

The organization of distance education in during the Covid-19 Pandemic

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Abstract

The pandemic has made adjustments to the process of organizing teaching, and ways of organizing pedagogical interaction. In the distance educational process, an increasing place is taken by the organization of interactive communication between teachers and students. The purpose of this research is to study the features of the organization of distance education (using the example of teaching English) in the context of the restrictions imposed by the COVID-19 pandemic. One hundred and twelve undergraduates studying at Toraighyrov University filled out the questionnaire. The results showed that the majority of undergraduates believe that the existing instructions and the educational resources provided do not help or do not help enough to develop professional competencies. The majority of respondents indicated that they do not use or do not use enough smart-resources appropriate to their level of preparedness to improve the quality of education in the context of distance learning. These studies can be useful for adjusting educational programs for bachelor's and master's degrees to better meet the needs of students.

Keywords: COVID-19; distance education; foreign language; online learning; media competence; smart resources.

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1. Introduction

The spread of COVID-19 required exceptional measures in the organization of the pedagogical process in high school. The restrictions imposed in connection with the pandemic have brought distance learning to a new level, which is characterized by a certain specificity in the selection of educational content, methods, and means of interaction between teachers and students. Educational organizations should increase the opportunities for distance education through digital resources, using them in organizing asynchronous learning (Daniel, 2020). The ways of using smart resources accumulated in practice allow us to solve many tasks: expanding interaction options and choosing feedback forms. In teaching a foreign language in high school, these methods are used to achieve the main goal.

The purpose of teaching a foreign language in the context of the requirements of state standards of professional education is to allow students to use their speaking skills in practice at the moment and in future professional activities. Therefore, a foreign language must be heard, spoken, read, and written in appropriate realistic situations. Neither translation nor mechanical exercises will help if they are not connected with practice and life. Interactive communication allows you to consolidate all speech skills and build correct communications in the process of professional activity. Distance learning should take into account these requirements. With the direct interaction of the teacher and students in the classroom, it is possible to use a variety of forms that solve the problem of preserving the authenticity of materials. Smart resources as a source of media texts are a fairly reasonable way to solve this problem.

The analysis of studies related to media education shows that its implementation can be organized in two directions: the use of media as a resource and the development of media as a result. Media as a source, or resource, for teaching a foreign language is a modern form of mastering reality. The discussion of the problems of using media education in modern conditions (Greenhow, Galvin, Askari, Brandon, 2020) leads to the strengthening of the ideas of more active use of media in the education system, not only during an emergency but also in the future. The transition to online learning during the pandemic significantly reduced personal contact between students and teachers, forcing them to use the existing opportunities in the educational environment (Daly, García & Bjorklund Jr, 2020). The participation of students in the practical use of the media is crucial for teaching, in general, and in teaching a foreign language, in particular. The variety of suggested methods turns to learn a foreign language into a fascinating journey into the world of another culture. The mass media as a source of authentic materials in the study of a foreign language encourages teachers to include it in their work.

Mastering the media, as a result, is another option for entering the media into our daily lives, which requires the formation of media competence. «Media competence includes the ability, content, and understanding skills to interact effectively and safely with the media» (Pérez-Rodríguez & Ponce, 2012). Studying the specifics of the distribution of news during the pandemic, the researchers conclude the increasing role of the media in the ways of interaction between people. A special role is played by «fake news», which demonstrates weaknesses in the guaranteed protection of the individual from the dangers of the Internet (Lazer, Baum, Benkler, Berinsky, Greenhill, Menczer & Zittrain, 2018). At the same time, the use of «fake news», which is emotionally colored, or news with «conspiracy-framed narratives» negatively affects people's attitude to the media (Brainard & Hunter, 2020).

The dissemination of disinformation is impossible if the consumers of this information have a sufficient level of media competence to comprehend the media texts critically. In an international study, experts found that media as one of the modern ways of interaction between people requires «strategic, reasonable, ethical and socially responsible communication that benefits citizens in a pandemic situation» (Navarro, Guerra-Ayala, Casimiro-Urcos, Vélez-Jiménez, Casimiro-Urcos, Salazar-Montoya & Torres, 2021). Moreover, journalism remains an influential force in shaping public opinion (Gentzkow, 2017). In this context, the skill of using media, as a result, is a task of education. Using

smart resources to achieve this result is a promising direction in the field of education (Valtonen, Tedre, Mäkitalo & Vartiainen, 2019).

1.1. Purpose of study

Creating conditions that meet the needs of students in the formation of media competence is a basic requirement in modern higher education. Are students morally ready to fully immerse themselves in online learning? Are students satisfied with the content of the content? Is there awareness of mastering the discipline? Is there a desire to continue studying remotely? To what extent did the independent work correspond to the goals and content of the discipline? What methods are most effective in online learning? What problems occurred during online learning? What personality traits do students consider important for a teacher who teaches online? These aspects are important for understanding the specifics of students' attitudes to distance education. This article presents the results of a study of the degree of satisfaction of students in master's degree programs with online learning in the context of a pandemic.

2. Materials and Method

2.1. Participants

The study involved 112 students enrolled in master's degree programs at Toraighyrov University, Republic of Kazakhstan. The chosen level of study (master's degree) is because students at this stage have a sufficiently high motivation to continue to receive scientific and professional education (Artino Jr. & Stephens, 2009). Undergraduates enter the chosen specialties more consciously than undergraduate students. Accordingly, we assume that the degree of conscious positive attitude to online learning among undergraduates is quite high.

Another argument in favor of choosing this level of study is that all the interviewed undergraduates who studied modern information technologies are familiar with the concepts of «media competence», and «smart resources». The researchers concluded that it is difficult to assess media competence skills, and they prefer to use «quality interviews» to study them (Schilder, Lockee & Saxon, 2016). Our choice of the questionnaire as a research method is because the survey methods allow us to find out the students' opinions about the learning process directly.

2.2. Data collection tool

Specifically, for the study, the questionnaire «Satisfaction with online learning in the context of a pandemic» was developed, consisting of eight questions, each of which corresponded to the research question of our study.

The first question of the questionnaire was aimed at identifying the degree of readiness of undergraduates for online training. The question was formulated as follows: «Were you mentally prepared for distance learning in the context of the pandemic? » Respondents were asked to choose an answer from the following options: yes/no.

The second question was related to satisfaction with the content provided on the discipline portal. To the question: «Were you satisfied with the training content provided by the university for the disciplines? », the answers were offered: yes/no.

The third question was aimed at identifying the degree of awareness of the mastered content of the disciplines. To the question: «Do you think that you have consciously mastered the discipline taught to you? » undergraduates were offered a choice of answers: yes/no.

The fourth question is related to identifying the need for online training. The question was formulated as follows: «Would you like to continue studying in a distance format? » The choice of answers as possible from two options: yes/no.

The fifth question is aimed at assessing the ratio of the goals, objectives, content of the courses, and the share of independent work laid down in the syllabuses: «Do you consider the share of independent work offered in the syllabuses to be adequate to the stated goals and objectives, the content of the discipline? » The answers were suggested to choose from: yes/no.

The sixth question is related to the identification of the degree of optimality of the choice of the teaching method. The question is formulated as follows: «What teaching methods are most effectively used by the university teaching staff? » The choice of answers was suggested from the traditional qualification of teaching methods: verbal, visual, practical.

The seventh question is aimed at identifying problems in online learning, this question is open-ended. The wording of the question was as follows: «What problems did you face when studying in a distance learning environment? List it». Undergraduates could offer their answers.

The eighth question was formulated as follows: «What personal qualities should a university teacher have to work in the conditions of distance education? ». The teacher performs the function of an intermediary between the university and the students in the new conditions. With the help of the seventh and eighth questions, you can adjust and improve the teaching process.

2.3. Procedure

The study was conducted in the context of a pandemic in the first semester of the 2020-2021 academic year. The undergraduates were allowed to answer the questionnaire in writing within 30 minutes via google forms. The results of the questionnaire were processed using Microsoft office applications.

3. Results

3.1. The degree of moral readiness of undergraduates for online learning in the context of a pandemic.

According to Table 1, 91 undergraduates (81.3%) consider themselves ready for online learning. 21 undergraduates (18.8%) do not consider themselves ready for online learning.

3.2. Satisfaction with the content offered.

According to Table 1, 108 undergraduates (96.4%) believe that the content provided for the study is satisfactory. 4 undergraduates, which is 3.6% of the total number of undergraduates studying, are not satisfied with the proposed content.

3.3. Awareness of mastering the content of the discipline.

According to Table 1, 98 undergraduates (87.5%) believe that the material offered in the courses of disciplines is consciously mastered. 14 undergraduates, which is 12.5% of the total number of undergraduates participating in the survey, believe that they have unknowingly assimilated the material.

3.4. Motivation to continue online learning.

According to Table 1, 90 undergraduates (80.3%) want to continue their studies in the online format, and 22 undergraduates (19.6%) do not have the desire to continue their studies in the online format.

3.5. Comparability of the share of independent work to the stated goals and objectives, the content of the discipline.

According to Table 1, 109 undergraduates (97.3%) believe that the share of independent work is represented, respectively, by the goals, objectives, and content of the discipline.

3.6. The preferred choice of teaching methods.

According to Table 1, practical methods are preferred by 57 undergraduates (50.9%), visual teaching methods are preferred by 40 undergraduates (35.7%), and verbal methods are chosen by 15 undergraduates (13.4%).

Table 1

Satisfaction with online learning in the context of a pandemic (N=112) (compiled by the authors)

	n	%
<i>1. Were you mentally prepared for distance learning in the face of a pandemic?</i>		
Yes	91	81,2
No	21	18,8
<i>2. Were you satisfied with the training content provided by the university for the disciplines?</i>		
Yes	108	96,4
No	4	3,6
<i>3. Do you think that you have mastered the the discipline you are being taught consciously?</i>		
Yes	98	87,5
No	14	12,5
<i>4. Would you like to continue your distance learning?</i>		
Want to continue online learning	90	80,3
Don't want to continue studying online	22	19,6
<i>5. Do you consider the proportion of independent work offered in the syllabuses adequate to the stated goals, objectives, and content of the discipline?</i>		
Yes	109	97,3
No	3	2,7
<i>6. Preferred choice of training methods</i>		
Practical teaching methods	57	50,9
Visual teaching methods	40	35,7
Verbal teaching methods	15	13,4

3.7. Problems of online learning.

According to Table 2, 85 undergraduates, which is 76% of the total number of respondents, do not find problems in learning in a distance learning environment. 75 undergraduates (67%) believe that the most common problems are related to server crashes and Internet connection problems. The inconvenience of file transfer in the distance learning system is noted by 15 undergraduates (13.4%).

The untimeliness and low volume of feedback, and shortcomings in the distance learning system were identified as problems by 12 undergraduates (10.7%). A large volume of written works is noted by 10 undergraduates (8.9%). The lack of diversity in the choice of smart resources is considered a problem by 8 undergraduates (7.1%). The untimeliness of setting tasks is defined as a problem for 5 undergraduates (4.5%).

In distance learning, 3 undergraduates (2.7%) note little practice. The subjectivity of the teacher in the assessment – 2 undergraduates (1.6%), technical problems – 2 undergraduates (1.6%), inability to visit the library– 2 undergraduates (1.6%), psychological problems (fatigue, fear, dissatisfaction with asynchronous learning, feedback) – 2 undergraduates (1.6%), insufficient material – 2 undergraduates (1.6%), this is how the remaining participants identified the problems. Some participants named two or three problems each.

Table 2

Problems of distance education in the context of a pandemic, according to students (N=112)

(compiled by the authors)

What problems did you encounter when studying? in the context of distance education? (multiple responses are possible)	n	%
No problem there	85	76
Server crash, weak internet signal	75	67
The inconvenience of transferring files to the DLT (distant learning technology) system	15	13,4
Untimely and low volume of feedback	12	10,7
Flaws in the DLT (distant learning technology) system	12	10,7
Large volume of written works	10	8,9
Lack of diversity in the choice of smart resources	8	7,1
Late setting of tasks	5	4,5
Little practice	3	2,7
Subjectivity of the teacher in the assessment	2	1,6
Technical problems	2	1,6
Lack of access to the library	2	1,6
Psychological problems (fatigue, fear, dissatisfaction with asynchronous learning, feedback)	2	1,6
Not enough material	2	1,6

3.8. The qualities of a teacher's personality are necessary for effective teaching in an online environment.

According to Table 3, 80 undergraduates (71.4%) found it difficult to answer. 75 undergraduates (67%) believe that teachers have the necessary qualities to work in a distance learning environment. 60 undergraduates (53.6%) did not have enough communication with teachers. The loyalty of teachers was not enough for 55 undergraduates (49%). We did not find a generalized answer for all teachers of 30 undergraduates (26.8%). 25 undergraduates (22.3%) believe that a teacher should know all the pedagogical technologies of distance learning. They believe that teachers lack the flexibility of thinking – 20 undergraduates (17.8%), computer literacy-15 undergraduates (13.4%)

Table 3

What personal qualities do teachers lack to work in the conditions of distance learning, according to students' opinions (N=112) (compiled by the authors)

What personal qualities do teachers lack to work in the conditions of distance learning, according to students' opinion?	n	%
I find it difficult to answer	80	71,4
Teachers have the necessary qualities to work in the condition of a distance learning	75	67
I didn't have enough communication with the teachers	60	53,6
Loyalty	55	49
There is no generalized answer for all teachers	30	26,8
The teacher must know all the pedagogical technologies of distance learning	25	22,3
Flexibility of thinking	20	17,8
Computer Literacy	15	13,4

4. Discussion

Our practical study of the problems of meeting the needs of students by the organization of distance education showed the following. The first question, related to identifying the degree of moral readiness of undergraduates for online learning in the context of the pandemic, showed that more than half of students are ready for online learning. Such a high percentage of positive motivation

confirms our assumption about the interest of students in learning, undergraduates have a high motivation to learn, in general, without dividing the form of training, since they consider this factor insignificant.

The second question helped to identify students' satisfaction with the content offered. More than two-thirds of respondents believe that the content presented in the university's distance education system is satisfactory. This fact indicates the high quality of the training materials provided for training. The third question is related to the quality of learning materials. Awareness of mastering the content of the discipline is noted by more than half of the respondents. Students were able to take a responsible approach to the study of the discipline.

The fourth question is related to the motivation to continue online learning. This format of training is supported by more than two-thirds of the respondents, which indicates a fairly comfortable learning environment for students. The share of independent work is presented comparably to the stated goals and objectives, the content of the discipline, according to the majority of respondents. Students did not experience any special problems in the special explanation and clarification of the proposed material to achieve the goal of training in the studied disciplines.

Half of the respondents prefer practical training methods, during which they can work out skills and abilities in a particular discipline. Verbal methods that require a leading role of the teacher, when a conversation is organized or an explanation of the material is given, are preferred for less than a quarter of the respondents. Two-quarters of respondents consider it necessary to use visual teaching methods.

Thus, most of the interviewed undergraduates consider themselves ready and motivated to study remotely. A conscious attitude to distance learning is associated with a positive attitude to the use of modern methods of communication when personal presence is not required, and the proposed means and conditions of training solve the basic educational needs. In many ways, this is since students can use and apply smart devices in various situations, even not related to training. The conditions provided by the university for online education meet the main needs of the respondents. On the seventh question of the questionnaire about learning problems, more than a third of the respondents said that there were no problems. More than half of the respondents note the lack of a stable Internet connection as a problem, which is a flaw of providers that provide Internet services.

Slightly less than a quarter of students, answering this question, pointed out the inconvenience of file transfer in the university system of distance education. The faster ways of exchanging information using smart devices, which are familiar to the learner, could solve this problem. Smart devices have entered everyday life, modern students cannot imagine their life without devices. However, the education system does not take into account these trends in society (Lyapina, Sotnikova, Lebedeva, Makarova, Skvortsova, 2019). Smart resources are underutilized in higher education. This aspect is noted in the answers by undergraduates.

The lack of diversity in the choice of smart resources is considered a problem by one-seventh of the surveyed undergraduates. The capabilities of modern smart resources are so broad that they can meet the needs of students with more advanced tools and technologies. One of the innovative tools is virtual reality. The use of virtual reality becomes available from all types of technical devices, laptops, tablets, and smartphones (Luigini, Fanini, Basso, 2020). Studies of the specifics of the use of virtual reality capabilities in the educational process through modeling, design, and games show the high efficiency of individual work compared to group work (Merchant, Goetz, Cifuentes, 2019).

In conditions of limitations, when students are faced with the need to work independently, smart resources with the involvement of the potential of virtual reality, successfully cope with the task of developing motivation for online learning. The use of innovative tools, for example, «hypermedia training» (Moos, 2014) in the training of future specialists affects the formation of the ability to reflect, which is a component of media competence. Smart resources as an effective means of intelligent

mobile communication also have disadvantages, for example, «discrepancies in urgent message labeling» (Aungst & Belliveau, 2015).

The survey participants encountered this problem. They noted it as «the inconvenience of file transfer in the distance education system», and «the lack of diversity in the choice of smart resources». Mobile devices are used for professional communication, as well as for interaction in the family, among friends, and in broader social communities. The rules of interaction are developed spontaneously, while this method of communication generates new ways of transmitting the information. In the exchange of this information, there are also no established rules. Digitalization has influenced the formation of the necessary skills for young people to meet the needs related to personal and professional interests. For young people, it is not a problem to find the necessary information, save it, and pass it on if necessary. In learning a foreign language, using the achievements of digitalization provides a lot of advantages, including improving speech skills, using authentic materials, and improving the quality of feedback (Mudra, 2020). Purposeful formation of media competence in the process of professional education will reduce the risks associated with access to social networks.

Media competencies cannot be limited to understanding them as a set of technical and operational skills. It is formed «in the process of cultural change» (Hobbs, 2016). As a way of socialization, media influence the formation of cognitive abilities, communication skills, and the ability to establish feedback with the world. Media competence acts as an integrative characteristic of the individual, which assumes the student's abilities, skills, and knowledge of how to use the media for learning and pragmatic tasks.

The need to develop the skills of safe and useful interaction of students with the media environment directs the attention of researchers to clarify the content of the concept of media literacy (Stein, & Prewett, 2009), to review the content of educational programs (Kosic, 2018). Considering the media as a force that influences the socialization of the individual (Gener & Süs, 2017), this aspect can be taken into account in the target component of the educational program. And when media competence is introduced as a goal and a planned learning outcome, the content of the training will focus on the current needs of young people who are entering a new era.

The use of mass media in the educational process requires solving a number of problems related to the unprofessional attitude of the administration to the organization of work with the media, the overload of educational programs, the level of training of teachers to use the media, the need to develop high-level proposals in the field of research and training programs (Fedorov, Levitskaya & Camarero, 2016), and, accordingly, the methodological justification of the work on the formation of media competence. Methodological foundations are needed for the construction of educational programs, and training materials for the introduction of media in the educational process (Thoman & Jolls, 2005).

5. Conclusion

The situation related to COVID-19 has led to the need to review the principles for selecting relevant educational content. One of the actual requirements for foreign language education at the university is the focus on developing the readiness to understand, use and evaluate media products in a foreign language. In accordance with these requirements, the higher schoolteacher must be guided by the current trends in foreign language education.

Making adjustments to the organization of the learning process in higher education in connection with the spread of COVID-2019 affected the search for optimal ways to interact with students, resources that affect the quality of training, and sources for the formation of educational materials. The limited use of traditional learning tools and resources is compensated for by modern communication methods. In the context of distance education, the media environment acts as a source of authentic content for the selection of educational materials, and smart resources successfully allow you to replace the usual ways that organize feedback between teachers and students.

References

- Artino Jr, A. R., & Stephens, J. M. (2009). Academic motivation and self-regulation: A comparative analysis of undergraduate and graduate students learning online. *The Internet and Higher Education*, 12(3-4), 146-151. <https://doi.org/10.1016/j.compedu.2016.10.001>
- Aungst, T. D., & Belliveau, P. (2015). Leveraging mobile smart devices to improve interprofessional communications in inpatient practice setting: A literature review. *Journal of interprofessional care*, 29 (6), 570-578. <https://doi.org/10.3109/13561820.2015.1049339>
- Brainard, J., & Hunter, P. R. (2020). Misinformation making a disease outbreak worse: outcomes compared for influenza, monkeypox, and norovirus. *Simulation*, 96 (4), 365-374. <https://doi.org/10.1177/0037549719885021>
- Daly, A. J., Fresno García, M. D., & Bjorklund Jr, P. (2020). Social Media in a New Era: Pandemic, Pitfalls, and Possibilities. *American Journal of Education*, 127 (1), 143-151. <https://doi.org/10.1086/711018>
- Daniel, J. (2020). Education and the COVID-19 pandemic. *Prospects*, 49 (1), 91-96. <https://doi.org/10.1007/s11125-020-09464-3>
- Fedorov, A., Levitskaya, A., & Camarero, E. (2016). Curricula for media literacy education according to international experts. *European Journal of Contemporary Education*, 17 (3), 324-334. <https://doi.org/10.13187/ejced.2016.17.324>
- Genner, S., & Süß, D. (2017). Socialization as media effect. *The international encyclopedia of media effects*, 1-15. <https://doi.org/10.1002/9781118783764.wbieme0138>
- Gentzkow, M. (2017). Small media, big impact. *Science*, 358 (6364), 726-727. <https://doi:10.1126/science.aar2579>
- Greenhow, C., Galvin, S., Askari, E., & Brandon, D. (2020). #cloud2class: The disruption and reorganization of educational resources with social media. *American Journal of Education*, 127 (1). – 1-11. <https://doi.org/10.1086/711062>
- Hobbs, R. (2016). Media literacy. In *Oxford Research Encyclopedia of Communication*. <https://doi.org/10.1093/acrefore/9780190228613.013.11>
- Kosic, M. (2018). Media Literacy and for the Net Generation. *International Journal of Emotional Education*, 10 (1), 68-88. <http://www.um.edu.mt/ijee>
- Lazer, D. M., Baum, M. A., Benkler, Y., Berinsky, A. J., Greenhill, K. M., Menczer, F., ... & Zittrain, J. L. (2018). The science of fake news. *Science*, 359 (6380), 1094-1096. <https://doi.org/10.1126/science.aao2998>
- Luigini, A., Fanini, B., Basso, A., Basso, D. (2020) Heritage education through serious games. A web-based proposal for primary schools to cope with distance learning, *VITRUVIO - International Journal of Architectural Technology and Sustainability* 5, no.22: 73-85. <https://doi.org/10.4995/vitruvio-ijats.2020.14665>
- Lyapina, I., Sotnikova, E., Lebedeva, O., Makarova, T. and Skvortsova, N. (2019), "Smart technologies: perspectives of usage in higher education", *International Journal of Educational Management*, Vol. 33 No. 3, pp. 454-461. <https://doi.org/10.1108/IJEM-08-2018-0257>
- Merchant, Z., Goetz, E.T., Cifuentes, L., Keeney-Kennicutt, W., Davis T.J. (2019) Effectiveness of virtual reality-based instruction on students' learning outcomes in k-12 and higher education: A meta-analysis. *Computers & Education*, 70, 29-40. <https://doi.org/10.1016/j.compedu.2013.07.033>
- Moos, D. C. (2014). Setting the stage for the metacognition during hypermedia learning: What motivation constructs matter? *Computers & Education*, 70, 128-137. <https://doi.org/10.1016/j.compedu.2013.08.014>
- Mudra, H. (2020). Digital literacy among young learners: how do EFL teachers and learners view its benefits and barriers? *Teaching English with Technology*, 20 (3), 3-24.

- Ospanova, B., Aubakirova, R. Z., Kuanysheva, B. T., Kabzhanova, G. A., Anatolyevna, T. I., & Tabakaev, Y. V., (2022). The organization of distance education in during the Covid-19 Pandemic. *Cypriot Journal of Educational Science*. 17(4), 999-1008. <https://doi.org/10.18844/cjes.v17i4.7104>
- <https://www.infona.pl//resource/bwmeta1.element.desklight-b96ae22d-d0db-4654-8326-ff613391cb2a>
- Navarro, E. R., Guerra-Ayala, M. J., Casimiro-Urcos, W. H., Vélez-Jiménez, D., Casimiro-Urcos, N. C., Salazar-Montoya, E. O., ... & Torres, J. C. C. (2021). Relevance of the mass media in Prevention, Education and Contextual Management of COVID-19. *World Journal on Educational Technology: Current Issues*, 13 (1), 129-146. <https://orcid.org/0000-0001-8960-8239>
- Pérez-Rodríguez, M. A., & Ponce, Á. D. (2012). From digital and audiovisual competence to media competence: Dimensions and indicators. *Comunicar. Media Education Research Journal*, 20(2). https://www.scipedia.com/public/Perez-Rodriguez_Delgado_2012a
- Schilder, E. A., Lockee, B. B., & Saxon, D. P. (2016). The Issues and Challenges of Assessing Media Literacy Education. *Journal of Media Literacy Education*, 8(1), 32-48. <https://digitalcommons.uri.edu/jmle/vol8/iss1/3>
- Stein, L., & Prewett, A. (2009). Media literacy education in the social studies: Teacher perceptions and curricular challenges. *Teacher Education Quarterly*, 36 (1), 131-148. <https://www.jstor.org/stable/23479205>
- Thoman, E. & Jolls, T. (2005). Media Literacy Education: Lessons from the Center for Media Literacy. *Yearbook of the National Society for the Study of Education*, 104(1), 180-205. <https://www.learntechlib.org/p/68405/>
- Valtonen, T., Tedre, M., Mäkitalo, K., & Vartiainen, H. (2019). Media literacy education in the age of machine learning. *Journal of Media Literacy Education*, 11(2), 20-36. <https://doi.org/10.23860/JMLE-2019-11-2-2>.