

ENGINEERING COLLEGE LECTURERS RELUCTANCE TO ADOPT ONLINE COURSES

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Abstract

The paper investigates difficulties involved in integrating online courses in academic colleges. Despite their growing prevalence in Israel and worldwide there are still no online courses offered as part of the learning process in many colleges. In order to identify factors for this phenomenon, a study was conducted to investigate the attitudes of 137 lecturers in an academic college concerning online courses. A questionnaire was employed to examine attitudes in four areas: cognizance of the online courses, willingness to teach these courses, influence of online courses on the college's reputation and teaching methods in online courses. The study identified four sources of reluctance among college instructors to teach in these courses: lack of knowledge concerning teaching methods, fear of a heavy work burden, concern that students' achievements might fall and impairment of the college's reputation. Since there is desire to integrate online courses in academic colleges, it is recommended that an online pedagogy support centre should be opened in these colleges, and that colleges should consider making it mandatory for students to take at least one compulsory online course during their degree course.

Keywords: online courses, colleges, online pedagogy, reluctance to online courses.

Introduction

Online courses began to appear globally in the end of 20th century (Jaggars & Bailey, 2010). At the beginning of the second millennium online courses appeared in several Israeli universities. In the USA, 69.1% of higher education institution managers see online courses as an essential component of their institution's long-term strategy (Allen & Seaman, 2013).

In contrast to the rapid adoption rate of online courses by the universities, introduction of online courses in Israel's academic colleges has been far slower and has encountered many difficulties. This phenomenon is not exclusive to Israel. Even in American and European universities and larger academic institutions have preceded the colleges and smaller academic institutions in adopting online courses. Evidence of this phenomenon appears in a report on activities at MAOR, the national Israeli repository of online learning object (Cohen et al., 2011). Contributions were mainly by universities and colleges' contributions were rather sparse (Universities: 1670 items, Colleges: 9 items). Universities have the advantage over colleges of larger student bodies and faculties, and this enables them to conduct a traditional course alongside an online course and thus to save costs (Hawkes & Coldeway, 2002). In a large institution, even when there is a low percentage of registration to online courses there are still enough students to justify offering an online course. Additionally, the heavy burden of teaching imposed on college lecturers makes it difficult for them to implement necessary adaptations during the transition from traditional to online courses. The purpose of this paper is to clarify the reasons for this phenomenon from the viewpoint of college lecturers.

Online courses offer the possibility of expanding accepted learning methods and can potentially significantly increase the amount of college students and the variety of contents that the college can offer as part of or as an extension of its learning program (Jahng, Krug, & Zhang, 2007; Phipps & Merisotis, 1999; Sitzmann et al., 2006). This is especially relevant for elective or specialized courses studied towards a first degree. The advantages of online courses are even more obvious when considering courses for a second degree, when students can study and also work part-time, often not in the vicinity of the college. Also, online courses can strengthen the college's image as an institution that adopts technological innovation as an essential value.

Alongside these advantages, online courses also create certain difficulties because of the changes lecturers and students have to undergo in the process. Online courses offered as part of preparatory courses in colleges have received little response from students. College lecturers' familiarity with online courses is in many cases quite poor. Further, a survey conducted among 2,800 lecturers in colleges and universities in the USA (Allen & Seaman, 2013) found that most lecturers in institutions that do not yet offer online courses, see online courses as inferior when compared with traditional learning (see Table 1).

A college that wants to introduce online teaching should choose courses where staff members are willing to teach according to this strategy and the students agree to learn online. Another opportunity to introduce online courses in academic colleges is by opening Massive Open Online Courses (MOOC). These courses constitute a fertile ground for important experiences for lecturers and students alike and can improve awareness of the essential benefits of online courses as part of the learning process.

How are online course defined?

The definition of online courses is to a certain extent arbitrary, and they have been defined in higher education in various ways. The present paper has adopted the definition of Allen and Seaman (2014) as it appears in Table 1.

Table 1: Definition of four course types relating to different levels of integration of online materials in learning and teaching

Type of course	Proportion of Content Delivered Online	Type of Course
Traditional	%0	Course where no online technology used – content is delivered in writing or orally.
Web facilitated	1-29%	Course that uses web-based technology to facilitate what is essentially a face-to-face course. May use a course management system (CMS) or web pages to post the syllabus and assignments.
Blended/hybrid course	30-79%	Course that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically uses online discussions, and typically has a reduced number of face-to-face meetings.
Online course	More than 80%	A course where most or all of the content is delivered online. Typically have no face-to-face meetings.

Support and pedagogy in online courses

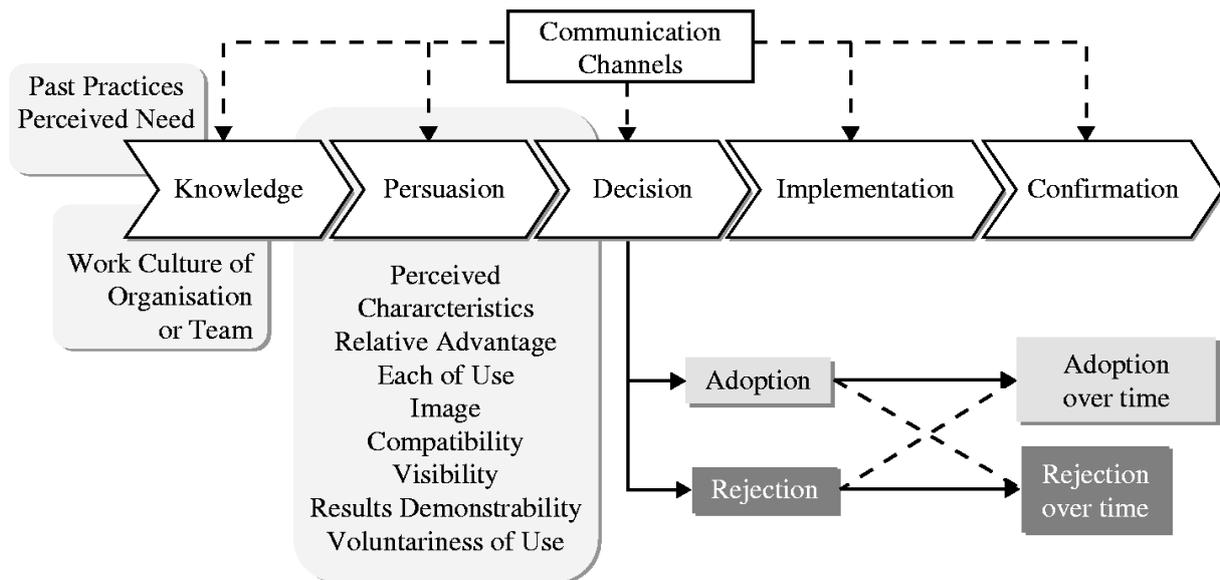
The transition from a traditional course that includes face-to-face sessions to an online course is not a simple process for lecturers attempting to use it for the first time. They have to cope with many questions (Parthasarathy & Smith, 2009) relating to the preparation of learning materials, integration of video-films (Birch & Burnett, 2008), providing assignments, follow-up of assignment performance, assuring that learning is authentic, exposure before a broad audience, forum management, accessibility for students and online administration of a final exam. Online courses are more student-oriented and focus on the student's performances throughout the course, often they are not required to complete a final exam (Berge, 1998; Schifter, 2000).

There are two very different approaches to online course development. The first approach – the 'lone lecturer' advocates imposing the full burden of responsibility on the lecturer, giving him/her academic freedom to develop the online course (Chapman & Nicolet, 2003). The second approach – the 'team approach' proposes that the course lecturer is responsible for course contents but he/she works with a team who take care of additional aspects of the course relating to teaching methods, evaluation strategies, and managing the technological environment in which the course operates (Hixon, 2008). Instead of choosing one of these extremes, colleges usually choose an intermediate approach.

The intermediate model aims to deal with questions relating to the development of online courses by establishing a support unit for lecturers who are new to the concept of online teaching. This unit should provide different resources to assist lecturers when they develop learning materials for an online course, provide instruction about the environment for online courses and the means to create video, and discuss different pedagogic issues with them regarding course management including methods to enhance student involvement in the course, and the evaluation of their performances. Thus, transition to an online course becomes a joint effort by different parties (Hixon, 2008), in which the lecturer still holds the major role. Managing such a team is a more complex project than managing a traditional course by a 'lone lecturer'. Moreover, the learning process and its evaluation need constant quality control (Holsombach-Ebner, 2013).

Promoting online courses in academia

The increase in college lecturers' willingness to teach online courses has been examined in many studies. Several models have been developed to illustrate the way in which innovation in general and new teaching methods and ideas in particular can filter into academic education (Dooley, 1999; Hall, Wallace, and Dossett, 1973; Rogers, 2003). The most predominately cited model is that of Rogers (2003). According to this model lecturers tend to adopt teaching innovations according to a series of stages: knowledge, persuasion, decision, implementation and confirmation (see Figure 1).



Source: Rogers (2003)

Figure 1. Rogers' diffusion of innovation model

At the stage of encountering and becoming familiar with the innovative elements in online course, decision-makers/lecturers examine the possibility of continuing to explore or stop investing efforts to understand the significance of the product. This decision depends on the lecturer's character including their academic background, personality variables and communicational behaviour and characteristics of the lecturer's work environment (Rogers, 2003). The stage of familiarization with knowledge concerning online courses also includes administrative aspects relating to the support available for lecturers willing to try online teaching. Evaluation of online courses at this stage should also include assessment of their influence on the target population, the students, for whom they are preparing the online course.

At the persuasion stage the advantages are weighed against the disadvantages of online courses in comparison with traditional courses. Additionally, the scope of complexity of online courses should be considered and the efforts that the lecturer will have to invest in order to learn innovations of this type of teaching, including the technology involved in online teaching.

At this stage a college that is interested in integrating online courses should invest efforts to prepare workshops for lecturers, with demonstrations and practical experience of online courses and the necessary technology and teaching methods (Shea et al., 2003). The college in which the present study was conducted is now at this stage. Several courses were held in which online courses were demonstrated and three 'innovator' lecturers began to integrate elements of online courses that could serve as the foundations for blended courses.

The college where this study was conducted has approximately 400 lecturers, including 98 staff members. The lecturers are exposed to online courses in various institutions. This exposure has increased especially after the proliferation of MOOC courses during recent years (Kop, 2011). These courses are open and free of charge to everyone (Allen & Seaman, 2013).

According to Rogers (2003), five factors influence the rate of adoption of innovation: relative advantage, compatibility, complexity, trainability and observability. A survey of online courses abroad indicates that they already attained a stage of maturity in the fields of technology and pedagogy a decade ago (Allen & Seaman, 2014). The adaptation of online courses to the needs of college lecturers poses several questions and these are the questions that the present study attempts to answer. Beginner online teachers and even those with experience in an online

environment see the operation of an online course with its particular teaching strategy as highly complicated. A lecturer who wants to teach an online course has to deal with many dimensions (Berge, 1998; Liu et al., 2005) such as: preparing and selecting learning materials, online pedagogy, course management, social activity, coping with technological problems, collecting and analyzing student assignments. The degree of accessibility of online courses can be judged according to two aspects: first - the student's ability to learn, and second - the ability to teach in this environment. With regard to the first aspect, MOOC courses have been available for the past two years and the college's lecturers have been sent information describing the possibilities of learning in these courses. With regard to the second aspect that deals with teaching, during the past two years courses have been held in the college concerning support systems for the operation of online courses, for example, for the development and management of online courses LMS (Moodle) and for the management of synchronous meetings (Elluminate). The research examined the extent of lecturers' willingness to teach when assisted by these systems.

Research questions

1. To what extent are college lecturers familiar with online courses?
2. To what extent are college lecturers willing to teach online courses?
3. How are the burden of preparation and teaching required for online courses seen in comparison to traditional courses?
4. How is the pedagogy required for online course teaching seen in comparison to the pedagogy required for traditional courses?
5. To what extent is there a difference between college lecturers' attitudes in principle and their attitudes in practice concerning online courses?
6. What are the characteristics of lecturers who tend to promote the integration of online courses in the college?

Research hypotheses

Relying on previous studies concerning online courses, we estimate that the attitudes of the college lecturers that we studied will be similar to the attitudes of lecturers in other institutions where these courses are not yet offered. We therefore hypothesized that:

1. Most college lecturers do not know how to teach online courses.
2. Most college lecturers estimate that traditional courses contribute more to students' learning than online courses.
3. Most college lecturers estimate that there is more difficult work involved in preparing online courses in comparison with traditional courses.
4. Most of the college lecturers estimate that the contribution of online courses to the college's reputation is marginal.
5. A connection will be found between college lecturers' attitudes in principle and attitudes in practice concerning online courses.
6. Lecturers who tend to promote integration of online courses in the college they teach will proffer fewer preconditions to the opening of such courses.

Research tools

In order to perform the research, an attitudes questionnaire was specially constructed. It included 22 statements relating to the research questions. The lecturers were asked to determine the extent of their agreement with these statements using a 5-point Likert-style scale where 1= 'definitely not agree' and 5 = 'definitely agree'. The questionnaire also included two questions that aimed to identify the conditions under which the lecturers would agree to teach online courses and the assistance that they expected to receive.

The reliability of the questionnaire was tested and it was found that the overall value of Cronbach's α for the whole questionnaire was 0.822. The questionnaire items were divided according to four areas of consideration. The division into four areas was performed with the assistance of two content experts and was performed after factor analysis; the results appear in Table 2. The questionnaire underwent content validation by four experts in the field of online teaching. After receiving their remarks and changing the composition of eight items, the experts were asked to reassess the validity of attitudes that appeared in the questionnaire. Only items agreed to by three out of four experts were included in the questionnaire's final version.

Table 2: Division of the questionnaire items into areas of consideration and levels of reliability for these areas according to Cronbach's α

Number	Area of consideration	Items	Reliability according to Cronbach's α
1	Knowledge of online courses	,2 ,1	0.627
2	Willingness to learn and burden of online course preparation	,16 ,8 ,7 ,6 ,5 ,17	0.714
3	Influence of online courses on college's reputation	14 ,12 ,4 ,3	0.853
4	Online course pedagogy	,15 ,13 ,10 ,21 ,20	0.762

Area 1 – examined the extent of the lecturers' familiarity with the online courses. Items investigated whether the lecturer had studied in online courses as a student, and whether they knew how to run an online course.

Area 2 – examined to what extent the lecturers were willing to teach online courses, and to what extent they felt that a burden of preparation for these courses would be imposed on them.

Area 3 – examined the lecturers' perceptions of the influence of integrating online courses on the college's reputation and the importance that lecturers attribute to inclusion of these courses in the college.

Area 4 – examined lecturers' attitudes concerning the teaching methods for online courses.

After the findings were obtained, reliability testing revealed that there was another division within the questionnaire, into two parts, each of which included 11 items.

Part 1: The questionnaire "support of online teaching" – this part included items that investigated the extent of the lecturers' support in principle for online teaching, relating to the advantages and disadvantages of online teaching, in terms of pedagogic suitability (10, 13, 15, 21), the effect on the college's reputation (3, 4, 12, 14), and the lecturer's willingness in principle to teach online courses (5, 8, 11). This questionnaire received a Cronbach's α value of 0.92.

Part 2: The questionnaire “personal perceptions” – this includes items examining the lecturer’s personal preferences concerning the practice of online teaching (7, 9, 16, 17, 18, 20, 22) and their beliefs concerning the extent of their personal suitability for online teaching (1, 2, 6, 19).

The research population

The research questionnaire was administered to 400 lecturers in an academic engineering college in the North of Israel. 137 lecturers completed the questionnaire, a response rate of approximately 33%. This is a relatively high proportion of responders in comparison to similar studies in the past (Schonfeld & Housewright, 2010).

Results

Table 3 presents data relating to lecturers’ attitudes for each of the above-mentioned areas – means and standard deviations are also shown here to facilitate identification of trends in their’ attitudes. In order to examine these attitudes in greater detail, responses to the questions in each of the areas are also presented below the table.

Table 3: Four areas examining the lecturers’ attitudes towards online courses

Number	Area of consideration	N	Mean	SD
1	Knowledge of online courses	129	2.59	1.07
2	Willingness to learn and burden of online course preparation	132	3.70	0.67
3	Influence of online courses on college’s reputation	135	3.51	0.91
4	Online course pedagogy	134	3.38	0.78

Knowledge of online courses

The extent of the lecturers’ knowledge concerning online courses was examined by two questions. The first question dealt with familiarity with online courses. The results appear in Figure 2, which shows that 73% of the lecturers do not have knowledge concerning how to conduct online courses. Only 10% of the respondents gave positive responses to this question. The second question dealt with lecturers’ past experience of online courses as learners (when they were students). Here the picture is slightly different: only 12% of the lecturers answered negatively, while approximately 63% gave a positive response. In other words, most of the lecturers had experience of online courses when they themselves were students but they did not know the process of how online courses are constructed and managed.

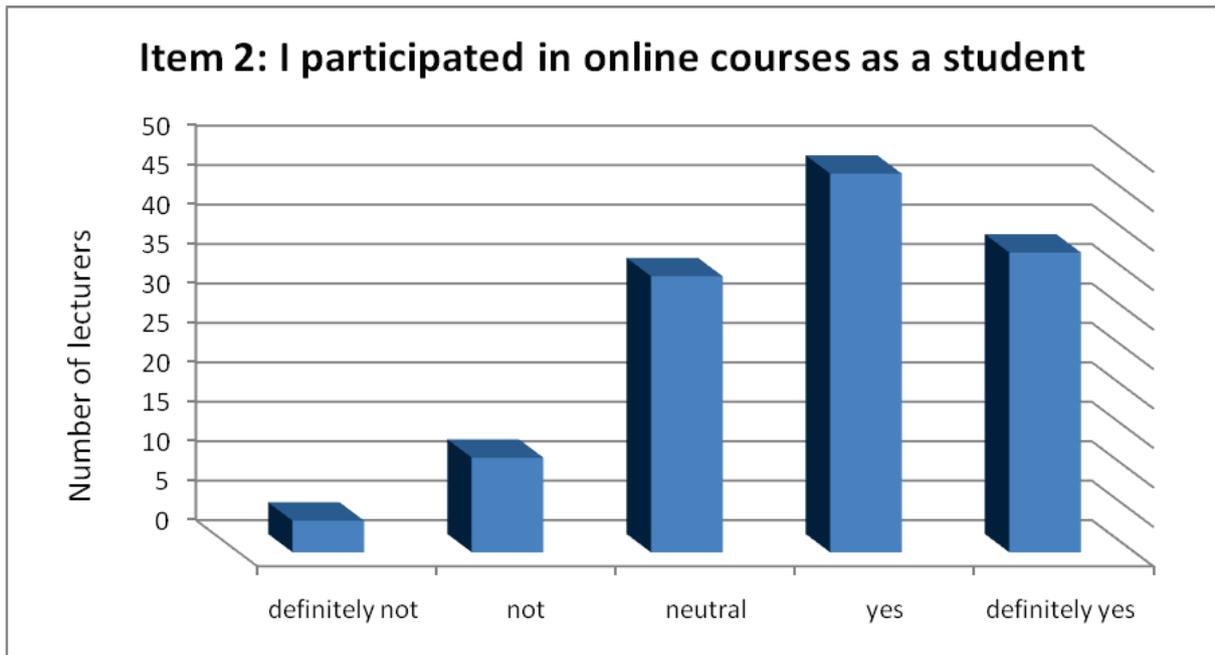


Figure 2. Lecturers' level of knowledge concerning online courses 73% agreed with the statement 10% disagreed.

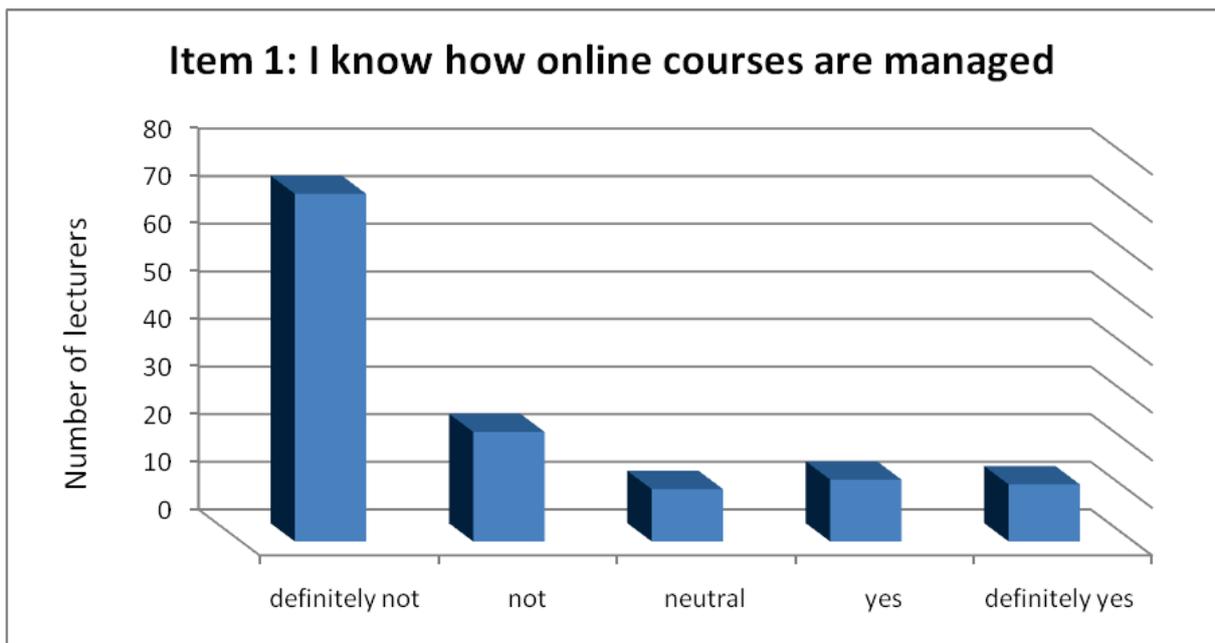


Figure 3. Lecturers' level of practical experience of online courses 63% agreed with the statement, 12% disagreed.

A medium level positive Pearson correlation was found between the lecturers' previous knowledge concerning online course management (Item 1) and the level of their previous practical experience of online courses as students (Item 2): $R(130) = 0.467$ $P < 0.0005$.

Willingness to teach online courses

The extent to which the lecturers' level of knowledge influences their willingness to teach online courses can be deduced from the lecturers' attitudes regarding Item 5 that examined the extent of their willingness to teach online courses in the college.

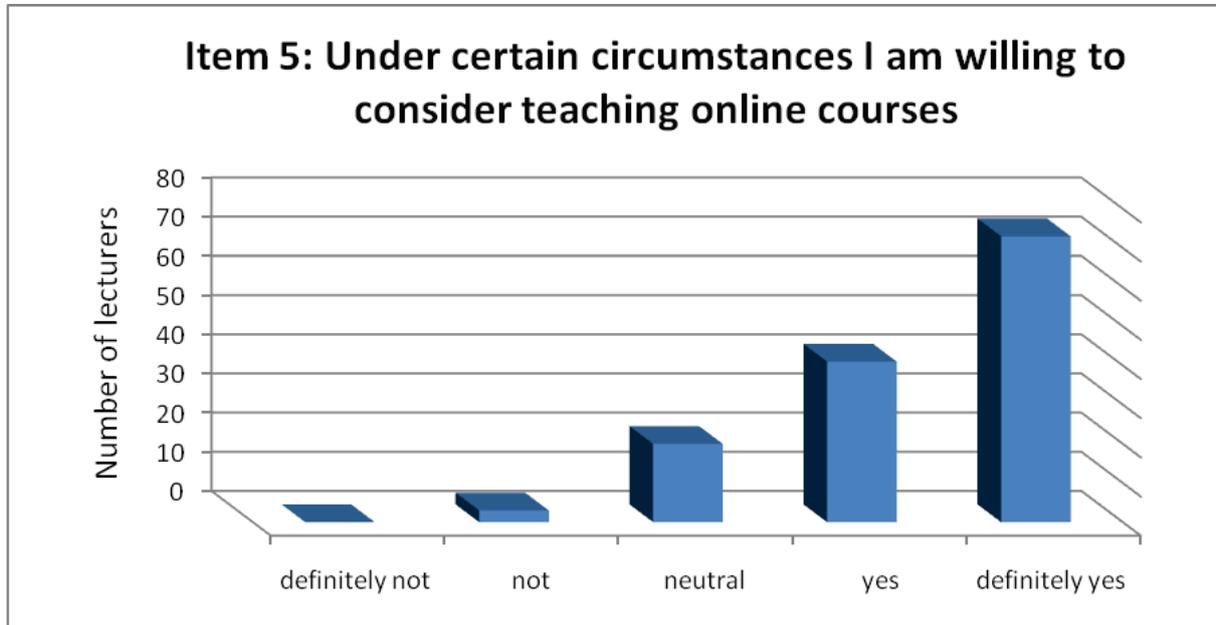


Figure 4. Lecturers' attitudes regarding willingness to try online courses 83% agreed with the statement 2% disagreed.

A weak positive Pearson correlation was found between the lecturers' experience of online learning as students (Item 2) and their willingness to teach online courses (Item 5): $r(130) = 0.281$ $P=0.001$. The lecturers' estimation of the burden of time that preparation of an online course imposes on the lecturer was examined by Item 6. The findings indicate that the large majority of the lecturers (84%) believed that they did not have sufficient time to develop an online course. No significant correlation was found between lecturers' attitudes concerning the burden of time for preparation and responses to the above-mentioned items.

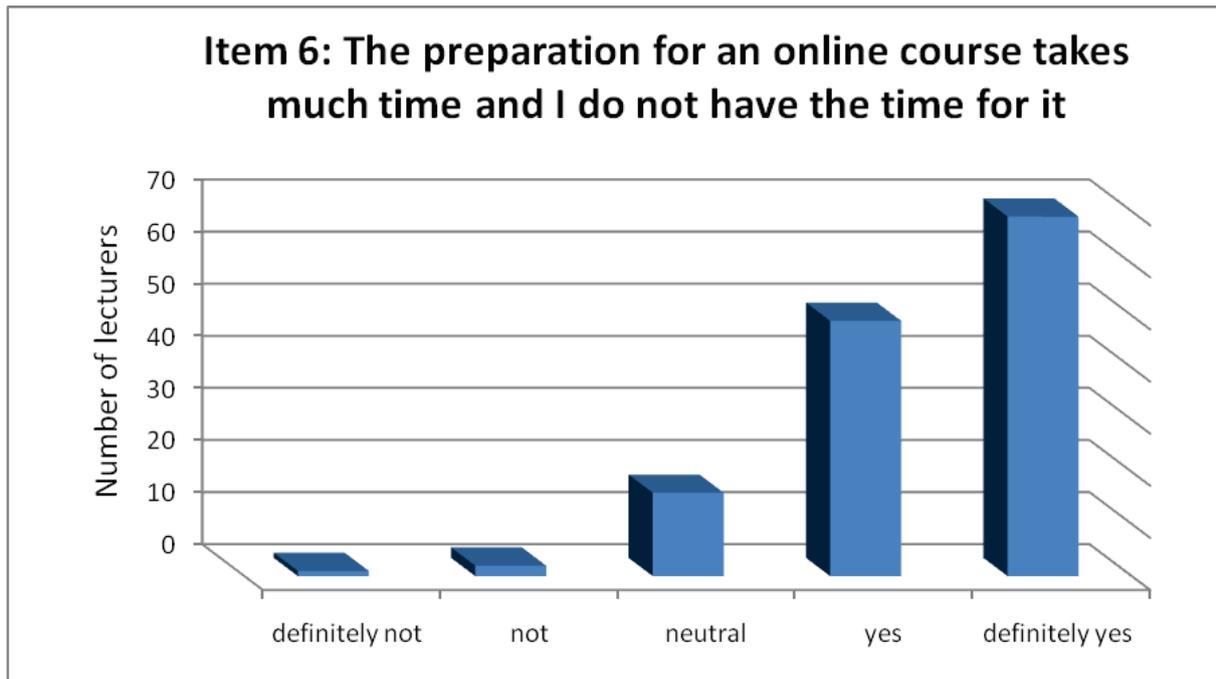


Figure 5. Lecturers' attitudes regarding willingness to prepare online courses

84% estimated that they did not have time to prepare an online course, although 2% did not agree that a burden of time was necessary to prepare an online course.

The influence of online courses on the college's reputation

In many educational institutions online courses are seen as contributing to the institution's reputation as a progressive organization using up-to-date technology and teaching and adopting itself to the reality in which students act. In order to identify the college lecturers' attitudes concerning this point they were asked five questions in this category. The responses to two of these questions are detailed below.

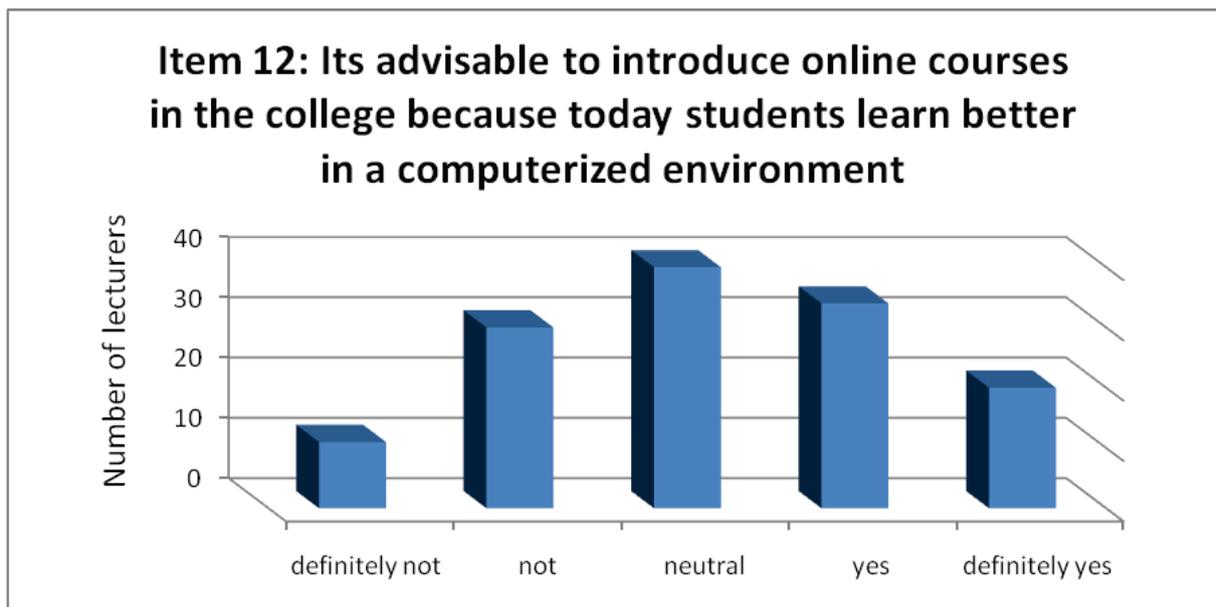


Figure 6. Lecturers' attitudes regarding importance of introducing online courses

The distribution of the lecturers' attitudes in relation to this item was close to a normal distribution: $SD=1.17$, $M=3.16$. Approximately 20% opposed the statement and 39% supported it.

The lecturers disagreed with regard to their consideration of the influence of online courses on the students' learning style. On this issue there was almost a balance between lecturers who felt online courses were important since they could be adapted to suit the students' learning style (Figure 6). In contrast, most of the lecturers believed that online courses had a positive influence on aiding students to deal with the environment that they will apparently face when they complete their studies (Figure 7). A high Pearson correlation was found between lecturers' willingness to teach online courses (Item 5) and their support for the introduction of online courses in the college because of their suitability for the students (Item 12), $R(135) = 0.547$, $P < 0.0005$. Another high Pearson correlation was found between lecturers' attitudes regarding Item 12 and their attitudes concerning the contribution of online courses to student skills (Item 14), $R(137) = 0.614$, $P < 0.0005$.

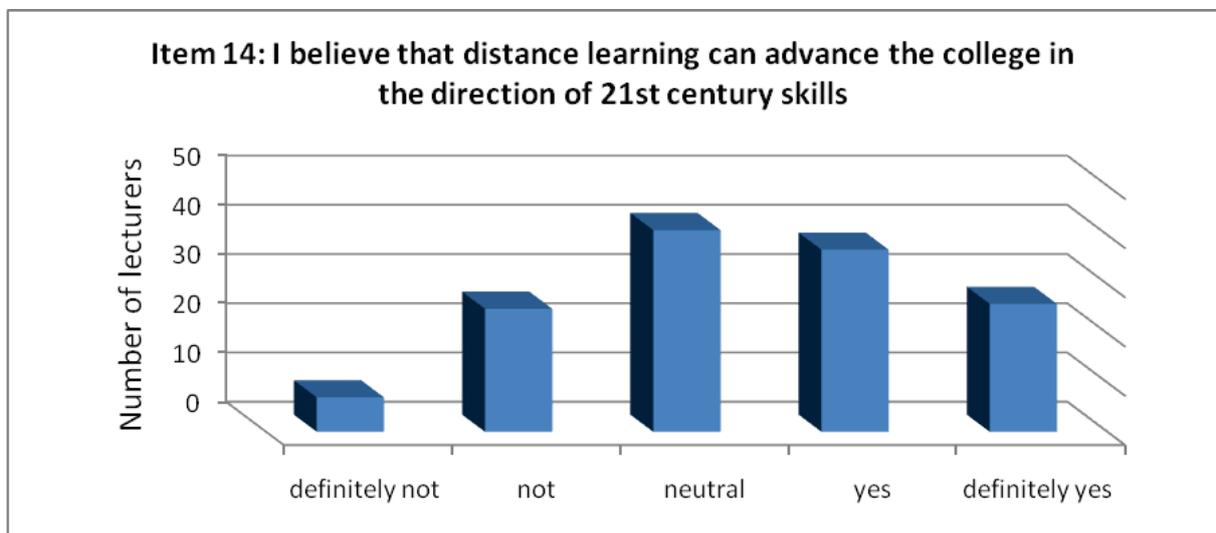


Figure 7. Lecturers' attitudes regarding the influence of online courses on student skills approximately 23% opposed this statement and 46% supported it.

Pedagogy of an online course

One of the serious difficulties that may deter lecturers from adopting online courses are the lecturers' academic level and quality of teaching/learning in comparison with the teaching/learning in a traditional course. The results concerning this issue related to Items 13 and 15 and appear respectively in Figures 8 and 9.

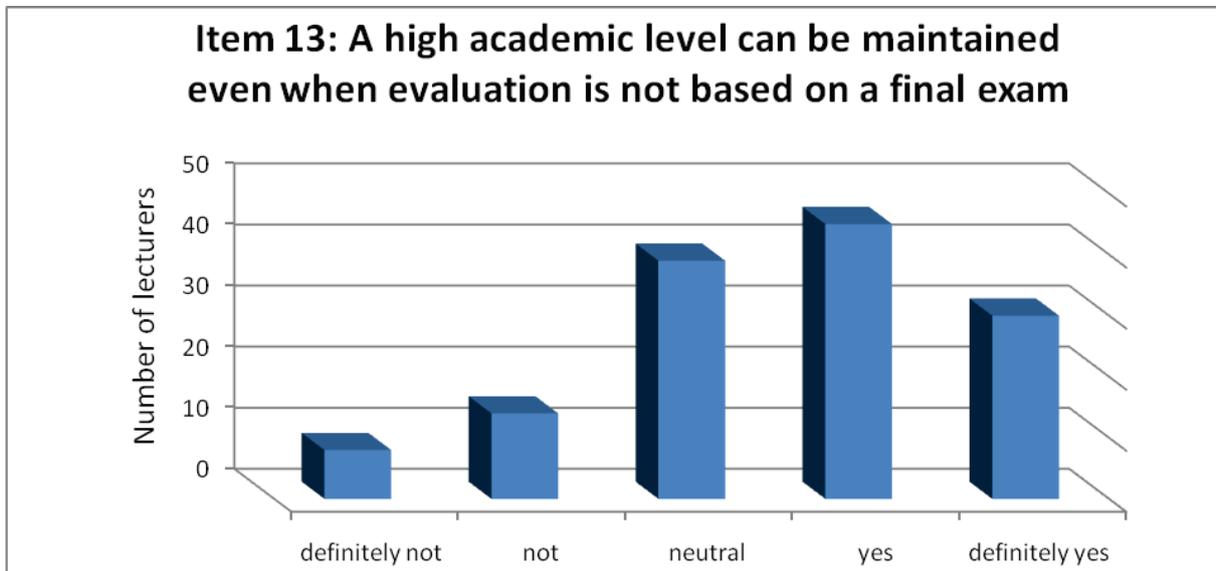


Figure 8. Lecturers' attitudes regarding the quality of learning in online courses 16% opposed this statement while 50% supported it.

A high Pearson correlation was found between responses to Item 13 dealing with the academic level of online courses ($M=3.55$, $SD=1.12$) and Item 14 dealing with the contribution of online courses to the development of 21st century skills, $r(136) = 0.559$, $P<0.0005$. These data indicate that most college lecturers have no objection in principle to the introduction of online courses in the college in terms of their academic level or contribution to the students.

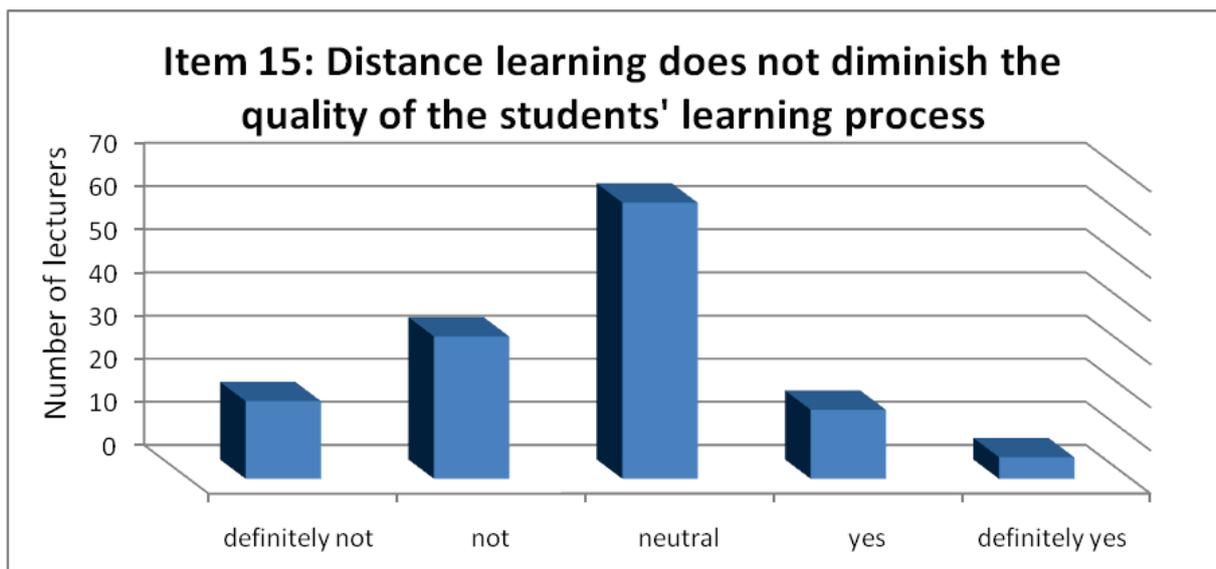


Figure 9. Lecturers' attitudes regarding the quality of learning in online courses. Approximately 38% did not agree with this statement and 15% agreed. There was an outstandingly high percentage of lecturers who expressed a neutral attitude (47%).

Lecturers' support for online teaching

Analysis of the responses to the research questionnaire revealed that most of the college lecturers tended to have a positive attitude towards online teaching. A minority of the lecturers (21%) expressed resistance to online teaching. Strong support was especially identified (Mean grade of more than 4) for 24% of the lecturers (Figure 10).

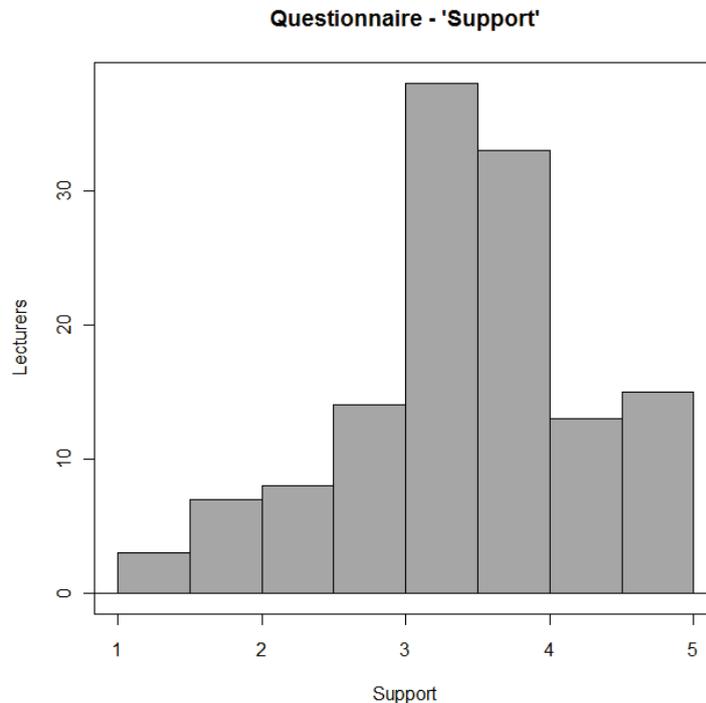


Figure 10. Lecturers' grades for the item relating to support for online teaching

Personal attitudes and statements by those lecturers who support online teaching

Examination of the correlation between lecturers' level of support for online teaching and their personal attitudes and statements yielded the results that appear in Table 4. The highest correlation was received for the demand for a teaching assistant as a condition for performing online teaching ($R(129)=0.54$, $p<0.0005$). In other words, insofar as lecturers agreed with the demand for a teaching assistant as a precondition they then expressed a need for more support for online teaching. A relatively high correlation was also found between the demand for professional assistance for video-filming and support of online teaching ($R(127)=0.47$, $P<0.0005$). A similar correlation was found between the preference for a-synchronous teaching and support for online teaching ($R(129)=0.46$, $P<0.0005$). Additionally, Pearson correlations were tested between the lecturers' level of support for online teaching and mean grades for three items (17, 18 and 20) and a high Pearson correlation was found ($R(127)=0.67$, $P<0.0005$). In the investigation that we conducted through linear regressions to see to what extent some personal attitudes and statements predicted support for online teaching, high correlations were found for three statements, explaining 46% of the difference in support for online teaching. The rest of the statements did not make a significant contribution beyond these three statements.

Table 4: Pearson correlations between questionnaire grade for “support for online teaching” and personal attitudes and statements

Item no.	Statement	Pearson correlate	p. value	df
18	If I perform distance teaching I expect to be assisted by a teaching assistant	0.54	<0.0005	129
17	I'm willing to be filmed and to teach one of my courses by distance teaching only if I receive support from professional staff	0.47	<0.0005	127
20	If I perform distance teaching I prefer to teach with an a-synchronous (not simultaneous) method	0.46	<0.0005	129

Discussion and Conclusions

Despite the proliferation of online courses over the past decade in many higher education institutions in Israel and abroad, most of the lecturers in different colleges in Israel still adhere to face-to-face teaching. The reluctance of lecturers in a college of engineering to undertake online teaching was examined in this paper. All the studied lecturers work in a Moodle environment and manage sites that accompany their face-to-face courses. Nevertheless, they do not exploit Moodle for online teaching. The study identified several reasons for this reluctance:

1. Lack of knowledge concerning teaching methods for online courses
2. Fear of a heavy work burden
3. Negative estimation of the influence of online learning on student achievements
4. Damage to the college's reputation as a result of integration of online courses in the learning program.

All these reasons correspond with the research hypotheses. The research findings indicate that 63% of the respondents are familiar with online courses, which they came to know as students, but only 10% of them know how online courses are run.

The lecturers' attitudes indicate that there is a difference between their experience as learners and their perception of the work of a teacher in an online course, including their perception of the complexity of online teaching. This difference is a meaningful factor for the lecturers' reluctance to teach online courses. Confirmation of this perception can be found in the lecturers' consideration of the burden of work required from a lecturer who wants to prepare an online course. Approximately 84% of the respondents estimated that preparation of an online course would require very much work and they could not devote the necessary time to this goal. This attitude was reinforced in light of the fact that 83% of the respondents expressed their willingness to teach an online course subject to certain conditions. The gap between their willingness in principle and the practical excuse that negates this willingness leaves only 2% of the respondents (3 lecturers) who were willing in principle and in practice to begin to teach online courses.

It is interesting to compare the estimations of lecturers in 2,800 educational institutions in the USA concerning the extent of the burden of preparations needed for online courses relative to preparations required for traditional courses (Allen & Seaman, 2013). It appears that 44.6% of the lecturers in these institutions believe that the burden of preparation for an online course is greater than that required for a regular course. 45.7% voiced a neutral response and only 9.7% opposed this determination. In other words, even among experienced persons, and not only among

beginners, there is a tendency to estimate that the burden of work that the lecturer needs to invest to prepare an online course is greater than that necessary for a traditional course.

Most of the studied lecturers hesitate to take a stand regarding the influence of online courses on the quality of learning, despite the fact that they had experienced online courses as students. Of those lecturers who were willing to state their attitude, 38% believed that online courses would harm the quality of learning, and this is an additional reason that explains the avoidance of this type of teaching by college lecturers. In a survey conducted in USA (Allen & Seaman, 2013) only 23% of the lecturers felt that online courses were inferior in comparison with traditional courses. But among lecturers in institutions that do not offer online courses this percentage grew to 55.8%. In other words, evaluation of the importance of online courses decreased among lecturers who had not yet taught them.

How can lecturers be helped to overcome their fear of teaching online courses in the college that we studied? We estimate that adoption of a team approach would help to resolve this matter. According to this approach, the course lecturer would have responsibility for the course contents, but in addition, there would be a college staff that would take care of additional aspects of the course such as: teaching methods, evaluation methods, and management of the technological environment in which the course is conducted (Hixon, 2008). It would be advisable for the college to initiate the establishment of a special centre to support those lecturers willing at this stage to begin to undertake online teaching, who would act as the 'innovators' for this project (Rogers, 2003). It is recommended that the college should examine the possibility of compulsory participation in at least one online course, as part of the course requirements for students during their studies for an academic degree.

According to Rogers (2003) at the persuasion stage major considerations include the advantages and disadvantages of online teaching, and the efforts required from the lecturer in order to absorb the new technologies. The research questionnaire investigated the lecturers' attitudes concerning principle and practice of the online courses at the persuasion stage. It was found that 21% of the respondents supported the introduction of online courses. This finding testifies to the existence of a core group of lecturers who are willing to enter the field of online teaching – 'innovators'.

In our opinion, a college that wishes to develop the field of online teaching should focus on this group of 'innovators'. It should concentrate on fulfilling the needs of the 'innovators' who are likely to bring about the change to online teaching. Understanding the attitudes of those lecturers who support online teaching, especially with regard to its practical aspects, is decisively important in order to advance online teaching in the college. The research revealed three practical aspects seen as extremely significant among those who supported online teaching:

1. A demand for a teaching assistant – no significant attitude was found among the lecturers concerning this issue ($M=2.99$, $SD=1.17$). Nevertheless among lecturers, who supported online teaching a more positive attitude was identified concerning this issue, refuting the sixth research hypothesis. Thus it seems that it is actually the lecturers, who support online teaching in principle, who tend to set this condition – the need to have a teaching assistant.
2. A need for professional help in video-filming – video-films are likely to provide a partial response to lecturers' problem of lack of time for course preparation. In cases where a traditional course is transformed into an online course, filming can be conducted during the delivery of the traditional course, so that seemingly, the lecturer would not be required to make any special efforts. This attitude, like the one mentioned in the previous clause, refutes the sixth research hypothesis.

3. The a-synchronous teaching method – the advantages of this teaching method lie in the fact that it frees both students and lecturers from being present at a fixed time, as required in traditional teaching or synchronous teaching. The ability to teach and check assignments at a time that suits the lecturer's constrictions was perceived as an advantage by the 'innovators' and is likely to advance the development of online teaching in the college. This condition, like the previous two, also refutes the sixth research hypothesis.

The impression that emerges from the findings is that those who support online teaching in the college are well aware of the difficulties they face in developing an online course. In our estimation, after beginning this type of teaching, attitudes will alter concerning these difficulties and the burden that online courses create (Allen & Seaman, 2014). At the initial stage, when changes in teaching methods are introduced, the difficulties are at their peak. At this stage, understanding the reasons for the lecturers' reluctance and responding to the different directions open for solutions according to their suggestions may help to advance online teaching in the college.

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