Efficacy of Open-Source Learning Management Systems in Developing the Teaching Skills of English Language Student Teachers

Thouqan Saleem Yakoub Masadeh¹*, Abdellah Ibrahim Mohammed Elfeky²

¹Department of Curriculum and Instruction, Najran University, KSA
²Faculty of Specific Education, Kafrelsheikh University, Egypt
*Corresponding author: dr_thouqan@yahoo.com

Abstract The study aimed to investigate the efficacy of open-source management systems in the development of the main teaching skills of student teachers at the department of English language at Najran University. An Open-Source Learning Management based educational website in addition to performance based observation card were developed for the sake of accomplishing the study's aim. Each one involved four main fields, i.e. lesson planning, lesson implementation, learners' achievement assessment, and classroom management. The experimental approach was used and the experiment was carried out on (56) participants. All of them were at their eighth level (last term at university) and were doing their field experience at schools. They were randomly assigned into control and experimental groups with (28) students in each. Participants in the control group were taught by the traditional way of teaching whereas their peers in the experimental group were taught via Open-Source Learning Management Systems. Findings revealed significant differences between the teaching performance of student teachers in both groups regarding their skills in lesson planning; lesson implementation; and students' achievement evaluation in favor of the experimental group. Nevertheless, there was no significant difference between the teaching performance of student teachers in both groups with regard to classroom management.

Keywords: learning management systems, moodle, student teachers, teaching skills, practicum, Najran University


1. Introduction

The appearance of new educational strategies has accompanied the rapid and continuous advancement in the area of technology development. Therefore, renewal of the teaching profession and improvements in the quality of teaching and learning through the provision of high quality professional development for teachers have been forefront of the educational agenda of many countries, [27]: 13. For teacher training programs to be more effective in producing real changes in classroom practices, they should promote continuous professional development opportunities that are cumulative and sustained over the career of a teacher. Professional development opportunities can be found through the interaction and communication with others through various channels. The roots of this fact go back to (1960) when [25] proposed his Social Learning Theory that considered interaction and communication with others as one important source for the individual's learning and knowledge development. With the growth and expansion of Internet all over the world, online teacher professional development programs have been encouraged. Financial and logistic difficulties of engaging teachers in face-to-face professional development opportunities, as well as the need for professional development, which can fit with teachers’ busy schedules and can draw on powerful resources have played a significant role in the appearance of various professional development programs. All of these programs see Internet as an assistant to overcome place and time constraints that most of the professional development programs suffer from, [11]. Nowadays, Internet has been the biggest information resource in the world. It has enabled learners everywhere to enhance their knowledge using various resources such as educational literature, encyclopedia, references, dictionaries, and databases. These resources can be accessed freely through web 2.00, social networking, and some interaction tools in LMS, which are of the most modern applications of technology. Each of these applications is set upon specific bases and certain concepts of the social constructivist learning, which adopts the idea of social communication among learners within learning communities to produce knowledge and experience, [14]:229. Moreover, Learning occurs through communication and participation with others. The individual's way of thinking and context explanation is mostly positively affected by his interaction with more capable or experienced persons, [9]: 231 & [25]:6. The convenience of time and space is a big promise made by distance learning. Students do not have
to be physically with the instructor in space and, depending on the method used, they do not have to be together in time as well, [23]:2.

On the other hand, the integration of many Educational technologies in education have been widely promoted for their potential to enrich, enhance and extend student-learning experiences, [21]:1013]. Hence, pioneer educational establishments all over the world try to benefit from these technologies as much as possible to convey knowledge resources to both of the learner and teacher in least time, effort and cost, [22]: 6. Nevertheless, without a satisfactory shift from the teacher-centered pedagogy to learner-centered pedagogy, this integration will remain worthless. That is, teacher-centered pedagogy deals with technology as a supplement to lessons to display the teaching content to the learners while learner-centered pedagogy believes in greater integrations of technology into classroom and yields larger gains in students’ achievement. In addition, the function of technology integration should change the roles of both the teacher and the learner. It also should be used as experiential learning activities like writing, research, collaboration, and analysis, [12]:14. One of these educational technology tools which has been prominent in the field of education and technology integration is Learning Management Systems known as LMS. [10]:479 mention that the problems, educators have been facing for more than twenty years like the decreased motivation and declining academic ability have led to the appearance and adoption of these LMSs to promote active learning not limited to a specific time or classroom; communication between the instructor and students; and collaborative learning among students.

Therefore, and based on Social Learning Theory of Vygotisky, the present study aims to test the effectiveness of a developed educational website using LMS on the development of the teaching performance of student teachers enrolled in the "Practicum" course through different ways of interaction with others such as their supervisors and peers. That is, it aims to determine the effect size of a developed Modular Object-Oriented Dynamic Learning Environment (Moodle) in the development of student teachers' teaching skills, namely lesson planning, lesson implementation, learners' achievement evaluation, and classroom management. Direct interactions such as the chatting rooms and indirect interactions like news forum, recent activity block and upcoming events were used to encourage action within this Moodle.

2. LMSs and Teaching

A report by Durham College Leadership Team in 2015, [3]:1 has stated that "Learning management system (LMS) refers to both software applications and web-based technologies that are used by faculty and students to access, plan, implement, supplement, monitor, and/or assess learning or to communicate about learning". LMSs are centralized, online platforms that treat curriculum, assessment delivery, and reception as commodities, [18]: 302. Open-Source Learning Management System is a highly developed type of distance learning as it provides a set of software tools that help to transfer and manage the learning content, [1]. [7] argues that LMS as a teaching tool has been developed to organize and regulate the administrative tasks of schools and other organizations. Teachers and instructors who use LMS have the opportunity to share course materials, calendars, notes, links, syllabus, opinions, and online assignments, [17]. One of the most popular open-source learning management systems is Moodle, which favors collaborative learning, enabling interactions with resources from different media and among all teachers, [4]:32. Much web-based learning, which has the ability to address the needs of end users and learner, is facilitated via LMS such as Blackboard, Moodle, and Sakai. [12,20]. Moodle is a Course Management System (CMS) or Learning Management System (LMS). It is an open source to produce online courses that can run on any computer where participants are authorized to copy, use, and modify Moodle. Besides, "Moodle has a wide range of features such as forums, glossaries, assignments, chats, surveys, quizzes that can be selected by the teacher/administrator to create a more flexible learning environment and meet the educational objectives and needs of the students", [8]. When using Moodle, individuals or organizations can download the software free of charge and the downloading comes with license, [26]. [16] adds that the interesting features of Moodle include downloading and sharing of documents, developing content in HTML; forum or discussions; quizzes; grading; formatted questionnaire; journal writing; and other features, which are seen important to the development of online learning. Besides, "Moodle is characterized by its site management and administrator tools; a variety of user management options, including multiple authentication options, online profile building; role-based assignments and permissions; registration and enrollment tools and plug-ins. Course management and communications options, including chat, forums, wikis, assessment builders, are also within the various features of Moodle", [1].

Yet, some researchers are afraid that LMS employment is still regarded as an electronic document but not as an effective learning tool despite the increasing adoption of these LMSs in schools and universities, [5]. Hence, it is time for us as educators to re-think seriously in changing or at least varying our teaching strategies or ways to go along with the attention paid to individualized learning where the trainee pursues his own learning according to his potentials, own background knowledge, and skills. In short, the present study aims to investigate the efficacy of open-source management systems in the development of the teaching skills of English specialty students who were enrolled in "Practicum" as the main teaching course that focuses on teacher preparation for the teaching profession. In brief, the study seeks to answer these questions:

1. To what extent is open-source management systems effective in the development of the teaching skills of English specialty student teachers enrolled in "Practicum" course at the college of education?

2. To what extent is open-source management systems effective in the development of lesson planning skill of English specialty student teachers enrolled in "Practicum" course at the college of education?

3. To what extent is open-source management systems effective in the development of lesson
implementation skill of English specialty student teachers enrolled in "Practicum" course at the college of education?

4. To what extent is open-source management systems effective in the development of students' achievement evaluation of English specialty student teachers enrolled in "Practicum" course at the college of education?

5. To what extent is open-source management systems effective in the development of classroom management of English specialty student teachers enrolled in "Practicum" course at the college of education?

3. Methodology

The main aim of the present study was to investigate the efficacy or the effect size of Open-Source Management systems in the development of the teaching skills of English specialty student teachers. All participants had been previously enrolled in a course called "Strategies of Teaching and Learning" in their seventh level and were enrolled in "Practicum" course related to the teaching process in their eighth level during the experiment. Therefore, the following lines will shed light on the study statistical design, participants, instruments, and ways of data analysis.

3.1. Study Design

The quasi-experimental research design was used for data collection in the present study. Pretest and posttest of two equivalent groups were used as shown in Table 1.

<table>
<thead>
<tr>
<th>Table 1. Research Design</th>
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<tr>
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<tr>
<td><strong>Experimental Group</strong></td>
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<td><strong>Control Group</strong></td>
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O₂ = effective teaching skills of posttest
X₁ = Traditional Treatment.

3.2. Study Participants

Participants in the present study were (56) student teachers who were in their last term (eighth Level) at university. They were all enrolled in their "Practicum" course provided by the department of curriculum and instruction at the college of education at Najran University in the second semester of the academic year 2014/2015. To fit the experimental design of the study, participants were divided into two equal groups of twenty-eight students in each. The traditional method was used to train students in the control group. That is, participants were taught through a teacher-centered method that adopts the use of lectures, discussions, and microteaching. The problem-solving element was presented by and/or discussed with the instructor. The syllabus, the teaching materials, and the student assessments were determined by the tutor and transmitted to students in various lectures. While a kind of distance-learning known as Open-Source Learning Management Systems was adopted to train the student teachers in the experimental group. In other words, student teachers in this group were taught via PowerPoint presentations and role-playing. They were encouraged to attend and participate in lectures via interactive forums. Besides, chat rooms and self-assessment encouraged essential communication skills and interaction among participant students.

3.3. Instruments

Two main instruments were used in the present study in order to achieve its main aim. Researchers had to design a teaching website where the teaching materials were presented. They also had to develop an observation card for students' performance in the four main fields of the study dealing with the effective teaching skills.

3.3.1. The Website Design

To implement the study accurately and to guarantee precise findings, it was necessary to develop LMS based educational website that could fit the learning needs of student teachers participating in the present study. Therefore, a thorough review of many Instructional Design Models for the production of teaching programs in general and LMS-based e-learning programs in particular was done to conclude a set of guideway steps to orient the production and design of an educational website that could achieve the aims of the present study. Learners' characteristics, identification of aims and content, and the design of the teaching activities were taken into consideration. Lesson planning, lesson implementation, students' achievement evaluation, and classroom management were the main topics of the developed website. One activity within a size of (80 MB) with a hyperlink was attached to each topic to facilitate its downloading.

Besides, formative assessment that aimed to identify and then close the gaps between students' understanding and the skills they possess relative to the course's expected learning outcomes before their confrontation of high-stakes tests and assignments was also taken into account. Therefore, a questions' bank that involved all questions related to participant's evaluation, was organized in a way that could help course supervisors assess each participant's performance. That is, a set of questions followed each activity students were expected to carry out. Information obtained from students' answers to these questions could enable the faculty member to evaluate objectively his assumptions concerning what and how his students were learning. In turn, students could benefit from their teacher and peers' frequent and thoughtful feedback that promotes their metacognition and self-regulation of the learning process.

In addition, asynchronous forum for discussion and synchronous chatting room were attached to the developed Moodle. Then a dictionary to provide students with the most important terms of effective teaching and enable participants to choose the way of terms presentation whether alphabetically, by category, by date, or by author was inserted. Participants were also allowed to add any terms they believed of relevance to the course topics. Figure 1 displays the main screen of the developed Open-Source Management Systems (Moodle).
Certain blocks were used in the developed Moodle, e.g. the calendar, people, administration, activities, search forums, recent activity, and upcoming events. Selection of such blocks was due to the roles they were assumed to play. The calendar, for instance could connect the various actions on the website with all ongoing dates during the whole semester. The people's block was expected to enable the assessors to identify their participants and in the same time allow participants to introduce themselves. While the administration block was meant to empower the web's administrator to have control over it. Another important block was the activities block that included all available teaching activities and resources in the course. Activities block contained the forums, exams, chatting rooms, web dictionaries, and tasks. Search forums block was also inserted to provide participants with an opportunity to search for any word or term related to the course. Recent activity block was added to the web for the sake of exhibiting all actions that had taken place since the participants' last log in whereas upcoming actions block was activated to let participants get an idea about the events to come and access dates to distinguish workdays from holidays.

![Interaction within Open-Resource Management Systems](image)

**Figure 1.** The main screen of Open-Resource Management Systems (Moodle)

![Interaction within Moodle](image)

**Figure 2.** Interaction within Open- Source Management Systems
Reliability of the achievement test was also calculated by education at the college of education at Najran University. A pilot study on (10) students at the department of special determination of the time needed were emphasized via a card's validity and reliability in addition to the appendix (A) for the evaluation items in each domain statements and (9) points. The total mark was (68), students' classroom management and consisted of (3) points. The third field investigated students' skills in the second field and consisted of (9) statements and had (29) points. The first field was interested in students' skills in lesson planning and involved (4) statements and got (12) points. Students' skills in lesson implementation was the interest of the second field and consisted of (9) statements and had (29) points. The third field investigated students' skills in their learners' achievement assessment and contained (6) statements with (18) points. The last field was devoted to students' classroom management and consisted of (3) statements and (9) points. The total mark was (68), see appendix (4) for the evaluation items in each domain. The card's validity and reliability in addition to the determination of the time needed were emphasized via a pilot study on (10) students at the department of special education at the college of education at Najran University. Reliability of the achievement test was also calculated by Cronbach Alpha and the coefficient correlation was (0.87) indicating that the results would be trustful. The rationale of the use of that observation card was the fact that it was developed, adopted, and accredited by the university board to accurately assess student teachers' performance in light of the expected and desired learning outcomes drawn by Najran University as a result of "Practicum" course. Development of a new observation card would have been a violation of the university regulations and might not fit the expected "Practicum" course learning outcomes.

3.3.2. Performance Observation Card

To better identify the degree of students' performance development in the teaching skills, which were the study cores, a four-field observation card was used. It was the same observation card accredited by Najran University to assess the teaching performance of student teachers of various disciplines at the end of their field-training course. Four main fields were the focus of that observation card. The first field was interested in students' skills in lesson planning and involved (4) statements and got (12) points. Students' skills in lesson implementation was the interest of the second field and consisted of (9) statements and had (29) points. The third field investigated students' skills in their learners' achievement assessment and contained (6) statements with (18) points. The last field was devoted to students' classroom management and consisted of (3) statements and (9) points. The total mark was (68), see appendix (4) for the evaluation items in each domain. The card's validity and reliability in addition to the determination of the time needed were emphasized via a pilot study on (10) students at the department of special education at the college of education at Najran University. Reliability of the achievement test was also calculated by Cronbach Alpha and the coefficient correlation was (0.87) indicating that the results would be trustful. The rationale of the use of that observation card was the fact that it was developed, adopted, and accredited by the university board to accurately assess student teachers' performance in light of the expected and desired learning outcomes drawn by Najran University as a result of "Practicum" course. Development of a new observation card would have been a violation of the university regulations and might not fit the expected "Practicum" course learning outcomes.

3.4. Groups' Homogeneity with Regard to the Observation Card

To check whether the present study's control and experimental groups were homogeneous, mean scores of their pretest results were analyzed. One-way analysis of variance (ANOVA) was used to check whether or not there were significant differences between participants in both groups. Table 2, Table 3, Table 4, & Table 5 show ANOVA results.

3.4.1. Participants' Homogeneity According to Their Lesson Planning Pre-test Results

Table 2 shows ANOVA results regarding the significance of differences between both groups' mean scores in the lesson planning pre-test.

3.4.2. Participants' Homogeneity According to Their Lesson Implementation Pre-test Results

Table 3 shows ANOVA results regarding the significance of differences between both groups' mean scores in the lesson implementation pre-test.

3.4.3. Participants' Homogeneity According to Their Assessment of Their Students' Achievement Pre-test Results

Table 4 shows ANOVA results regarding the significance of differences between both groups' mean scores in their assessment of their students' achievement pre-test.

3.4.4. Groups' Homogeneity according to their classroom management pre-test results

Table 5 shows ANOVA results regarding the significance of differences between both groups' mean scores in their classroom management pre-test.
visits by himself. Therefore, one can say that all training materials and follow up of student teachers in the study implemented microteaching, lectures of participants supervisor who was one of the researchers of the present participants were informed to get ready for their teaching experiment days. At the end of the eighth week, all the (56) that was available and reachable during the whole access the designed website through the Moodle system in the experimental group, on the other hand were allowed the number of the training hours was (32) hours. Participants in the control group received two training campus. Each session lasted for two hours and so the total sessions on Sunday and Tuesday via microteaching and participants were trained to master the sub-topics of performance observation card. During these two weeks, student teachers were trained to master the sub-topics of the main topic. Therefore, training took eight weeks. Participants in the control group received two training sessions on Sunday and Tuesday via microteaching and lecturing by their academic supervisor at university campus. Each session lasted for two hours and so the total number of the training hours was (32) hours. Participants in the experimental group, on the other hand were allowed to access the designed website through the Moodle system that was available and reachable during the whole experiment days. At the end of the eighth week, all the (56) participants were informed to get ready for their teaching performance assessment. "Practicum" course academic supervisor who was one of the researchers of the present study implemented microteaching, lectures of participants in the control group, in addition to the delivery of the training materials and follow up of student teachers in the experimental group. He was to carry out all classroom visits by himself. Therefore, one can say that all participants were assessed in the same way as the assessor/rater factor or variable was controlled by entrusting the academic supervisor to evaluate the performance of all participating students. Each student was visited twice at the school where he was practicing his field experience and assessed using the observation card that was designed for this purpose. The first visit was a directive one where the academic supervisor highlighted the trainee's strength and weakness points and proposed ways of improvement. The second visit was evaluative where each trainee was given a degree according to his performance regarding his fulfillment of each sub skill attached to each topic or teaching skill. As soon as classroom visits for all participants were completed, grades were registered for all participants and mean scores for each group in each teaching skill were extracted and calculated. Independent T. test for two samples was used to analyze the study's results.

3.5. Experiment Implementation

Two weeks were allotted for each field of the four main study fields as presented in the designed website and performance observation card. During these two weeks, student teachers were trained to master the sub-topics of the main topic. Therefore, training took eight weeks. Participants in the control group received two training sessions on Sunday and Tuesday via microteaching and lecturing by their academic supervisor at university campus. Each session lasted for two hours and so the total number of the training hours was (32) hours. Participants in the experimental group, on the other hand were allowed to access the designed website through the Moodle system that was available and reachable during the whole experiment days. At the end of the eighth week, all the (56) participants were informed to get ready for their teaching performance assessment. "Practicum" course academic supervisor who was one of the researchers of the present study implemented microteaching, lectures of participants in the control group, in addition to the delivery of the training materials and follow up of student teachers in the experimental group. He was to carry out all classroom visits by himself. Therefore, one can say that all participants were assessed in the same way as the assessor/rater factor or variable was controlled by entrusting the academic supervisor to evaluate the performance of all participating students. Each student was visited twice at the school where he was practicing his field experience and assessed using the observation card that was designed for this purpose. The first visit was a directive one where the academic supervisor highlighted the trainee's strength and weakness points and proposed ways of improvement. The second visit was evaluative where each trainee was given a degree according to his performance regarding his fulfillment of each sub skill attached to each topic or teaching skill. As soon as classroom visits for all participants were completed, grades were registered for all participants and mean scores for each group in each teaching skill were extracted and calculated. Independent T. test for two samples was used to analyze the study's results.

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4. Results

As soon as the experiment ended, grades of students in both groups with regard to the observation card in the post-application were registered and documented. After that, independent samples' T. test was used to identify the significance of the differences between both groups modified gain ratio of their performance in the fields of lesson planning, lesson implementation, students' achievement revaluation, and classroom management. Table 6, Table 7, Table 8, and Table 9 illustrate the findings.

4.1. Results related to participants' performance in lesson planning

To make sure whether there was any statistically significant difference between participants' performance in lesson planning due to the teaching method, T. test was used. Results are shown in Table 6.

4.2. Results Related to lesson Implementation Skill

To make sure whether there was any statistically significant difference between participants' performance in lesson implementation due to the teaching method, T. test was used. Results are shown in Table 7.
Table 7 shows that T. ratio for the difference between the modified gain ratio of students' mean scores in the experimental and control groups was significant (T= 6.832). In other words, there was a significant difference (α=0.05) between the performance of student teachers in the experimental group (M=25.3571) who were trained via Open-Source Management Systems and the performance of their peers in the control group (M=20.6786) who were taught by the traditional method. This significant difference was in favor of participants in the experimental group due to the use of LMS as a teaching tool.

### 4.3. Results Related to Students' Achievement Assessment Skill

To make sure whether there was any statistically significant difference between participants' performance in students' achievement assessment due to the teaching method, T. test was used. Results are shown in Table 8.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Mean Difference</th>
<th>T. Ratio</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group</td>
<td>28</td>
<td>15.75</td>
<td>1.2057</td>
<td>1.9643</td>
<td>4.297</td>
<td>0.001</td>
</tr>
<tr>
<td>Control Group</td>
<td>28</td>
<td>13.7857</td>
<td>2.09686</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Table 8 shows that T. ratio for the difference between the modified gain ratio of students' mean scores in the experimental and control groups was significant (T= 4.297). In other words, there was a significant difference (α=0.05) between the performance of student teachers in the experimental group (M=13.7857) who were trained via Open-Source Management Systems and the performance of their peers in the control group (M=15.75) who were taught by the traditional method. This significant difference was in favor of participants in the experimental group due to the use of LMS as a teaching tool.

### 4.4. Results Related to Students' Classroom Management Skill

To make sure whether there was any statistically significant difference between participants' performance in classroom management due to the teaching method, T. test was used. Results are shown in Table 9.

Table 9. Modified Gain Ratio of participants' performance in classroom management

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Mean Difference</th>
<th>T. Ratio</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group</td>
<td>28</td>
<td>7.2143</td>
<td>1.34322</td>
<td>0.25</td>
<td>0.696</td>
<td>0.989</td>
</tr>
<tr>
<td>Control Group</td>
<td>28</td>
<td>6.9643</td>
<td>1.34666</td>
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</table>

Table 8 shows that T. ratio for the difference between the modified gain ratio of students' mean scores in the experimental and control groups was significant (T= 0.696). In other words, there was no significant difference (α=0.05) between the performance of student teachers in the experimental group (M=7.2143) who were trained via Open-Source Management Systems and the performance of their peers in the control group (M=6.9643) who were taught by the traditional method. This insignificant difference could indicate that there was no effect of LMS use as a teaching tool on the development of participants' performance in classroom management.

## 5. Discussion

The present study has revealed that the use of Moodle to develop the teaching skills of English language specialty student teachers was effective to a large extent. The modified gain ratio in student teachers' means was apparent in the development of their skills in lesson planning, lesson implementation, and evaluation of their learners' academic achievement. That is, teaching performance of student teachers in the experimental group in accordance to these three fields was better than the performance of their peers in the control group. Such an impact or efficacy can be due to a set of factors such as the easiness and quickness to access the developed website content without time or place constraints. The flexible interaction with the developed Moodle teaching material via texts, images, and graphics was also effective in concepts clarification and trainees' motivation. The display method of glossary provided on the Moodle, which contained the most important terms and concepts, also played a significant role in improving participants' teaching skills. Moreover, participants were granted freedom to choose how to display these terms and concepts whether alphabetically, by category, by date, or by Author. Furthermore, students were granted the authority to add more relevant terms. One more cause was the fact that the use of the chatting room and discussion forum to make unlimited synchronous and asynchronous discussions among students themselves or with teachers was significant in exchanging experience; answering participants' questions; and gaining information, concepts, and knowledge. Another interesting reason for Moodle's efficacy was the consideration of the individual differences among participating student teachers. In other words, each participant could learn more and more from the Moodle's content via Internet according to his own potentials and pace. The formative assessment to which participants were exposed drove them to re-access the Moodle's content more and more for the sake of getting the most correct answers and so better learning and understanding was achieved.

These findings are seen to be in agreement with those results by [8] regarding the efficacy of LMS-based interdisciplinary learning module that combined podcasts, discussion boards, and virtual groups, in supporting students' deep learning and self-study in a majority of cases. They also corroborate the findings of [19] regarding the teachers' positive sense about Moodle as a tool for enhancing teaching and learning. Findings also go along with the results of [4] with regard to the effective utilization of GeoGebra and Moodle, which proved to be very successful as integration enables the inclusion of GeoGebra files directly into Moodle webpages and discussion forums. While they are in disagreement with [15] in accordance to technology availability, time allotted, and difficulty to use LMS inside the classroom. On the
opposite, understanding who the participants in the present study were and what their needs were, contributed much to the success of the developed Moodle that was used to train student teachers on the skills of teaching. Findings of [13] corroborates these assumptions regarding the adopted strategy and trainers’ previous awareness of their trainees’ needs, attitudes, and practices.

Nevertheless, LMS as a teaching tool was not effective in developing participants’ skills in classroom management. This ineffectiveness can be due to ‘learners’ preference of a self-directed and collaborative instructional modality, as well as teacher presence and interventions in the online environment. Quality of the opportunities to communicate with teachers plays a significant role in the effectiveness of any provided program. Students usually prefer informal and casual forms of podcasts incorporated into conversations and discussion rather than a teacher giving direct instruction as a voice-over, accompanied by a slide show”, [[18]: 307-8]. Schools’ organization, rules, and environment. Quality of the opportunities to communicate with teachers plays a significant role in the effectiveness of any provided program. Students usually prefer informal and casual forms of podcasts incorporated into conversations and discussion rather than a teacher giving direct instruction as a voice-over, accompanied by a slide show”.

In short, the teaching Moodle effectiveness can be doubled or even trebled if it accounts for a system of rewards and incentives to encourage its successful implementation as well as the quality of its teaching materials, [15].

6. Conclusion

This study examined the efficacy of Open-Source Learning Management Systems in developing the teaching skills of English specialty student teachers at Najran University. The study concluded that there was a statistically significant difference in the modified gain ratio between students’ mean scores in the control and experimental groups. The difference was in favor of the experimental group with regard to their performance development in lesson planning, lesson implementation, and evaluation of their learners’ achievement. Yet, no significant difference in the modified gain ratio of students’ mean scores in both groups that could be due to the management was noticed.

In light of the findings of the present study, researchers put forward the following set of recommendations:

1. The use of open-source management systems in similar educational contexts.
2. The adoption of open-source management systems to develop the teaching skills of English specialty students during their practicum.
3. The use of open-source management systems as a teaching approach instead of the traditional one at the colleges of education
4. The need to involve learners in the construction of their teaching Moodle in addition to encouraging them to contribute effectively to its educational content.
5. The need for universities and other educational constitutions to sensitize their faculty and students of the importance of open-source management systems and its role in improving the educational process as a whole.
6. The need to train faculty members how to use the open-source management systems and prepare their teaching courses to fit this teaching method through sessions for the development of their capabilities.

Acknowledgment

The researchers are grateful to all people who took part in the present study. They are mainly indebted to all student teachers, academic supervisors, cooperating teachers, and school principals for their assistance and participation. Researchers are thankful for the Deanship of eLearning at Najran University for the provision of all teaching tools that helped make this work successful.

References


Appendix A
Trainee Field Experience Evaluation Form

<table>
<thead>
<tr>
<th>Teaching Practices</th>
<th>Utmost marks</th>
<th>Due marks</th>
<th>Personal Qualities</th>
<th>Utmost marks</th>
<th>Due marks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lesson Planning</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objectives were executively and correctly defined</td>
<td>3</td>
<td>3</td>
<td>Appearance and general behavior</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>Objectives covered the varied aspects of knowledge, skill and sentiment</td>
<td>3</td>
<td>3</td>
<td>Passion and respect to students</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>The lesson outline was complete and comprehensive</td>
<td>3</td>
<td>3</td>
<td>Self-confidence</td>
<td>25</td>
<td>3</td>
</tr>
<tr>
<td>The basic information are provided in the teacher's notebook</td>
<td>3</td>
<td>3</td>
<td>Attitudes towards teaching</td>
<td>26</td>
<td>3</td>
</tr>
<tr>
<td><strong>Lesson Implementation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The lesson's introduction urges the students to learn</td>
<td>3</td>
<td>3</td>
<td>Total</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Using modern learning-evocative teaching strategies</td>
<td>4</td>
<td>4</td>
<td>Administrative Aspects (for school's director)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mastery of scientific material and ability to achieve its objectives</td>
<td>4</td>
<td>4</td>
<td>Observing work times.</td>
<td>27</td>
<td>4</td>
</tr>
<tr>
<td>Relating the scientific material with the students' daily life.</td>
<td>3</td>
<td>3</td>
<td>Participating in school activities</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td>Interconnection of ideas and consistency of learning activities during presentation</td>
<td>3</td>
<td>3</td>
<td>Shouldering responsibility and well behaving.</td>
<td>29</td>
<td>4</td>
</tr>
<tr>
<td>Considering the individual differences between the students</td>
<td>3</td>
<td>3</td>
<td>Accepting directions</td>
<td>30</td>
<td>4</td>
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<tr>
<td>Keenness on the students' participation in learning activities</td>
<td>3</td>
<td>3</td>
<td>Relations with school members</td>
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<td>4</td>
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<tr>
<td>Using teaching tools interestingly and objectively</td>
<td>3</td>
<td>3</td>
<td>Total</td>
<td>20</td>
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<tr>
<td>Balancing the class time with the lesson's elements</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Student's assessment and management</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posing well-phrased intellectually varied questions</td>
<td>3</td>
<td>3</td>
<td>1. Teaching performance</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Enhancing the students' performance through different incentive methods</td>
<td>3</td>
<td>3</td>
<td>2. Personal qualities</td>
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</tr>
<tr>
<td>Relating assessment questions with the lesson's outcomes</td>
<td>3</td>
<td>3</td>
<td>3. Administrative aspects</td>
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</tr>
<tr>
<td>Diversifying evaluation methods to assess the varied learning aspects.</td>
<td>3</td>
<td>3</td>
<td>Total</td>
<td>100</td>
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<tr>
<td>Documenting the students participation levels and assessment outcomes</td>
<td>3</td>
<td>3</td>
<td>Remarks and directions:</td>
<td></td>
<td></td>
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<tr>
<td>Paying much attention to conducting and correcting exercises and homework.</td>
<td>3</td>
<td>3</td>
<td>Director's name: ……………………</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Classroom</strong></td>
<td></td>
<td></td>
<td>Signature: ……………………</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulating the students participation and activity</td>
<td>3</td>
<td>3</td>
<td>Supervisor's name: ……………………</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controlling movement and rooming inside the classroom</td>
<td>3</td>
<td>3</td>
<td>Signature: ……………………</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizing and managing the students individual and team work</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

First: General information
Name:  
School:  
Semester:  
Visit Date:  
Visit Type: Directive ( ) Evaluative ( )
Course Title:  
Lesson subject:  


