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Discussion Forum as the Central Element of the Online Seminar: Content-Analysis of Posts by German Students

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The Role of the tutor for distance courses moderation, as well as the aims of discussion forum usage by learners are discussed. Discussion forum posts have been analyzed and the importance of asynchronous computer-mediated communication for knowledge acquisition by learners has been proved. Gender aspect is also taken into consideration.

Keywords: discussion forum, computer-mediated communication, content analysis, online seminar, gender aspect.

Discussion Forum in Education: Virtual Communication or Virtual Silence?

Despite the number of advantages a discussion forum offers for distance learning processes, some researchers claim that forums are seldom, if ever, used by the learner. (e.g. see Puntschart, 2006; p.10). Even if they are used, the only purpose of it is to discuss organizational issues (e.g. see Hinze et al., 2003; p.61). It is no use waiting for the learners to discuss the current topic, apparently, if they find only social messages from co-learners and instructions on the course from the teacher and/or the tutor in the discussion forum (e.g. see Grotlüschen, 2004; p.72).

So, as Schulmeister puts it, “Quality moderation of the discussion, published messages and topics content, tutor’s recommendations for learners’ support in educational process – they all play the key part“ in computer-mediated communication. (Schulmeister, 2004, p. 36-37). He also stresses the significant influence of communication process continuity on the quality of the educational process itself, in contrast with several other researchers who claim the importance of the cost and technical features of electronic educational means.

I. Rozina, for example, singles out technological, organizational and didactic components of modern information-educational

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environment organization (Rozina, 2005, p. 102). Efficiency of educational processes, however, can be achieved only when promptly controlled methods of education are used together with direct communication and feedback between learners and teacher in individual and group communication (Rozina, 2005, p. 125). Petko comes to similar conclusion, saying that “tutors need to influence the quality of discussion by posting substantial messages relevant to the topic studied and then by requiring well-grounded argumentation and pointing at delusions if answering posts are far from being close to reality” (Petko, 2003, p. 206).

We agree with the researchers that the quality of computer-mediated communication depends directly on the level of tutors’ active moderation of discussions. The consequence of the increased level of the tutor’s activity, as a number of authors’ point out, is a considerable raise in the tutor’s workload. (Puntschart, 2006; Rinn et al., 2003; Hesse et al., 1997). A research by Hyesse, for instance, shows that the number of the tutor’s posts amounts to 50 % of the total number of messages. But at the same time, 60 % of students’ posts are written by only 10 % of all learners in the group.

So, the authors give recommendation on the ways to lower labour contribution of the tutor and to raise learners’ activity. They include advice on preliminary preparation of all distance courses’ components including planned discussion’s components. Such preparation is a prerequisite for distance learning rather than a suggestion for classical forms of education. Following the recommendations described, Pauli et al. have lowered tutor’s labour contribution on moderation, the tutor’s messages amount to 10 % of all the posts, and increase the learners’ activity, 50 % of all the posts attribute to 60 % of learners (Pauli et al., 2000).

Another example of this kind is Puntschart’s survey, the aim of which is to organize an efficient forum discussion; efficient both from the learners’ knowledge achievement’s point of view and from the tutor’s labor contribution. Due to thorough distance course tasks’ planning, the author has managed to lower the tutor’s labour contribution (from 12 % to 3 % of all the posts). The result is achieved because the learners fulfilled their planned tasks, which comprised active discussion of current topic studied in the forum. The author has also managed to increase the number of new topics suggested by the learners up to 29 % of all the posts, and to enhance learner’s reaction to their groupmates’ posts up to 68 % (Puntschart, 2006).

Similar approach to online seminars that is based on their strict structure is used at the Distance and Independent Studies Center (further referred to as DISC) of Kaiserslautern Technical University, Germany. Online seminars at DISC, as well as discussion forums of online seminars at Virtual Campus of Rheinland Pfalz University (Virtueller Campus Rheinland Pfalz, VCRP), have been analyzed in detail by Sabine Hemsing (Hemsing, 2008). The aim of the survey is to analyze the problems tutors solve at asynchronous discussion moderation as well as forum discussions moderation influence on learners’ educational achievements.

Pedagogical Design of Distance Educational Course at an Example of Online Seminar

The planning and structuring of educational process traditionally lies in well-known pedagogical theories and is connected with both information and communication technologies of online seminars development. In contrast to pedagogic technology understood by the authors of “Internet-Education: Pedagogic Design Technology”

as "... purposeful consecutive description of teacher's and learners' activities to achieve the didactic goals", pedagogic design means "... development of educational materials and types of activities as well as their methods and means" (Internet-Education, pp. 39,43). Thus, pedagogic design is an indispensable part of any pedagogic technology by being a procedural and technological mechanism that brings pedagogic technology to its real application in the classroom (Internet-Education, p. 44).

When organizing online seminars at DISC, professors use the following parameters of pedagogic design for an online seminar:

- Duration of the distance course and teaching load for it;
- Subject scope of the course and its aims;
- Learners' group characteristics such as their level of knowledge, e.g. beginners, number of learners in the groups, their motivation;
- Tutor's preparedness to conduct the course;
- The place of the course in the curriculum;
- Technical means the tutor has at their disposal (Hemsing, 2008; p.104).

Both classical and online seminars comprise the following stages:

- Introductory;
- Main;
- Final and feedback or reflection (Bloh, 2005; p.22).

At each stage, the tutor can use different pedagogic technologies and variants to conduct the course. Thus, at an *introductory stage*, the learners share personal and/or professional information to create a comfortable atmosphere of trust in class. This stage is decisive for further activity of learners¹. That is why the well-timed welcoming post by tutor to open the online seminar officially is very important.

The introductory stage also gives learners the opportunity to share their expectations of the course and to become acquainted with the system of distance learning (SDL). The phase is even more important for the learners who take their first course in the virtual educational environment. Thus, having been acquainted with technical possibilities of SDL during the introductory stage, the learners will further focus on the subject scope of the course.

The central part of online seminar is the *main part*, of course, when the learners work with new educational materials. The stage consists of several thematic phases, as a rule. A six- to eight-week seminar, for example, will have from four to six thematic phases. Such thematic distribution and structuring of online seminar is very important for the learners as they use different asynchronous means of learning. It is necessary to consider the fact that distance study of a topic requires more time comparing with that at traditional education models. This way, one hour of traditional class work corresponds to about one week of asynchronous communication at online seminar (Hemsing, 2008; p.106).

At the *final stage* the main aim of tutors is coordinated conclusion of online seminars. During the phase the learners are asked to assess the seminar, filling in the online evaluation form or questionnaire. The stage can also be used to finish up individual tasks if necessary.

Educational methods used at online seminars are usually not a novelty by themselves. Traditional techniques that can be adjusted to the conditions of distance learning are used, such as pros and cons group discussion, role play, brainstorm, mini-group projects, quizzes, mind maps, presentations, web-portfolios, web-quests and many others. Online seminars often employ, for example, "circle of acquaintances" exercise taken from psychological practice and adapted to asynchronous computer-mediated

communication of distance courses. To inspire learners for an active and interesting discussion the tutor very often gives them a task that requires not only to write a very short introductory essay but to share an incredible story that had previously happened to learners personally or to attach a photo illustrating professional activities of the learner. The aim of the task described is acquaintance and psychological liberation of learners as well as their acknowledgement of SDL media peculiarities (Hemsing, 2008; p.153).

To find out the methods to inspire active discussion in the forum we have conducted a content analysis of text messages posted by learners.

Participants' Characteristics and Survey's Methods

In her survey Hemsing has analyzed tutors' posts in forums with the aim to study problems tutors have to solve when conducting an asynchronous discussion. To our mind, the problems tutors have to solve basically determine the problems learners face in the meaning of the posts they make. That is why we have analyses both the tutor's messages and online learners' posts, the latter being of prime interest to us.

Three different seminars conducted by different tutors in 2012 are chosen for analysis: "Labour Relations Law", "Distance Technology in Education" and "Fundamentals of Scientific Work". 65 people (15 men and 50 women) of the average age of 38 have taken the courses. All of them are the students of Master's programmes such as "Educational Management", "Human Resources" and "Andragogy".

The choice of such a variety of seminars and tutors is intentional with the aim to allocate common trends and to compare groups on several features. "Fundamentals of Scientific Work" online seminar, for example, is different from the rest because it has no group work in the

process of education. Group method is not used deliberately because the seminar is a prerequisite part of the professional aptitude exam to qualify for Master's Degree Program. The feature gives us the opportunity to understand if group work influences the tendencies in using discussion forum by the learners, or not.

The basics for analyzed posts differentiation are taken from the classification of tutor's duties by Berge and classification of comments types for blog analysis by Schulmeister (Berge, 1995, p.23; Schulmeister, 2010, p.320).

As Berge puts it, the tutor's tasks when conducting an online seminar can be classified the following way:

- Pedagogical tasks (thematic content messages);
- Social tasks (social messages);
- Organizational tasks (to solve organizational problems);
- Technical tasks (to solve technical problems).

The given classification is useful to determine the type of the post and to assign it to one category or another and, thus, to detect the aim of discussion forum usage by learners at different moments of time.

To analyze the tendencies of the comments in web-blogs Schulmeister singles out six basic categories (see Table 1).

In our survey we do not discuss the category of "Net etiquette rules reminder" because the category is irrelevant for the groups in question. Content of some posts can be attributed to several categories at the same time, but we still attributed one post to only one of the above mentioned categories, depending on its meaning.

Berge's classification, in our opinion, suits well for all kinds of posts both for new topics and for comments on them. Comments to new topics are also worth analyzing according to Schulmeister's classification (see Fig. 1).

Table 1. Web-blogs Texts Categories by Schulmeister

Text's Characteristics	Content
Reactive statements	Response to a statement, direct discussion of partner's posts (continues to give reasons, asks again, criticizes, asks to clarify, etc.)
Active statements	Doesn't go beyond the topic discussed, but doesn't comment on the information posted earlier and doesn't ask questions. Begins their own independent statement (claims, shares knowledge, cites other authors, describes personal experience).
Statements of personal opinion	Emotional assessment of partner's point of view ("As far as I know...", "If you ask me...", "I fully agree with...", "I'm afraid I disagree on the point that...", etc.)
Net etiquette rules reminder	Appeals to the necessity to follow rules and norms properly: gives remarks on inappropriate behaviour on the net, reminds about rules of appropriate behaviour, etc.
Chain of arguments and conclusions	Having taken the earlier posted information as the basis (as a rule, the information is taken from the post that opens a new topic), participants give a logic chain of arguments and conclusion. They use different reasons, compare pros and cons, find a tendency, etc.
Language gestures	Statements are irrelevant to the topic of the course, do not serve to establish social contacts, neither they attribute to other types of communication. They are different from personal opinion statement because they comment on the quality of the posts not on its meaning, e.g. "Super!", "I am delighted!", "LOL", "That is terrific!" etc.

General Statistic Data

For the period from two to four weeks 1953 posts have been published, 1560 of them by learners and 393 posts by tutors at all three seminars studied. In average, men publish 18 posts at a seminar and women – 26. Average length of a message is about 100 words regardless the gender of the poster. Total numbers of messages posted by learners and tutors of all three seminars are given at table 2.

So, 24 % of posts open new topics, 4 posts by men and 6 posts by women at average, 58 % of them contained comments of seminar's participants. In average, 14 posts by men and 19 posts by women are the comments on the current topic, and every new topic receives about 5.4 comment by learners (see table 2).

Main Research Results

As Hemsing points out, discussion forums are the central element for DISC online seminars (Hemsing, 2008; p.52). According to her

survey, learners' educational achievements are determined by discussion forum participation (23 %) together with individual tasks fulfillment (26 %) and online educational materials (23 %) (see Fig. 2).

It is necessary to note that the number of tutor's posts at discussion forum moderation at DISC which make up the biggest part of tutor's workload alongside with individual tasks checking, amount to 20 % of total number of posts. This number significantly increases the figures of the earlier mentioned authors who accomplished to lower the tutor's workload for discussion forum moderation while preserving the quality of education.

Nevertheless, DISC professors do not have lowering the tutor's workload at discussion moderation as their aim because they consider it to be justified. For 17 % of seminar's participants, for example, consider tutor's comments important for the process of learning as they give confidence to know

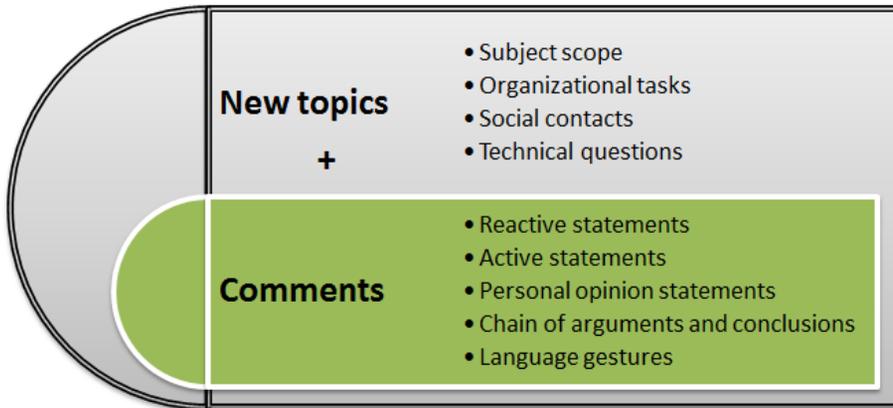


Fig. 1. Discussion Forum Text Messages (Posts) Differentiation

Table 2. Posts' Distribution for Three Seminars

Parameter	Labour Relations Law		Distance Technology in Education		Fundamentals of Scientific Work		Total	
	Quantity	Average	Quantity	Average	Quantity	Average	Quantity	Average
Number of posts	672	28	1185	49	96	6	1953	30
Men	83	21	179	36	14	2	276	18
Women	460	24	791	44	33	3	1284	26
Tutor	129	129	215	215	49	49	393	131
Number of words in a message	64122	95	95163	80	10690	111	169975	87
Men	8838	106	15869	89	2895	207	27602	100
Women	49910	109	62861	79	4678	142	117449	91
Tutor	5374	42	16433	76	3117	64	24924	63

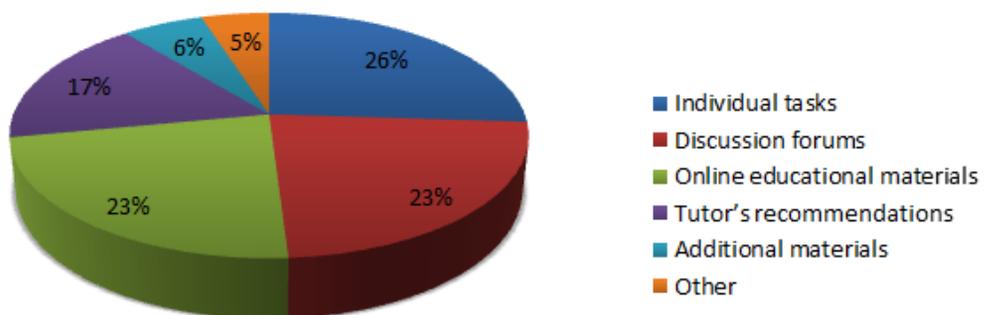


Fig. 2. Learners' Educational Achievements Components (Hemsing, 2008; p.272)

Table 2. New Topics and Comments Distribution to the Number of Posts

Type of post	Labour Relations Law	Distance Technology in Education	Fundamentals of Scientific Work	Total
New topics	132	289	54	475
New topics / messages, %	20	24	56	24
New topics with comments	79	166	29	274
New topics with comments / New topics, %	60	57	54	58
Comments	540	896	41	1477
Comments / New topics with comments, average	6.8	5.4	1.4	5.4

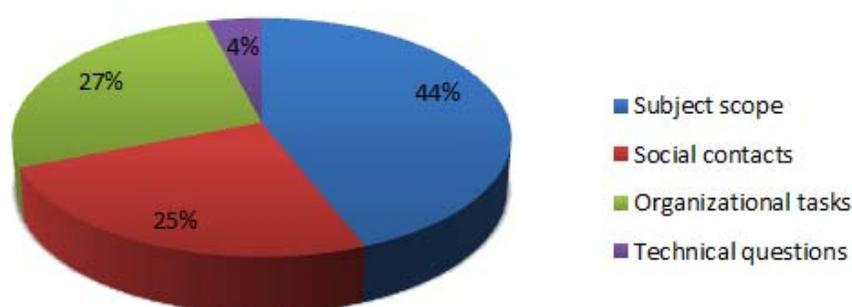


Fig. 3. Students' Aims When Using Discussion Forums

the learning is going the right direction and they are very helpful if any difficulty arises. Hemsing also comes to the conclusion that the more messages the tutor posts the higher is the learners' satisfaction level conserving the quality of online seminar (Hemsing, 2008; p.284). Moreover, the learners' satisfaction grows with the increasing number of words in tutor's posts (Hemsing, 2008; p.291). Under the existing circumstances of competition between higher educational establishments especially in the sphere of distance learning, the positive mood of learners is viewed by DISC as a very important component.

Using content analysis of posts in forums we affirm pedagogic orientation of asynchronous discussion. Thus, 44 % of all the posts are solely devoted to the subject scope, 25 % are of social nature, 27 % are connected with organizational

questions and only 4 % deal with technical problems (see Fig. 3)

Surprisingly enough, during the "Fundamentals of Scientific Work" online seminar where group work of seminar's participants was not employed, the number of posts concerning organizational problems is zero (see Fig. 4).

Percentage of comments to new topics is the following: 58 % are reactive statements, 23 % are active statements (see Fig. 5). Relatively few posts are those of personal opinion (4 %), chains of arguments and conclusions (5 %) and language gestures (10 %).

An interesting fact is that during the "Fundamentals of Scientific Work" online seminar where seminar's participants don't work in groups, there are no personal opinion posts. Moreover, there is no discussion to lead to a chain of arguments and conclusions (see Fig. 6).

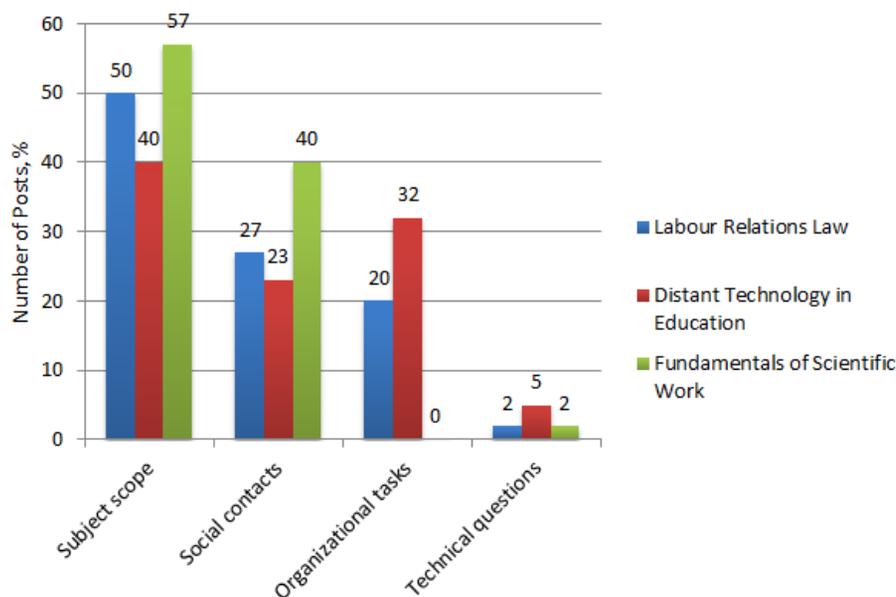


Fig. 4. Distribution of Aims to Use the Forum at Three Different Seminars

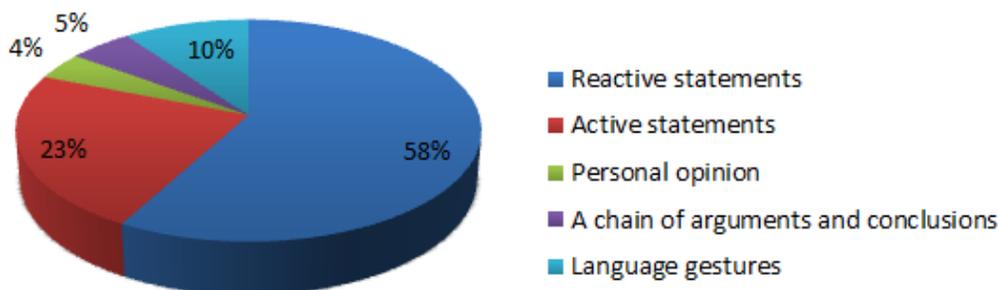


Fig. 5. Types of Statements Used by Students as Comments

It is also easy to note that during the “Fundamentals of Scientific Work” seminar the number of language gestures increases, so do the active statements. They prevail over reactive statements in comparison with the statements at two other seminars. But the fact that active statements prevail does not imply that the participants are able to lead a constructive discussion. Sometimes the tutor or other learners posted questions requiring a new independent statement, to describe personal experience at a particular situation, for example. Such

statements were also common at group work when a group was supposed to solve a problem, for example, and one of the participants started the discussion, the others then added their suggestions.

From gender point of view it is important to mention that types of posts by men and women do not differ much. Only at the two seminars where learners worked in groups the number of social posts, statements relate to the subject scope and reactive statements by women exceeded the number of them by men.

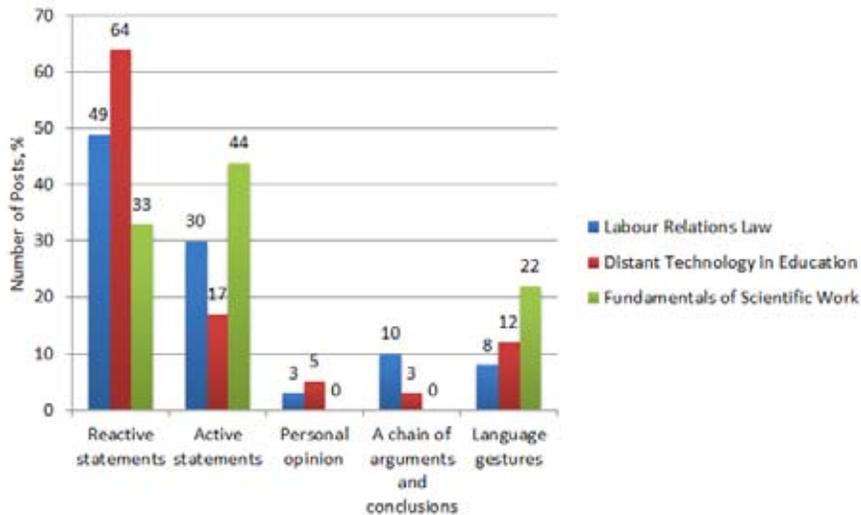


Fig. 6. Distribution of Learners' Posts Types in Three Seminars

Conclusion

Whether students will use discussion forum actively or not during their online or distance course depends on pedagogic design of the course and the goals the teacher sets. Despite the fact that asynchronous discussion moderation by tutor is an important element of a distance course and determines the level of learners' satisfaction by the quality of education, students' participation in discussion forum can be activated at minimal tutor's labour contribution into discussion moderation. To make it possible, thorough content and pedagogic scenario development is necessary.

Main peculiarities of asynchronous communication at discussion forum of DISC online seminars we have found out by content analysis of posts in forums are:

- Women write more posts in discussion forums than men;
- Discussion forums are mainly used to discuss the subject scope (44 %) and to establish social contacts (25 %);

- Organizational questions arise in forum only when groups work needs to be coordinated. During the online seminar where group work of seminar's participants was not employed, the number of posts concerning organizational problems amounts to zero;
- When commenting, learners mostly use reactive statements, giving relative answers to other posts and discussing partners' messages;
- When group work is not employed, learners do not give their personal opinion and discussion forums do not lead to a chain of arguments and conclusions;
- Aims of men and women to use discussion forums as well as their commenting styles differ slightly: the number of social posts, statements devoted to subject scope and the number of reactive statement in women's posts is a little higher.

¹ Here we need to consider the fact that students at DISC take distance courses and, as a rule, are not acquainted before the beginning of the online seminar. Furthermore, in Germany there is no fixed assignment of students to groups, so, choosing a course the students meet new co-learners each time they have a new course.

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**Дискуссионный форум как центральный элемент
онлайн-семинара:
контент-анализ текстовых сообщений
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В статье рассматривается роль тьютора при модерации дистанционных курсов, а также цели использования обучаемыми дискуссионных форумов. Проведен анализ сообщений дискуссионного форума, подтверждающий значимую роль асинхронной компьютерно-опосредованной коммуникации для приобретения знаний обучаемыми. При анализе текстов учитывался гендерный аспект.

Ключевые слова: дискуссионный форум, компьютерно-опосредованная коммуникация, контент-анализ, онлайн-семинар, гендерный аспект.
