

# Reviews and Pedagogical Concerns of Online Learning Models During the Pandemic Covid-19

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**Abstract**— The substantial advances in technology over the last three decades have put it in the foreground in almost all of our modern life sectors. Education, just like other sectors, attracted many technological applications to its routine delivery approaches, which made it an essential part of the modern learning process. However, the massive increase in the reliance on technology that are normally triggered by crises such as the recent pandemic Covid-19 transformed the role of technology from being the catalyst to the learning process into being the main carrier. Many colleges and universities around the world shifted their learning style to be entirely online, hence, emerged the need to implement some of the online learning models that have been in use for the last two decades. The purpose of this fundamental research paper is to look at the pros and cons of some of the most common online learning models that have been used by more educational institutions as a result of crises like the pandemic. Although such models have been in use before the pandemic, the recently increased usage of online learning has exposed some pedagogical concerns that were not as clear. The results showed that along with many pedagogical obstacles, online learners who cannot do most of the learning requirements independently are unable to engage effectively in an online learning environment.

**Keywords**— crises, technology, online learning models, pedagogy, higher education

## I. INTRODUCTION

Looking at the previous literature, one can find many different models for online learning that suit different pedagogic needs (Alyaa & Hasan, 2017). Such models can be looked at as potential for online learning. There have been several online models recently mentioned by Harrasem (2017) and Ko and Rossen (2017), but one of the recent online models implemented in the field of education is mentioned by Clarke & Mayer (2016) who present a model that involves a person demonstration of modules contents with an online avatar (pedagogical agent) using video streams. However, given the fact that many learners being novice users of technology, and not being exposed to full scale online learning (just beginning to grasp the online learning concepts), it was found that two earlier models might have potentially been implemented in the online learning for educational institutions (Alyaa & Hasan, 2017). Those models are Salmon's five-stage model (2002) and Garrison and Anderson's community of enquiry model (2003).

## II. SALMON'S MODEL

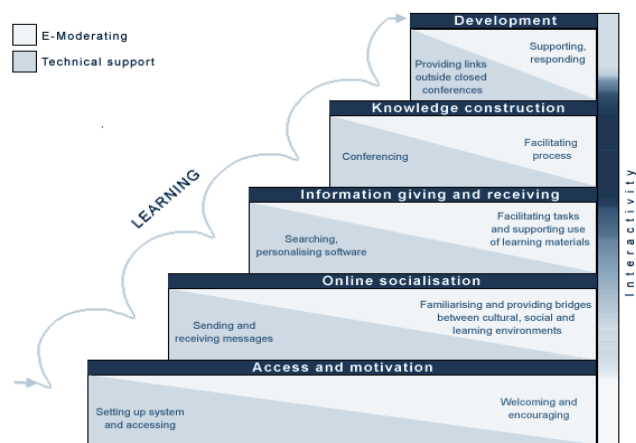
Salmon's model of 5 stages of e-learning has been studied and developed as a standard model for many years. It has been applied to many different training disciplines and learning contexts. The model can be used in identifying activities that learners (the teachers in this study) might be involved in throughout the different stages of the learning process. This is summarised in the following table;

Learning stage	Learner activity	Tutor activity
Stage 1 Access and motivation	Setting up system and accessing	Welcome and encouragement Guidance on where to find technical support
Stage 2 On-line socialization	Sending and receiving messages	Introductions Ice-breakers Ground rules Netiquette
Stage 3 Information exchange	Carrying out activities Reporting and discussing findings	Facilitate structured activities Assign roles and responsibilities Support use of learning materials Encourage discussions Summarize findings and/or outcomes
Stage 4 Knowledge construction	Conferencing Course-related discussions Critical thinking applied to subject material Making connections between models and work-based learning experiences	Facilitate open activities Facilitate the process Asking questions Encourage reflection. Tutor is very active at this stage.

Stage 5 Development.	Use of conferencing in a strategic way Integration of CMC into other forms of learning Reflection on learning processes Students become critical	Support Respond only when required Encourage reflection Tutor is less active and hands over to the students
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**Figure 2:** Salmon's Model Description (Salmon, 2004)

Looking at the brief description of the model in the table above draws my attention to the fact that although the model was originally designed for e-learning, it is possible to be applied in blended learning, which is something that the teachers in this study might benefit from by balancing their options, i.e. not to be fully exposed to online learning but



It can be seen in the figure above that the tutors' role (the trainer) is shown on the right of the steps while the left side shows the technical support needed in the process. It also shows the structured activities that are built on the previous experiences of learners. The model presents a framework on how to build an online learning environment via conferencing. The steps are meant to help in raising the individuals' level of contributions in active learning. It provides "a scaffold for a structured and paced programme of e activities" (Salmon, 2002: 10). A brief explanation of Salmon's e-learning model presented throughout the table and the figure above needs a detailed presentation to show the potentials of such a model to be used in online learning.

These five stages in the model; access and motivation, online socialisation, information giving and receiving, knowledge construction, then development. I present below an explanation of each of the five stages;

### 1. Stage 1

Access and motivation is the stage where participants join the e-learning environment by using certain login credentials. The trainer or the tutor directs the participants to the next stage by welcoming them to the e-learning environment. Although this stage is looked at as a preparation stage in which the operational procedure is demonstrated, Salmon (2002) thinks that it is a good practice if all is demonstrated to the participants while they are online and not in a face to face meeting with them. Salmon thinks that we cannot expect the participants to take part in the e-learning environment successfully just because the procedure has been explained to them beforehand. Salmon thinks that participants need to explore how online learning works when they are already online. Salmon also thinks that new e-learners might hear negative comments about the effectiveness of e-learning from other participants. Salmons add that such comments whether true or not will give new e-learners unnecessary negative supposition about online learning even before they try it. Furthermore, the process of inducting participants on a face to face bases is time-consuming. Salmons says that "IT support people will spend many hours assisting, and some people will still fall by the wayside." (p.14)

By the end of this stage, learners can navigate through the e-learning environment confidently (Alyaa & Hasan, 2017). Having acquired the main skills of how to work and learn online, learners become more active in their next visit and they can move to the next stage with minimum concerns.

### 2. Stage 2

Online socialisation enables learners to set up their own identities as e-learners and be more active in socialising with other learners. This mainly starts by sending short messages to each other like introducing themselves to other people online. Knowing the other people in the group helps in building a good e-learning environment. Learners should be able to introduce themselves and begin to know each other. This promotes teamwork spirit and establishes a friendly relationship among learners preparing for a collaborative online learning environment. "Indeed, the importance of establishing relationships, through both formal and informal interactions, in contributing to social and academic integration, is well documented as critical for students' retention" (MacDonald, 2008: 50).

### 3. Stage 3

Exchanging information is a more productive stage in which learners start gaining information. The relationship among participants moves from a mere friendly exchange of greeting into a more course-related one. There two types of interactions in this stage; the first type is between learners and other learners and between learners and the moderator of the course. The second type is between learners and the learning materials. The moderator or the tutor is the person who presents the learning materials which can be done in different formats; uploaded materials, typed instructions or links to other websites. Most of the learners' activities at this stage are focused on retrieving information about assigned tasks and then sharing outcomes. The moderator or the tutor needs to make sure that the instructions on any task are precise in order not to distract learners from the learning environment and keep them engaged

interactively. “The fact that online activities are central to the course means that all students in the group are expected to participate... the moderator may be engaged in chasing up, and encouraging those who re not active.” (MacDonald, 2008: 61) It is also worth noting at this stage that learners might need help in navigating around tasks and finding information, this is normal and expected because not everyone is fully familiar with tasks at such a stage.

#### 4. Stage 4

The knowledge construction stage is when learners start to formulate their assumptions about knowledge and relate them to their own experiences. Learners’ main task at this stage is to build up upon their previous experiences and try to apply that to new situations. In doing so, learners will be able to develop new skills in their practice. Learners formulate their understanding of knowledge “linking it directly to personal experience ... each piece of newly constructed knowledge is built on previous knowledge” (Salmon, 2002: 29). Tutor at this stage should encourage learners to debate and comment on the points of discussion and acknowledge learners’ remarks.

#### 5. Stage 5

Development is the outcome of all the previous stages. Unlike the previous stages, learners become more concerned at this stage about their personal development and thus their interaction with each other decreases. Learners are more aware of how to engage in an online learning environment at this stage and their main concerns are on how to relate what they have already gained to their contexts. Learners’ metacognitive understanding is reinforced in this stage as they are more able to make a judgement on their learning and apply new ideas to their online learning process. Salmon (2002: 33) says that metacognitive learning skills focus on what the learners do in new contexts or how they might apply concepts and ideas”. Learners start guiding each other at this stage and offering each other advice on various situations.

Although Salmon’s models present detailed steps on how to conduct online learning, it has not been agreed on in the later literature. Studies like Unwin (2007); Johns & Peachy (2007); Moule (2007); Moterram (2006) have criticised Salmon’s model and described it has been simple, mechanical and determined by the physical process alone. Critical research conducted by Jones & Peachy (2007) showed that Salmon’s model lacked the required level of socialisation. Johnes and Peachy (2007) found that an appropriate level of socialisation was not achieved because of the limited guidance that online learners were offered. Moule (2007) says that the absence of the face to face factor in Salmon’s model has made it limited in nature, “the five-stage model has not reflected the potential available to use e-learning as part of an integrated approach that includes face-to-face delivery” (Moule, 2007: 39).

The simplicity of Salmon’s model makes it a straightforward process for novice e-learners and that is criticised by other studies because teachers’ learning is a far more complicated process than such basic steps. However, such a model could be appropriate in the technology-novice contexts as learners in such contexts might not have been introduced to such an online

environment quite often and a straightforward easy online learning model will be sufficient for such early stages of online learning. The model explains in each of its five stages what is needed from learners and tutors as far as technical support and participants roles are concerned. Motteram (2006) has adopted Salmon’s model in a blended learning event that he organised for English language teachers in which he applied all the five stages. Motteram (2006) mentioned that adopting Salmon’s model in that context was a success.

As to the progress of participants from one stage to another, Salmons (2002) acknowledges that this cannot be achieved equally for all participants. There will always be some participants who lag and this depends on different reasons such as the level of knowledge with computer and the adequate support received. Of course, tutors cannot offer step by step support for all participants at all times. The model does offer a practical framework for e-learning but individual support needs have to be considered by tutors in order not deter novice learners from online learning. “Although online learning allows students to be fully included in a community, instructors need to pay attention to issues of accessibility, availability and support to ensure their full participation” (Palloff & Pratt, 2003: 46) This leads us to what some studies suggested about adding a preliminary stage to the model in which new learners receive a face to face induction. Such a stage might also help in assessing the participants’ needs and thus address them at an early stage. Palloff & Pratt (2003: 79) emphasises the importance of the needs assessment stage in education

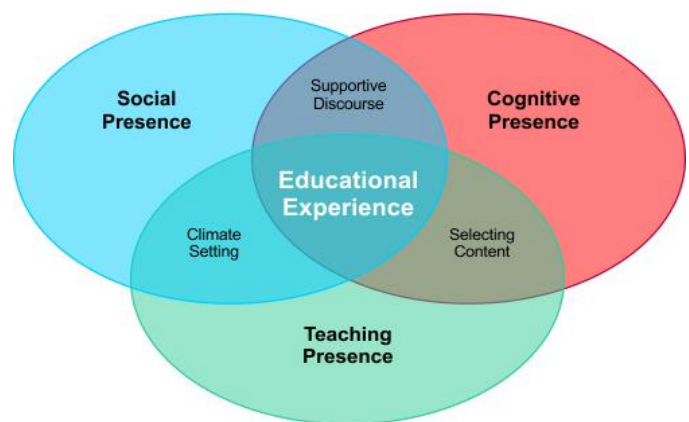


Figure 4: Garrison & Anderson’s Community of Enquiry Model (Garrison & Anderson, 2003)

Garrison and Anderson’s model presents a kind of practical relationship between social presence, cognitive presence and teaching presence. The result of the interaction of those three mechanisms is a community of enquiry. I present below a brief description of each of the mechanisms.

and says that such assessment “has been increasingly recognized as a necessary part of curriculum design”. Stewart and Coffman (1996: 261) also state that “the integration of needs assessment as part of a total distance education system should benefit all stakeholders”.

### III. COMMUNITY OF ENQUIRY MODEL

Garrison and Anderson (2003) model focus on the facilitation of e-learning environments to create active online communities in which independent and interdependent practice can be achieved. The main argument in Garrison and Anderson's model is that participants in an e-learning environment come together to discuss a specific purpose of how to construct and validate understanding. In doing so, participants can achieve both cognitive independence as well as social interdependence.

Social presence is where participants introduce themselves to other e-learning community members to establish their real presence in the community.

- Cognitive presence is the learners' ability to build up their meaning through continuous

interaction and communication with other participants and the tutor.

- Teaching presence is related to the tutor's facilitation of the above two mechanisms, i.e. is when the tutor selects the contents (cognitive) and sets the environment (social) for participants so they can create a useful learning experience.

The community of enquiry modal shows the functional roles of participants and tutor throughout the relationship between social presence, cognitive presence and teaching presence. The community of enquiry model "provides the order and structural elements needed to begin the process of understanding the complexities of online learning" (Garrison et al, 2010: 32). The model has proved to be useful in setting up online education. Aykol et al (2009: 123) talk about the model as becoming a prominent model of learning online, "considerable research has been conducted which employs the framework with promising results, resulting in wide use to inform the practice of online and blended teaching and learning. It states that online learning is best supported and maintained in a learning community in which learners engage effectively in critical reflection. The theoretical aspect of the model is grounded in research on meaningful and deep approaches to learning while its philosophical aspect is collaborative constructivism (Garrison et al, 2010).

As in the case of Salmon's model above, we acknowledge that Garrison and Anderson model presupposes access to some organisations to moderate and design its implementation, which might need some preparation in the technology-novice contexts, but again this can be seen as another step in the right direction for the online learning provision.

### IV. EMPIRICAL RESEARCH

Studies such as Figlio et al (2013); Pincas (2004); Burnett, 2010) have reported that the lack of face to face communication in the online learning environment especially between learners and tutors makes learners miss out on seeing the tutor as a dynamic figure in the classroom who takes the responsibility of managing interaction and supporting the learning needs (Alyaa & Hasan, 2017). Face to face learning chats are characterised by tentativeness and this is hard to suggest without "using facial expression, hesitancy and tone of voice." (Burnett, 2010: 248)

Tibbett (2004: 33) adds that the delay in responding to learners' needs and concerns can be frustrating mainly to new e-learners. "The internet gives much more than it accepts. Interaction with a web page is still not as immediate or satisfying as interaction with people. Teachers want to help; most teachers want to know about their students' lives, thoughts, and opinions. The web page does not care, however much the Java expert tries to humanise things".

Looking for another educational concern in the online learning environment, I found that familiarity with using technology has been mentioned by several studies as a concern that online learners might encounter. Online learners need a sufficient level of knowledge of technology to be able to engage effectively and interact critically. The technical support that is normally available for learners in the traditional model might not be available for online learners. Besides, knowledge of technology is important if constructivist pedagogy is to be accommodated in the learning environment, i.e., learners need to be familiar with how to use different technology applications for educational purposes. Smarkola, (2008) mentions that learners with greater computer self-efficacy may have more positive attitudes toward the Internet. Buabeng-Andoh (2012: 136) highlights the "lack of teacher confidence" with technology among the barriers behind poor integration.

Palloff & Pratt (2007: 4) say that "many institutions mistakenly believe that all it takes to implement an online distance learning program is to install a fancy software package and train faculty to use it". This is, of course, not the case because without learners and tutors being fully aware of how to use technology and learning outcomes would not be possible to achieve. Palloff & Pratt (2007) add that tutors and learners "need to be knowledgeable about the technology in use and comfortable enough with it to assist should difficulty be encountered". Meyer & Murrell (2014: 10) also emphasise that education policy leaders needed to allocate resources to enhance policy executers' skills with technology. Another issue in this regard that previous studies mentioned is the implications of constructivist pedagogy for using technology in teaching and learning. Duffy et al (2012: 3) mention that "constructivist pedagogy emphasizes the "situatedness" of learning and the context in which it is experienced. The context involves the larger framework or purpose for engaging in a task". Consequently, sufficient support for learners is needed to address any unfamiliarity with the online environment and to enable them to create a learning context in which they communicate with others successfully. Previous studies also referred to as learners' reading and writing skills as essential to achieve an active online environment. Salmon (2002) mentions that learners who do not have a sufficient level of reading and writing skills will be under pressure in any online learning environment and this is more likely to happen with learners who use foreign languages in their communication. As a result, non-native learners being under pressure of producing error-free text messages might develop what is called "online error phobia" (Salmon, 2002) which might lead to online learning being abandoned by such group.

Another online learning concern is invisibility. Being invisible to other learners and tutors increases the isolation status of online learners. McConnell (2000) mentions that online learners' level of activities and participation might be affected by the invisibility of their tutor which in some cases makes them lurking and inactive. Unlike the traditional learning setting, the online learning environment does not oblige learners to participate due to being invisible to each other and their tutor. It, therefore, offers "an electronic mask behind which online participants may hide" (Grint, 1992: 13) and this encourages lurking. Online learners can easily withdraw from any context if they feel that it is not for them without the need to justify their action. Salmon (2002) suggests encouraging online learners to share their details, i.e. profile, to create a face to face like environment in which learners develop a feeling of belonging to their online group. This, according to Salmons (2002), can compensate for the invisibility issue of online learners.

Other studies like Pachler (2005); Kearsley (2000); McLoughlin (2002); Polly et al. (2010); Bourne & Moore (2004). Bourne & Moore (2004) mentioned learners' independence as a concern in online learning contexts. The main concern is that learners who cannot do most of the learning requirements independently will not be able to engage effectively in an online learning environment. In a study they conducted on higher education online learners, Bourner & Moore (2004: 9) found that "there are two reactive behaviour dimensions dependent/independent. Dependent students need instructor's approval on all their work while independent students are self-motivated". Online learners being in a learner-centred online pedagogy are expected to be independent and to self-direct their learning process (McLoughlin, 2000) without any help from their tutors who are only the moderators and not the source of knowledge as in the case of the traditional learning environment. (Pachler, 2005). Online learners need to depend on their metacognitive skills to direct their learning and on their online groups and other web resources. This according to Kearsley (2000) represents a setback for learners who do not have the required independent learning skills and as a result, they are not likely to be successful in an online learning environment.

As online learning provides learners with a scope of freedom from their tutors' control, it perhaps provides an appropriate independent learning environment. Therefore, Pratt (2002) argues that the traditional learning environment is not a learner-centred pedagogy and thus it does not prepare learners or train them to be independent, which is the case in the technology-novice contexts. This is different from the online learning environment in which learners need to be independent and self-directed. "When students are introduced to online learning, they are faced with a new learning environment and the expectation that they will have independent learning skills and the capacity to engage in activities that require self-direction and self-management of learning" (McLoughlin & Marshall, 2000: 3).

Consequently, according to McLoughlin & Marshall, online learners need to be inducted on how to become accustomed to an independent learning environment and how to apply their meta-cognitive skills. Online students "need to develop

independent study habits and to develop self-responsibility. This is achieved by providing learners with an introduction to learning online, examples of study timetables and guidance in creating their plan and study goals" (McLoughlin & Marshall, 2008: 8). This will enable them to participate effectively within their learning groups and promote their progress. They will also be able to evaluate their performance as learners and develop plans for themselves depending on their previous accumulated knowledge. Weddell and Malderez (2013) emphasise that learning has to develop new practices and behaviour and developing a good understanding of how different elements operate in any new educational context and this applies to online learning being a new educational context in the future.

### Concerns related to online learning

There are quite a few pedagogical worries that are linked to the online learning experience. The move from traditional learning style to online mode is not a smooth one and it entails several concerns for both parties; tutors and learners. Online learning is a large scale change in the way learning is conducted, where and when learning happen, how learners are assessed, and how resources can be evaluated to suit learners and most importantly that at the centre of all of this there are learning activities that must occur. By this view "it's not new pedagogies that we need, but new ways of providing existing pedagogy efficiently and flexibly" (Stephenson, 2001: 17). This is the real challenge for online learning. It is the challenge of how to offer the pedagogical experience equivalent to that of an individual tutorial with a knowledgeable, sympathetic, and well-equipped teacher to a large number of learners in geographically dispersed and socially diverse setting" (Stephenson, 2001: 17). Previous literature has highlighted some of those concerns that are associated with online learning.

Among those concerns is isolation. The lack of interaction with people on a face to face basis can make learners feel lonely, hence the models that I proposed earlier are desirable as they address such issue. Palloff and Pratt (2003: 73) say that the feeling of loneliness that many online learners may feel is "the hardest symptom for educators to combat". Isolation "can influence a student's attitude to online learning and as such needs to be given greater consideration when designing web-based courses" (McInnerney & Roberts, 2004: 77). Salmon (2002) even goes further to describe the situation as stressful and frustrating for learners. The absence of social interaction affects new learners even more because they have to build their assumptions of how the rest of their group would normally act in a face to face environment and for new learners "this is not the best orientation" (McConnell, 2002: 71). The feeling of isolation can cause learners to be more concerned about completing duties on time as they expected to handle tasks independently and this put pressure especially on new learners. Social interaction is important from time to time to relieve the sense of isolation (Salmon, 2002) and to teach and offer knowledge that is not always possible to convey throughout the online environment. (Pincas, 2004)

Impersonal interaction is another concern about online learning. Some online learning methods are asynchronous and are normally based on text messages exchanged and there is no face to face interaction as the case in the traditional learning

environment. Also, paralinguistic features are missing in online learning which in certain situations are important for learning. Previous studies such as Herring (1999) and Burnet (2010) discussed the lack of paralinguistic features in the online learning context. They mentioned that this type of learning is mainly associated with the recreational context that is conducted through real-time interaction. Burnet (2010: 248) identified some features in this concern by stating that in an online learning context “firstly, contributions are limited to two or three lines in length. Secondly, participants lack paralinguistic cues, such as eye contact, gesture, and facial expression. Finally, several participants can simultaneously compose and post responses to the same comment, resulting in multi-stranded conversations”. This, according to Herring (1999) might shatter learners’ focus and can cause “topic decay” (p.10). Burnett (2010: 289) adds that “the lack of paralinguistic cues may cause a reluctance to share emerging thoughts and ideas: it is hard to gauge others’ reactions to comments and easy to misinterpret tone or content.”

## V. CONCLUSION

The online learning trend that prevailed throughout the Covid-19 pandemic across the globe making many universities and colleges adopting it as an alternative to the traditional learning revealed that there are some concerns that we have to be aware of and address for future references. Although some advantages of online learning were clearly obvious such as its affordability at the times of crises and its ability to accommodate a more independent learning, it highlighted a gap in the usage of such learning models and some implications for the learners. In addition to the many pedagogical obstacles, online learners who cannot do most of the learning requirements independently are unable to engage effectively in an online learning environment.

## REFERENCES

- Akyol, Z., Garrison, D. R. & Ozden, M. Y. (2009) Online and blended communities of inquiry: Exploring the developmental and perceptual differences. *The International Review of Research in Open and Distributed Learning*, 10 (6), 65-83.
- Mahdi, A. A & Hasan, H. F. (2017). *New Technologies for Teaching and Learning: Challenges and Propose model for the implementation of E-learning in North of Iraq*. LAP LAMBERT Academic Publishing.
- Bourne, J. & Moore, J.C. (2004) *Elements of Quality Online Education, Practice and Direction*, pp. 13–45. Sloan Center for Online Education, Needham.
- Buabeng-Andoh, C. (2012) Factors influencing teachers' adoption and integration of information and communication technology into teaching: A review of the literature. *International Journal of Education and Development using Information and Communication Technology*, 8 (1), 136-148.
- Burnett, C. (2010) Learning to Chat: Tutor participation in synchronous online chat, *Teaching in Higher Education*, 8 (2), 247-261.
- Duffy, T. M., Lowyck, J. & Jonassen, D. H. (2012) *Designing Environments for Constructive Learning*. UK: Springer Publishing Company.
- Figlio, D., Rush, M. & Yin, L. (2013) Is it live or is it internet? Experimental estimates of the effects of online instruction on student learning. *Journal of Labor Economics*, 31 (4), 763-784.
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7–23.
- Garrison, D. R., Anderson, T., & Archer, W. (2003). A theory of critical inquiry in online distance education. *Handbook of distance education*, 1, 113-127.
- Garrison, D. R., Cleveland-Innes, M. & Fung, T. S. (2010) Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *Internet and Higher Education*, 13, 31–36.
- Grint, K. (1992) Sniffers, lurkers, actor networkers: Computer mediated communications as a technical fix. *Technological literacy and the curriculum*, 148-170.
- Harasim, L. (2017) *Learning theory and online technologies*. Taylor & Francis.
- Herring, S. (1999) Interactional coherence in CMC. *Journal of Computer-Mediated Communication*, 4 (4).
- Jones, N. & Peachey, P. (2005) The development of socialization in an on-line learning environment, *Journal of Interactive Online Learning*, 3(3), 1–20.
- Kearsley, G. (2000) *Online education: Learning and teaching in cyberspace*. Wadsworth Publishing Company.
- Ko, S. & Rossen, S. (2017) *Teaching online: A practical guide*. Taylor & Francis.
- MacDonald, J. (2008). *Blended learning and online tutoring: Planning learner support and activity design*. Gower Publishing, Ltd..
- McConnell, D. (2000) *Implementing computer supported cooperative learning*. Psychology Press.
- McInnerney, J. M., & Roberts, T. S. (2004). Online Learning: Social Interaction and the Creation of a Sense of Community. *Educational Technology & Society*, 7 (3), 73-81.
- McLoughlin, C. & Marshall, L. (2008) Scaffolding: A model for learner support in an online teaching environment. *Teaching and Learning Forum*.
- McLoughlin, C. (2002) Learner Support in Distance and Networked Learning Environments: Ten Dimensions for Successful Design. *Distance Education*, 23 (2), 149 - 162.
- Meyer, K. A., & Murrell, V. S. (2014). A national study of training content and activities for faculty development for online teaching. *Journal of Asynchronous Learning Networks*, 18(1), n1.
- Motteram, G. (2006) Blended education and the transformation of teachers: a long-term case study in postgraduate UK Higher Education." *British Journal of Educational Technology*, 37 (1), 17-30.
- Moule, P. (2007) Challenging the five-stage model for e-learning: a new approach. *ALT-J*, 15 (1), 37-50.
- Pachler, N. (2005) Foreign language teaching as an evidence-based profession? *Language Learning Journal*, 27 (1), 4-14.
- Palloff, R M & Pratt, K. (2007) *Building Online Learning Communities: Effective Strategies for the Virtual Classroom*. UK: John Wiley & Sons Ltd.
- Palloff, R. M. & Pratt, K. (2003) *The Virtual Student: A Profile and Guide to Working with Online Learners*. UK: John Wiley & Sons Ltd.
- Palloff, R. M., & Pratt, K. (2007). *Building online learning communities: Effective strategies for the virtual classroom*. John Wiley & Sons.
- Pincas, A. (2002). *Talk 5. Course Design 2 – Part B. Lecture notes*. Online Education and Training Course. Institute of Education. London.
- Polly, D., Mims, C., Shepherd, C. E. & Inan, F. (2010) Evidence of impact: Transforming teacher education with preparing tomorrow's teachers to teach with technology (PT3) grants. *Teaching and Teacher Education*, 26 (4), 863-870.
- Salmon, G.K. (2002) Approaches to researching teaching and learning online. *Networked learning: Perspectives and issues*. 195-212.
- Salmon, G.K. (2004) *E-moderating: the key to teaching and learning online*. London and New York: Routledge Falmer.
- Smarkola, C. (2007) Technology acceptance predictors among student teachers and experienced classroom teachers. *Journal of educational computing research*, 37 (1), 65-82.

- Stephenson, J. (2001) *Teaching and Learning Online: Pedagogies for New Technologies*. London: Kogan Page.
- Stewart, R. G., & Cuffman, D. M. (1996). Needs assessment: A systematic approach for successful distance education. In *Proceedings of the 1998 Mid-South Instructional Technology Conference*. Available: <http://www.mtsu.edu/~itconf/proceed98/rstewart.html>.
- Tibbetts D, *TESL- EJ Forum*, Vol. 7, No. 4, F-1, March 2004 (online: 20.5.2004) <http://www.writing.berkeley.edu/TESL-EJ/ej28/f1.html>
- Unwin, A. (2007) The professionalism of the higher education teacher: what's ICT got to do with it? *Teaching in higher education*. 12 (3), 295-308.
- Wedell, M. & Malderez, (2013) *A. Understanding language classroom contexts: The starting point for change*. Bloomsbury Publishing.
- Werry, C.C. (1996) Linguistic and interactional features of internet relay chat. In S. Herring, ed., *Computer Mediated Communication: Linguistic Social and Cross-Cultural Perspectives*, pp. 47–63.