OPTIMAL TEACHING AND LEARNING PRACTICES IN ONLINE MULTIPARTICIPANT COURSES

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ABSTRACT

Recently, colleges have begun to employ online learning courses for multiple participants. Consequently, students need to master online learning skills. To improve this teaching model, this study investigated the considerations and teaching patterns of two lecturers in the same multiparticipant online courses: 102 students in one course and 70 students in the second. The students' learning patterns and preferences were also investigated, especially the preferences of students with learning disabilities, the time they invested in learning, their insights, and their level of satisfaction with teaching-learning methods. Data were collected from in-depth interviews with the lecturers, a questionnaire for all their students, ten semistructured interviews with students at the end of the course, and the course forum correspondence and the course blog. Questionnaire responses underwent quantitative analysis with SPSS software. Interviews and responses to open questions underwent qualitative content analysis. Thematic categories were produced from data from the forums and blogs. The findings show a preference for small groups within the multiparticipant course, fewer targeted messages from the lecturer, and fewer multiple messages from colleagues. Both lecturers' and students' visibility and social presence improved in small groups as did the students' commitment to learning. However, in the large group, multiplicity of participants was advantageous, creating a large community of learners rich in "mass wisdom," but this required different course assignments and communication practices. Replacing less successful elements in each model (small groups vs. one large group) with more successful elements produces optimal teaching patterns for multiparticipant online courses and opens up further research.

Keywords: Online course, multiparticipant courses, small groups, evaluation methods, peer evaluation

INTRODUCTION

Online teaching is influenced by the Constructivist teaching approach (Reid-Martinez, & Grooms, 2018) and its diffusion in education, and it is part of the "information explosion" that characterizes the present democratization of online knowledge. In online teaching it is possible to identify the potential to motivate students during the course and increase their active participation in learning. This intensive activity has a major influence on the learning experience of students in an online course, while in turn it is influenced by the characteristics of online learning, the teaching style and teaching model of the instructors, and the characteristics of the system within whose environment the learning takes place. This study sees online learning as an opportunity to more profoundly apply the Constructivist approach to

instruction while exploiting the advantageous characteristics of online learning.

The transition to online teaching in higher education institutions is a growing trend. Students need skills that will enable them to learn in online environments in order to function successfully (Cleveland-Innes, Garrison, & Kinsel, 2007). In teaching an online course, it is important to allow the students to enjoy investigative dialogical and experiential teaching and to expose the learners to pedagogic applications and learning strategies that will improve their life in future (Campbell, 2018; Dabbagh, 2007).

The exposure to online applications and having experience using these applications in the course helps the learners function better in a technological environment in the course and outside the classroom. Advanced technologies also influence the design of a learning environment and enable participants to learn in an entirely online environment. These possibilities alter the roles of the lecturers and the students in an online environment and necessitate reexamining those roles. The challenge is even greater in a multiparticipant online course, in which there is a need to mediate the gap between the digital reality and classroom sessions while offering various experiences and activities over the course and responding to a large audience of learners (Kritz, Shonfeld, & Gujski, 2015).

This present study aimed to identify the teaching practices of two lecturers in two offerings of an online multiparticipant course entitled Teaching and Learning in Online Environments. The subject of the course is the use of technology in teaching and learning, and the students are required to present weekly assignments. The research elicited the lecturers' considerations and the advantages and disadvantages of different teaching practices and their influence on the students' learning. It also aimed to understand the learners' preferences regarding different learning practices and teaching practices, their insights, and the level of their satisfaction regarding the teaching methods and other means employed by the different lecturers in the course. To elicit this information, the researchers used questionnaires, teaching reviews, course products such as blogs and discussion groups, and interviews with teachers and students. The research findings served

as the foundation for discussion on the subject of the assimilation of online courses, and especially multiparticipant courses, as part of the learning program in a teacher education college—a subject that is controversial today.

THEORETICAL BACKGROUND AND LITERATURE REVIEW

Types of online teaching

Online teaching uses a variety of Internet technologies, such as Internet-assisted face-to-face teaching using different BYOD (Bring your own Device) models (Song, 2016) and teaching that combines synchronous tools and distance learning conducted asynchronously in an LMS (Learning Management System) (Auster, 2016). Asynchronous distance learning optimally exploits the online environment to overcome the limitations of time and location for learning activity and the techno-pedagogic ability of the system for learning administration (Croxton, 2014).

Models of online teaching

The changes involved in the transition from face-to-face teaching to Internet-assisted teaching offer a variety of models for the implementation of Constructivist teaching (Seifert, 2017; Weller, 2011), for example Bloom's taxonomy (Bloom, 1956) and the SAMR model (Puentedura, 2011). In online learning the role of the lecturer changes and a significant portion of the responsibility for collecting information, evaluating sources, consolidating ideas, and presenting them transfers to the learners (Kop, Fournier, & Mak, 2011). The teachers store the knowledge and guide, enabler, and support the learners and shares information with them (Downes, 2010; Siemens, 2008). In a changing reality it is important to focus on the creation of a learning environment that encourages interpersonal relations and valuable learning experiences (Shedroff, 2009). This development of the teachers' role, and especially the interaction between the teacher and the learners, is one of the challenges for the new pedagogy that uses technological applications and online teaching models.

Using these strategies, lecturers need to take care to tightly construct the course contents while providing a space for the students' activity. They need to provide authentic assignments for

the learners' work, vary the contents and find high quality sources, empower the students' ability to manage their studies, give feedback within a reasonable time, appoint skilled teaching assistants, encourage interpersonal communication, and maintain regular weekly contact with the students (D'Agustino, 2016). Web-based Instruction (WBI) enables self-regulated and self-paced learning, corrective instruction, planning of defined learning systems, and expansion of the learning process through discussion groups (Tobin, & Kesselman, 1999).

Online learning is mainly built around written communication, which has the power to be more calculated and profound than oral communication (Fedynich, Bradley, & Bradley, 2015). The reason for this is that writing skills require coordinating complex cognitive processes including five aspects: 1) communication and the goal of the writing, 2) development of content, 3) genres and conventions, 4) sources, and 5) composition. Each of these aspects of the writing process are goal oriented and require consideration and regular editing by the writer (Sparks, Song, Brantley, & Liu, 2014).

Learners' attitudes on online courses

Interest in the online environment has grown rapidly, and this reveals the attitudes of the participants, since the attitudes of learners in this environment are tightly connected to the online interaction. A lack of interaction creates a sense of isolation, and this increases the probability of dropout from online courses or a lack of student success for these courses (O'Shea, Stone, & Delahunty, 2015; Shelton, Hung, & Lowenthal, 2017). The online learners' experiences have been investigated in qualitative research that uses methods that increase interaction in the course, including the use of online sites based on collaborative assignments that encourage sharing and working together. One study compared a group of learners in active, interactive collaboration to a second group where each learner studied alone. It was found that in both groups participation was influenced in the online environment by learning-related factors such as personal attitudes, changes in the learner's personality-related variables, and mediated characteristics such as learning preferences and styles (Ozaydin Ozkara & Cakir, 2018). This study investigated optimal teaching

practices in online multiparticipant courses and examined students' attitudes regarding different components of the online courses that reflect the different teaching practices studied here. A central component that influences the attitudes of the learners in online courses is their learning characteristics.

The research literature indicates that it is important to consider the special needs of students participating in online courses for the first time and the needs of students with learning disabilities and to design the online course according to pedagogical considerations and Universal Design Rules (UDL) (Alamri & Tyler-Wood, 2017; Galusha, 1998; Scott & Temple, 2017). Apart from the quality of the course's design, the learners' attitudes are also influenced in many cases by the quality of interaction with the course. Research has shown that learners who receive feedback felt that the instructor demonstrated concern towards them (Portolese Dias & Trumpy, 2014; Seifert, 2017).

Learning disabilities

Learning disabilities are diagnosed when the achievements of the individual in standardized reading, mathematics, or writing proficiency are significantly lower than is expected when considering the individual's age, education, and IQ. Learning disabilities have a significant impact on academic achievement or on daily tasks that require reading, mathematics, or writing (American Psychiatric Association, 1994, pp. 143–146). In online learning, the mode in which materials are provided is particularly important when it comes to students with learning disabilities. In such cases, in the absence of face-to-face meetings, it is particularly important to be mindful of the students' disabilities and learning preferences. Students with learning disabilities can benefit greatly from online learning because this mode of learning can be more easily adapted to the individual's pace, needs, and preferences.

The number of students with learning disabilities is steadily increasing and constitutes approximately 3% of all students in higher education institutions in Israel (Heiman & Precel, 2003). Including varied teaching settings can help respond to the learning styles required for these students. The advantages of an online course are that it can encourage and serve as a

key to acquiring independent learning skills (Armstrong, 2000), and it has the advantages of using digital text, rather than printed matter, that can be adapted to the needs of all students (O'Neil, 2001). These advantages are especially relevant for students with learning disabilities who need comfortable instruction online (Hill & Burger, 1999) and who have learning disabilities and difficulty demonstrating knowledge. The ability used during reading from printed materials and writing on forms is facilitated by reading and writing from the same screen (Shiah, 1994).

Dividing students into groups in an online multiparticipant course

The research indicates that group work advances academic achievement (Slavin, 1991). When learners in online courses have previous experience of group work and believe that group work is important, they also express more satisfaction towards the group work in the course (Hillyard, Gillespie, & Littig, 2010; Johnson and Johnson, 2009; Lee, Ngampornchai, Trail-Constant, Abril, & Srinivasan, 2016; Phipps, Phipps, Kask, & Higgins, 2001). Group work also is effective when there is trust among the members of the group and when the group has a common goal and a positive and constructive interpersonal dependence that enables the group members to express their opinions, participate in discussions, and challenge each other's thinking (Johnson & Johnson, 2009; Slavin, 1991).

When using group work in online teaching, it is recommended to give students assignments composed of several parts instead of one large assignment so that members can work on different parts of the assignment (Lee et al., 2016). Defining the goals of the collaborative work and the expected learning outcomes is also important. Collaborative work in small groups facilitates a better understanding of the studied materials (Gaytan & McEwen, 2007) and a more egalitarian contribution by all members of the group (Finegold & Cooke, 2006). Work in small groups in online learning contributed to a better learning experience than was enjoyed by learners in face-to-face teaching (Springer, Stanne, & Donovan, 1999), and it seems that students prefer working in small groups to working in large groups (Brindley et al., 2009).

In order to solve this problem and allow students a more intimate experience in small groups in the multiparticipant courses examined in the present study, it was proposed to divide the learners into small work groups to perform different assignments or even for the duration of the courses. This is a novel experience that took deliberation concerning the best way to assign people to groups, for example, should the students be able to choose to work with friends or should they be divided by interest or according to the learners' academic specializations/ There was also deliberation concerning the optimal number of members for a group.

Optimal number of members in a group

Social presence can be seen "as the degree to which a communication medium allows group members to perceive (sense) the actual presence of the communication participants and the consequent appreciation of an interpersonal relationship, despite the fact that they are located in different places, that they may operate at different times, and that all communication is through digital channels" (Lowry, Roberts, Romano, Cheney, & Hightower, 2006, pp. 633). Researchers have found that the optimal size of a group depends on the field of teaching and its goals, the size of the course, the extent of heterogeneity of the group, and the expected duration of its activity. A review revealed that teachers tend to teach groups of two to three participants when knowledge is to be applied in a new field, while they tend to teach to groups of seven to ten participants when learning new materials. It was also found that the quantity and quality of the interaction among group members differs depending on its size. In a few cases, it was found that from the learners' viewpoint, the optimal size of the group is up to three learners, while groups that have more than six learners hinder positive group work (de Hei, Strijbos, Sjoer, & Admiraal, 2016). The optimal number of group members can be determined by the group goals and the types of contribution expected from the group. Experience shows that a group of six participants is a good framework for completing collaborative assignments, creating effective cooperation, and building trust between group members.

Goal of this research and the research questions

This study compares teaching practices in two

online courses and aims to characterize optimal teaching practices in multiparticipant online courses. It seems from the literature review that teaching practices in online courses are influenced by mutual interactions between the lecturers' considerations and the learners' preferences concerning the different course components. Thus, the following research questions were considered:

1. What considerations do the lecturers take into account when planning a multiparticipant online course, and what are the distinct characteristics of planning for such a course?

2. What should be the optimal characteristics of learning management in a multiparticipant online course as expressed in practice?

3. What are the learners' preferences regarding learning practices in the course and its characteristics, and in what way is their sense of belonging to the group expressed?

METHODOLOGY

Participants

The research was conducted in a large education college in the center of Israel. Two lecturers participated in the study, both experts in the digital teaching field who were teaching two fully online multiparticipant courses. The pool for the sample included all the students who participated in the courses: 102 students in the first course and 70 students in the second course. The respondents were all students in Year 1 and 46 students (45%) were from the first course and 67 students were from the second course. Ninety-five percent of the respondents were women, their mean age 23.6 years, and 16% of the respondents had not previously been exposed to an online course, 43% of them had participated in one or two online courses, 35% had participated in three to four online courses, and 5% had participated in more than four online courses.

Research tool

The research paradigm employed a mixed-methods approach that combined both quantitative and qualitative data collection and analysis (Johnson & Onwuegbuzie, 2004; Keeves, 1998) and was assisted by the following instruments:

1. In-depth interviews: Interviews were conducted with the lecturers in the two courses at three different times. The interviews asked about the considerations that the lecturers used to choose the learning styles employed in the course. The interviews lasted one and a half hours on average and were recorded with the lecturers' consent.

2. The questionnaire: A specially developed questionnaire, that was validated by three experts on the use of technology in education was administered to the students. It included questions on:

   • the subject of several messages during the course (nine items; for example, "What was the total number of messages that you received from the lecturer each week over the course?");

   • the visibility on the course (three items; for example, "To what extent did you feel that friends saw what you did on the course?");

   • the consideration of the lecturer (three items; for example, "To what extent did the lecturer respond to student's requests?");

   • the amount of time invested (two items; for example, "The average amount of time per week that I invested in performing the course assignments.");

   • teaching and learning methods (two items; for example, "Which learning would you prefer?");

   • a sense of belonging (intended for the course that was conducted in small groups—eight items; for example, "Belonging to a small group contributes to a sense of intimacy in a multiparticipant course.");

   • the use of a forum for all the course participants (intended for the course that was conducted as a large group—two items; for example, "The use of one large forum over the course contributed to a sense of confidence in the ability to learn.").

The items were measured on a Likert scale from 1 (not at all) to 5 (to a large extent). The research goal was presented at the beginning of the research and the respondents were promised anonymity.

3. Semistructured interviews: Students were interviewed at the end of the course. Students who expressed their willingness to be interviewed for the research in the questionnaire were asked questions related to their perception of the course from a temporal perspective. Each interview lasted approximately twenty minutes.

4. Forums and blogs: Additional information was also elicited from the correspondence in forums and blogs where the students discussed the course contents and their learning experiences. These data were collected with the students' consent.

Issues and variables investigated in the research

As part of the research, various aspects related to the respondents' perceptions regarding online multiparticipant courses were examined. Here are details of the examined aspects.

Lecturers:

- the design of the course contents (extent of clarity and ease of comprehension, highlighting assignments);
- the lecturer's consideration (extent of availability and willingness to help, including the existence or nonexistence of a telephone connection, personal responses with compliments, and encouragement;
- correcting mistaken perceptions and publishing insights to a wide audience of all the learners;
- size of the learning group (number of members);
- the manner in which information is transmitted from the lecturer to the learners and from the learners to the lecturers or to their peers (publication on an open forum or personal blog visible only to the lecturer).

Students:

- learning disabilities (with disability or without disability);

- messages on the course (many or few messages from the lecturer to the learners and from the learners to their peers and the type of message and its timing);
- learners' accountability (the lecturer identifies learners with difficulties and turns to them rather than the learners keep themselves informed and up-to-date and to turn to the lecturer when they have difficulty);
- follow-up of studies (the lecturer follows up on the learners' progress and turns them in cases of late submission or nonsubmission of assignments rather than the learners follow up with the lecturer);
- the learners' extent of satisfaction regarding the lecturer's response to their questions;
- the sense of belonging according to the size of the group;
- the frequency of assignments;
- learning methods (preference regarding a fully online course in contrast to a hybrid course; and
- the extent of the learners' sense of visibility by the lecturer and by their peers during the course.

Research procedure

At the beginning of the research, preliminary interviews were held with the two lecturers. Each lecturer described this course and their teaching methods, and the findings from these interviews constituted the basis for the questionnaire. During the course an additional interview was held with each lecturer in which they spoke about the management of the course, the assignments, the interaction of the lecturer with the students, and the interaction between the students. Summarizing interviews were held at the end of the course with the two lecturers that asked about with their reactions to the findings. A discussion took place concerning the insights that emerged from their reactions and their intentions to learn from these findings. Subsequently the models were improved and recommended components from one model were introduced into the other model. The research questionnaire was administered online to the students towards the end of the course. Ethical research rules were observed

carefully throughout the research. The names of the lecturers were masked in the publication and the students responded to the questionnaire anonymously. The students received information about the research and were told that they were entitled to participate without any influence on their course grade.

Data analysis

Both qualitative and quantitative analysis were applied to the data. The responses to the questionnaire were analyzed with the assistance of SPSS software. T-tests were used to measure the independent variables for comparison between responses of learners in the large group and responses of those learning in small groups. Also, $\chi 2$ tests were conducted to compare the distribution of the learners' different characteristics in both formats. Content analysis was applied to the transcripts of interviews with the lecturers and to the students' responses to open questions in the questionnaire. Subject categories were elicited from the data on the forums and personal and collaborative blogs (Shkedi, 2004).

FINDINGS

Findings concerning the lecturers

Lecturers' considerations in planning the course and their preferences

The findings presented here relate to the lecturers' considerations regarding the planning of a multiparticipant online course, and the characteristics that they chose when planning the course, such as dividing the learners into small groups rather than one large group. They include characteristics of communication, such as how many messages to and from the lecturer to the learners or from the learners to the lecturers, the manner by which the lecturer transmits information to the learners and the learners to the lecturers and to their peers, the manner in which students are evaluated, the frequency of assignments, and the design of the course site. The findings detailed below were gleaned from analyzing the transcripts of interviews with two lecturers before the course began.

The different teaching practices of the two lecturers are presented in Table 1 as they relate

Table 1. Course Characteristics According to Two Teaching Samples

Course characteristics	One large group model	Small groups model
The approach underlying the course design	Communication in a large learning community enriches and encourages learning	Sense of belonging to the group and the emotional component encourage learning
Activity and participation	One forum for all the course participants	Small, closed, and permanent groups over the whole course
The lecturer's approach	Encourages a multiplicity of messages in electronic post about what is learned in the course and the forum is synchronous and more interactive	Few messages that are focused and short
Type of messages	Messages are a conversation on the forum	Course management through one-directional messages from the lecturer
Clarifications of content	On the community forum and in the learning unit	Mainly direct updating in the learning unit and to a slight extent in the lecturer's messages
Evaluation	Anonymous peer evaluation, group evaluation, and evaluation by the lecturer and teaching assistant	Anonymous peer evaluation, self-evaluation, and lecturer's evaluation
Personal communication	Conversation in a large forum, in the message system, in personal mails, and by telephone	Individuals writing on blog and messages for all the class. Interpersonal communication in the messages system.
Assignments	Weekly assignments	Weekly assignments
Site design	A fixed schematic structure with video, text as an alternative to video, and explanation in step-by-step video and in-text assignments	A fixed schematic and abbreviated structure to orient the learner in complex learning procedures. Technological elements to follow up on learning, submission of assignments, and follow up of grades.

to the research question: What considerations do the lecturers take into account when planning a multiparticipant online course, and what are the distinct characteristics of planning for such a course?

The information shown in Table 1 indicates that the online course was planned by each lecturer according to their goals and rationale. The lecturers' different approaches created two online courses with different characteristics and types of practices.

The information in Table 1 also shows that one approach aimed to exploit the multiplicity of participants in order to create an online learners' community in which a large number of participants contribute to the richness of the discussion and communication and turn the asynchronic discussion into a largely synchronic discussion by enabling reactions to be received in a short time, and enabling a natural discussion without needing to pressure the participants to react to their peers (because, even if only some of the participants react, the discussion will be sufficiently rich). The result was a dynamic course in which something was always happening over the entire week, even by email. In contrast, an opposite approach was applied in the second course by dividing the students into small groups according to considerations of friendship or fields of interest, so they see only the members of their group and feel as though they participate in a multiparticipant course, which increased the familiarity and intimacy among the participants.

The general conclusion that emerges from Table 1 is that the mass wisdom and dynamism in the large group, and in contrast the visibility and intimacy in small learning groups are two poles between which the lecturers plan their courses.

Lecturers' learning management in the online multiparticipant course

In relation to the second research question, (What should be the optimal characteristics of learning management in a multiparticipant online course as expressed in practice?), the two lecturers interpreted as success their ability to prevent dropout, encourage the students' active participation, and facilitate the students' entry to the course site each week, their learning the contents, and their completing the assignments. Both lecturers understood that practical steps should be taken to succeed in this. Table 2 presents a comparison between the characteristics of the learning management of the two lecturers and the strategies that they used.

It can be seen from Table 2 that in the large group model, the lecturer's learning management style involved regular interaction with the students, sending messages and reminders, regular technical support, turning individually to students with difficulties and sharing selected reactions with the entire group. This is in addition to regularly updating the questions and answers

Table 2. Learning Management Characteristics in the Two Teaching Styles

Learning management characteristics	One large group model	Small groups model
Timing of sending one-directional messages from the lecturer concerning course management	At the beginning of each week. Sometimes reminder messages are also sent towards the weekend.	At the beginning of each week with the publication of the learning unit. Sometimes a reminder message is sent towards the weekend.
Highlighting assignments for submission	Giving graphic highlights to assignments	Table of assignments and dates
Support and response: identifying students that have difficulty or do not submit all the assignments or submit late, and the lecturer's personal messages to them to clarify the reasons and provide help	In a questions and answers file that is regularly updated. Sending reminder text messages to students that have not submitted an assignment before it closes	In a questions and answers file. The obligation to be informed and updated is imposed on the students, and they are responsible for the follow up of their learning.
Telephone support	Lecturer's telephone support, even at the weekends (then the main learning takes place).	
Written reactions	Lecturer's responses to individual students with encouragement, amendment of mistaken perceptions etc.	

file, which offers the students tools to check their assignments. In the large group model, the lecturer indicated how important the lecturer-student connection is in an online course:

The students arrive at an online course with anxiety and prejudice that they are going to feel alone on the course. I exploit every request from a student, and even jump on it as a means to gain much treasure, as an opportunity to form a relationship with them and to show them that in an online course it is possible to form good connections with the lecturer, even better than in a classroom course.

The lecturer who used the small groups model noted how important it is to foster the students' personal responsibility for their learning:

I think the most important skill for the 21st century is the ability to study alone, I try to improve their personal responsibility for learning management.

Lecturers' insights and recommendations as a result of the findings

After the lecturers were exposed to the research findings concerning the two different appearances of the course, an additional interview was held with each of them concerning the insights that they had derived from the findings and the changes that it would consequently be worthwhile to introduce in their teaching models. This constituted the lecturers' reflections on their courses and summarized the intelligent process of drawing insights from the empirical findings. The main findings are presented here.

The lecturer in the large group detailed the alterations that he made in the management of electronic text messages:

It was found that students were not satisfied by the multiplicity of electronic mail messages and preferred to receive these messages from the lecturer rather than from their peers. This led me to improve my teaching model and to maximize the use of messages in the following manner: in the forum for assignment submission and discussions, I will shut down the option of sending text messages, and the students will

not receive any messages from their peers yet they will still be able to read them in the discussion group. Nevertheless, in order to exploit the advantages of the online learning community and the mass wisdom in the large group, in the forum's "questions and answers" there will be subscription to the messages and each student will receive all the questions asked by all students and the lecturer's or their peers' answers. It is similar to a course with many small groups, in which each student in the course receives the questions that are published on this forum by mail, because it is relevant for all the students. It is also important to continually repeat the question in all the messages which relate to the answer.

Also, in the forums where assignments are submitted and discussions take place, where the subscription for messages is cut off, every time that I encounter a response or unique contribution by students, then before I react, I will activate the "subscription of messages" and so everyone will be exposed to that exclusive contribution and my compliments to the person who published the message. This is also true, if I want to exploit the student's publication to "push" relevant information to the learners or to publish my own important reaction.

In this way I get the best of both worlds: I exploit the advantages of the large size of the course as a rich online learning community with its insights and high-quality contributions, and also maintain a small number of messages, especially from the lecturer, while the responses from their peers published in the mail will only be those which are carefully selected.

In contrast, the lecturer in the course that employed small groups described how he would alter the use of the forums:

After the deep interviews and since I got to know the ideas of the lecturer in the course with a large group, I was exposed to the Q&A forum ("an answer is required to be observed in the discussion"), which

was used a lot in the course according to the large group model. In this forum you have to publish your answer before you can see your friend's answer. This feature increases the probability that the student will consider the learning material in a more profound manner. Having understood this, I intend to implement the use of this sort of forum in assignments that require writing following study of information sources. It improved my realization of the advantages of an online learning community and mass wisdom. In order to enjoy the students' main ideas in the course without burdening them with too many messages, I decided to compose summarizing passages that are the product of the insights that were published on the forms and the blog, and to publish them when we finish each learning unit, together with the publication of the new learning unit.

The research findings reinforced the understanding of how important it is that the students should receive few messages. I am therefore going to emphasize to the students that they need personal responsibility for their learning in an online course. In this manner I can reduce the need to send reminders towards the end of a learning unit.

These findings reflect the lecturers' desire to adhere to the group model that characterized their courses and to improve these models by adopting successful components from the alternative model in order to acquire optimal advantages of both models and attain optimal teaching practices for their courses.

Findings concerning the students

Students' preferences regarding different teaching styles

This section presents the findings that attempt to answer the third research question: What are the learners' preferences regarding learning practices in the course and its characteristics, and in what way is their sense of belonging to the group expressed?

These findings relate to the students preferences concerning the dependent variables, such as the size of the learning group, the number of messages in the course and their character (from the lecturer or from a peer), learning methods (preference regarding the extent of the online component in the course, either fully online or partially online), students' sense of belonging according to the size of the group to which they belong, the extent to which the students feel they are visible in the course for the lecturer or their peers, and the extent of the students' satisfaction regarding the lecturers' responses to the learners' requests.

Students' preferences regarding group size

Figure 1 shows the students' preferences regarding the size of the group by type of group in which they participated.
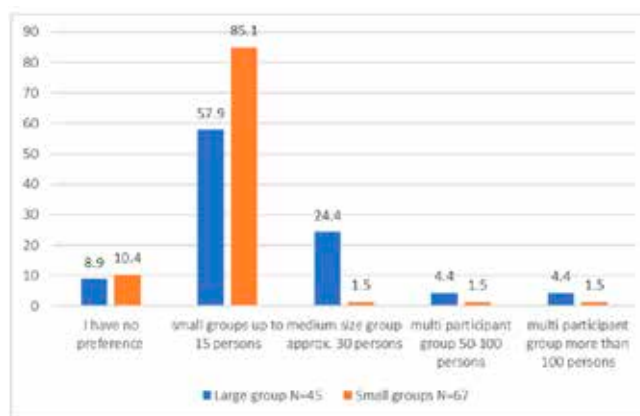

Figure 1. Students' preferences regarding the size of the group (%) by type of course

The data in Figure 1 indicate that there is a preference to learn in small groups both among students who studied in a large group in one course (57.8%) and among students who studied in small groups in the second course (85.1%). Moreover, students that studied in small groups had a more positive attitude towards learning in small groups numbering up to 15 students, while students that studied in a large group had a positive attitude towards learning in large groups (medium size groups of approximately 30 students, multiparticipant groups of 50–100 students, and even in groups with more than 100 students). Significance tests ($\chi2$) indicated significant differences in the students' preferences in the two different size groups ($\chi2 = 17.76(4)$ p < 0.001).

Students' perception of the messages in the course

The students were asked about the quantity of messages that were received from the other

students and from the lecturer. In an online course, communication is conducted in writing, so messages become the main component in communication between the lecturer and students and between the student and their peers. In interviews the students indicated that one of the lecturers sends regular messages and the other lecturer sends a collection of messages once a week. The purpose of this part of the study was to discover the students' views on this issue. The distribution of their answers appears in Figure 2.
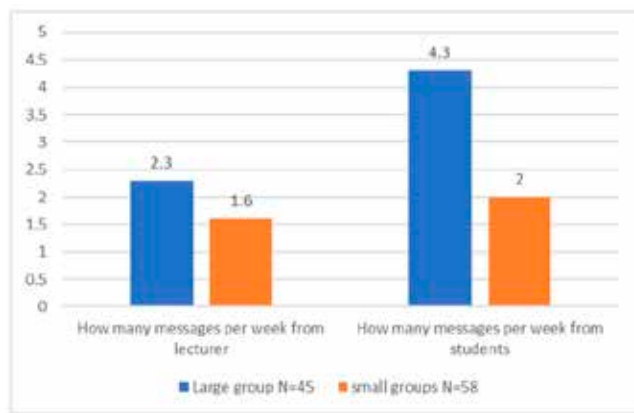
Figure 2. Number of messages received from the lecturer and from other students by type of group in which the students participated

As noted, in an online course, communication is conducted in writing, and the quantity of messages in a course, just like their character, has a significant influence on the extent of the students' satisfaction and also affects the lecturer's considerations when planning the course and the manner in which it will be taught. The data in Figure 2 show that the students in the large group received more messages from the lecturer (M = 2.3) and from their peers (M = 4.3) each week in comparison to students who worked in small groups and received fewer messages from the lecturer (M = 1.6) and from their peers (M = 2.0). The differences in the number of messages that the students in the two groups received from the lecturers was significant (t(110 = 5/17; p < 0.001), as was the difference in the number of messages received by the students in the two types of group from their peers (t(66) = 7.60; p < 0.001).

In addition to identifying the quantity of messages received by the students each week from the lecturer and the other students, the research revealed the students' preferences regarding the number of messages they wished to receive. The students' level of satisfaction regarding the number of messages in the course appears in Figure 3.
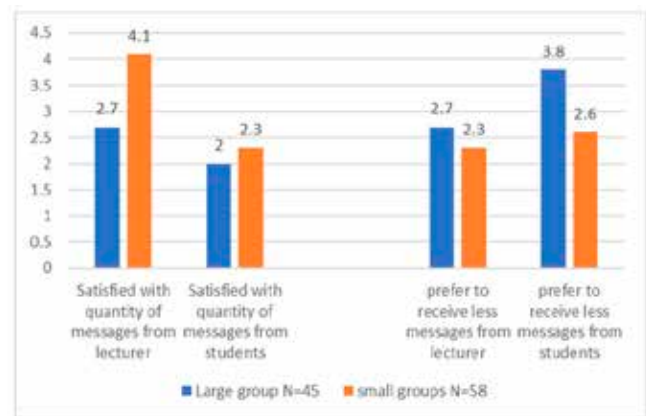

Figure 3. Means for students' satisfaction levels and preferences regarding the number of messages by type of group

As can be seen from the information in Figure 3, the level of students' satisfaction regarding the quantity of messages received is in inverse ratio to their actual amount: As the number of messages that the students received from the lecturer or their peers increases, the level of their satisfaction regarding the number of messages decreases. The difference in students' level of satisfaction regarding the quantity of messages received from the lecturer between the two types of groups was found to be significant (t = -5.69(df74); p < 0.001) and also the difference in students' level of satisfaction regarding the quantity of messages received from their peers was also found to be significant (t = -7.60(111); p < 0.001).

The results of a Pearson correlations test showed a significant negative correlation between the number of messages that the students received from the lecturer and their level of satisfaction concerning the quantity of messages (r(112) = -0.42; p < 0.001). A significant negative correlation was also found between the number of messages that the students received from their peers and the level of their satisfaction regarding the quantity of messages (r(113) = 0.52; p < 0.001).

It appears that the students in the large group had a stronger preference to receive messages from the lecturer each week in comparison to those in the small groups. This may be due to the stronger need in the large group to "put things in order" in the course and to receive guidance at

a higher frequency. In both courses the optimal number of messages per week was found to be two to five. Perhaps the reason for the desire to reduce the number of messages from peers in the large group stems from the larger number of messages that were received from peers in this group in comparison to the number received by those in small groups. To this should be added the limited familiarity and lack of intimacy between peers in the large group in comparison to that which exists in small groups.

Data from the questionnaire indicated that in both groups there was satisfaction regarding the number of messages received from the lecturer at the beginning of studies on a particular subject and at its end and regarding their contents. The messages reminded the students to perform their assignments and contained necessary clarifying information. In contrast to this, there was dissatisfaction regarding the burden of messages received from their peers in the course. The students in the large group noted that there was a repetitive use of emails that caused flooding, or a large personal load and a heavy load for their mail system. One of the students emphasized the importance of the messages from the lecturer:

> I think that if I had not received the reminder messages regarding the opening of a new unit, I could not stay in the course I would not have complied with the assignments—I needed those reminders.

Another student reinforced the importance of the difference between messages from the lecturer and messages from friends on the course:

> During the course we received an average of two messages per week on the actions that were published on the site and the submission date and everything involved in the assignments and I think that was sufficient. We don't need more or less than that. With regard to the members of the course I was continually getting alerts from email which member had reacted and that was a nuisance and not so comfortable to receive emails of that sort.

It appears that the role of messages from the lecturer was to guide the students' learning, so they were important for the students and they were prepared to receive between two to five per week. By contrasting, the messages from their peers were seen by the students as less essential and often irritating.

Preferred group size for students with learning disabilities

In order to discover the preferred group size for students with learning disabilities, a comparison was drawn between the responses of these students and students without learning disabilities. Figure 4 shows the results of this comparison.
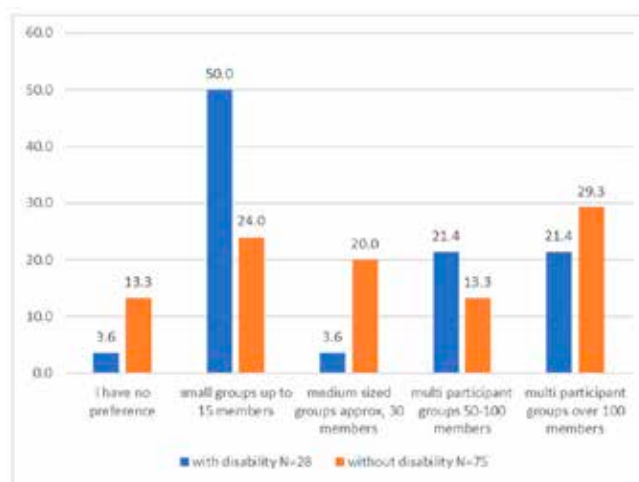

Figure 4. Comparison of preferences for learning method between students with learning disabilities and students without learning disabilities (percentages)

From the data displayed in Figure 4, it appears that 50% of students with learning disabilities prefer learning in small groups versus 24% of students without disabilities. Approximately 43% of the students with learning disabilities and those without learning disabilities prefer to study in groups of up to 50 students; only 3.6% of the students with learning disabilities preferred to study in small groups of up to 30 students in comparison to 20% of students without learning disabilities.

Students' preferences for different learning methods

The students in both types of groups were asked which learning method they preferred: 1) entirely face-to-face, 2) mainly online, 3) online with equal parts face-to-face, 4) mainly online, and 5) entirely online. The distribution of the students' answers is displayed in Figure 5.
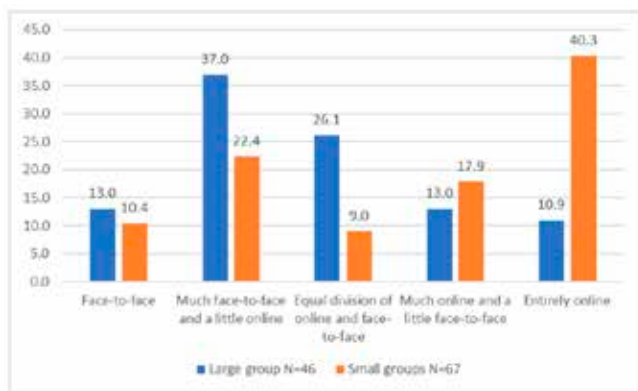
Figure 5. Students' preferences regarding learning method

The data in Figure 5 show that in the two teaching models there was a small group of students who preferred face-to-face teaching: 10.4% in the model using small groups and 13% in the model employing a large group. In the model using small groups, 40.3% of the students prefer a course that is entirely conducted online, and in the model using a large group, 37% of the students preferred more face-to-face and less online teaching (M = 2.7, SD = 1.2) in comparison to students that studied in small groups (22.4%) (M = 3.6, SD = 1.5). The differences in preferences for learning types between the two types of groups were found to be significant (t(108) = -3.33; p < 0.001).

Preferred learning methods for students with learning disabilities

In order to identify differences between the preferences of students with learning disabilities and of students without these disabilities, a
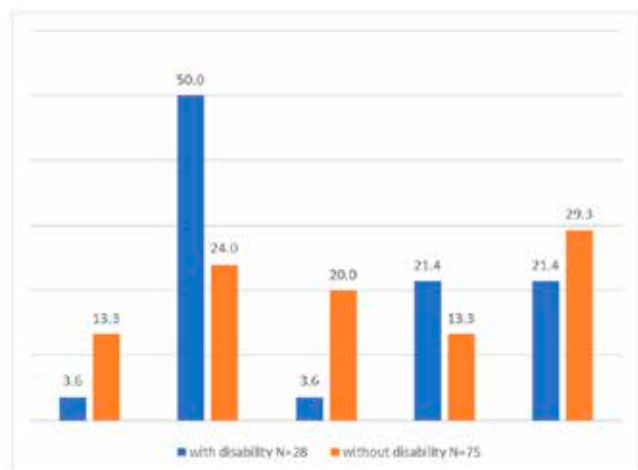

Figure 6. Preference for learning method of students with learning disabilities in comparison to students without learning disabilities

comparison was drawn between the responses from the two groups. The results of this comparison are shown in Figure 6.

The data shown in Figure 6 show that half of the students with learning disabilities prefer studies that are mainly delivered face-to-face with fewer online lessons in comparison to 24% of the students without learning disabilities who prefer this combination of methods. Of the students with learning disabilities, 21.4% prefer a course that is mainly delivered online with a few face-to-face meetings in comparison to 13.3% of the students without learning disabilities, and another 21.4% of the students with learning disabilities prefer a fully online course in comparison to 29.3% of the students without learning disabilities. A small number of students with learning disabilities (3.6%) prefer the course to be half face-to-face and half online in comparison to 20% of the students without learning disabilities. The differences that emerged in an overall comparison of responses regarding students' preferences for a learning method between the group of students with learning disabilities and those without learning disabilities were not found to be significant.

Students' sense of belonging and sense of visibility

The students in the two types of course were also asked about their sense of belonging and to what extent they felt they were visible to the lecturer and their peers. The analysis of their answers appears in Figure 7.
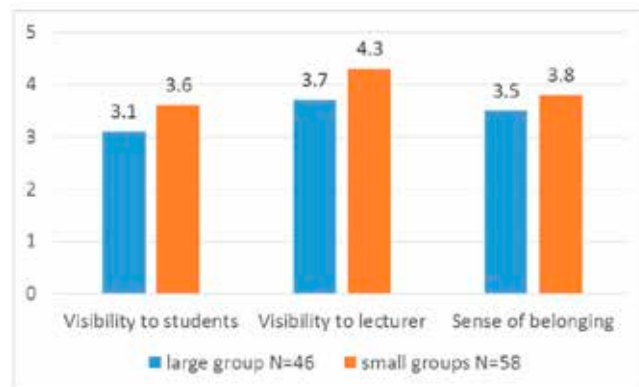

Figure 7. The students' sense of belonging and visibility

Additional components that influence the extent of the students' satisfaction in an online course and the extent of the course's success (and consequently also the manner in which the lecturer will design and manage the course) are

the students' sense that they belong to the group of learners in the course, that there is a good response to their questions to the lecturer, and that they are visible to the lecturer and their peers. The following findings emerged in response to the research question concerning the students' preferences for the learning styles that the lecturers chose to use in the two different courses and their characteristics.

Figure 7 indicates that the students' sense of belonging to the course was stronger for students who studied in small groups (M = 3.8, SD = 1.2) in comparison with students who studied in the large group (M = 3.5, SD = 1.1). These differences were not significant.

With regard to the students' feeling that they received a suitable response to their messages to the lecturer, the students in the large group reported that they were slightly more satisfied with the responses (M = 4.8, SD = 0.36) than the students who studied in the small groups (M = 4.7, SD = 0.54). The response to students' requests in both groups was very highly rated and the differences between students' responses in both types of groups was not significant.

The students' sense that they were visible to other students (M = 3.6, SD = 1.1) and to the lecturer (M = 4.3, SD = 0.9) was higher in the course using small groups in comparison to students' sense of visibility to the other students (M = 3.1, SD = 1.1) and visibility to the lecturer (M = 3.7, SD = 1.2) in the course using a large group. The differences in sense of visibility to the other students (t(111) = 2.4; p < 0.5) and the differences in sense of visibility to the lecturer (t(111) = 3.1;

p < 0.01) were found to be significant. These parameters were also examined in a comparison between students with learning disabilities and students without learning disabilities. The results of this examination appear in Figure 8.

It is clear from the comparison described by Figure 8 that the students with no learning disabilities reported a stronger sense of belonging to the group (M = 3.3, SD = 1.2) than did students with learning disabilities (M = 3.8, SD = 1.2) (t(111) = -1.8, p < .05).

The students with learning disabilities had a lower sense of visibility to the lecturer (M = 3.7, SD = 1.1) than the group with no learning disabilities (M = 4.1, SD = 1.0) (t(111) = -1.8, p > 0.05) and a lower sense of visibility to the other students (M = 3.2, SD = 1.1) in comparison to students without learning disabilities (M = 3.5, SD = 1.1) (t(111) = -1.8, p < 0.05).

To summarize, the research findings indicate that, in general, there is a preference to study in small groups, and it appears that the students in the large group prefer face-to-face teaching more than those who studied in small groups, while the latter prefer distance teaching. Accordingly, the sense of belonging to the course and sense of visibility in the course is higher for students who studied in small groups in comparison to those who studied in the large group and among students without learning disabilities. This is also true for the sense of visibility to the lecturer and to their peers.

DISCUSSION

The research findings yielded certain insights concerning the distinct and preferred characteristics that should be taken into account in planning a multiparticipant online course and the students' preferences regarding certain studied dependent variables (central components in the operation of a multiparticipant online course).

The lecturers' consideration and the particular characteristics involved in planning a multiparticipant online course

In response to the first research question, (What considerations do the lecturers take into account when planning a multiparticipant online course, and what are the distinct characteristics of planning for such a course?) the lecturers' different approaches created two online courses with different characteristics and active
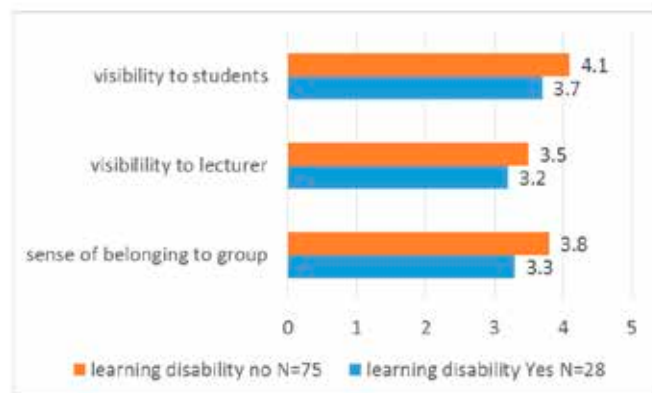
Figure 8. Comparison of the sense of belonging and visibility between students with learning disabilities and students without learning disabilities

practices. One approach was to exploit the large number of participants to create an online learning community in which the multiplicity of participants contributed to the enrichment of the discussion and communication. This made the discussion more synchronous (since it reduced the waiting time for responses) and enabled a natural discussion without any need to compel/or encourage the participants to react to their peers. This produced a very dynamic and eventful course with email messages.

In contrast, learners were divided into small groups in the second course. As part of the Moodle system's ability to manage learning, it was possible to hide the members of the other groups and their activities from the members of each small group. Thus, the members in each group did not see what happened in other groups and they had a sense that their group constituted the entire course in which it appeared there were few participants in order to increase familiarity and intimacy in the small groups, though at a cost to the dynamism of events. This finding is supported by previous research that found that in online teaching, learning in small groups produces a better learning experience for learners (Springer et al., 1999) and students prefer to work in small groups rather than in large groups (Brindley et al., 2009).

The lecturers' preferences regarding group size

It was found that in the large group model, the lecturer's strategy was to send many more messages so that the students would regularly receive the messages, and this would build a sense of a learning community and beneficially exploit the large number of participants. In this model, the students reacted to each other through peer evaluation and as part of the assignment presented on the forum. This type of teaching releases the lecturer from the need to react regularly and reduces the burden on the lecturer and makes the work in the multiparticipant course more efficient. The students, on their part, receive much more, and more detailed, feedback for each section of the assignment that they submit.

In the small groups' model, the lecturer's strategy was to create a sense for the students that they were visible to their peers so they could enjoy the mechanism of "social supervision" that influenced the seriousness of writing on the forum. By using small groups, the lecturer tried to

produce learning in a course with few participants. However, with regard to the contribution to the enrichment of the discussion, this number will only enable deep discussion if those involved in the discussion relate to it seriously and contribute meaningful statements. There is a certain fear that in cases where some of the participants do not take an active part in the discussion, or do not invest sufficient thought, the discussion will be poor and the variety of opinions, ideas, and viewpoints will be limited. Thus, it seems that to ensure high quality discussion in this type of activities, as opposed to previous findings (de Hei et al., 2016), the group should include more than six members.

In addition to improving the interaction and discussion between learners, goals should also be considered regarding the learners' affective area: a sense of belonging to the group, participants' social presence, and visibility in their colleagues' eyes. Care for these aspects can improve the learners' feelings and their learning experience. However, it should be noted that a group of six members can reduce the personal space of each member. When emotional goals are set and their attainment depends on mutual assistance between the group members, then arranging in groups of friends or relying on previous acquaintance is very helpful. Also consider the pros and cons of positioning a learner in the same group throughout the course. If there are considerations indicating the need to increase the group to more than six members, then twelve members could be a comfortable choice since it can be subdivided into two, three, four, or six members, which enables the allocation of the learners in smaller groups, such as pairs, within the affiliation group for particular assignments.

It seems that in order to reap the greatest benefit from this model of small groups in a multiparticipant online course, the purposes of dividing into groups should be considered and the optimal number of participants should align with those purposes. The concept of fixed groups should also be considered by relying on previous research findings on this issue (de Hei et al., 2016).

Learning management, changing models, lecturers' insights, and recommendations in light of the findings

The differences found in the manner of learning management between the two lecturers can be summarized as follows (see Table 2):

- In the large group model, the lecturer strove to create regular interaction with the students by sending messages and reminders, providing constant technical support, initiating individual communication with students who seemed to have difficulties through telephone and SMS contact even on the weekends. He also shared reactions with the entire group relating to the studied subject matter.

- In the small groups model, the lecturer imposed more responsibility for the learning process on the students and only provided tools so the students could follow up on their assignment and receive ready-made answers to frequently asked questions.

- After the lecturers were shown the characteristics of their course models and learning management as they appeared in the findings, each of them chose to adopt some of the components of their colleague's model, which had been found to be advantageous, towards the planning of their next course.

From the interview with the lecturers at the end of the course it appeared that in the large group model, the lecturer decided to maintain the large group and enjoy the advantages of its relatively easy operation and the richness of the large interactive learning community. Nevertheless, he decided to seriously reduce the quantity of messages by cancelling the ability that the learners could receive messages from their fellow learners. Thus, the learners would only receive important messages from the lecturer or a limited number of messages from their fellow learners as selected by the lecturer as important and relevant for their learning. He noted:

In this way I will get the best of both worlds: I will exploit the advantages of the large course as an online learning community, rich in insights and high-quality contributions, and I will also keep a small number of messages, especially those from the lecturer, so that they will only receive carefully selected reactions from their peers in their mail.

The lecturer also adopted the use of a board with dates of assignments for the entire course as a follow-up tool (used in the small groups model) to increase the learners' independent responsibility for their learning and submission of assignments on time.

Thus too, the lecturer who operated the small groups model decided to continue to use this model and enjoy the advantages that it embodied since the students preferred to work in small groups because of the higher sense of visibility and belonging in these groups. Nevertheless, he decided to exchange some of the regular forums ("regular forum for general use") that he had previously used with Q&A forums ("answer required for observation in a discussion") that were used in the large model group. His intention in adopting this strategy was to increase the probability that the students would better process the learning materials in assignments that require writing after studying information sources. This is because this tool necessitates that learners read the information sources and then compose an original answer before they can see other answers and react to them.

He also decided to adopt one advantage of a large online learning community and its "mass wisdom," although the learning still took place in small groups, by deciding to compose summarizing texts when a learning unit was completed. This was the product of insights that were revealed in the learners' publications on forums and in the blog. Thus, he also tried to "get the best of both worlds" and share the learners' insights and reactions with other learners and yet still maintain a small number of messages. He explained:

The research findings reinforced my understanding of how important it is for the students to have just a few messages. Consequently, I will emphasize to the students that they need to take personal responsibility for their learning on an online course. In this manner I can reduce the need to send reminders towards the end of a learning unit.

Therefore, it was found that with correct planning, online multiparticipant courses can maintain the same qualities as online courses with few participants. By exploiting the ability of the system to manage the course learning

and dividing the students in a multiparticipant course into small groups, the students' sense of intimacy and sense that they are studying in a small course are maintained. The small groups model also contributed to an increase in the learners' sense of visibility. Maintaining intensive activity in the course by submitting a weekly assignment and receiving feedback on each assignment is maintained in a large group through peer evaluation. Another configuration for the planning of the course without small groups is to become an online learning community whose members are able to benefit from the large group and more frequent interaction by transforming the asynchronic activity into something closer to synchronous activity (for example, by receiving many swift reactions in the discussion groups and for assignments). All these advantages produce a special learning experience in the large group: The course becomes dynamic and the learners are able to enjoy the "mass wisdom" that characterizes a multiparticipant course. As the lecturer in the large group mode noted:

> *In a large class there is a "buzz" for better or worse. Any vagueness and lack of clarity can grow into something with broad dimensions in which you can lose control. While in the classroom the presence of the lecturer calms things, someone answers and there are reactions, in an online course everything is under the surface, it's all more sensitive to vagueness and lack of clarity.*

In the interviews with the lecturers after they heard the findings and during the discussion of the insights that emerged from the findings, it was also found that it was possible to adopt some of the more successful components of each model to complement the other model to improve both.

The students' preferences for different learning practices and characteristics that the lecturers chose for the different courses

It is interesting to compare the learners' preferences and the extent of their satisfaction with the distinct characteristics of each of the different approaches adopted in the two courses. The third research question (What are the learners' preferences regarding learning practices in the course and its characteristics, and in what way is their sense of belonging to the group expressed?)

aimed to elicit information on this point in order to understand the courses' success.

The learners' preferences regarding the learning group size

The findings regarding the size of the group that appear in Figure 1 indicate that the students who studied in the small groups had a more positive attitude towards groups of up to 15 students in comparison with the students from the large group. However, the students in both groups expressed their preference to study in small groups. Most of the students who noted that they prefer to study in a large group are students that actually studied in that group. It seems that some of the students that studied in the large group enjoyed beneficial learning, and the large group suited them and was familiar to them from their past experiences, as were the advantages they had derived from this setting. This was in contrast to the students who did not study in the large group investigated here, and this may be because their source for comparison was other online multiparticipant courses or multiparticipant face-to-face courses. In future research, it would be informative to clarify this issue. This finding indicates how important it is to allow students to experience different teaching models and methods in online courses (Seifert, 2017; Weller, 2011).

Selection for the groups according to specializations or fields of interest seems very relevant when the goal is to improve the quality of the learners' interaction and the quality of the discussions. Moreover, since the goals relate to the cognitive-professional field, it is possible to allow the learners to belong to different groups when working on different assignments and the size of the group can alter according to the task. For example, in a multiparticipant course that deals with special education, division into groups according to types of learning disabilities may be the most natural division, and the number of participants in each group could be determined by the number of learners interested in studying a particular disability.

In contrast, randomly dividing the students enables the learners to connect, communicate, and cooperate with new colleagues. The importance of determining the members of the group becomes more obvious when it is noticed that the random choice of group members prevents the students

from having to cope with the embarrassment of a popularity contest for places in a group. Learners at all levels can contribute to the achievements of their group (Roberts & McInnerney, 2007; Wolff, 2016).

The students' satisfaction regarding the quantity of messages in the course

Despite the rationale that justifies a multiplicity of messages in the large group model in order to create a learning community and transform the asynchronous course into a more synchronous experience, in both courses and models that were studied it was found that when there was a larger number of email messages, the students' satisfaction level decreased. This trend can be reversed, and it is possible to enjoy the advantages of both strategies. In the interview that discussed the lecturers' insights from the research findings, the lecturer who used the large group model deduced that it was worthwhile to exploit the ability of the Moodle system to block the transmission of messages from the discussion groups on the course site to the learners' email, so that the quantity of messages that they received to their email fell to zero. Nevertheless, in the support forum with Q&A, the subscription to email messages would continue to be active to enable the students in the large group to enjoy regular support. Moreover, it is possible to temporarily lift the block of the subscription to forums when the lecturer answers an important question to one of the students so the group will be exposed to the lecturer's helpful answer or the successful presentation by the student. Thus, the quantity of messages is significantly reduced and the quality of the messages passed on increases as does their importance. It is recommended that follow-up research to the present study should investigate the learners' level of satisfaction with the improved models resulting from the lecturers' insights from the present findings.

The students' preferences for learning methods

The present findings reveal that in the teaching model using small groups, most of the students prefer fully online teaching, and in the large group model most of the students prefer face-to-face teaching and less online teaching. In general, it was found that the students who studied in the large group expressed a stronger preference to face-to-face teaching in comparison to students who studied in the small groups. Perhaps the reason for this is that in the large group, students felt more isolated, so they preferred face-to-face learning together in a classroom, in comparison to learners in the small groups who enjoyed intimacy and felt less need for social and pedagogic closeness. The possible connection between the students' feelings of loneliness in a multiparticipant online course and the desire for face-to-face intimacy shows the importance of the students' sense of belonging to the course and their sense of visibility to the lecturer and their peers, which is why these issues were also investigated.

The students' sense of belonging in the course and sense of visibility to the lecturer and peers

Other findings that emerged from the research relate to the students' sense of belonging to the course and their sense of being visible to the lecturer and to their peers, which were found to be stronger in the small groups than in the large group. It was therefore found that the small groups model achieved its goals in this regard. The sense of receiving a response from the lecturer was found to be slightly stronger in the large group and slightly improved the students' satisfaction with the large group model.

The research findings can help instructors understand the characteristics and considerations taken into account in planning a multiparticipant online group from the lecturer's viewpoint. They also indicate a trend of integrating learners with different learning abilities in one class and providing support for this diversity. The research pointed to the different preferences of different learners. Some of the nonsignificant differences that were received in the comparison between students with learning disabilities and those without can be explained by the broad variety of disabilities that characterize different students. It was found that the students' disabilities correlated with their preferences for learning methods. There are students who find it very difficult to be present in class, so being able to work independently outside the lesson time makes things easier for them. In contrast, there are those who are present during lessons, and their interaction with the lecturer and other students gives them a sense of security and makes the learning process easier for them, influences their sense of visibility to the

lecturer and other students, and increases their sense of belonging to the group.

The limitations of the research and recommendations for further study

The number of students in each of the two courses was different: The large group model included 102 students (in one group) and the small groups model included 70 students divided into groups. The number of students in a course can have an influence on different aspects of the course, such as the lecturers' and students' visibility online. The teaching methods of the two lecturers were different: The large group course employed a special forum for Q&A, for the submission of assignments, and for discussion (an answer was required to observe the discussion), while in the small groups course the students could see their peers' answers before submitting their answer or their assignment, and they could also observe the work of other students in their group.

Although the two versions of the same multiparticipant course were similar, (i.e., Teaching and Learning in Online Environments), the research population in the two were different: In one course the students were specializing in special education while in the other course the students were specializing in elementary schooling. The research described here took place within a bachelor's degree program at one college. However, the findings indicate a direction for further studies to include more varied populations and additional education institutions. These recommendations can be implemented irrespective of the course contents, the lecturer's personality, and the quality of their teaching. It would also be worthwhile to use further research to investigate the level of learners' satisfaction with regard to the improved models that were produced as a result of this present study.

SUMMARY

Academic institutions in Israel and other countries have invested significant resources in recent years to develop multiparticipant online courses (Cleveland-Innes et al., 2007), and many lecturers have begun to transfer their teaching from face-to-face to online courses. It therefore becomes important to try to understand the considerations underlying the planning of an online multiparticipant course and the characteristics of these courses from the lecturers' and students' viewpoints (Seifert, 2017).

According to the findings of this study, the students reported an obvious preference for studying in small groups in a multiparticipant course both in the large group model and in the small groups model. With regard to the quantity of email messages, the students preferred to receive a few focused messages from the lecturer and avoid receiving large numbers of messages from their peers. It was found that learning in a small group contributed to both the lecturer's and the students' sense of visibility and social presence and improved the students' commitment to learning in the course. These findings support the strategy of small groups in which the lecturer is less involved in the regular discussions. In the large group model pressure on the lecturer is reduced through peer evaluation and feedback and participation of all the course participants in all the lecturer's feedback and reactions. These findings are in line with previous research findings (Portolese Dias & Trumpy, 2014; Seifert, 2017) in which students appreciate a high level of interaction (between the lecturers and students and among the students themselves) and see this as contributing to the positive experience of an online learning community throughout the course.

The research findings identified teaching practices in online courses, especially for multiparticipant online courses, that exploit the advantages of learning in small groups and are suitable for lecturers who prefer this teaching model. But they also identify teaching practices that exploit learning in a large group to create an online learning community that is rich in shared knowledge and strongly interactive and is suitable for lecturers who prefer this teaching model. In both cases, these practices employ possibilities that allow the lecturer to overcome the limitations of time and place in an optimal manner. Teaching practices of this kind can help learners who prefer to study in small groups to overcome the impediment of being in a large group and allow them to enjoy the advantages of more flexible learning frames that also allow learners in the large group to enjoy the interactivity and "mass wisdom" formed in the large group. Identifying the components that were more successful in each model and then integrating them into the other

model allows for optimal teaching practices to be offered in multiparticipant online courses and constitutes a springboard for further research on this issue.

Competing Interests

I confirm that none of the authors have any competing interests in the manuscript.

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