Using online questionnaire among 378 students, the high popularity of social media has been confirmed. An important research question is whether higher education institutions teaching students mainly in the fields of social, economic and legal sciences use the benefits of the social media in the context of Learning Management Systems (LMSs) and integrated social media tools. The majority of the examined 24 universities use two LMSs - Moodle and Blackboard Learn. Both possess tools like forums, chat, wikis, internal messaging, blogs, learning groups, collaboration tools. The study of the two Moodle platforms implemented at the UE-Varna shows use of discussion forums, chat, and internal messaging.**

*Keywords* – **Web 2.0, Social media, Higher education institutions, Learning Management Systems, Integrated social media tools, Discussion forums, Chat.**

## 1. Introduction

Internet and Web 2.0 have become an irreplaceable part of modern day life. Thanks to the Web 2.0 concept and the ingrained in it social media technologies, the users connect to each other, share information, emotions, opinions, experiences, create social contacts and develop them [1]. One can observe a social transformation of communicational behavior among members of most age categories and mostly among young people. Namely, the social media best represent Internet's ever-growing reach in all areas of social, economic, political, cultural life. Social media have become a space where information is being exchanged constantly and with high intensity and where an individual can present him/her self, present his/her interests and views. In the social media are attracted vast amounts of people in a way, uncharacteristic for other spaces and media. That gives grounds to some authors to categorize them as a phenomenon [2, 3] and revolutionary new trend [4].

Social media are especially popular among young people, including those attending universities and higher education institutions. This fact makes the question of using social media for purposes of academic performance, education and learning in higher education institutions particularly relevant.

With the help of an online survey, we aim to prove the high adherence of young people in higher education institutions to the social media and on this ground to investigate whether this is recognized and being made a good use of from the educational institutions. In particular, we would like to see if better learning and education practices are being created based on the wide range of tools of social media. The goal of our research is to study how social media are used in higher education in Bulgaria, mainly in the context of the applied Learning Management Systems and the integrated in them elements of social media in their wide spectrum (social networking sites, blogs, content communities, collaborative projects, virtual social world, etc.).

## 2. Influence of Social Media on Education

In present times, education and learning are being increasingly impacted by web technologies, the concepts of Web 2.0 and Web 3.0, including also technologies connected with the social media.

The areas, where social media are involved include communication, collaboration, knowledge management, multimedia, entertainment [5,6]. A number of authors have claimed the reach of social media engulfs a wide range of technologies and applications - blogs (e.g. WordPress), content communities (e.g. YouTube), social networking sites (e.g. Facebook, LinkedIn), collaborative projects (e.g. Wikipedia), virtual social worlds (e.g. Second Life) [4,7]. Microblogs, chat platforms, multimedia platforms, photo and video sharing, virtual game worlds can also be added [8,9]. Namely, the expanding range of activities that can be aligned with the concept of social media extends the professional integration of these activities in the fields of education and learning.

In education and learning, the social media can be used through the whole spectrum of their potential opportunities. A number of scientists observe social media playing an important role in sharing information between students, collecting data for research, sharing personal academic interests with other people, engaging with students and finding out about their opinions during instructions, forming of groups for teamwork [10]. Some authors point the special role of some social networks (Facebook, Twitter, and Flickr) from an educational perspective [11,12]. Lau, Lui and Chu (2016) [13] claim that social media represent an engine for the students who are aided in forming and developing their interests in academic disciplines. Other authors [14] believe that social media stimulate the relationship and communication between teachers and students but also with parents and community members and in this way professional learning communities are being built.

Thanks to the use of the social media technologies many educational benefits can be recognized, which according to empirical studies, can be divided to the following ranges [15]:

- Enhanced communication between lecturers and students;
- Increased opportunities for teamwork and networking between students
- Faster resource sharing
- Better students' access to study material
- Creating an alternative platform to the official learning management systems

- Presenting the students with technologies that can improve their success in job search

The educational institutions, lecturers and students count on social media in formal education more and more especially when it comes to sharing practices, popularizing educational materials, sharing opinions and comments. One of the opportunities of social media use is to integrate their components into LMSs.

## 3. Empirical Evidence for High Social Media' Popularity among University Students – University of Economics - Varna's Example

In order to defend our thesis of how important it is for Bulgarian higher education institutions (HEIs) to use social media in education, our first goal is to prove the high popularity of the social media among young people, and especially among the academic community in Bulgaria.

With the view of our research intentions and our occupation as lecturers at the University of Economics - Varna (UE-Varna), Bulgaria, we used the opportunity to study the actual opinions and attitudes of the students we teach. With that in mind, we conducted an online survey among 378 students containing 10 questions. The students are in bachelor and master programs in three majors - Business Information Systems, Accounting and Control, and Informatics. The online survey was procured in the period May-June 2017. The perception of the students toward social media was investigated through two questions – Q4: Which of the following social media do you have an account in and Q5: How often do you use the following social media? The results from these two questions are displayed in Fig. 1 and Fig. 2.

The distribution of answers to the question of having an account within the social media shows that they are very popular among students based on the fact that only 2 of those 378, or 0.6%, do not possess an account in none of the social media. The results of this survey also reveal that 97.4% of the students or 368 have a Facebook account and Facebook is the most popular social media among them. The rest of students' favorite social media include YouTube (305 or 80.7% from the respondents have an account), Google+ (294 or 77.8% from the respondents) and Instagram (231 or 61.1%).

The graphic clearly visualizes the fact that at least 50% of the students possess an account in four social media - Facebook, YouTube, Google+, Instagram and on top of that, one in every two students has an account simultaneously in all of these 4 social media.
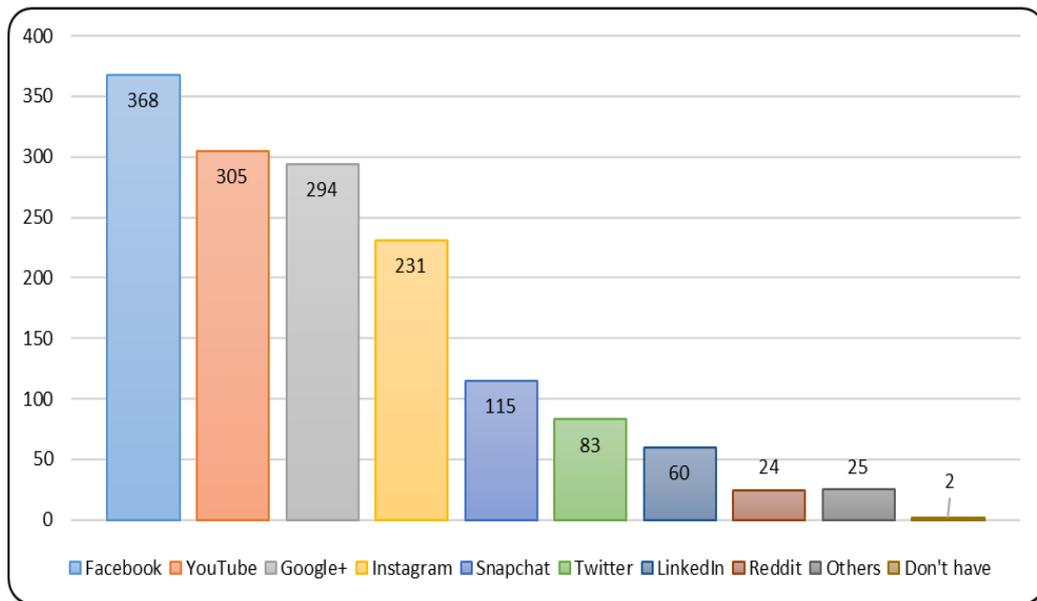
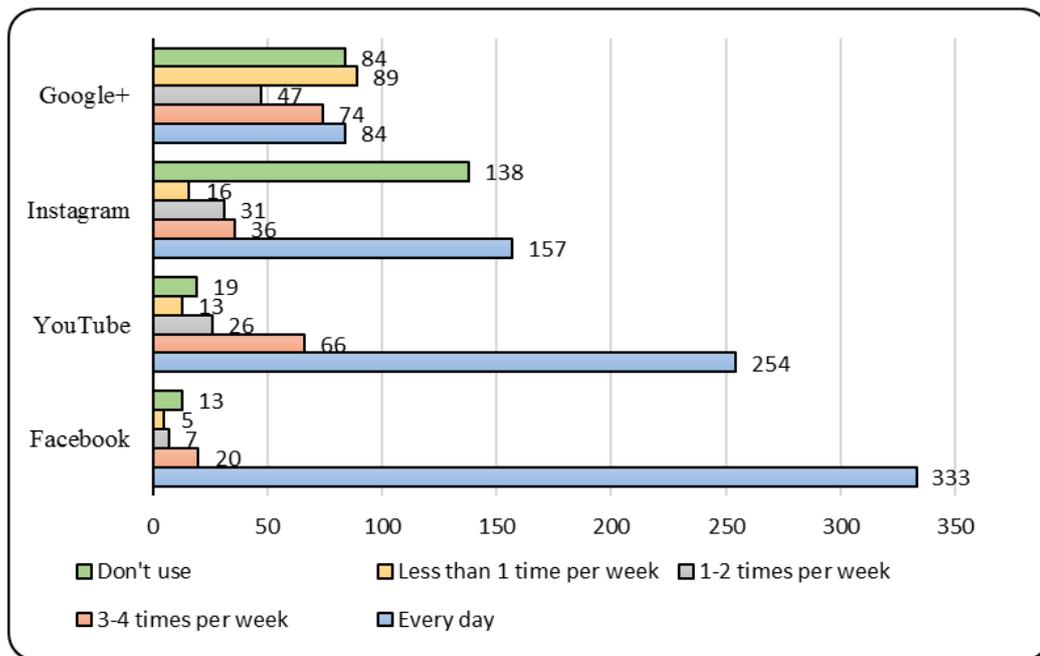*Figure 1. Number of respondents that have an account in social media*



*Figure 2. Frequency of use of four main social media.*

Having established the underlined high appeal of Facebook, YouTube, Google+ and/or Instagram among students, the following questions we researched was about the frequency of use of those social media (Fig. 2).

Data proves that Facebook users are decidedly attracted to their favorite platform with 88.10% of them (or 333 respondents) log in to it daily. YouTube comes second with 254 respondents, or almost 67% of the respondents who visit it on a daily basis. For Instagram and Google+ the frequency of use is not on a daily basis for the majority of the respondents and additionally a high percentage of users never use

them but still possess an account – almost 60% for Instagram and 29% for Google+. For comparison: users that do not log in to Facebook and YouTube are 3.5% and 6.2% respectively.

The demonstrated high interest among the students towards social media, mainly Facebook, brings forward the essential issue whether and how the Bulgarian universities can use them to reach the students in an effective manner.

Among the potential possibilities for the application of social media tools in education and learning in their broad spectrum (creation and maintenance of discussion forums, blogs, wikis, real

time chat, collaboration, student communities, etc.) are proper LMSs. Namely, this possibility is the backbone of our research in the context of their use in HEIs in Bulgaria.

## 4. Study of the Use of LMSs in Higher Education Institutions in Bulgaria and the integrated Social Media Tools

One of the important research questions in our paper is to study which LMSs are used in several of the main HEIs in Bulgaria.

The starting point of our study is University of Economics – Varna, among whose students the study has been done thus far.

Overall, in Bulgaria there are 51 HEIs. According to the official information included in the Register of Higher Education Institution in Republic of Bulgaria which is maintained by the Ministry of Education and Science (MES), 37 of them are public while 14 are private [16]. The register includes information about all HEIs having an accreditation in the country.

University of Economics – Varna teaches students in four professional areas – 3.7 Administration and Management, 3.8 Economics, 3.9 Tourism and 4.6 Computer Science. The first three fields belong to the field of education 3., Social, Business and Legal Sciences, while the fourth belongs to the field of

education 4., Natural sciences, Mathematics and Informatics. According to the official Register of the number of the students, the first three account for about 95% of all the students at the University [17]. For that reason, we will focus only in this field of study, making a comparison with other HEIs in Bulgaria that teach in this field. Majority of the universities in Bulgaria (40 in number) offer educational programs in Social, Business and Legal Sciences field of study, therefore we will examine only those who teach mainly in this field.

Our goal is to determinate whether these HEIs use any LMSs and if yes – which are the most popular among them and do they offer components of social media.

A total of 24 universities have been studied in detail. These universities are divided in four groups according to the number of their students for the academic year 2016/2017. In the first group are universities with more than 10 000 students, in the second between 4 000 and 10 000, in the third between 1 000 and 4 000 students and in the fourth up to 1 000 students. In order to achieve our goal, the websites of the respective universities are examined. The results are displayed in Table 1, Table 2 and Table 3.

*Table 1. State HEIs in Bulgaria teaching mainly in the field 3. Social, Business and Legal Sciences*

| № | Name of the HEI | Number of students | Group based on number of students | Name of the used LMS | Internet address of the used system |
|---|---|---|---|---|---|
| 1 | University of National and World Economy | 22186 | Group I | Moodle | • http://m-learning.unwe.bg/ <br> • http://moodle.unwe.bg/ |
| 2 | Sofia University „St. Kliment Ohridski" | 19272 | Group I | Moodle | • http://elearn.uni-sofia.bg/ |
| 3 | Plovdiv university „Paisii Hilendarski" | 16187 | Group I | Moodle | • http://pdu.uni-plovdiv.bg/ |
| 4 | University of Economics – Varna | 9280 | Group II | Moodle | • http://moodle.ue-varna.bg/ <br> • http://e-learn.ue-varna.bg/ |
| 5 | St. Cyril and St. Methodius University of Veliko Turnovo | 9279 | Group II | Own system: distance education | • http://new.cet-vtu.com/bg |
| 6 | South-West University "Neofit Rilski" | 8046 | Group II | 1. Blackboard learn <br> 2. Moodle | • https://dlearning.swu.bg/ <br> • http://www.e-learning.swu.bg/ |
| 7 | University of Ruse | 7401 | Group II | Own system – e-Learning Shell | • http://e-learning.uni-ruse.bg |
| 8 | D. A. Tsenov Academy of Economics | 7386 | Group II | Moodle | • https://dl.uni-svishtov.bg/ |
| 9 | Trakia University | 7133 | Group II | Moodle | • http://edu.uni-sz.bg |
| 10 | Shumen University | 5653 | Group II | Moodle | • http://cdo.shu.bg |

| № | Name of the HEI | Number of students | Group based on number of students | Name of the used LMS | Internet address of the used system |
|---|---|---|---|---|---|
| 11 | Agriculture University Plovdiv | 5124 | Group III | No system yet. A system is planned for 2018/2019 study year. | |
| 12 | University "Prof. Dr. Assen Zlatarov" Burgas | 4380 | Group III | Blackboard learn | • https://el.btu.bg/webapps/login/ |
| 13 | University of Food Technologies – Plovdiv | 4050 | Group III | Own system. | • https://distedu.uft-plovdiv.bg/bg |
| 14 | University of Library Studies and Information Technologies Sofia | 3505 | Group III | System "Integrated Learning Information Arbeit System" (ILIAS) | • http://elearn.unibit.bg |

Table 1 provides information on the state HEIs in Bulgaria teaching mainly in the fields of Social, Business and Legal Sciences - the number of students, the group in which the university is, the used LMSs, and the address of the used systems. Table 2 shows the relevant information about the private HEIs. Table 3 summarizes the information on the implemented LMSs respectively.

*Table 2. Private HEIs in Bulgaria teaching mainly in the field 3. Social, Business and Legal Sciences*

| № | Name of the HEI | Number of students | Group based on number of students | Name of the used LMS | Internet address of the used system |
|---|---|---|---|---|---|
| 1 | New Bulgarian University | 8 258 | Group II | Moodle | • https://e-edu.nbu.bg/ |
| 2 | Varna Free University | 8 069 | Group II | Moodle | • https://do.vfu.bg |
| 3 | Univerisy of Agrobusiness and Rural Development | 3 498 | Group III | Moodle | • http://www.vuarr-dist.com |
| 4 | International Business School | 3 069 | Group III | Moodle | • http://dlc.ibsedu.bg/ |
| 5 | University of finance, business and entrepreneurship | 1 889 | Group III | Own system (e-Class VUZF) | • http://www.eclass.bg/ |
| 6 | University of Security and Economics – Plovdiv | 1 834 | Group III | Blackboard learn | • http://cea.bg |
| 7 | Burgas Free University | 1 615 | Group III | Moodle | • http://ucdo.bfu.bg/moodle/ |
| 8 | American University in Bulgaria | 943 | Group III | Blackboard learn | • https://elearn.aubg.bg |
| 9 | European Higher School of Economics and Management | 730 | Group IV | Bulgarian LMS (EClass) | • http://eclass.ecem.bg/ |
| 10 | Varna University of Management | 601 | Group IV | Own system | • http://dec.vumk.eu |

The results clearly show the positive attitude of HEIs to the use of electronic learning systems. 23 out of 24 of the examined universities use platforms for electronic and distance learning and one of the HEIs is about to implement such a system for the next 2018/2019 study year. The summary of the used systems leads to the conclusion that the most preferred LMS is Moodle used in 13 of the HEIs (see Table 3). Furthermore, Blackboard Learn is used in 4 of the universities and 7 use self-developed systems (ILIAS, e-Learning Shell, e-Class, etc.). Thus, the last mentioned are out of our reach and we will only focus on Moodle and Blackboard.

Moodle is open-sourced learning platform designed to provide personalized learning environments. It is distributed freely under GNU General Public License. The platform can be used for blended learning, distance education and other e-learning practices in school, universities and workplaces. It can be referred as to the best platform according to the criteria such as functionality (ease of use and content creation), the number of students that can use platforms and cost [18]. The biggest advantage of Moodle is its flexibility and customizability. Xu and Mahenthiran (2016) [19] point out that Moodle is the most cost effective solution. Since it is open-sourced, it has a large community of developers and users that help make the platform better by creating additional plugins that enrich its functionalities.

Blackboard is an example of commercial LMS that can be used only after being paid for.

*Table 3. Implemented LMSs in HEIs in Bulgaria teaching mainly in the the 3. Social, Business and Legal Sciences field*

| Name of the LMS | Number of implementations | Name of the HEI |
|---|---|---|
| I. Moodle | 13 | 1. University of National and World Economy<br>2. Sofia University „St. Kliment Ohridski"<br>3. Plovdiv university „Paisii Hilendarski"<br>4. University of Economics – Varna<br>5. South-West University "Neofit Rilski"<br>6. D. A. Tsenov Academy of Economics<br>7. Trakia University<br>8. Shumen University<br>9. New Bulgarian University<br>10. Varna Free University<br>11. Univerisy of Agrobusiness and Rural Development<br>12. International Business School<br>13. Burgas Free University |
| II. Blackboard learn | 4 | 1. South-West University "Neofit Rilski"<br>2. University "Prof. Dr. Assen Zlatarov" Burgas<br>3. University of Security and Economics – Plovdiv<br>4. American University in Bulgaria |
| III. Other purchased or self-developed LMS:<br>• ILIAS<br>• e-Learning Shell<br>• e-Class, etc. | 7 | 1. St. Cyril and St. Methodius University of Veliko Turnovo<br>2. University of Ruse<br>3. University of Food Technologies – Plovdiv<br>4. University of Library Studies and Information Technologies Sofia<br>5. University of finance, business and entrepreneurship<br>6. European Higher School of Economics and Management<br>7. Varna University of Management |

Since the focus of our paper is the use of social media practices during the educational process of HEIs, a comparison is made between the functionalities of the two platforms regarding social media elements. The results are shown in Table 4.

*Table 4. Comparison between the integrated Social Media elements in Moodle and Blackboard learn*

| Social media features | Moodle | Blackboard learn |
|---|---|---|
| I. Discussion forums | Yes | Yes |
| II. Chat | Yes | Yes |
| III. Wikis | Yes | Yes |
| IV. Internal messaging and notification system | Yes. | Yes |
| V. Learning groups | Yes | Yes |
| VI. Blogs | Yes | Yes |
| VII. Collaboration tools and activities | Yes | Yes |

## 5. Overview of the Integrated Social Media Tools in Moodle and Blackboard

### 5.1. Discussion forums

Discussion forums are essential part of both platforms. In Moodle they are automatically generated to every course created. They work exactly like groups in the social media – users can create threads and ask questions related to the studied material and other users can respond back. In the field of education this resource can be used by students to express their opinions regarding the covered topics, teachers can get feedback about the quality of the material, how it can be improved, etc. The discussion forums are example of asynchronous form of communication.

### 5.2. Chat

Contrary to discussion forums, the chat is a resource that allows users to conduct synchronous communication. The lecturer can create chat rooms in a study course and have time restraints if he/she wishes. Through the chat function, the lecturer can give consultations in real time. Furthermore, students can chat between themselves and discuss topics related to the specific course.

### 5.3. Wikis

Wiki is a resource that allows users of both platforms to add and edit content. It is an effective collaboration work tool for working on joint projects and for all participants to account for development of the respective course. Both students and teachers can add different content making the wiki richer and more useful for the users. This is an example of a component that can provide fruitful cooperation between students and teachers.

Cuenca (2016) [20] has shared his practical experience of over four years using Moodle wikis for planning and developing subject contents within collaborative foreign language teaching and learning.

### 5.4. Internal messaging and notification system

Both Moodle and Blackboard have internal messaging system by which users can send private messages between each other. This feature is very similar to many on the most popular messaging services such as Messenger, Viber, WhatsApp and others. Both platforms have the possibility to notify the user on different occasions – for example, when a reply to a topic followed by the user has been made, when an assignment has been graded by the teacher and a feedback has been received, etc. Furthermore, Moodle and Blackboard have mobile applications that can be installed on nearly every smartphone, so users can receive notifications right on their phones. In Blackboard Learn there are two types of messages that can be used – My Blackboard messages and Course messages. The first are targeted towards everyone in a learning network, while the second only to users enrolled in a specific course [21].

### 5.5. Learning groups

In both platforms, there is the ability to create so-called "learning groups". Teachers can create such groups, so students can communicate between each other and collaborate with each other on different assignments. Moodle gives possibility to the teacher to create two types of groups – visible and separate. In the first type, the students can communicate in and out of the group and see the activities of other groups, while the second type allows the activities to be seen only by users in the group. In Blackboard the teacher can also create groups within the different courses

providing the students with space where they can work together on different assignments.

### 5.6. Blogs

A blog is a tool for personal online publishing like an online journal or bulletin. Moodle and Blackboard offer the possibility for creating and managing of blogs. As a social media tool, blogs can contribute to open discussions, comments, exchange opinions and views, etc. In Moodle, there are options for creating of course blogs and user blogs - one for each individual user [22]. In Blackboard Learn, lecturers create and manage blogs, and only enrolled users can view and create entries and comments in them [23]. Lecturers can use blogs to give students additional learning materials or instructional materials. They can rely on blogs and blog comments to get students' feedback. Thanks to comments, students can exchange thoughts and opinions and thus the lecturers can gain insights into students' activities. Blogging can be an effective way for interacting with students and for stimulating development of ideas.

### 5.7. Other collaboration tools and activities

A typical example of collaboration tools are the resources called "Workshops". They enable collection, review and peer assessment of students' work. The grading is done using a special criteria system put together by the teacher of the specific course.

As mentioned earlier, Moodle has a large community of developers and users that help making the system even better with adding different functionalities incorporated in plugins. We would like to point out some of these plugins:

- RTcollaboration (Collaborative real-time editor) – a plugin in Moodle that works similarly to Google Docs and enables collaboration work on different documents. Being a real-time editor, it allows users to see what others are typing, what changes are being made to the document and so on.
- ZoomMeeting – a video and web conferencing platform that gives authorized users the ability to host online meetings with up to 50 participants [24]. In such a way, a virtual classroom can be established.

In Blackboard Learn there are also many examples of collaboration tools and activities, the most notable being Blackboard Collaborate – a tool that enables video conferencing. Similar to ZoomMeeting in Moodle, this feature allows teachers to create a virtual classroom that can be used for online discussions, real-time lectures, test review sessions, live Q&A sessions, and others. The virtual classroom includes a whiteboard, chat panel, web browser, course map, and a question-and-answer area [25].

Furthermore, there are many plugins that allow different level of incorporation of social media in the platforms. One example is a theme in Moodle called Essential that enables the incorporation of a course to Facebook, Twitter, Google+, Flickr, Instagram, YouTube and other networking sites [26]. Another example are two plugins: Oauth 2 authentication plugin and LenAuth that have similar functionalities. They allow users to log into the platform using their credentials from various social media sites, including Facebook, Google, LinkedIn, Yahoo, Twitter, VK, and others [27,28]. We have to bear in mind that even though this may be a useful feature for the students, it can be risky from security point of view because there is no way to confirm that the user is actually a student at the proper university. This definitely raises questions related to the intellectual property of the materials stored on the platform and the need of their protection by allowing access only to authorized users.

The HEIs in Bulgaria should incorporate some of the abovementioned features of the platforms in order to offer the students an experience similar to social media. Furthermore, an advantage of their positive impacts can be taken, so that the students will be stimulated to use the LMSs and the modern approach of teaching they can offer.

## 6. The Use of LMS Moodle and integrated social media tools at the University of Economics – Varna

As mentioned earlier, University of Economics – Varna uses two implementations of the LMS Moodle: one for distance learning and one for e-learning. Both of them are adapted towards the specific needs of the University. In this part of the paper, we would like to analyze some of the statistics related to the exploiting of LMS in this particular university and what kind of social media tools are most frequently used.

At the University of Economics – Varna there are 9280 students, about 90% of them are full-time students and 10% are studying some of the offered distance learning programs. The first implementation of Moodle is used for distance students and the second one – for full-time students. The two platforms are displayed in Fig. 3.

First, we would like to check how many students use the two platforms and on that basis to determine the reach of the LMS.
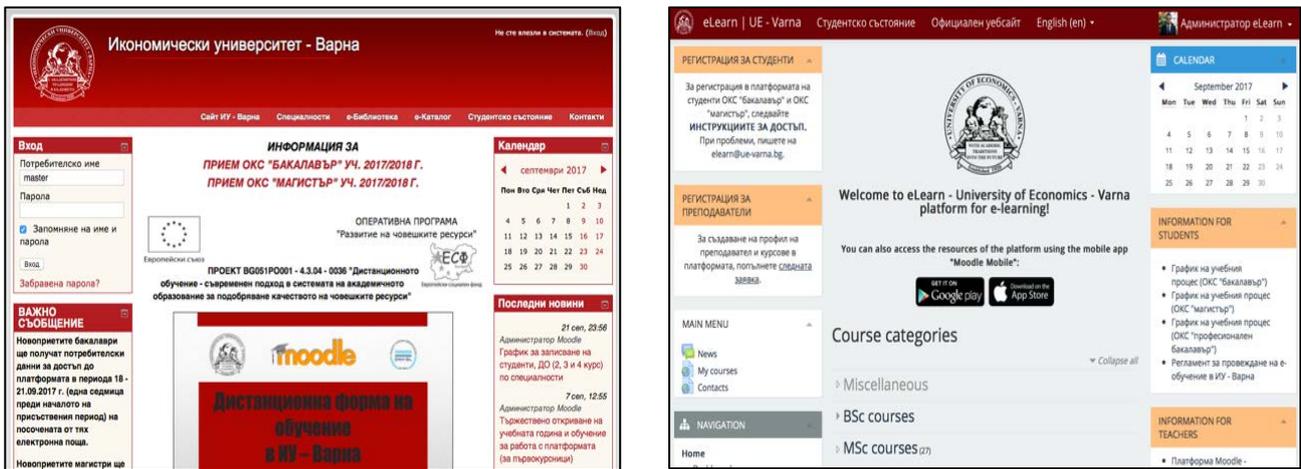
*Figure 3. Moodle platforms used at University of Economics – Varna.*

*Table 5. Usage statistics of the two implemented Moodle platforms at UE – Varna*

| Platform | Number of courses | Number of users | Percentage of all students in the respective form of study |
|---|---|---|---|
| Distance learning platform (http://moodle.ue-varna.bg) | 541 | 1275 | 100% |
| Digital learning platform (http://e-learn.ue-varna.bg) | 171 | 3328 | 39% |

As the figures in Table 5 show, in distance form of study all students use the Moodle platform, while in the full-time study about 40% of all the students use the other Moodle implementation. For the last cited percentage, it should be noted that the active, leading role in initiating a course offering in the Digital learning platform have the lecturers, not the students. Study of the attitude and the activity of the lecturers in the use of the capabilities of the LMS, incl. of the social media tools in educational practice will be a subject of our research in a next publication. Definitely, there is a huge potential for increasing the number of users and the turning point may be exactly in the social media features that the platform can offer.

As abovementioned, examples of social media features in Moodle are the discussion forums, chats, wikis, etc. Table 6 presents a summary of the two main social features used in the LMSs at UE – Varna – the forums and the chats. Intensively used is the internal messaging and notification system too, but it is not possible to obtain statistics.

The comparison between the two implementations of Moodle at UE-Varna shows that despite the lower number of courses in Digital learning platform, the application of forums and chats is more intensive, measured by relatives such as average rate per course – 3.6 versus 2.5 in Distance learning platform.

*Table 6. Usage of social media features in LMSs at UE – Varna*

| Platform | Number of discussion forums | Average rate per course | Number of chats | Average rate per course |
|---|---|---|---|---|
| Distance learning platform (http://moodle.ue-varna.bg) | 1340 | 2.48 | 51 | 0.09 |
| Digital learning platform (http://e-learn.ue-varna.bg) | 421 | 3.60 | 45 | 0.26 |

Statistics derived from the platforms show that chats and wikis are not used in both platforms. On the other side, in section 3 of the paper we gave empirical evidence on the high popularity of the media and their daily use by students. Based on the established patterns, we can formulate the hypothesis that if these social media features are more widely used on both platforms, this would provoke additional interest in students and could attract additional learners. This would increase the share of students that LMSs at UE-Varna can reach. Using these functionalities can improve the quality of the learning process and significantly enhance the interactive nature of the courses. If efficiency is achieved, other higher education institutions in the country would certainly follow the implementation of the best learning practices.

## 7. Conclusion

The role of the social media is growing both for business as well as for learning and education. Using an online survey among students at the University of Economics – Varna, we conducted an empirical study on their attitudes towards the social media. The results of our study proved the strong positive students' interest in the social platforms, especially on Facebook where almost 100% of them have an account and use it on daily basis. This provokes the research in LMSs used by state and private HESs in Bulgaria, teaching mainly in the field of Social, Business and Legal Sciences.

Our study of 24 Bulgarian universities teaching mainly in that field on the implemented LMSs identified in 23 of them the use of such systems and that the two major platforms are Moodle and Blackboard Learn. These platforms possess various integrated social media tools like discussion forums, chats, wikis, internal messaging, blogs, creating learning groups, collaboration tools.

The detailed study on the use of the social media tools in the two platforms implemented at the UE-Varna (Distance and Digital learning platforms) revealed the following most commonly used features - discussion forums, chats, internal messaging and notifications and no using of tools like wikis, forums, etc. This leads to the conclusion that there is still a relatively low use of the potential of integrated in the platforms social media features at the UE-Varna.

The current research supports the idea that the use of social media tools in learning and education, however, should no longer be considered as innovation, but must be a daily practice. On this basis, for HEIs, which aim at enhancing the quality of the learning process, the interactive nature of the learning, the high interest of the students in the educational service as a whole, we could make a forecast for increasing use of the power of the integrated in LMSs social media tools in the near future.

## Acknowledgements

## References

[1] Griesbaum, J. (2013). Social Web. In: Kuhlen, R., Semar, W., Strauch, D. (Eds), *Grundlagen der praktischen Information und Dokumentation*. Walter de Gruyter, Berlin, 562–574.

[2] Rosmala, D. (2012). Study of social networking usage in higher education environment. *Procedia-Social and Behavioral Sciences*, *67*, 156-166.

[3] Davis III, C.H.F., Deil-Amen, R., Rios-Aguilar, C., & González Canché, M.S. (2012). *Social media and higher education: A literature review and research directions*. Report printed by the University of Arizona and Claremont Graduate University.

[4] Kaplan, A.M., Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, *53*(1), 59–68.

[5] Fabian, R., (2011). *Kundenkommunikation über Social Media: ein Planungsprozess*. Josef Eul Verlag, Lohmar – Köln.

[6] Kilian, K. (2010). Was sind Social Media? *Absatzwirtschaft*, 3, p. 61.

[7] Balakrishnan, V., Gan, C. L. (2016). Students' learning styles and their effects on the use of social media technology for learning. *Telematics and Informatics*, *33*(3), 808–821.

[8] Gastelum, Z. N., & Whattam, K. M. (2013). *State-of-the-Art of Social Media Analytics Research* (No. PNNL-22171). Pacific Northwest National Lab.(PNNL), Richland, WA (United States)..

[9] Tess, P. A. (2013). The role of social media in higher education classes (real and virtual)–A literature review. *Computers in Human Behavior*, *29*(5), A60-A68.

[10] O'Brien, L. (2012). *Six ways to use social media in education*. https://cit.duke.edu/blog/2012/04/six-ways-to-use-social-media-in-education/.

[11] Gülbahar, Y., Kalelioğlu, F., Madran, R.O. (2010). Sosyal Ağların Eğitim Amaçlı Kullanımı [Educational Use of Social Networks]. *inet-tr 2010 Türkiye'de İnternet Konferansı*. İstanbul, Turkey.

[12] Kalelioğlu, F. (2017). Using Facebook as a Learning Management System: Experiences of Pre-service Teachers. *Informatics in Education*, *16* (1), 83–101.

[13] Lau, W. W., Lui, V., & Chu, S. K. (2017). The use of wikis in a science inquiry-based project in a primary school. *Educational Technology Research and Development*, *65*(3), 533-553.

[14] Cox, D., McLeod, S. (2014). Social media strategies for school principals. *NASSP Bulletin*, *98*(1), 5–25.

[15] Legaree, B.A. (2015). Considering the changing face of social media in higher education. *FEMS Microbiology Letters*, *362*(16), 1–3.

[16] Ministry of Education and Science (MES). Register of Higher Education Institutions. http://rvu.mon.bg/HomeEn/IndexEn

[17] Ministry of Education and Science (MES). Register of active and dropout Bachelor, Master and PhD students. http://www2.mon.bg/adminureg/html/rep.asp.

[18] Buhu, A., Buhu, L. (2015). Open Source E-learning Platforms and Software for Online Textile Engineering Learning, *11th International Scientific Conference eLearning and Software for Education*, Bucharest, April 23-24, 534-537.

[19] Xu, H., Mahenthiran, S. (2016). Factors that Influence Online Learning Assessment and Satisfaction - Using Moodle as a Learning Management System. *International Business Research*, 9(2),1-18.

[20] Cuenca, F. R. (2016). The use of wikis to enhance integration of skills and encourage collaborative learning in ELT. An example from Instrumental English. *Beyond the universe of Languages for Specific Purposes: The 21st century perspective*, 15.

[21] Blackboard Help, *Messages.* https://help.blackboard.com/Learn/Instructor/Interact/Messages [ accessed 18 October 2017].

[22] University of New South Wales (UNSW) Sydney, *Blog in Moodle*, https://teaching.unsw.edu.au/blogging-moodle. [accessed 24 October 2017].

[23] Blackboard Help, *Blogs*. https://help.blackboard.com/Learn/Instructor/Interact/Blogs [accessed 09 June 2017].

[24] Moodle Plugins Directory. Zoom Meeting. https://moodle.org/plugins/mod_zoom [accessed 18 June 2017].

[25] Blackboard Help. *Virtual Classroom and Chat Collaboration Tools*. https://help.blackboard.com/Learn/Instructor/Interact/Collaboration_Tools. [accessed 13 July 2017].

[26] Nash, S.Sm., Moore, M. Moodle Course Design Best Practices, Birmingham: Packt Publishing, 2014.

[27] Moodle Plugins Directory. LenAuth. https://moodle.org/plugins/auth_lenauth. [accessed 27 July 2017].

[28] Moodle Plugins Directory. Oauth2 authentication plugin for Moodle. https://moodle.org/plugins/auth_googleoauth2 [accessed 15 September 2017].