Online Learning Through LMSs: Comparative Assessment of Canvas and Moodle

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Abstract—Learning Management Systems have become one of the primary means of organizing online learning and teaching processes. They provide educators with tools to create, host, and manage various materials for learners. The variety of modern LMSs is immense and requires profound research for making the right choice. The article is aimed at examining several aspects of online learning provision. Firstly, the study has surveyed world educators to identify what LMSs are more frequently applied in their professional practice. Secondly, based on the data obtained, the article examines two LMSs, Canvas and Moodle, in terms of their efficiency and ease of use for educators and students. The research presents a comprehensive comparison of four sets of features, which respondents emphasized during the survey. They include User Interfaces and the enrollment process, the efficiency of these two systems for students and teachers, integration with other platforms and programs, a set of attributes in terms of functionality, and opportunities for comprehensive assessments and grading. Thus, the purpose of the study is to conduct a comprehensive comparison of two LMSs, Moodle and Canvas, defined as one of the most required and topical by world educators and students, and reveal their possibilities for the implementation in the educational process of various establishments and students of different age.

Keywords—learning management system, online learning, Canvas, Moodle, assignment, grading

1 Introduction

The current unstable situation in the world has resulted in the necessity to adapt to a changing reality. The COVID-19 pandemic has made its adjustments in economic, political, and social spheres of life as well as in education. Researchers observe the drastic shift from face-to-face teaching and learning to online education [1; 2; 3; 12; 13; 16]. A physical classroom environment has finished being the "only option" for sharing knowledge and delivering lectures [6; 11; 17]. If earlier educational technology, including LMSs, just helped "mirror" a person's learning process when s/he is not at an educational establishment, now it has become a part of the in- and out-of-school

learning process [15]. All educational establishments worldwide concentrate on providing high-quality services in the digital environment.

To deliver online lectures, lessons, and courses, to interact with students and trainees, educators have to choose the appropriate online platform or Learning Management Systems (LMS), which will satisfy their needs. Nowadays, developers offer a wide range of LMSs. For example, UNESCO has suggested a list of educational platforms and applications consisting of more than 10 LMSs and up to 11 MOOC platforms [19].

D. Turnbull and his colleagues define a Learning Management System as an online learning technology aimed at developing, managing, and presenting the materials of a course [18]. L. Reid understands LMS as a "course management platform" enabling to get an education regardless of "geographical location" [14]. In general, an LMS helps simplify and enrich the process of teaching and learning. Educators can develop multi-functional, interactive, meaningful educational tasks and materials. Students are enabled to interact and collaborate with participants of courses sitting at their computers or using mobiles.

Modern LMSs vary in their types and functionality, ranging from those based on cloud computing and not requiring profound knowledge of programming languages to on-premises software, implying specific skills in programming and working with databases arrays [7; 10]. The diversity of final products hampers the choice of the appropriate system for the educational needs of establishments or individuals. It can be challenging to find detailed information on all LMSs presented in the market. Besides, researchers often focus on comparing systems without considering educators' urgent and genuine demands. The features of LMSs examined in scientific works or specialized blogs and articles are compared and described either in a too technical manner, making it difficult for an average user to understand it, or just providing final figures and overall statistics.

The article aims to conduct a comprehensive comparison of two LMSs, Moodle and Canvas, defined as one of the most required and topical by world educators, and reveal their possibilities for the implementation in the teaching and learning processes of various types of educational institutions and students of different age groups.

The research is based on such hypotheses:

1. Canvas and Moodle can be used equally effectively by different educational establishments and students of different ages.
2. Canvas has more functionalities and integration features than Moodle to conduct online teaching.
3. Moodle is more understandable and user-friendly than Canvas for students during their online learning.
4. Canvas and Moodle provide equal opportunities for an objective and comprehensive assessment of students' work and activities.

2 Materials and methods

The research has used the following methods: data collecting by implementing an online questionnaire; the quantitative analyses to work with data arrays; the method of comparison to analyze main characteristics of LMSs; and the descriptive method to present the results obtained during the study.

Educators from nine countries (Belarus, Great Britain, Iraq, Spain, Mexico, Moldova, Poland, and Ukraine) were involved as interviewees. The total number of respondents was 104 people. They were divided into groups based on two characteristics: a type of educational establishment (school, college, higher educational establishments, trainees of specialized courses (courses for advanced training; MOOC; courses for researchers, etc.); and the age of students (junior – up to 10 years old; middle – from 10 till 16 years old; and senior – more than 16 years old).

To conduct the research, the questionnaire, which included several questions, was designed:

1. What LMSs do you use for organizing your learning and teaching process?
   (a) Moodle
   (b) Canvas
   (c) your option.
2. Who is your target learner?
   (a) students from colleges and universities;
   (b) students from schools;
   (c) trainees of specialized courses (courses for advanced training; MOOC; courses for researchers, etc.)
3. Would you like to try one of the LMSs stated above (Moodle or Canvas) in your work? Which one?
4. What demands should an LMS meet for the successful running of your online course?

Figure 1 shows that most respondents prefer Moodle (70%) while only 25 % use Canvas during their teaching and learning. Such results are explained by the fact that many higher educational establishments (especially those located in countries of the former USSR) are used to Moodle because it has been launched as the main platform for distant learning since countries gained their independence.

Consequently, they just adjusted it for the current online learning. At the same time, modern trainers who work with both local and international students and have international certificates, tend to develop their online courses with Canvas LMS. The reason they provided in the questionnaire is that most of the MOOCs they took are delivered on this platform.

Regarding age groups and types of educational establishments, the situation is as follows:

– for college and university students (middle and senior age groups), the predominant online platform is Moodle – 65% of respondents, just 30% of respondents use Canvas;

- for school students (junior and middle age groups), Moodle, Canvas, and other online platforms are almost the same and do not have strict differences and preferences – Canvas and Moodle – 30% each, other platforms – 40%;
- trainees of specialized courses prefer Canvas – 80% of respondents, other types of platforms – 15% of respondents, Moodle – 5% of respondents.

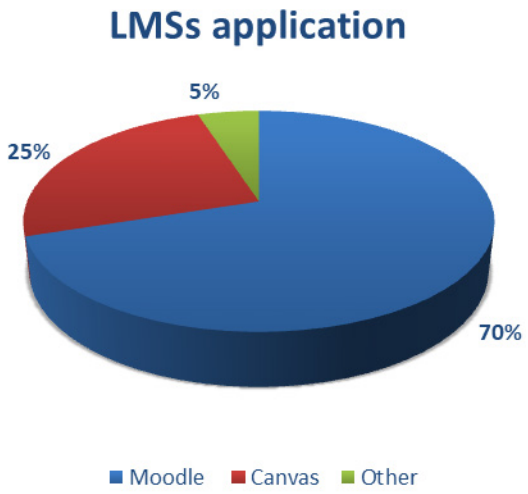

Fig. 1. LMSs application preferences among world educators

The percentage of figures is provided following the respondents for each type of educational establishment, taking into account the age of students.

In terms of territorial diversity, the respondents are representatives of nine countries. According to Table 1, Moodle is more popular, numbering six countries out of nine, among developing countries. Only representatives of three countries reported prevailing implementation of Canvas in their professional activities: the USA, the United Kingdom, and Poland. Thus, though Poland is a developing country with a transitive economy, the data have shown that developed countries mainly tend to use Canvas. In addition, Polish educational establishments that took part in the survey work closely with universities and colleges in the USA, one of the most significant users of this system. For example, 14 top online BD programs were delivered through Canvas in the USA in 2018 [5].

However, educational establishments from developing countries demonstrated their readiness and willingness to learn more about Canvas features and the possibility to use them for their teaching needs.

Table 1. Canvas and Moodle implementation in different countries

LMSs	Country
Moodle	Ukraine Mexico Iraq Spain Belarus Moldova
Canvas	The USA Poland The UK

Based on the assumption that before choosing an appropriate LMS for online or blended learning, a customer should concentrate on the final product and its requirements, respondents were asked to list their demands for the system (Table 2).

Table 2. Requirements for LMSs listed by respondents

N	Feature
1	User-friendly interface
2	Intuitive navigation
3	Easy process of registration
4	Easy-access
5	Automotive adaptability to any device
6	Possibility to set any amounts of points for tasks
7	Immediate assessment and notification of a student
8	Operation of the system without any hangs
9	Integration with other services and platforms
10	Video-conferencing

Thus, educators emphasized the importance of intuitive navigation not to spend much time explaining to students how the system works; the easy process of registration with the possibility to register a large number of people at the same time; user-friendly creation of tasks, and integration of materials without any bugs and hangs. Moreover, they mentioned a preference for organizing video conferences with their students or at least an option to embed links for other resources like Zoom.

Based on data retrieved from the responses of interviewees, Canvas and Moodle LMSs were studied considering four main functional areas:

1. User Interface and the process of enrollment to the online course.
2. Assignments and Collaboration.
3. Content Development and Integration.
4. Grading.

3 Results

3.1 User interface and the process of enrollment to the online course

The UI is the primary focus in designing LMSs. The choice of the online course and the learning environment depends on how easily a customer can navigate through it. According to W. Gachier and D. W. Govender, user interfaces provide learners with "the opportunity to experience complex and integrated environments" [9]. B.A. Bagustary and H.B. Santoso state that the most effective way to increase student interaction and engagement in courses is to apply adaptive UI [4].

The UI of Moodle is default and consists of several blocks, depending on the Moodle shells that are used (Figure 2). The customer's (educator's) first page includes the following elements: Navigation Panel (at the top of the page with sub-elements: Home; Dashboard; My courses; This course); Course overview (a panel with courses delivered by an educator); Recently accessed courses Panel; Pan-el with General Information (Private Files; Latest Badges; Calendar; Upcoming Events; Online Users). Besides, developers provided "Settings" and "Hide blocks" buttons.

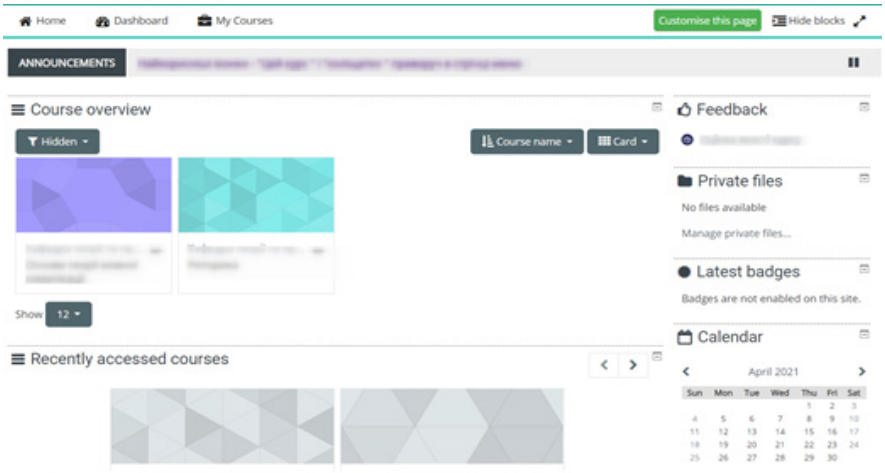

Fig. 2. Moodle UI

Suppose a course's owner wants to customize the interface by making some functions of Moodle unacceptable or removing some options. In that case, s/he needs to know the basics of programming and working with PHP. For example, to do the actions stated above, a person will have to edit such files as "course/format/weeks/format.php" or "course/format/topics/format.php," or to have admin rights for changing activities or deleting modules. For this reason, the educational establishment often has a special department (IT specialists), which primary responsibility is to maintain the Moodle operation and help teachers. Thus, a teacher cannot customize the UI without assistance, which takes additional time and energy.

The Canvas UI is intuitive, enabling an educator to make the learning and teaching process more effective and accessible. As it is shown in Figure 3, the UI consists of four main blocks: The Global Navigation Bar available on every page of the course (on the left of a page); the Course Navigation Bar containing links to various sections of the course (next to The Global Navigation Bar); The Content Section with the information provided on the page (the central part of a page); The Course Sidebar with tools necessary for managing the course (on the right of a page).

Fig. 3. Canvas UI

If a course creator wants to reorder or hide some Sections of the course, s/he can do it easily in Navigation Tab (Settings). If a person needs additional sections, it can be done in the Sections Tab of the Settings. In general, an educator can easily customize the Canvas interface without special assistance.

A new user of Canvas does not need much time to understand the principles of operation and adjustments, while working with Moodle requires additional training and studying of manuals.

The enrollment process on Canvas and Moodle happens on a separate page: People (Canvas) and Users (Moodle) and has several peculiarities. While adding people in Canvas, an educator needs to click on the People button and choose one of the methods and roles; in Moodle, s/he has to choose the enrolment methods first. Adding people in Canvas includes the following steps:

- click the button People;
- choose how to add users: by email; Login ID; SIS ID;
- choose the role: a student; a teacher; a teacher assistant; a designer; and an observer;
- choose a Section (if it is necessary).
- if required, students can interact only within a specific section.

If students do not have a Canvas account, a teacher just collects their email addresses and sends an invitation to the course or shares the self-registration link. Next time the process will be more straightforward because students' IDs will be on the Canvas database. In addition, an educator does not need to type each email address

separately; Canvas enables to do it by pasting many email addresses separating them by a comma. Besides, it is possible to create Groups for team-working during the period of studying.

In Moodle, there are three types of enrolment: self-enrollment, cohort synchronization, and course meta link. Although a course facilitator can enroll an entire academic group, enrolling students as different groups or groups working asynchronously requires much effort and background knowledge. It is particularly challenging for language courses. In addition, educators complain about a limited set of roles: a student, an assistant (with rights to edit), and an assistant (without editing rights).

Thus, both Canvas and Moodle are designed to meet students' and teachers' demands. However, in terms of usability and simplicity of the system, Canvas needs fewer efforts and less time for becoming accustomed to an LMS. The majority of respondents mentioned its intuitiveness and user-friendliness. At the same time, they indicated that Moodle and other online platforms are more suitable for students of junior and middle age groups.

Thus, given the advantages and disadvantages of Canvas and Moodle, the study has indicated that they can be used by various educational establishments and students of different ages with the same efficiency.

3.2 Assignments and collaboration

Another essential feature of an LMS is managing learners' progress and tracking. The last is possible through an effective system of assignments [11]. Teachers must have possibilities to develop tasks that best suit their professional needs.

The typical online assignments include discussions board, tests, quizzes, case-based assignments; wikis; portfolio creation; etc. [8]. Both Canvas and Moodle LMSs enable their users to create different types of quizzes, tests, and discussions. However, Moodle has more options for tests. They can include drag and drop, calculated, calculated multi-choice, and numerical tasks.

Canvas developers offer to create graded and non-graded (optional) tasks for both an individual student and a group of students. The format of their responses also varies and includes simple text entering, adding videos, audios, files, or images when required. In some cases, students can also add web links to support their works or share additional materials. The instructor has the right to leave feedback on the task for every student in the form of a text, a file, or media. Once a teacher leaves a comment, a student is notified by email. In Moodle, users can submit an online text and any type of file, often limited in size. A teacher sends a response in the form of feedback or a text comment; annotate PDF or offline grading worksheet. The last is not incorporated in Canvas LMS.

A teacher does not need to go to the course's main page to add the assignment. S/he has four options in the Course Navigation Bar, which is always displayed on the left of pages, while in Moodle LMS, a teacher has to be on the course page to add tests (Figure 4).

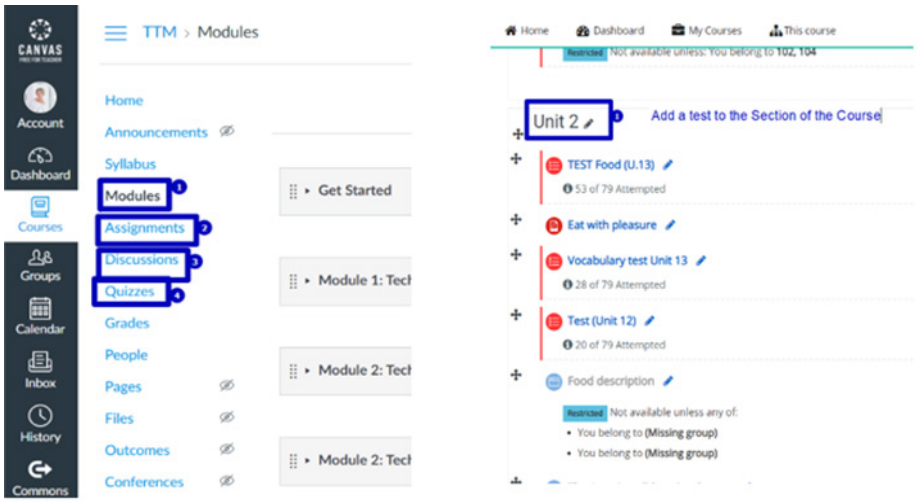

Fig. 4. Sections of Canvas and Moodle LMSs to add assignments

In addition, in Moodle, a teacher can prepare tests in a txt format and download this file to be automatically transferred into a test. In terms of discussions, Canvas provides more opportunities, including such options: allow threaded reply; users must post before seeing replies; enable podcast feed; graded; allow liking, and add to student to-do. Participants can also post their video and audio answers, which increases online productivity and interactions. Moreover, only Canvas supports the submission of Google Apps assignments.

Online collaboration is a substitute for face-to-face communication during a traditional way of teaching and learning. Students and teachers should know that any time they can reach each other and solve any problems or discuss any issues that appeared during the study. For this reason, Canvas LMS developed ungraded discussion boards, collaborations, and conferences (BigBlueButton). The collaboration includes web-based tools like GooglDocs for collaborative work and sharing ideas. In addition, Canvas has one unique feature, - peer-reviewed forums, where students are assigned to add comments to participants' posts without grading them. To simplify the communication process, an LMS also created the People tab where participants can see all people enrolled in the course and their profiles with additional information, including both professional (LinkenID; orchid; GoogleScholar account, etc.) and personal (Facebook, Instagram, Telegram) links. Finding people in Moodle and messaging them is a time-consuming and rather complicated process. It is challenging to do it intuitively.

In Moodle, students are offered to take part in forums and chats. Moodle Forums like Canvas Discussion Boards are designed for students' communication and co-creation of content. To create a forum or a chat, a person has to go to a course page or a course tab and choose the necessary item that takes more time compared to Canvas. The layout of the system also makes this process more complicated.

Thus, Canvas has a variety of learning tools to be implemented in the teaching and learning processes, encouraging students to work better and learn more. At the same time, some students mention that sometimes they are confused by the number of ways for communication and have some problems choosing which one they should use for the particular task. Teachers emphasize the need to update the mechanism of doing homework to enable students to continue their tasks any time they want. At the same time, Moodle is a more understandable online platform for students, especially junior ones, in terms of communication.

3.3 Content development and integration

Online teaching is a complicated process requiring the implementation of various tools and services; that is why many respondents mentioned the integration feature of LMS.

Due to a cloud-based architecture, Canvas can be integrated with numerous third-party applications, SIS, and AMS. A person can easily open their course on Windows, Linux, Mac, iPads, iPhones, and devices working on Android or Windows Mobile. Moodle supports Windows and Android devices. Besides, Moodle Pty Ltd has introduced Moodle's official app for iPads, though it only works when an administrator of the site allows it to be set up. Canvas also has a built-in function of adding external applications, which provides users with LTI tools that work great with Canvas (Figure 5).

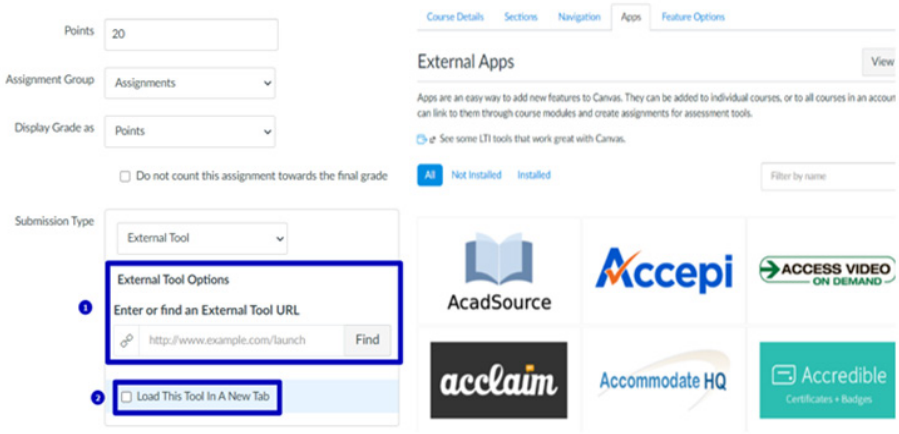

Fig. 5. Canvas external options

Another way to engage more program tools and devices in online learning through Canvas is to choose External Tool when creating an assignment and enter or find an external tool URL (Figure 5). It works great with Google and Google Classroom and thus simplifies teaching and learning organization online for educators who have accounts there and need to add and share some tasks from these services.

Nowadays, more and more tools are appearing essential for teachers, and Canvas is working on easy integration with most of them. For example, it is possible to use Jamboard, FlipGrid, Turnitin, Edpuzzle, etc. Another way to expand the course content is to implement courses, presentations, pages, and other resources from Canvas Commons, a learning object repository.

At the same time, though Moodle does not have such extended possibilities for external applications, it has its peculiarities. Firstly, it allows the integration of plugins and modules from the inner database. Secondly, one distinct feature of Moodle is supporting IMS, SCROM, and AICC packages. It just presents this type of content without the possibility to generate it on the site. Educators who are familiar with coding can write HTML or JavaScript codes. Other educators have to create packages using authorized SCROM software like iSpring Suite, Adobe Captivate, Gomo Learning, Lectora Online, HotPotatoes, etc. (Figure 6), most of which are not free.

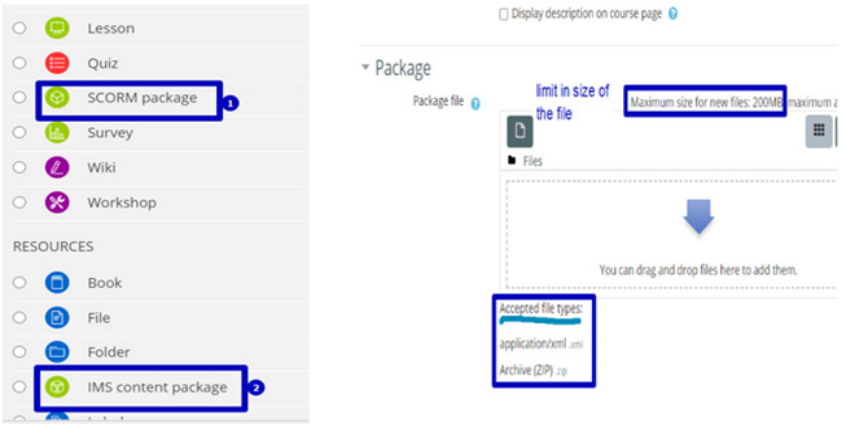

Fig. 6. SCROM and IMS content packages in Moodle

However, suppose the repository or a server of the institution is limited, or teachers can use a limited amount of virtual environment. In that case, it will be challenging to implement these tasks. Besides, students can have other system settings and features that do not allow them to open the assignment and lead to confrontations. Handing SCROM and IMS content packages needs additional training and technical support.

Both Canvas and Moodle provide users with rights to upload various types of files, including pdf, ppt(x), zip, doc(x), txt, xls(x), rtf, ods, etc. The range of media files varies and includes jpeg, gif, mp3, wma, wmv, m4v, mov, mp4, 3gp, and others. It is also possible to create html pages within these LMSs.

Canvas, unlike Moodle, has two unique tools, Syllabus and Modules. The first one is designed to integrate with all types of assignments, Grades and Calendars. Respondents mentioned its exceptional usefulness for the cooperation with students and their notification about tasks they are to complete during the course. Its interactive features enable a teacher to provide links to the crucial components like Modules. From the beginning of the course, students are aware of their schedules and deadlines,

which helps them organize their learning more productively and efficiently. The syllabus is available in the Course Navigation Bar during the entire period of the course.

Modules are a tool for organizing a course by weeks, units, or other organizational elements. It substitutes a coursebook by providing students with pages full of theoretical and practical information. Each Module is embedded with navigation, media resources, discussions, and quizzes required for this period of studying material. However, if an educator needs to create HTML pages that look like a coursebook for their teaching purposes, s/he can do it only in Moodle.

Given the above, we can state that Moodle and Canvas have an almost equal level of functionality with their pros and cons. Thus, each teacher chooses what suits them more and coincides with other demands in terms of functionality.

3.4 Grading

Grading is based on the same principles in both LMSs, though its realization is different. Canvas and Moodle work with graded categories and ungraded tasks invisible in a grade book. A quick grading interface where a teacher can see and click through all student assignments, leave comments, and add points (scores/grades) is incorporated in these systems. It is SpeedGrader in Canvas and Quick Grading in Moodle (located in Settings of a Gradebook). The difference is that in Moodle in Editing Mode, there is a text block next to each grade (2), allowing editing or adding many grades (1) at once (Figure 7). A teacher cannot leave media comments or add a file with the analysis in a grade book.

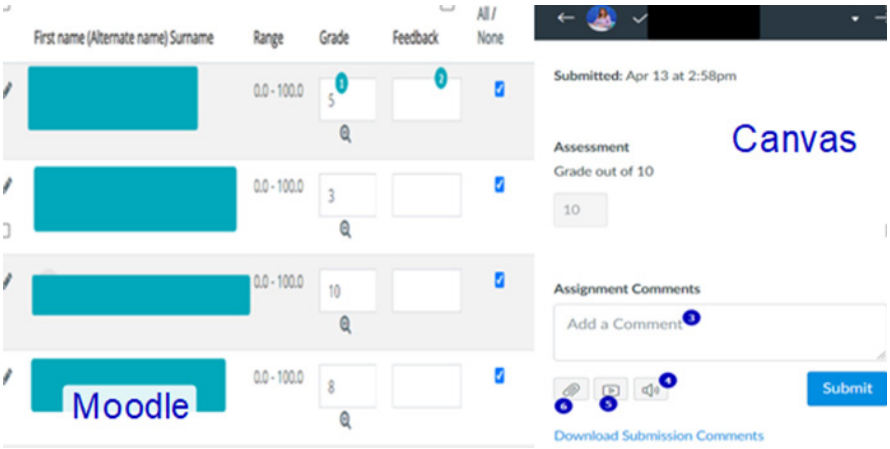

Fig. 7. Quick grading in Moodle and Canvas

In Canvas, a teacher can scroll through different students' tasks, editing grades if it is necessary, leaving assignment comments either in the form of (3) a text message, (4) speech recognition, (5) a media comment, or (6) a file attachment (Figure 7). The date, the time of the submission, and the notification in red, meaning that an assignment missed the due date, are reflected in SpeedGrader for each assignment. Students

can also find how groups will weight assignments during the course in Syllabus to understand how they can get their points, on what scale, and for what activities.

To get quick access to grading, a teacher should click on Grades in Course Navigation Bar in Canvas and go to the Assignment page or Grader Report in Moodle, where results can be seen in the form of points, letters, and percent. A teacher can see assessments only in that form in which s/he sets them in a task; for example, if it is 10 points, only points will be displayed in the grade book. At the same time, Canvas provides users with such a feature as accessing SpeedGrade from a participant's cells and the possibility to write a comment without leaving a grade book. This LMS also has a unique analysis ("what if") that projects the final course grades of a student based on various possible outcomes of assignments. Moodle, unlike Canvas, has developed a system of automatic forum discussions grading, which operates on calculating points (ratings) got by a student for their post.

Analyzing other features of the grading system of both LMSs, they include possibilities to: arrange results by the due date, assignment, and user names; provide a single/personal view; import or export data; filter results; and see grade book history.

Based on the stated above, the study indicates the same opportunities for objective and comprehensive assessments of students' works and activities provided by Canvas and Moodle. At the same time, Canvas has advantages in terms of automatic checks, which speeds up students' reaction to grades and simplifies the assessment process.

4 Discussion

The organization of the educational process has changed drastically over the last three years. Globalization, integration into the world community, the COVID-19 pandemic, its spread and impact on all spheres of life have made the sphere of education search for alternative ways of teaching and learning. The main emphasis has been done on a virtual space, which enables teachers and students to continue their interaction in any condition. The information above demands profound scientific research, formulation, and verification of specific hypotheses.

The conducted analysis has confirmed the first and the second hypotheses. The third hypothesis is confirmed partially, and the fourth one is disproved. Though learning management systems mostly have the same principle of operation, the choice of educational establishments or teachers should be based on the type of establishments and the age of students enrolled in the course. Based on the questionnaire, both teachers and students stress the importance of such features of LMSs as a user-friendly interface, intuitive navigation, easy access, a coherent and prompt system of assessments, and the possibilities to integrate with other services, platforms, and programs.

Dwelling on the Canvas and Moodle efficiency in the teaching and learning processes of various educational establishments and students of different ages, the data revealed the equal importance of these two systems. The difference is in the way they are developed, organized, and in a set of their features. Thus, Canvas proved to have a significant number of integration features that are easily realized and combined with

other platforms and programs. Moreover, respondents indicated Canvas as "more modern" while Moodle is regarded as "outdated," lacking some development.

The third hypothesis was disapproved partially. Firstly, the research has found that in terms of a user-friendly interface and easier ways to operate and navigate, Canvas is more appropriate and preferred by respondents. However, students are confused by the organization of communication in Canvas, highlighting some challenges in controlling discussions and many daily updates and notifications. In this aspect, students tend to use Moodle.

The fourth hypothesis was disapproved because respondents outlined the effectiveness and convenience of Canvas automatic assessments, which are clear and prompt.

Based on the data provided above, the aim of the article stated at the beginning of the study was achieved. The main value of the article is the provision of a comprehensible and fair comparison of two main LMSs, Canvas and Moodle, in terms of their appropriateness, advantages, and disadvantages in the organization of the educational process for teachers and students. However, some limitations in the application of the obtained data should be outlined. Firstly, the range of countries participating in the survey is rather limited and can be extended. Secondly, it would be appropriate to divide educational establishments into groups (primary, secondary, and higher) and study them separately. At the same time, these limitations do not reduce the practical value and scientific importance of the article and just outline the further trends in research.

5 Conclusion

The impact of the COVID-19 pandemic has intensified the process of ICT penetration into various spheres of life. It has also boosted the development and active application of online tools and virtual learning environments and systems. Learning management systems are regarded as one of the most efficient ways to organize online and blended learning and teaching.

Based on the data retrieved from the questionnaire held among educators and students of different ages from Ukraine, Poland, Belarus, Moldova, Iraq, Mexico, Spain, the USA, and the UK, the article has provided a thorough analysis of two LMSs most frequently used by educational establishments and individual teachers, Canvas and Moodle, in terms of their implementation in the teaching process of various educational establishments and individual trainers and teachers.

The study has identified that mainly developed countries implement Canvas in their online learning. However, developing countries tend to learn more about this system and try to build their courses on this platform. Moreover, universities and colleges are predominant users of Moodle.

In addition, these two LMS have been analyzed in terms of four main areas determined as crucial ones by respondents. These areas include UI of the systems; assignments and collaboration; integration and extendibility; and the process of grading. Being an open-source cloud application, Canvas provides many opportunities for its users. It does not require profound technical knowledge and skills for both educators

and participants of courses. Moodle is an on-premise LMS with a range of sophisticated features and settings.

The study results have determined that the UI of Canvas is more intuitive and flexible while Moodle UI is default and requires the knowledge of basic programming and working principles on PHP. Being a user-friendly system, Canvas is more accessible and simpler in navigation compared with Moodle, though students find its communication algorithm more challenging and complicated. The enrollment process is more challenging in Moodle for working with a separate academic group, groups within this group, or the creation of individual lists.

Regarding assignments and the grading process, the research has determined that Moodle provides certain options for more advanced users. Canvas offers unique peer-review forums and the intuitive system of finding other participants and sending them messages. Its grading system is more transparent and easier for mastering by both teachers and students.

Having compared content development and integration facilities, Canvas is more functional and can be integrated with various third-party applications; it can work well on Windows, Linux, Mac, iPads, iPhones, and Android. However, it does not support a set of IMS, SCROM, and AICC packages like Moodle.

Based on the results of this research, the perspectives of the further study are to compare other leading LMSs in terms of their implementation in online and blended learning, to conduct a comprehensive analysis of strengths and weaknesses of Canvas and Moodle for a particular type of educational establishments (schools, colleges, universities), training companies (teacher training courses, various advanced training, etc.), and individuals (tutors, freelance trainers, and educators).

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