

## APPROACHES TO ONLINE LEARNING: A STUDY OF THE FACTORS AFFECTING TEACHERS IN A FULLY ONLINE FACULTY

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**Abstract:** *Nowadays there has been a wide interest in implementing online courses in universities. Even though most of studies on online learning focus on issues related to technology or teaching methods, so there is less attention is given to online teachers and their approaches to learning. The purpose of this paper is to provide an overview of how teachers approach online learning and different factors that influence the approaches to individual teachers in online learning, especially in a fully online faculty. One hundred ninety-eight (198) teachers belonging to the A. Yasawi International Kazakh-Turkish University were interviewed. Dependent variables include three approaches to online learning: the approach to content acquisition, the approach to collaborative learning, and the approach to building knowledge. Explanatory variables are socio-demographic, academic knowledge, online teaching experience, teaching, online teaching and the role of teachers in online learning. Different analyses of multiple regression are used to determine judgments and verify the influence of independent variables. The results show that age, academic experience, online devotion to teaching and especially the role of teachers in online learning are important predictors of adapting a specific approach to online learning.*

**Keywords:** online learning, distance education, online courses.

Teaching is a key aspect of the educational quality of online research.<sup>1</sup> The teaching presence includes the development of the contents of the curriculum, training activities and terms; monitoring and management of cooperation; and ensuring that students achieve their learning outcomes. Teachers' approaches to learning are a suitable concept for characterizing different types of education. According to Trigwell and Prosser,<sup>2</sup> teachers' approaches to learning were compiled from the perspective of their teaching strategies and the intentions underlying the strategies.

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<sup>1</sup> P. Shea, C. S. Li, A. Pickett, „A study of teaching presence and student sense of learning community in fully online and web-enhanced college courses”, in *The Internet and Higher Education*, volume 9 (3), 2006, pp. 175-190.

<sup>2</sup> K. Trigwell, M. Prosser, „Development and use of the approaches to teaching inventory”, in *Educational Psychology Review*, no. 16 (4), 2004, pp. 409-424.

Expanding our knowledge about online learning is important for teachers' trainings, since the way that teachers consider online learning is clearly related to a better processes and student learning outcomes. In addition, this knowledge can be used in developing interactive learning environments. Also can help in designing programs for faculty training in online learning, to understand and adapt them to the proper use of these new learning environments.

Studies conducted on approaches to online learning have been conducted both in mixed training courses in which teachers must balance their learning (face to face and the virtual learning environment) as well as in online courses. Phenomenographic methods are most often used to collect and analyse data, and the results of studies are usually qualitative.

In a pioneering study conducted by G. Robert,<sup>3</sup> were analysed teachers' perspective to the use of the Internet for teaching and learning in mixed environments. Using a mixed methodology, combining survey data and interviews of 198 participants, three different attitudes were identified: (1) the Internet was used as a source of information; (2) A network used independently of other students or teachers for individual, independent learning; and (3) The network used for group analysis, making and dialogue.

Regarding to mixed learning settings, Ellis, Steed and Applebee (2006), analysed data from interviews with 19 teachers, identifying four approaches to online learning in a virtual learning environment: (1) teachers focused on the way how students successfully completed learning task by following the instructions; (2) teachers encouraged students to experiment with resources to learn new technologies; (3) teachers wanted to take advantage of the interactive learning context to support students' acquisition of knowledge; and (4) teachers tried to help students take on greater responsibility for their education.

More recently, P. E. Williams<sup>4</sup> conducted phenomenographic studies, interviewing 25 IT teachers who used virtual learning environments at a mixed university. Approaches to online learning have been described as a support tool: (1) teachers communicating information to students; (2) teachers who promote the application and clarification of concepts; (3) teachers supporting the research of content

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<sup>3</sup> G. Roberts, „Teaching using the web: conceptions and approaches from a phenomenographic perspective”, in *Instructional Science*, no. 31, 2003, pp. 127-150.

<sup>4</sup> P. E. Williams, „Roles and competencies for distance education programs in Higher Education”, in *The American Journal of Distance Education*, no. 17 (1), 2003, pp. 45-57.

resources, exchange and development of ideas through educational interactions; and (4) teachers who support the joint creation of knowledge.

In the effort of determining how teachers anticipate teaching in online courses, C. Gonzalez,<sup>5</sup> taking into account previous contributions from Roberts, conducted research in online health courses. Using the phenomenological perspective, he collected data from seven teachers and proposed three approaches to online learning: (1) the Internet used for individual access to materials and information, and for individual evaluation; (2) Internet used for learning communication (asynchronous and/or synchronous); and (3) the Internet used as a tool for network learning.

Teachers basically had created virtual spaces for the exchange of information with students<sup>6</sup> and were guided by the building process of students' knowledge. In the next report, Gonzalez<sup>7</sup> interviewed 18 university teachers from two universities and made an alternative proposal with four approaches to learning using online methods: (1) e-learning as a method to provide information; (2) e-learning as a tool for casual communication; (3) e-learning as a way to participate in online discussions; and (4) e-learning as a manner of supporting knowledge as creation tasks.

## Methodology

The purpose of this paper is to provide a comprehensive overview of how teachers approach their online learning and what factors influence their adaption of a particular approach. For this is considered that approaches to online learning, teachers' importance in the process and individual characteristics are outlined. The following research questions are being studied: RQ. Which are the roles of teachers in online learning?

This research project was conducted at the A. Yasawi International Kazakh-Turkish University. Several courses conducted by this university

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<sup>5</sup> C. Gonzalez, „Conceptions of, and approaches to, teaching online: a study of lecturers teaching postgraduate distance courses”, in *Higher Education*, no. 57 (3), 2009, pp. 299-314.

<sup>6</sup> İ. Çakir, „Instructional materials commonly employed by foreign language teachers at elementary schools”, in *International Electronic Journal of Elementary Education*, volume 8, no. 1, 2016, pp. 69-82.

<sup>7</sup> C. Gonzalez, „What do university teachers think eLearning is good for in their teaching?”, in *Studies in Higher Education*, no. 35 (1), 2010, pp. 61-78.

are online. Programs for students and graduates are provided using a virtual space, which is based on asynchronous written communication networks. It is important to emphasize that this research is focused only on one university. The educational model of the A. Yasawi International Kazakh-Turkish University focuses on the student and the educational process. Learning resources and training strategies are aimed at promoting access to content, creating knowledge about students and collaborative learning (the A. Yasawi International Kazakh-Turkish University, n. d.).

The A. Yasawi International Kazakh-Turkish University (IKTU) covers two types of teachers: the staff of its own teachers of the IKTU and a large number of assistant teachers in combination. The first group of full-time teachers has responsibilities related to university management, curriculum development, curriculum design and research, among others.

Associated teachers working part-time have a major job outside the university, currently as a teacher in another university or in the professional field. They have responsibilities related to online learning using a virtual class, which is a learning management system developed by the IKTU itself (A. Yasawi International Kazakh-Turkish University). The University expects that associated teachers will develop their online training taking into account the role of different teachers in educational design, management of learning activities, management of social interaction and educational use of technology and training assessment.

Associate professors of the A. Yasawi International Kazakh-Turkish University received an email from the research team inviting them to participate in the study and asking them to fill out an online questionnaire that can be accessed through a link embedded in the message itself. The online version of the questionnaire was anonymously announced between November 2016 and February 2017.

Totally 198 respondents, the response rate was 46.13% of all online-associated teachers.

Participants were asked to provide basic individual information. Among 198 teachers, 56% are men, 44% are women. Their average age at the end of 2012 was 43 (SD=7.6). As for the level of education, 24.3% had a bachelor's degree, 36% had a master's degree and 39.7% a Ph.D. They are specialised in the following areas: Social Sciences (59.9%), Humanities (11, 4%), Health Sciences (6.9%), Engineering (15.5%) and Science (6.2%). Most of the teachers were taught at the university at the bachelor's level (85.5%), and the others completed post-

graduate/doctoral studies (14.5%). Among the teachers surveyed, 33.5% had less than 3 years of online learning experience, 46.6% from 3 to 10 years, and 19.9% over 10 years. Finally, interviewed, from the teachers 24.5% took less than 25% of their school time for online learning, 21%-from 26 to 50%, 22.5%-from 51 to 99% and 31.1% devoted 100% of their time.

### **The role of teachers in online learning**

Participants were asked to think about the role of teachers in online learning using the Likert Scale of twenty points (see Table 1), ranging from „*not important*” (1) to „*very important*” (5). The measurement was constructed taking into account the role of teachers in online learning determined by the relevant contribution.<sup>8</sup> Participants assessed the importance of several training tasks, which are usually performed for online learning in the A. Yasawi International Kazakh-Turkish University.

### **Approaches to learning online**

Participants were asked to report from their point of view approaches to online learning based on the Likert Scale of 12 subjects, ranging from „*strongly disagree*” (1) to „*completely agree*” (5). The scale was constructed taking into account some of the outlooks identified by Gonzalez.

As a first step in the data analysis are the two research factors analysing the online learning and the role of teachers in this process. These were conducted to reduce the variability of an item to a multidimensional semantic space that represents values for teachers. There were developed three scales for online learning approaches and five scales for the role of teachers in online learning. In both cases, the raw estimates were added and divided by the number of elements included in each coefficient, to preserve the original scale (ie, from 1 to 5 to facilitate its interpretation).

In the second stage were developed three multidimensional regressions to determine the relationship between the three approaches to online learning and each independent variable. Regression coefficients (B), standard errors (SE), significance t-tests and their corresponding

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<sup>8</sup> E. Thach, K. Murphy, „Competencies for distance education professionals”, in *Educational Technology, Research & Development*, no. 43 (1), 1995, pp. 57-79.

standardized versions (beta) were also calculated. F tests and R2 values were used to determine the significance and overall fit of the three multiple regressions. It served as an indication of the explanation reflected in each model.

## Discussions

The analysis of the main components (PCA) showed an acceptable five-component structure (KMO=0.853 and a significant Bartlett test,  $p < 0.000$ ), explaining 62.07% of the total variance in the following roles of teachers: management of social interaction (29.78%), study project (10, 91%), technology management (9.22%), training evaluation (6.65%) and training support (5.52%). Five components showed acceptable reliability, with Cronbach a 0.807, 0.743, 0.837, 0.720 and respectively 0.763 (see Table 1).

**Table 1: Rotating component matrix (factor loads) and descriptive statistics for the role of teachers in online learning (N=198)**

|  | Mean | SD   | F1    | F2    | F3    | F4    | F5    |
|--|------|------|-------|-------|-------|-------|-------|
| Managing social interaction  | 3.52 | 0.78 |       |       |       |       |       |
| Promotion of relationships of trust and mutual commitment among students   | 3.58 | 0.99 | 0.864 | 0.136 | 0.276 | 0.166 | 0.390 |
| Resolution of group conflicts among students                               | 3.37 | 1.03 | 0.781 | 0.265 | 0.369 | 0.250 | 0.346 |
| Intensification of cordial and warm relations between teacher and students | 4.03 | 0.88 | 0.731 | 0.173 | 0.188 | 0.376 | 0.319 |
| Facilitation of personal or professional knowledge among students          | 3.11 | 1.01 | 0.726 | 0.125 | 0.487 | 0.085 | 0.377 |
| Instructional design   | 4.34 | 0.54 |       |       |       |       |       |
| Design of the training proposal based on the training requirements         | 4.24 | 0.77 | 0.058 | 0.768 | 0.212 | 0.184 | 0.179 |
| Selection, design and/or content adaptation                                | 4.35 | 0.69 | 0.125 | 0.759 | 0.181 | 0.191 | 0.053 |
| Establishment of learning objectives and competency to be developed        | 4.33 | 0.70 | 0.145 | 0.739 | 0.255 | 0.224 | 0.245 |
| Selection, design and/or adaptation of learning activities and assessments | 4.43 | 0.65 | 0.224 | 0.726 | 0.123 | 0.355 | 0.150 |
| Guiding the use of technology  | 3.60 | 0.76 |       |       |       |       |       |
| Design of certain technological tools for learning                         | 3.56 | 0.90 | 0.313 | 0.255 | 0.827 | 0.079 | 0.201 |

|   |      |      |       |       |       |       |       |
|---|------|------|-------|-------|-------|-------|-------|
| Decision to integrate new technological tools into the existing virtual environment                       | 3.58 | 0.91 | 0.238 | 0.186 | 0.817 | 0.113 | 0.227 |
| Guidance of students in the use of the virtual learning environment                                       | 3.72 | 0.93 | 0.264 | 0.248 | 0.808 | 0.231 | 0.281 |
| Regulation of an appropriate use of technology by students  | 3.55 | 0.98 | 0.315 | 0.199 | 0.795 | 0.202 | 0.337 |
| Learning assessment   | 4.44 | 0.50 |       |       |       |       |       |
| Amelioration of students' misunderstanding of content   | 4.33 | 0.72 | 0.133 | 0.209 | 0.173 | 0.781 | 0.203 |
| Resolution of questions from students about the content   | 3.16 | 0.54 | 0.178 | 0.175 | 0.110 | 0.775 | 0.147 |
| Monitoring and evaluation of students' individual and group activities                                    | 4.38 | 0.70 | 0.281 | 0.377 | 0.149 | 0.677 | 0.389 |
| Providing students with information about assessment (grades, correct answers and/or evaluation criteria) | 4.37 | 0.72 | 0.316 | 0.375 | 0.222 | 0.644 | 0.262 |
| Learning support  | 3.66 | 0.70 |       |       |       |       |       |
| Guidance and monitoring of students' participation in social/interaction activities                       | 4.38 | 0.70 | 0.470 | 0.171 | 0.213 | 0.085 | 0.820 |
| Monitoring and evaluation of students' participation in social/interaction activities                     | 3.41 | 0.98 | 0.577 | 0.158 | 0.245 | 0.154 | 0.755 |
| Guidance and regulation of students' individual study processes   | 3.62 | 0.87 | 0.262 | 0.114 | 0.400 | 0.268 | 0.746 |
| Control and monitoring of students' learning pace and learning periods                                    | 3.99 | 0.81 | 0.199 | 0.303 | 0.230 | 0.407 | 0.679 |

Teachers scored more on the evaluation of training and the scale of "Educational Design" than other scales: the role of training, of „*Using the role of technology*” and the importance of „*Managing social interaction*”.

The role of „*Management of social interaction*” refers to tasks as the promotion of trust and mutual trust between students, as well as between students and teacher, the resolution of conflicts in groups and the strengthening of mutual communication between participants. In the educational project, the tasks of the teacher were related to the selection and adaptation of content, the definition of goals and competencies, the training and preparation of training activities and evaluation.

„*Managing the use of technology*” includes tasks related to the development of technology training tools, the integration of new tools in a virtual classroom, the orientation of students to use a virtual learning

environment and the provision of assistance to promote the use of specific technology tools.<sup>9</sup>

The „*Evaluation of learning*” where the teacher must perform a relation between formative and final evaluation, for example: answering the students’ questions about content, correcting mistakes within the meaning of students, monitoring and evaluation of individual or group training activities and transferring information to students regarding the evaluation (evaluation criteria, correct answers or qualifications). The role of the training support is consistent with various learning objectives, such as monitoring, management and evaluation of student participation in social interaction activities, the orientation of individual learning processes, monitoring the pace of instruction, explaining methodology and organizing study time, but also presentation and consistency of training activities.

## Conclusion

In this research question was studied the role of teachers in online learning. There were identified five roles of teachers, curricula and training evaluation, developed among them. It not only brings together various existing contributions,<sup>10</sup> but a set of five teaching roles in online learning includes a new role called the role of teaching support. Although, in this area, this was poorly defined in the previous studies. Tutorial support seems to play an important role in the relation between teachers belonging to this university.

Examining the second research issue, there are three main approaches to online learning: content acquisition, collaborative learning and knowledge creation. Previous researchers reported similar categories using qualitative methods. These three approaches should be seen as different ways in which associate teachers contribute to teaching process in the fully online faculty. Contrary to what could be expected in a fully online college, the associate employee of the IKTU teachers do not understand the self-learning of students as an approach to online learning. Finally, answering to the third research question, our results

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<sup>9</sup> I. Kasparova, „The right to be included: Homeschoolers combat the structural discrimination embodied in their lawful protection in the Czech Republic”, in *International Electronic Journal of Elementary Education*, volume 8, no. 1, 2015, pp. 161-174.

<sup>10</sup> I. Alvarez, T. Guasch, A. Espasa, „University teacher roles and competencies in online learning environments: a theoretical analysis of teaching and learning practices”, in *European Journal of Teacher Education*, no. 32 (3), 2009, pp. 321-336.



show that teachers concentrate on different roles, and they focus on online learning procedure.

