Moodle: Ten Years On

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Abstract— As Moodle (and similar online teaching tools) move into their second decade, it is important to learn how they have caught on among teachers and students. This research attempts to answer the question: Do students and teachers use Moodle to the maximum? A two-part questionnaire was designed to probe student and teacher use of Moodle. Results show that neither students nor teachers take full advantage of what Moodle has to offer.

Keywords- Moodle use, Students, Teachers

I. INTRODUCTION

A little over a decade ago a new teaching and learning tool entered the lives of university students and teachers worldwide: Moodle (or a similar online tool such as Blackboard). It is evident that these tools are here to stay whether one likes it or not, so it is to the benefit of all educators to have a good understanding of how such tools have caught on so far among today's students- known as Gen Y (born between 1977 and 1990), as well as lecturers- mostly from the Younger Boomers generation (born between 1955-1964) [1]. Armed with such a picture, teachers and students can function better in the ever-changing world of education.

II. RESEARCH QUESTION

This research will attempt to shed light on the following question: Do students and teachers use Moodle to the maximum? We need to find out: how has it caught on over the past decade i.e. how often do people log in, are certain functions more popular, less popular, overused, underused or not used at all and why?

It should be mentioned from the outset that this paper will not focus on the technical aspects of the system (i.e. which system is preferable from a technical point of view) but rather the concept and popularity of using an online tool in the world of education. In this latter area, research is sorely lacking. (The reader interested in the technical aspects is referred to Al-Ajlan and Zedan [2]). The online tool discussed will be Moodle which is used at the academic institutions where this research was carried out.

The organization of this work will be as with research texts: a review of the literature regarding online use in Israel (where this research was carried out) and Moodle followed by a discussion of the methodology, and then the results accompanied by an analysis.

III. LITERATURE REVIEW

A. Internet Use in Israel

In 2011, the last time this issue was researched, there were 68.90 per 100 internet users in Israel [3]. The average Israeli spends 38.3 hours online a week putting Israel in the number two spot worldwide after Canada (40.4 hours per week) ahead of the US and UK in third and fourth place respectively [4]. According to Shamah [5], "Israeli kids aren't just connected to the Internet; they're hyper-connected. And it's not just the kids who are plugged in. More than a third of Israelis 55-64 connect to social networks either daily or several times a week, as do 22% of those 65 or older."

No doubt, therefore, that Israel can be considered a highly-wired country.

B. Moodle

Developed first in 2002, Moodle can be found in universities the world over [6]. It is a course management system used for online teaching and learning [7].

A major factor which will determine the acceptance of online teaching tools is TAM- the technology acceptance model- proposed by Davis [8]. According to this model, there are two key factors that lead to acceptance: the online system will be easy to use and the student's performance will improve by using the system. Other factors have been identified: critical mass i.e. the number of people using the system passes a certain threshold [9], there is proper technical support [10, 11] as well as perceived playfulness [12] i.e. the user believes attention is focused on interaction with the internet and/ or is curious and/ or enjoys the interaction. Over the past few years TAM has been "updated" to UTAUT (Unified Theory of Acceptance and Use of Technology) - see [13]. Most research has shown a connection between TAM/ UTAUT and Moodle use [11, 13, 14].

This research, however, is less interested in proving a connection between TAM/ UTAUT and Moodle (which does exist according to results) and more in uncovering how students and teachers actually use Moodle- how it has caught on over the past decade.

IV. METHOD

A two-part questionnaire was used to carry out this research. The first part questioned the students' Moodle habits while the second part was interested in the teachers. The basis for the questionnaire was Brandl's [15] survey of Moodle

benefits. The questions were pretested on 57 students and adjustments were made. The questions were in Hebrew to facilitate matters even though Israeli university students are proficient in English. The students surveyed attend two different academic institutions located in southern Israel. At both institutions, Moodle supplements class lectures.

First, there is a need to understand the student body and their attitude towards Moodle. Hence, students were asked the total number of courses they are taking in the current semester versus the number which are online, in order to determine if the student has a high or low number of courses online. At both institutions, lecturers have the option of putting their courses online or not.

The other questions regarding students were:

2. Do you feel that Moodle is beneficial to the learning process? Yes/ No Explain.

3. How often do you logon during the semester?

a) more than once a day

b) once a day

c) 2-3 times a week

d) once a week

e) _____(you may write in another answer)

4. Do you logon when off campus? Yes/ No.

If you chose "no", explain why not.

Regarding actual use of the tool, this researcher wanted to find out what students do in addition to "standard" use i.e. downloading material, submitting assignments, checking grades. In other words, has Moodle simply become a more modern way to obtain material and information or is there more to it?

5. Have you ever posted a message on the News forum?

a) yes

b) no

6. Have you ever contacted the class using the class list?

a) yes

b) no

The second part of the questionnaire, where students discussed their teachers' habits, contained the following questions:

1. In your Moodle courses, do your teachers post the following?

a) the course syllabus   yes/ no

b) learning materials   yes/ no

c) assignments   yes/ no

d) feedback on assignments   yes/ no

e) grades   yes/ no

2. Has one of your teachers ever opened a forum?

a) yes

b) no

If you chose "yes" to the previous question, did you participate?

a) yes

b) no

If you chose "yes" (you did participate), did you feel it was helpful?

a) yes

b) no

3. Has any one of your teachers conducted a survey?

a) yes

b) no

If you chose "yes" to the previous question, did you participate?

a) yes

b) no

This researcher with assistance from two colleagues distributed the questionnaire in classrooms where a lesson was taking place. Students filled out and returned the surveys on the spot. In the end, 528 questionnaires were distributed and returned.

V.   RESULTS AND DISCUSSION

A. Part One (the students)

The first question revealed that 444 of the students had a high number (i.e. 80%-100%) of courses online while 84 noted the number of online courses was low (i.e. 20%-40%). No student fell between 40%-80% or had less than 20%. The responders are full-time students from all faculties and are mostly first and second year students.

Question 2 asked if students felt Moodle was beneficial to the learning process. The responses were as follows:

Students with a high number of courses online
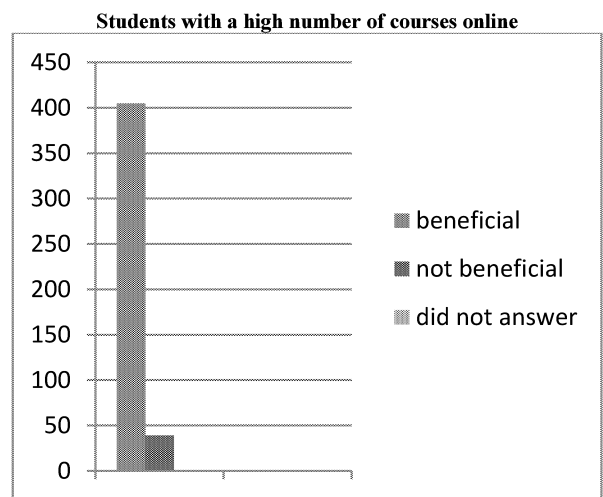
Students with a low number responded similarly.
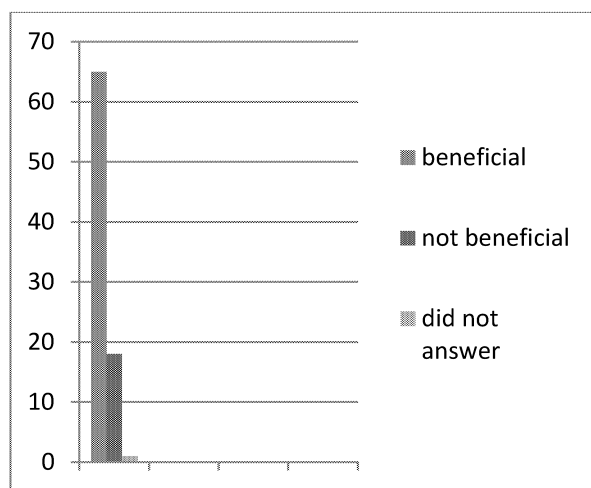
The different reasons for answering "beneficial" or "not beneficial" are varied. They mostly deal with efficiencies. Students with a high number who are satisfied with Moodle noted the following (my translation from the Hebrew):

"All the material is together in one place."

"It helps me prepare for the lecture."

"It is easy to access material." / "Material is available 24/7."

"The power-point and homework are available before the lecture."

"There is easy access to grades."

"The announcement board is very convenient."

"There is no need to run after teachers."

"It is easy to make up something I missed."

"I can learn on my own. There is no need to attend the lecture."

"It is easy to prepare homework."

"Everything is online today."

"It saves money."

"It improves student-teacher communication."

"Last-minute changes are posted."

"I know what the lecture will be about."

"I can access material from anywhere."

"I can easily submit assignments and papers."

However, not everyone sees Moodle favorably. Interestingly, most comments relate to poor teaching methodology.

"Teachers only post material to download."

"The uploaded material is not relevant to what is done in class."

"There are too many sites. Some teachers use Moodle, some their own (departmental) sites while others have private sites."

"The internet connection could be faster."

"Solutions are not posted."

"Material is uploaded in the last minute."

"There is poor coordination between the lecturers and their assistants."

"Some teachers have not learned or do not want to learn how to use Moodle."

"I do not like the fact that I have to print out material at my expense."

Students who had a low number of online courses and believed the Moodle aids the learning process did not have any comments that differed from their high-number peers, but students not pleased with Moodle added the following:

"Teachers do not explain things in class. They tell us to check the website."

"Older material is not removed and I get confused."

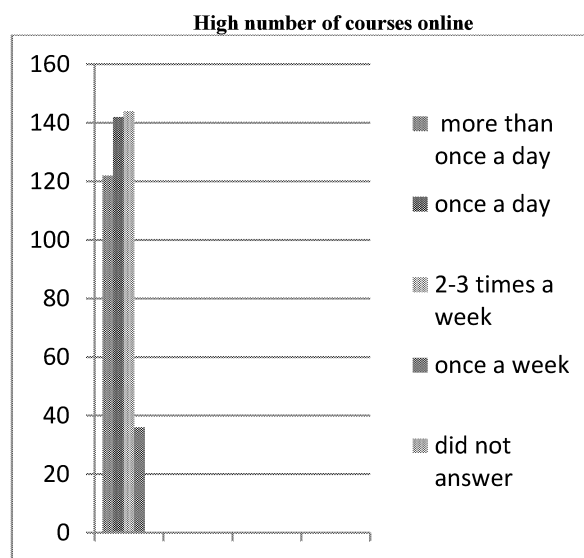"It is not helpful if only a small number of courses is online."

"Many times the site is disorganized."
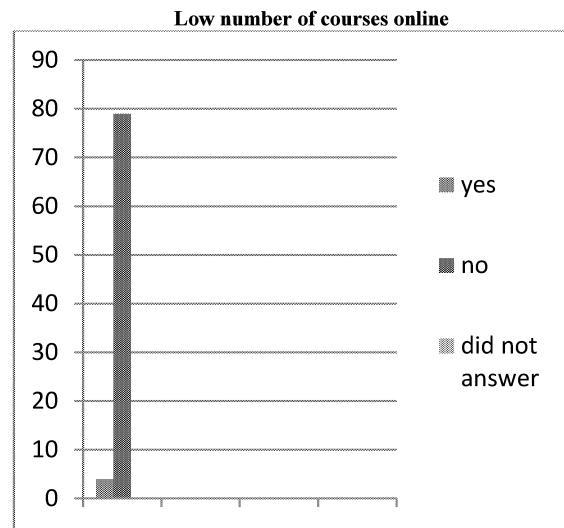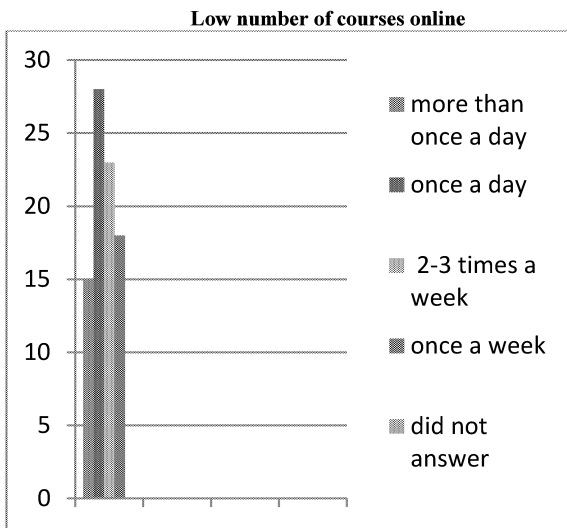
"I have too many technical problems."

"By the time I final get used to one version, a newer version is put into use."

Questions 3 and 4 attempted to determine the students' login habits.

Question 3: How often do you logon?

High number of courses online

In highly-wired Israel, most of these students logged on at least once a day.

Low number of courses online

Legend: more than once a day; once a day; 2-3 times a week; once a week; did not answer

Not surprisingly, more students fell into the 2-3 times a week and once a week categories but the majority was logging in at least once a day. It is unclear whether this was due to the hyper-connected mentality of Israelis [5] or TAM/UTAUT.

The fourth question revealed that all but 15 of the 528 students surveyed log in when not on campus. Reasons given for not logging in were:
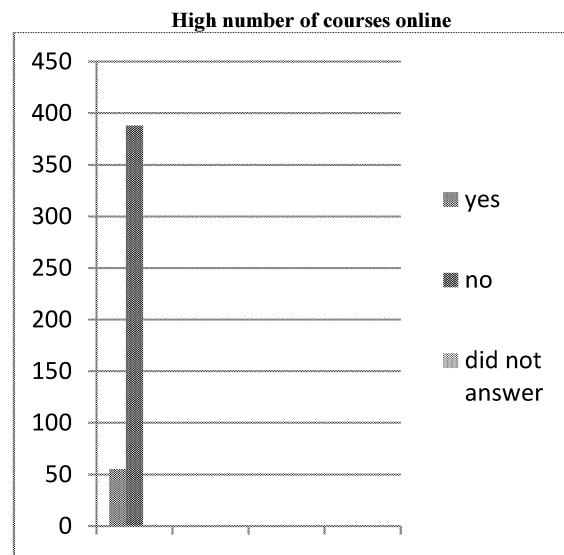
I do not want to log in when I am not on campus. (11 students: 8 high and 3 low)

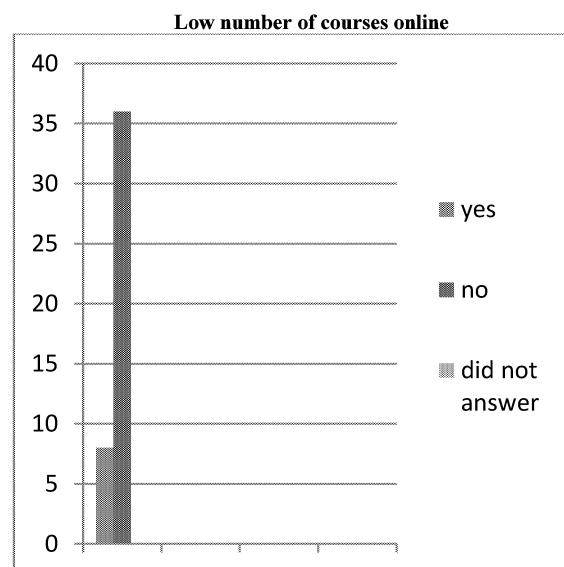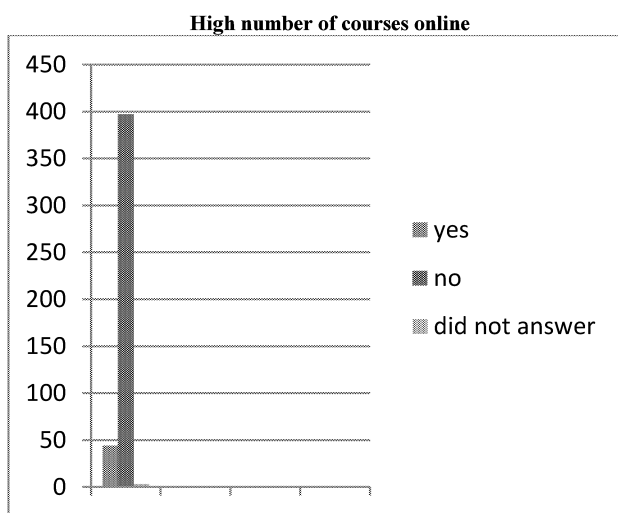"I do not have an internet connection at home." (1 student: low)

"There is no need with a small number of courses online." (3 students: low).

The final two questions on this part of the questionnaire checked inter-student communication using the News forum and class list. The following four graphs show the unpopularity of these two features.

Have you ever posted a message on the News Forum?

High number of courses online

Legend: yes; no; did not answer

Low number of courses online

Legend: yes; no; did not answer

Have you ever contacted the class using the class list?

High number of courses online

Legend: yes; no; did not answer

Low number of courses online

Legend: yes; no; did not answer

The question which needs to be asked is: why are these two features so underused? At first this researcher thought

that the features have not yet caught on. However, one student provided unsolicited information on the questionnaire which may shed light on this issue. Even though the question was multiple-choice, one student scribbled "we have Facebook for that" next to the question. So it seems there is inter-student communication but with Facebook. (In addition, these two questions revealed that students do not use Moodle to the maximum.)

The issue of Moodle versus Facebook is one which requires more study. While this research showed a clear preference for Facebook, other inquiries have produced different results [16]. A possible explanation for Facebook over Moodle is the desire of students to be in their "own territory" i.e. teachers do not have access [17].

The next section will be devoted to the second part of the questionnaire.

B. Part Two (the teachers)

The second part of the survey asked students how their teachers use Moodle. All students (i.e. high-number and low-number) were grouped together as this factor is irrelevant when evaluating teachers.

Question 1: In your Moodle courses, do your teachers post the following?
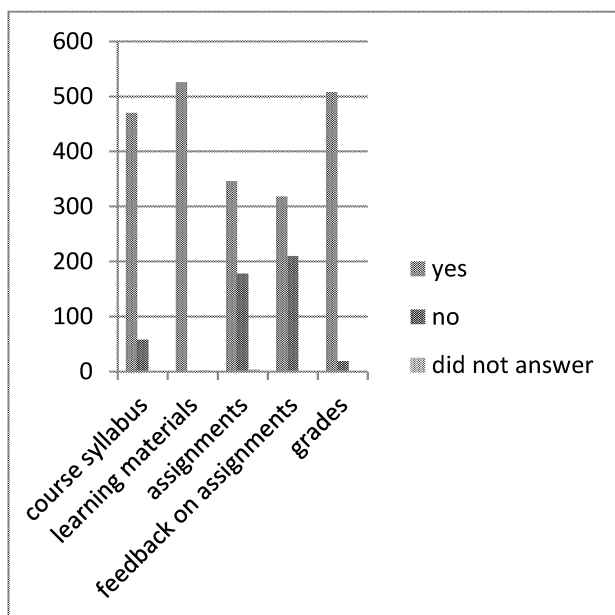
The most serious issue here is assignments and feedback. In an online course the number not posting assignments and feedback, while not the majority, is high and this can lead to a decrease in the usefulness of Moodle as noted by students earlier in the "not beneficial" comments. Further research should interview these teachers to determine why assignments and feedback are not being posted.

The final two teacher questions focused on two tools: the forum and the survey.

Has one of your teachers ever opened a forum? (Note the numbers on the left.)
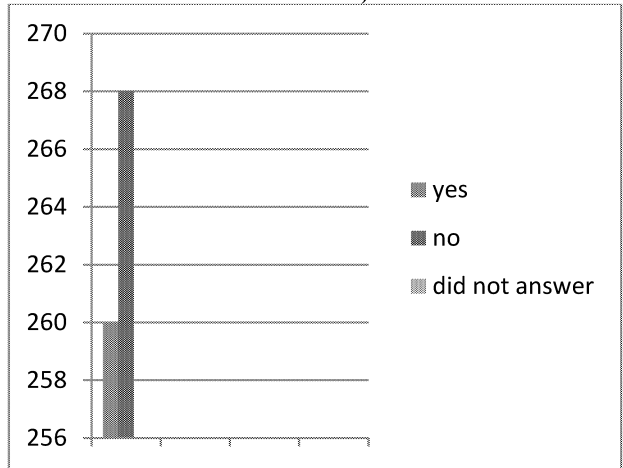
The results are almost equal with a difference of only 8. Of the 260 who answered "yes", 167 (64%) mentioned they participated and of these 167 participants, 146 (84%) noted that it was helpful. This is a tool which has caught on to a certain degree but needs to become more popular. Teachers as well as students should become familiar with the forum since those who use it find it beneficial on the whole.

Has any one of your teachers conducted a survey?
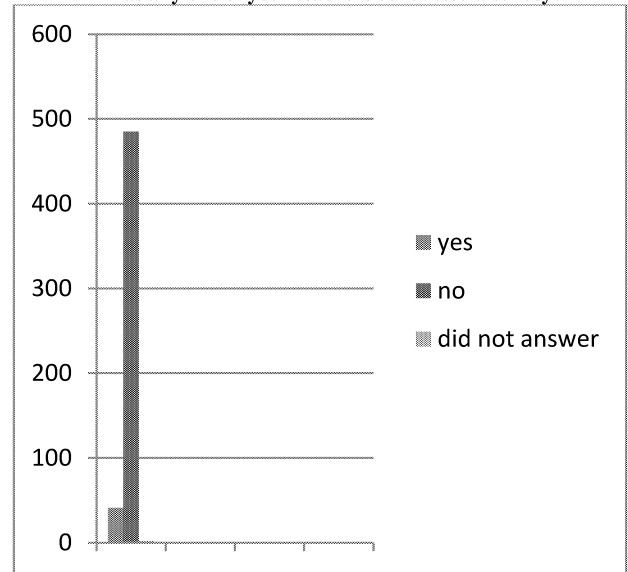
Of the 41 who answered "yes", 33 said they participated.

There is no doubt that teachers are missing out on a very important part of Moodle. The only way a teacher can really know if a particular task, requirement, etc. is useful is by asking the students. Without student feedback, a teacher is in the dark and may be carrying out something which is a less-useful or in a less-productive way.

VI. CONCLUSION

The first part of this research (the students) can be summarized as follows. The number of courses online is not an issue. Most of the 528 students log on at least once a day, all but 14 log on when off campus and the News forum and

directory are underused by all. The bottom line is that students do not take full advantage of Moodle.

The second part showed that teachers do not use the tool to the maximum as well. The learning forum could be used more and hardly anyone conducted a poll.

Most important, in the opinion of this researcher, teachers should pay attention to the following issues in order to improve Moodle use:

a) only uploading material/ uploading in the last minute

b) not explaining in class

c) student can learn without attending class

d) too many sites/ posting in different places

e) not removing older material/ material not relevant/ a disorganized site

f) solutions not posted

VII. LIMITATIONS AND SUGGESTIONS

This research was carried out in a highly-wired country. It would be interesting to repeat it in medium or lowly wired countries. It would also be interesting to see results in institutions which do not use class lectures but are totally distance learning.

Moodle and similar tools are here to stay. It is best for all pupils and academic staff to learn to use them to the maximum for the benefit of all concerned.

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