The Best Practice - E-learning Course "Sociology"

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Abstract: - The fast development of information and communication technologies (ICT) improves greatly education quality. The role of ordinary teacher changes – he/she becomes a tutor or a student's mentor. At the same time the role of a student changes – he/she overcomes the passive learning process and becomes an active explorer. E-learning is an important education component at Zagreb School of Economics and Management (ZSEM) and, in addition, it is obligatory for all our teachers and students. In this paper, the development process of course "Sociology" shall be described. During the course development 11 standards were used, that is to say, statical, dynamical and administrative ones. We shall pay special attention to dynamical standards, that is to say, to online quizzes and closed student-student and teacher-student discussions. We shall get interesting results by paying attention to student's participation in online discussions at two completely different courses, namely, Sociology and Information and Communication Technologies. The obtained quality of the e-learning course and evaluations on the satisfaction of students with lectures shall be also taken into account.

Key-Words: - e-learning, course development, quality, sociology, discussion, information and communication technologies, evaluation

1 Introduction

One tends very often not to make difference between distance and e-learning. Distance learning appears in the 18th century. It has strongly developed due to the fast development of information and communication technologies and the introduction of e-learning into the process of education. According to this, nowadays e-learning and distance learning tend to partly overlap.

The development of e-learning has provided some new ways of organizing distance learning and, in addition, it enabled its higher quality.

Garrison, Anderson and Archer developed in 2000 a conceptual model of online learning and called it "Comunity of Inquirymodel" (Col) [1,2] Col model is shown on Figure 1. It brings constructive and reasonable results of learning, when there is a satisfying level of cognitive presence. This cognitive presence implies that a constructive learning can be achieved when one learns in a surrounding which supports the development and growth of critical thinking. Other important thing relates to creating support, where student should feel comfortable enough to express his/her ideas freely. In the paper about teacher presence Anderson, Rourke, Archer and Garrison indicate three key roles a teacher

has in the process of creating an efficient way of teaching [3].
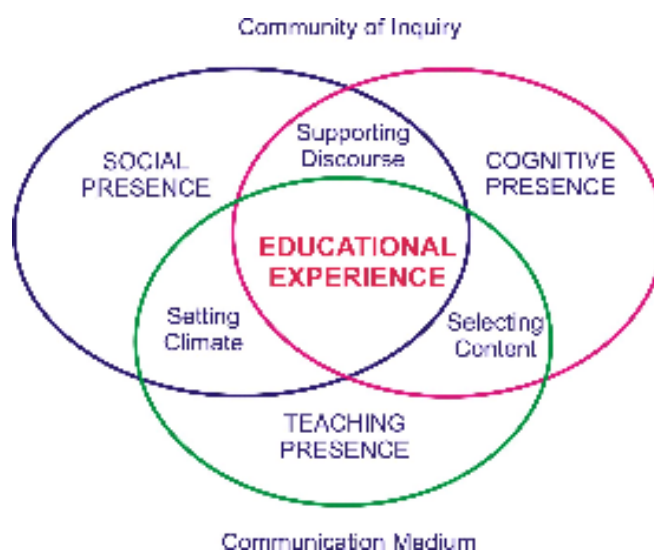

Fig. 1 Elements and educational experience

E-learning offers great improvement possibilities in full-time class combined with e-learning [4]-[9] as well as in distance learning [10]-[14]. A student overcomes

the passive learning process and becomes an active explorer responsible for his/her educational process. The ordinary role of a teacher changes as well. He/She becomes a tutor or mentor to his/her students. The greater number of virtual universities comes into existence [15].

Zagreb School of Economics and Management (ZSEM) has been paying a great deal of attention to e-learning from its very foundation in 2002 [16]-[18]. ZSEM is at the moment only high-education institution in Croatia which systematically uses e-learning in classes. This means that e-learning is obligatory for all our students and teachers, and during all lectures there is a unique LMS (Learning Management System), that is to say, WebCT [19]. The University Management played an important role in the systematically implementation of e-learning into the process of education [20]. At the moment 100 courses concerning Bachelor and Master Curriculum have been created.

Now we shall describe the way we adapted a first-semester-sociology course to an e-learning class. The course was developed in e-learning form in 2004. There were no problems concerning performing a distant class in cases when the teacher was prevented from being physically present at her lectures. In schoolyear 2007/2008 250 students attended this course.

2   The structure of the e-learning course

On the Figure 2 the structure of the e-learning course Sociology is shown. The structure of an e-learning course can be either linear or made via hyperlinks [21]. The linear structure goes from the LMS system WebCT. Afterwards student can access all momentarily active courses. From the course list we shall choose the course that we are going to analyse. Via homepage one can access the particular element. The other way to do this includes hyperlinks (discontinuos lines).

In the paper "E-Learning Course Development – Quality Standards" [22] the authors defined 11 standards, via which the quality of the developed e-learning course is measured. According to this, one differs three groups of standards, that is to say, statical, dynamical and administrative standards. In the development of our e-learning course we took account of these standards as well as of course specifications. In statical standards group the following items are defined: Syllabus, Lectures, Part-time Students, Info and Results. We paid special attention to the looks and design of the page, which also belong to the statical standards group. Dynamical standards are an important part of each e-learning system while they represent a constant teacher-student communication. To dynamical standards in our case belong: Calendar, Mail, Discussion and Online Quizzes. The Calendar is a virtual noticeboard including

all relevant dates and infoes. Administrational standards refer to the regular updating of the student database and to turning off the self-registration option after the first three weeks of class. The problem occurs when the student databases of some courses still include persons that passed the course several years ago. Due to this, the server is additionally overburdened.
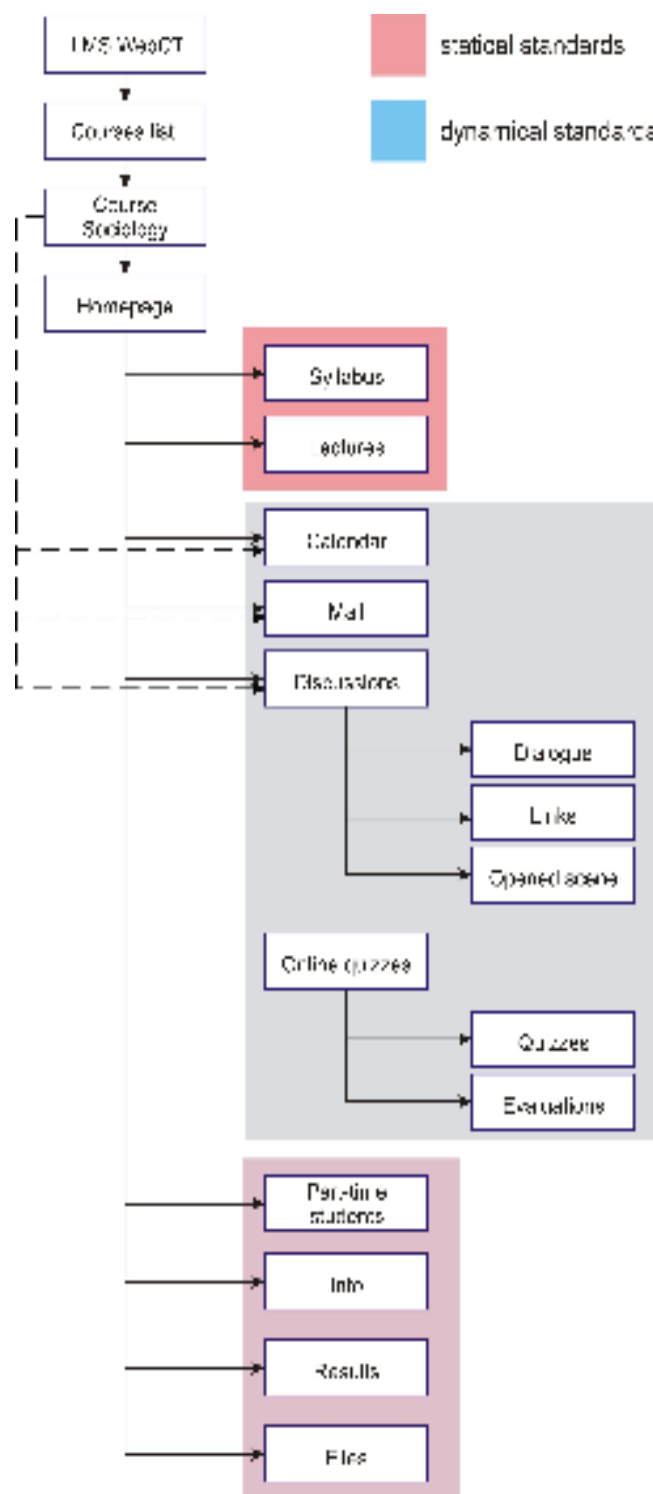

Fig. 2 The structure of the e-learning course

Discussions are very important in each e-learning system and therefore, we shall analyse them separately. One division of discussions is on open and closed discussions [23]. The open discussion is a non-obligatory discussion between student and teacher or among students, and it is not closely related to curriculum material. The closed discussion involves curriculum material, and can be either a teacher-student or student-student discussion.

We named the closed teacher-student discussion "Web Dialogue" and every student is in a two week period due to take part in a discussion initiated by teacher. Student has to answer listed questions, and comment on at least one reply written by some other student. This way we entice the active participation of students in discussions. The length of answer is not very important. What is important is that reply is very well reasoned and profesionally formulated. Textbooks pay a lot of attention to a student-student discussion [24]-[27]. We named that sort of discussion "Opened Scene" and it is not obligatory, but nontheless, students can get some extra credits for their participation.

The special part of the discussion are "Internet links". The point of this task is that students learn how to browse the Internet in a relation to a sociological topic they are at time working on. After each unit students are due to find two useful weblinks which relate to a given topic. After each link, student is due to describe content and give his/her reason why he/she had used it.

2.1 Quizzes

Online quizzes belong to dynamical standards. At the moment at ZSEM only few courses with quizzes are planned, and what is more, they are used as online simulation quizzes, homework, tests and end-of-term evaluations [28]. When it comes to quizzes, teacher can clearly see who took part in them, which is not case with evaluations. They are filled in anonymously. One can see who took part in evaluations but one cannot relate results with a particular student.

The quizzes we use at the course Sociology have approximately 25 questions and are written 30 minutes. This has proved to be sufficient time in order to solve tasks. We also had a trial quizz at the beginning of semester in order to get students used to some specifications of online quizzes, for instance, the necessity of saving each answer before turning to next question.

Apart from three short essay-questions that are done in order to check the student's ability of connecting and understanding certain theories, expressions and sociological phenomena, the quizzes predominately consist of the following four groups of questions with selected answers:

- true/false answer after describing a certain expression, statement or phenomenon
- one is due to select a false statement, which is found among few correct ones
- one is due to select a true statement, which is found among few false ones
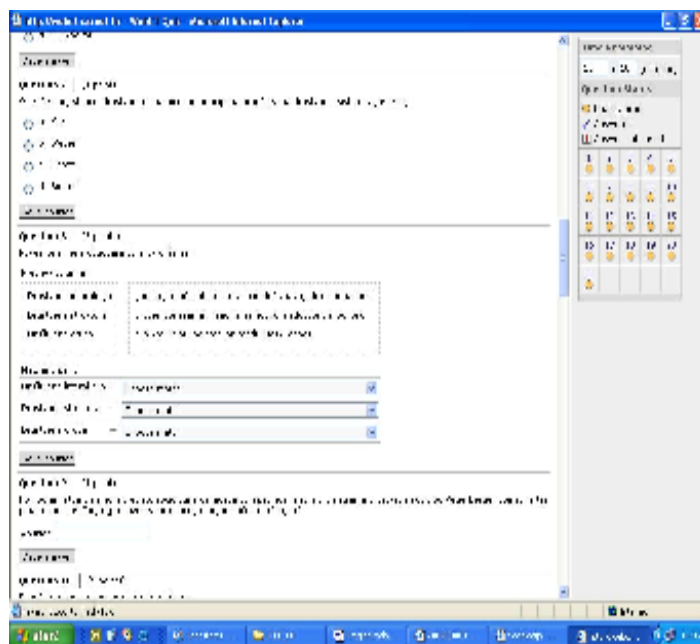- connecting expressions with given statements or definition

Fig. 3 Online quiz with different types of questions

Online quizzes were for the first time used at the course "Sociology" during the schoolyear 2007/2008. Since all students were logging in at the same time, we had slight problems with server. It happened that students were unable of saving their answer. We solved this problem by dividing all students into several groups doing different quizzes at different time.

2.2 Discussions

Dialogue is an important part of Sociology class. Many researches have been carried out on the comparison of discussion at full-time class and the one held online [29]. At full-time class we are constricted by time we have at our disposal and by time we can dedicate to discussion with our students. One of the important advantages of an online discussion is time factor. Asynchronous communication helps students to get insight into some other opinions and to comment on them in a clear and meaningful way. In his research Steimberg & etc.[30] analysed three groups of participants who took part in online discussions: active ones – participants who write messages, passive ones – participants who read messages but do not reply on them and participants who

do not take part in online discussions at all. Some better LMS systems, such as WebCT have the ability of registering a passive participation in discussion. In order to motivate our students to become active participants in online discussions, we demanded in Syllabus that all students were due to take part in a so called "Web dialogue". A special part of active students are students who initiate some topic by themselves. They have the opportunity to initiate an interesting dialogue in a so called "opened dialogue" and by doing so attract a larger number of dialogue participants.

2.2.1   Closed teacher-student discussion

This is an obligatory discussion and every student is due to take part in it. Although Garrison etc. have developed a few successful methods of content analysis [31, 32], we used the classical methods of the content analysis. For each of ten given topics, students had to create two posts. In Table 1, the distribution of posts according to topics is shown.

Topic	Number of posts	Links
T1	372	163
T2	339	121
T3	349	121
T4	292	118
T5	311	120
T6	308	128
T7	337	141
T8	386	128
T9	406	138
T10	220	118

Table 1 Distribution of posts according to topic

Depending on the topic, the number of posts varies as well as discussion's quality. The number of posts on the Web dialogue got higher at the end of semester as well as the awareness of time significance and extra credits. The exception here is the last 10th topic which dealt with the idea of collective community wisdom, that is to say, an interesting concept with strong sociological implications which results in astounding business results.

In spite of attractiveness and applicability of this topic, which deals with the way by which virtual communities change traditional ways of running a business, the participation was rather low. The other less visited topic was a topic number 4, which dealt with

education and Knowledge society. Students were expected to propose some possible solutions to problems in Croatian education such as: brain drain, low participation in the life-long learning, insufficient university funding etc. This topic was also very unnoticeable, although students could have easily identified themselves with it. Regarding the above mentioned arguments, it is hard to connect the number of posts and dialogue quality with the type and interest of the topic. Nevertheless, one thing is certain here: the number of posts got during semester systematically higher (see topics T6-T9). Since some topics will be preserved as online material for a new generation of students who start their studies at ZSEM this fall, it will be interesting to compare their participation regarding the same topics.

It is interesting to follow the frequence of participation in discussion. The more the deadline for the closing of discussion gets near, the more active students get. The curve is approximately exponential function (Figure 4).
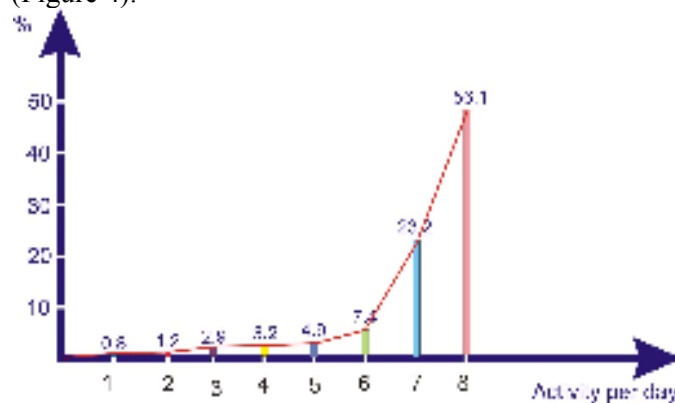

Fig. 4 The frequence of participation in discussion

2.2.2   Closed student-student discussion

In order to motivate our students to get more active, we left them with the possibility to participate in a closed student-student discussion which we called "opened scene". Moderators are students and teacher only serves as an observer who is in charge of content analysis and, in addition, she rates the quality of each discussion. In last semester students opened 45 different topics, and 36.5% of students were at least once active on the opened scene, although that part of discussion was not obligatory. Approximately 13% of students opened at least one discussion on the opened scene. Out of these 13% students, 75% of them opened one topic, 15% two topics and 10% three or more topics.

2.2.3   Method orientation

Due to the nature of the course content and constructivist educational philosophy of the teacher, the course was primarily designed to encourage students' involvement and critical thinking. In order to motivate

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continuously students' participation, a great attention has been payed to create interesting topics for web dialogue because they encourage collaborative learning and, thus, contribute to the process of learning. This goes in line with findings from David Stein's study reported in the journal Online Cl@ssroom [33]. The study indicates that course structure afftects student's satisfaction, and that the most important structural elements of any online course are the clarity of course objectives and the amount of interaction involved. Since technology is an optimal medium to enable learners with the opportunity to create the meaning of the course content through their dialogue and interactions with each other and the instructor, this was heavily used as the course method. Compared with other courses where memorisation of facts and concepts is more important than interpretation and deconstructive method, it was logical that a method for a sociology course focuses on a high dialogue situation because it assists learning process and stimulates critical thinking. The intention of all used instructional elements was not only to facilitate the learning process, but also to reduce the space separating the learner and instructor in terms of psychological, physical and communicative distance. Through such experience and intense interaction, the group becomes more confident in its ability to learn, understand and make meaning.

3 Results

Even 9.2% of students took part in the course more than 6000 times per semester, which shows how great their motivation and the course dynamic were. The Table 2 shows the number of course accesses done by the top ten students.

Student	The num. of course access	Passive discussion participant	Active discussion participant	Moderator
S1	8136	7118	33	0
S2	7745	5974	32	0
S3	7368	5981	33	0
S4	7297	6002	53	0
S5	7170	5975	35	1
S6	6832	5997	18	0
S7	6825	5471	35	0
S8	6780	5873	29	0
S9	6717	5946	38	0
S10	6604	5938	5	0

Table 2 Ranking list according to access to the e-learning course

Student	Active discussion participant	Passive discussion participant	The number of WebCT access	Moderator
S1	89	3147	3839	1
S2	76	1671	2393	0
S3	73	5498	6535	1
S4	70	4367	4740	1
S5	65	2009	2978	0
S6	63	4358	5271	2
S7	58	1632	2227	1
S8	56	4299	5195	2
S9	55	598	1057	0
S10	54	3782	4404	0

Table 3 Ranking list according to the number of sent posts

In Table 2, top 10 students according to the number of e-learning course access are shown. Table 3 shows the ranking list according to the number of sent posts. Only the student S3 can be found in the Table 2 as (S10). There is no significant connection between the number of WebCT access and the number of sent posts, while students take part in other elements of the e-learning course. We cannot also find the significant influence of passive discussion participation on the active one. The active students were more often moderators on the "opened scene".

3.1 Grades

The majority of students passed the exam before the first official exam term, that is to say, instead of taking a standard exam they chose to work intensively online during semester. This way of passing exam implies continuous work during semester and class attendance. Students should have all grade elements and class participation of at least 50% in order to take part in an early exam term. In this case, one does not have to take part in a final oral exam in regular exam term, and the grade is concluded before exam terms and formed on the basis of total credits, that is to say, points students collected during semester. This means that when it comes to a task fulfilment one cannot pass or pass it. During semester one collects all credits cumulatively and the total number of credits results in a certain grade. During semester students received results on their online quizzes and the number of credits gained on the Web

dialogue in the WebCT folder "Your grades". The way of grade calculation is shown in the Tables 4 and 5.

Grade elements	Points	The number of tasks	Task points
Online quizzes	300	5 quizzes	Every quiz 60 points
Internet links	200	2 links for 10 topics	Every link 10 points
Webct dialogue	300	10 questions	15 points for an answer 15 for a comment
Lecture Dialogue	200	4 group dialogues	50 points for everyone in the group

Table 4 The way of grade

5	880 and more
4	780 – 879
3	680 – 779
2	580 – 679
1	less than 580

Table 5 Grading scale

3.2 The course evaluation

In order to get more efficient, at ZSEM two kinds of evaluations are carried out:

- the evaluation of the developed e-learning course done by e-learning team [22]
- student evaluation at the end of semester

3.2.1. The Evaluation of the Developed e-learning Courses

Once a year the e-learning team evaluates the quality of existing e-learning courses. The quality is measured via 11 standards. The Table 5 shows the comparison of all standards at the course Sociology in the last two years.

Standard	2006/2007	2007/2008
S1 – Syllabus	10	5
S2 – Lectures	10	10
S3 – Part Time Students	0	10
S4 – Design	10	5
D1 – Calendar	5	10
D2 – E-mail	10	10
D3 – Discussion	15	15
D4 – Online tests	0	10
A1 – Database students	0	5
A2 – Self-registration	0	5
O - Other	0	0
Total	60	85

Table 6 The distribution of singular standards

The Figure 5 depicts the comparison of the e-learning course „Sociology" with the average of all courses held at Zagreb School of Economics and Management. In the shoolyear 2006/2007 „Sociology" gained 60 points (out of maximal 100) when being evaluated, which approximately corresponds to the average of all courses. The average of all courses is 59.17. Discussion gained maximal 15 points, and we had to further work on the development of online quizzes and administrative standards. We took all suggestions of the e-learning team into account, and in the current evaluation the course reached the top by sharing the 4th place with its 85 points.
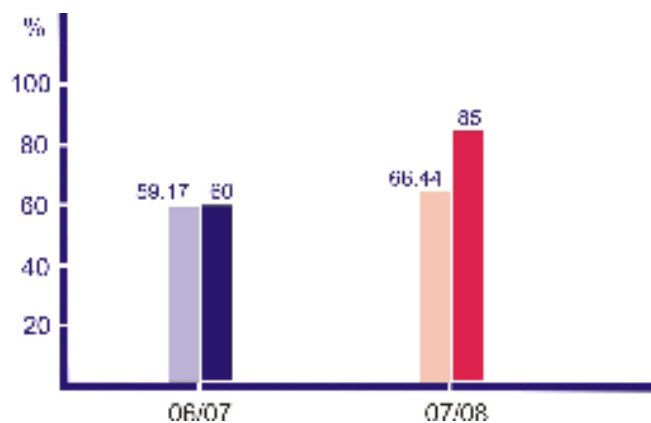

Fig. 5 The Evaluation of course quality in the schoolyear 2006/2007 and 2007/2008
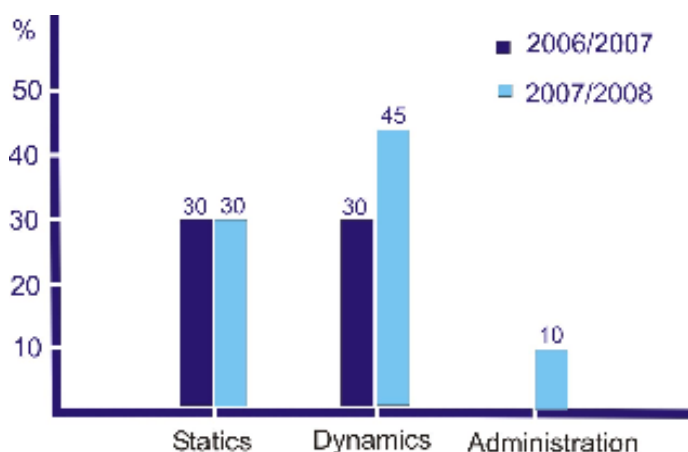
Fig. 6 The distribution of singular

The Figure 6 depicts the distribution among three groups of standards. Statical standards remained the same, although it came to a slight redistribution. Thanks to online quizzes and good discussions, dynamical standards jumped from 30 to 45 points. According to dynamical standards Sociology holds 2nd place among all courses held at Zagreb School of Economics and Management. Administrative standards jumped from 0 points to maximal 10 points.

3.2.2. Student evaluation at the end of semester

At the end of each semester evaluations on student's satisfaction with their teachers, assistants, courses and their studying at ZSEM are carried out. During the last years evaluations have been carried out via WebCT, so that one can very easily cope with the data and, in addition, quality statistical analysis and the comparison of all courses can be carried out. Online questionnaires are mostly active during last three semester weeks. [34]

We can claim that progress is evident if we take student evaluations into account. The course satisfaction grew from 3.4 in the last year to 4.6 in this year (Fig. 7).
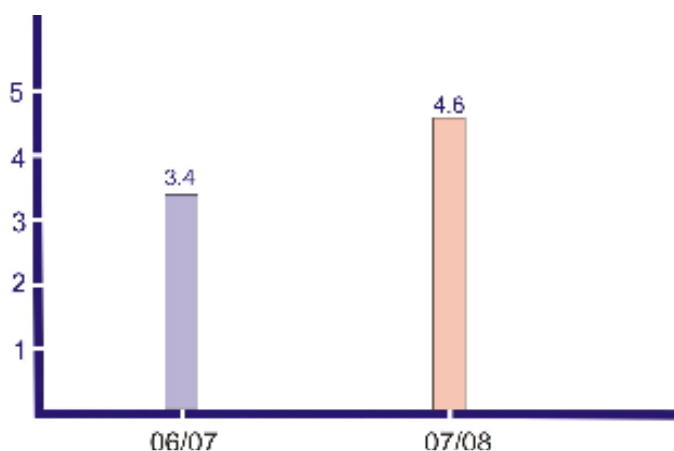

Fig. 7 The satisfaction of students with the course Sociology in last two years

3.3 The comparison of discussions at different courses

It is interesting to compare student's activity at two completely different e-learning courses. In first semester students parallely attend 6 courses, and one of them is Information and Communication Technologies (ICT).[35] We chose this course for comparison because it is among top evaluated courses, with 95 points out of maximal 100.

In contrast to Sociology, discussions are not obligatory and they serve to motivate students. Even 95% of students were either an active or passive participant in online discussions, although they were not obligatory. On average each student read 751 posts during semester. At the course both open and closed discussions are held. There are two kinds of closed discussions: teacher-student discussion, which is initiated by teacher and student-student discussion initiated by students.

The Table 6 shows the comparison of student's activity according to the number of WebCT accesses at two completely different courses.

Sociology		ICT	
Student	The num. of course access	Student	The num. of course access
S1	8136	**S1** (S2)	3477
S2	7745	S2	3439
S3	7368	S3	3025
S4	7297	**S4** (S4)	2987
S5	7170	S5	2984
S6	6832	**S6** (S3)	2924
S7	6825	**S7** (S5)	2860
S8	6780	S8	2704
S9	6717	S9	2629
S10	6604	**S10** (S1)	2551

Table 6 The comparison of students according to the number of accesses to the e-learning

It is evident that students were more active at the Sociology course, which is normal, since the course was also held distant. Although here one talks about two completely different courses, it is interesting to notice that top five Sociology students are also among top ten ICT students. One can conclude that a certain relation exists and that a student active at one course is mainly active at other courses. Of course, depending on the

interest for certain courses. It is interest to indicate a sex structure: at Sociology top students are predominately women (among top 10 students, 8 of them are women). At ICT men are better. Among top 10 students, 6 men are to be found.

In Table 7 we shall compare course activities according to the number of sent posts, where closed and open discussions are included.

Sociology		ICT	
Student	Number of sent posts	Student	Number of sent posts
S1	89	S1	76
S2	76	**S2** (S4)	53
S3	73	S3	51
S4	70	**S4** (S8)	49
S5	65	S5	49
S6	63	S6	45
S7	58	S7	35
S8	56	**S8** (S10)	32
S9	55	S9	28
S10	54	S10	27

Table 7   The comparison of students according to the number of sent posts

At the course Sociology students sent more posts, but the difference is not expected since discussions were obligatory. Correlation among discussion activities at two completely different courses is predominately lesser than the e-learning activities. Three students are found on ranking list of both courses according to the number of sent posts. It is interesting to see a sex structure. At Sociology female students were predominant (8:2), while at discussions male students took the turn (5:5). At ICT male students were slightly dominant (4:6) and at discussions they were predominant (1:9). Taking all this into account, one can conclude that female students take more actively part in e-learning course and that male students are in general more more active at discussions.

Sociology		ICT	
Student	Open scene	Student	Student-student discussion
S1	22	**S1** (S7)	10
S2	21	S2	7
S3	20	S3	7
S4	20	S4	6
S5	18	S5	6
S6	18	S6	6
S7	17	S7	5
S8	16	S8	4
S9	13	S9	4
S10	13	S10	4

Table 8   The comparison of students according number of posts at student discussions

Open scene at Sociology and student-student discussion at ICT are not obligatory. The Table 8 shows that open scene came into life and students take actively part in it, while student-student discussion at ICT is about to come into life. The same generation of students was more motivated to take part in student discussions at course Sociology than at ICT course. Only one student can be found on both lists.

5   Conclusion

In this paper, we described some relevant aspects for the development of the course "Sociology" at Zagreb School of Economics and Management (ZSEM). Special attention has been payed to online discussions and co-relation with the rest online activity elements, and in addition, these conclusions have been carried out:

- There is no significant relation between the number of WebCT accesses and the number of sent posts concerning discussions, since students take part in other elements of the e-learning course.
- One cannot find a more relevant influence of passive discussion participation on the active one. However, more active students were more often moderators in "Opened scene".

By comparing two completely different courses (Sociology and ICT) the following conclusions have been made:

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- There is a certain correlation, namely, a student active at one e-learning course is probably active at other e-learning courses as well.
- The correlation between participation in discussions at two completely different courses is considerably lesser than the participation in the e-learning course.
- As far as a sex structure is concerned, the distribution according to courses is diverse. The common trait is that female students took part more often in the e-learning course. Male students were in general more active at discussions.

The quality of the e-learning course has been constantly supervised in order to get it more efficient and further developed. Via LMS system, students are constantly in touch with lecturer, which gives a new dimension to quality improvement in the process of education. In order to motivate our students, each semester lots of novelties have been introduced. A video project is planned for the next semester, that is to say, a group work, where students should deal with a topic and elaborate it via 5-minute-video project. The topic shall later on also be discussed. Our students intensively use new technologies at all lectures. On this way we prepare our students for a life-long learning (LLL).

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