Setting Learning Objectives in a Digital Environment Based on Learners' Preferences in Electronic Interactions*

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Abstract

The research is being conducted into the creation and solution of the tasks for the formation of foreign-language competences of college students in a digital environment based on social networks. The attitude of students to the use of various social services, to the peculiarities of the presentation of the content and the conditions for the solution of the problem is analysed, as well as the inclusion of students in the informal solution of similar educational tasks in open social networks.

Keywords: *Digital learning environment, use of social media in learning, setting learning targets in digital environment, attitudes to learning in digital environment.*

1 Introduction

In the context of the pandemic, the use of the digital learning environment has become a pressing issue. However, researchers argue that mass online learning is now more likely to be called "emergency" or "unforeseen" online [Hodges et al., 2020] or even "crisis pedagogy" far from full online learning [Morreale et al., 2020]. In online switching, teachers have tended to focus on providing students with access to course materials, rather than on how structured or how well the content reaches the audience, and education has become more centred on the teacher rather than the needs of the students [Egbert, 2020].

Since not every educational institution today has its own educational platform LMS, the task of organizing the qualitative setting and solution of educational tasks in a digital environment can be solved using public Internet services. This is particularly true for the communication cycle disciplines in which learners' language competencies are formed. The digital environment offers the possibility of varying training tasks, which are reflected in both content and presentation, using various digital tools, services and platforms.

Research reflects the tendency of educators to focus on course materials and overlook the need to motivate learners while learning online [Arrosagaray et al., 2019]. It should be borne in mind, however, the students should be at the centre of education in a digital learning environment, rather than technology as a means of learning [Rasheed et al., 2019]. Today, this is not yet fully integrated into the design of the digital learning environment. Educators should bear in mind that modern learners develop their preferences in an electronic environment of interaction, based on their evolving behaviour in social networks where they are active and proactive. All of this should be taken into account in setting and managing educational objectives in a digital learning environment in order to make the educational process more productive.

2   Materials and Methods

Hypothesis. Social services and cloud-based technologies should be used more widely in building to address the learning needs of learners outside the classroom, especially in the communication cycle (formation of foreign-language professional competences) since young people are highly communicative in the use of social services. Taking into account the preferences of modern students in the organization of electronic interactions, this will make it possible to influence the course of the educational process, increasing the activity of students in the process of solving the set educational tasks.

Experimental research was carried out on the basis of the Saint Petersburg Autonomous State Vocational Training Institution "College of Tourism and Hotel Services" in the academic year 2019-2020. The study was attended by 79 college students specializing in the Hotel Industry. Foreign language proficiency ranges from A1 to B1, according to the Common European Framework of Reference. Digital traces of learners were analysed on online services to determine the course and outcome of educational activities. The survey method was used to assess the attitude of learners to the organization of learning tasks in a digital environment.

3   Experimental part

Students learn general and professional competences in the course of vocational training at the College of Tourism and Hotel Service. A college graduate in the field of Hotel Industry must be able to carry out professional communication not only in the state language but also in foreign languages according to Federal State Educational Standard of Secondary Vocational Education in Hotel Business and Federal State Standard of Secondary Vocational Education in Hotel Service. In the face of pandemic constraints, digital education became necessary in 2020. One of the most relevant decisions was the creation of a virtual learning environment for foreign-language vocational communication as an element of the digital learning environment (DLE), which is a set of conditions and opportunities for learning, development and socialization, education [Blinov et al., 2019].

It should be noted that one of the features of college students' education is the context approach [Verbitsky, 2019] which takes into account the specific nature of the students' future professional activities. The teacher conducting the training follows a pattern from information to knowledge, from knowledge to skills, from skills to proficiency, to the development of professional competencies. In digital learning, these challenges are addressed through the use of electronic (digital) educational resources, careful selection in accordance with the objectives of the environment, the creation of a resource bank, and special forms of training and education activities with variable setting of educational tasks based on the network services of the environment.

Building a digital learning environment based on network services. To address the problem of out-of-class learning, a digital, virtual learning environment for foreign-language, professionally oriented communication among college students has been developed. The digital learning environment is defined as an online information and education space created and managed by information and communication technologies to address educational challenges and the self-development of all participants in the educational process [Methodological Bases for the Formation of MDEE, 2018]. The digital environment was realized through the use of cloud-based technologies, which are indispensable in organizing shared distributed activities. Google services such as Google Disk, Google Docs, Google Tabs, Google Slides, including YouTube, gmail, Google Translator, other electronic translators and dictionaries (https://context.reverso.net/, https://wooordhunt.ru/). The Google Classroom platform was chosen as the Learning Management System. The main resources were authentic podcasts and videos in English, the regular listening of which allowed the students to immerse themselves in a foreign language environment.

Virtual class technology based on www.learningapps.org was applied. Eight virtual classes were organized, corresponding to the number of foreign language study groups in the college, each student

was provided with an individual login and password to enable them to enter their virtual classroom, find and perform exercises, grouped by E-folders on Professional Education. The virtual classroom technology allows learners to work interactively, to receive urgent feedback on the correctness of the exercise, to perform the exercise as many times as necessary before fully assimilating the material. The convenience of the applied technology for the educator is obvious - there is an automated learning control, the possibility of carrying out training analytics on the basis of a visualization of the number of attempts, time and performance of the exercise.

In parallel, mLearning 2.0 technology was used, using mobile devices to work with resources invested in closed learning groups based on the VK platform, which allows for the joint creation of a resource base of the environment and the performance of a communicative function between the participants in the educational process. The Zoom platform was used as a means of remote communication in synchronous mode. The use of e-mail as a means of communication has been observed to be less popular among learners, with preference given to instant communication via social media (VKontakte). Figure 1 shows the use of digital tools for the formation of foreign-language professional competences for students.
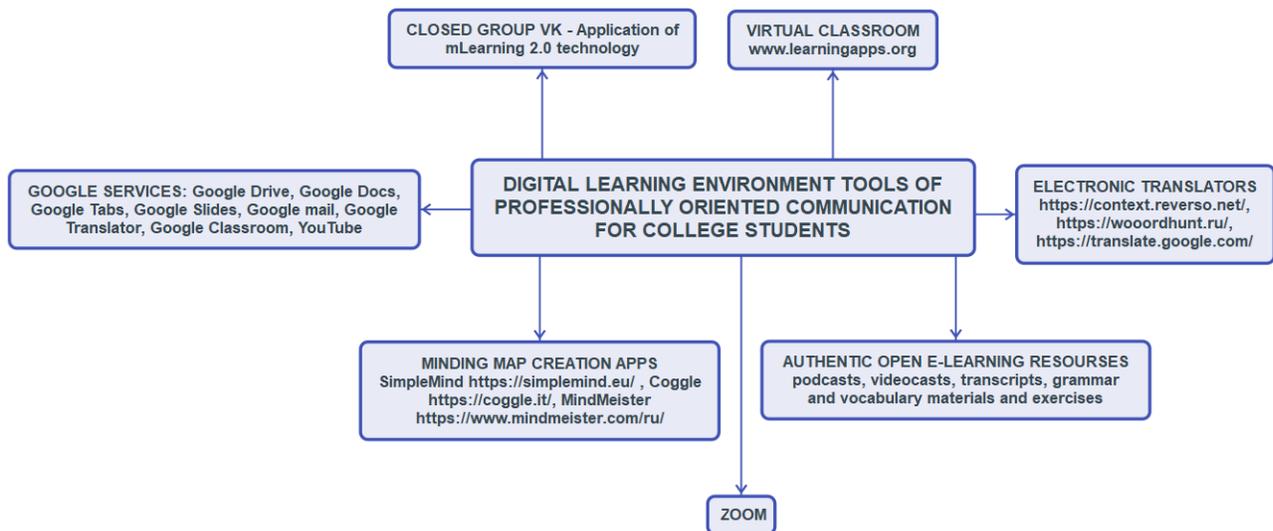

Figure 1: The Use of Digital Tools for Developing Students' Foreign-Language Professional Competences

Features of setting educational goals for the formation of foreign-language professional competences in a digital environment. The main structural unit for teaching and learning activities in the DLE is the digital resource-based training task, which the learner performs mainly independently. In order to organize the learning task itself and effective feedback, three types of information resources must be agreed upon: substantive, learning management resources, and communication resources. [Noskova, 2020]. On the basis of these types of resources, the digital setting of educational objectives was organized in a context of variable setting of tasks, which allowed the learner to choose the preferred mode of educational interaction in the process of their solution.

It should be noted that there are also many programs and applications in the digital environment when learning a foreign language. Learners may use them according to their individual preferences. The BBC Learning English application has been selected as a modern and professional resource for independent learning of general aspects of English. Online content should not only be fascinating but also clearly structured and subject to a logical plan [Muir et al., 2019]. No matter how important or interesting the course materials may be, the teacher's task is to ensure constant interaction of

students with this content, for example, with the help of graded assignments [Rayens & Ellis].

The selection and development of information resources were guided by the following criteria: authenticity (in foreign language learning), multimedia, multimodality and flexibility of use, accessibility, visibility, system, adaptability, interactivity, relevance.

The organization of the learners' interaction with the content of the course, is a key predictor of the satisfaction of the students, creating a feeling of having an educational result [Alqurashi, 2019]. Students are more satisfied with the course if online materials are available, stimulate interest in the course and help to better absorb the content of synchronous sessions, personalize the learning [Cole et al., 2019]. In order to encourage active interaction with learning resources, educational objectives were set to develop skills necessary for future professional activities, such as listening to foreign-language speech (auditing) with special lexical units to be included in situations of professional dialogue. Transcripts based on listening, repetition following the English-speaking speaker, and reading aloud were practiced in order to practice pronunciation skills and to better assimilate lexico-grammatical material.

One of the main requirements for the creation of a resource base for an individual occupation and environment as a whole is its saturation. This has made it possible to choose a way of solving educational problems on the basis of the students' personal preferences. The over-saturation of the environment with educational resources allows the teacher to use the available material creatively depending on the purpose and objectives of the class, the focus groups of the learners, the current level of possession of the material, the condition of the students and other factors.

*Problem solving situations in a digital environment.*The situation of solving problems in the digital environment has changed due to the possibility of the learners choosing ways of closing their feedback: with teachers, with learning partners, with Internet resources. Communication with partners was important for the development of foreign-language competencies. On the basis of the authentic resources offered, learners were asked to develop their own dialogues that simulated different situations of professional communication. Both the individual form of organization of educational and cognitive activities and the work in pairs or mini-groups were applied. The professional dialogue simulations were run in pairs and were the main means of preparing for the demonstration final qualifying examination.

4   Analysis of the Experimental Results

In the context of the pandemic, ZOOM learning technologies were widely used to replace classroom teaching. As the results of the survey indicate, this type of training does not fully meet the needs of the trainees. The results of the survey showed that over 65 percent of the trainees felt that such a format could not be a substitute for live communication. Almost half of the respondents agree that ZOOM classes are only partially useful (46%). Of the students, 32.4 percent were fully satisfied with this arrangement, while 26 percent were not satisfied. It was therefore important to explore other forms of remote learning that were more in line with user preferences.

Such a tool in the experiment was a digital (virtual) learning environment implemented on the basis of public network services for solving the problems of formation of foreign professional competences. During the pilot work, an independent evaluation of the quality of education was carried out in the framework of the innovative project "Federal Internet Examination in Vocational Education". The project is aimed at providing independent assessment of student performance as required by Federal State Standards of Secondary Vocational Education.

In the Federal Internet Examination, 74 students from six groups of first and second year, specializing in the Hotel Industry, of the Saint Petersburg College of Tourism and Hotel Services, were accepted. The level of education in the discipline "Foreign Language" was evaluated. The test consisted of three sets of tasks involving assessment of knowledge of lexical-grammatical material, business writing skills and professional communication in different situations.

An independent evaluation of the quality of education found that the fourth (highest) level of education included more than one third (39.2 percent) of the tested students, the third - 24.3 percent, and the second - threshold - about one fifth. Results below the threshold showed only 17.6% of students taking the Federal Internet Exam .

It is interesting to compare the data with the results of the foreign language examination conducted at the college. The examination took the form of simulated situations of future professional activity, such as reservation, checking in, checking out, as well as an evaluation of written communication skills in the form of writing a business letter in a foreign language. During the exam, the student was to act as a hotel administrator, and the guest was a foreign language teacher. The evaluation was carried out by several experts.

The vast majority of students (75.7 percent) passed the "excellent" foreign language examination and one fifth (20.3 percent) received the "good" mark. Only 3 people out of 74 (4.1%) showed satisfactory results.

It should be noted that the evaluation was based on a competency-based approach. In our view, the successful demonstration by students of the foreign-language professional communication competence that they have formed confirms the working hypothesis of the effectiveness of the organization of education in the form of setting educational goals in the digital environment.

However, it is important to find out how students perceive the conditions for organizing independent educational activities in a digital environment, and what their preferences are.

The results of the questionnaire made it possible to obtain a picture of preferred services and information resources, and to identify the nature of educational interactions and emerging relationships in the context of digital learning. The data obtained are shown in Fig. 2.

The vast majority of students who took part in the study were positive about the use of modern digital technologies in language learning: 46.1% fully and 36.3% partially agree that the closed group of VKontakte is a convenient and modern way of organising educational activity in foreign language learning. Only 14.7% of respondents do not realize the usefulness of performing interactive exercises in the virtual classroom on the LearningApps.org platform, and only 12.7% are negative about the use of mobile technologies. Interestingly, organizing educational activities through Google Classroom proved unsuitable for more than a third of the students who participated in the study. For example, 36.3% of those surveyed indicated that they did not like to perform tasks on this platform.

The attitude of students to changing situations of solving educational problems in a digital environment. A change in the situation with regard to the solution of educational problems was evident when students asked for help. The results of the study showed that 36.5 percent of teachers will seek help in learning difficulties; 30.4 per cent will seek help from friends; and 7.8 percent will seek help from families (parents), while 74.5 percent will seek help from the Internet. Students also prefer the Internet (74.5%), while only 42% will turn to fellow students. The data obtained correlate with the difficulties identified in the independent use of a foreign language in a digital environment: only 23.5% of the students indicated that they were easily able to practise in a digital (virtual) environment and the same number of students stressed that they like learning English remotely. Only 26.5% of the respondents are fully prepared for paired (group) work.

It is important to recognize that a modern, open digital environment integrates the educational interactions of formal, non-formal and informal education. Therefore, the educational objectives of formal education should take into account the electronic interactions in which learners prefer to be included in order to encourage them, through informal interaction, to pursue similar educational objectives. The results are shown in Table 1.

For example, the results of the study showed that the vast majority of respondents (89.2%, 51.0% always and 38.2% sometimes) used mobile applications in their own learning of a foreign language. The use of electronic dictionaries is used by 85.3% of learners (48.0% always and 37.3% sometimes). To improve the English language, students also frequently watch films in the original language (77.5%, of which 30.4% always and 47.1% occasionally). Almost nine-tenths of interviewees (29.4% always
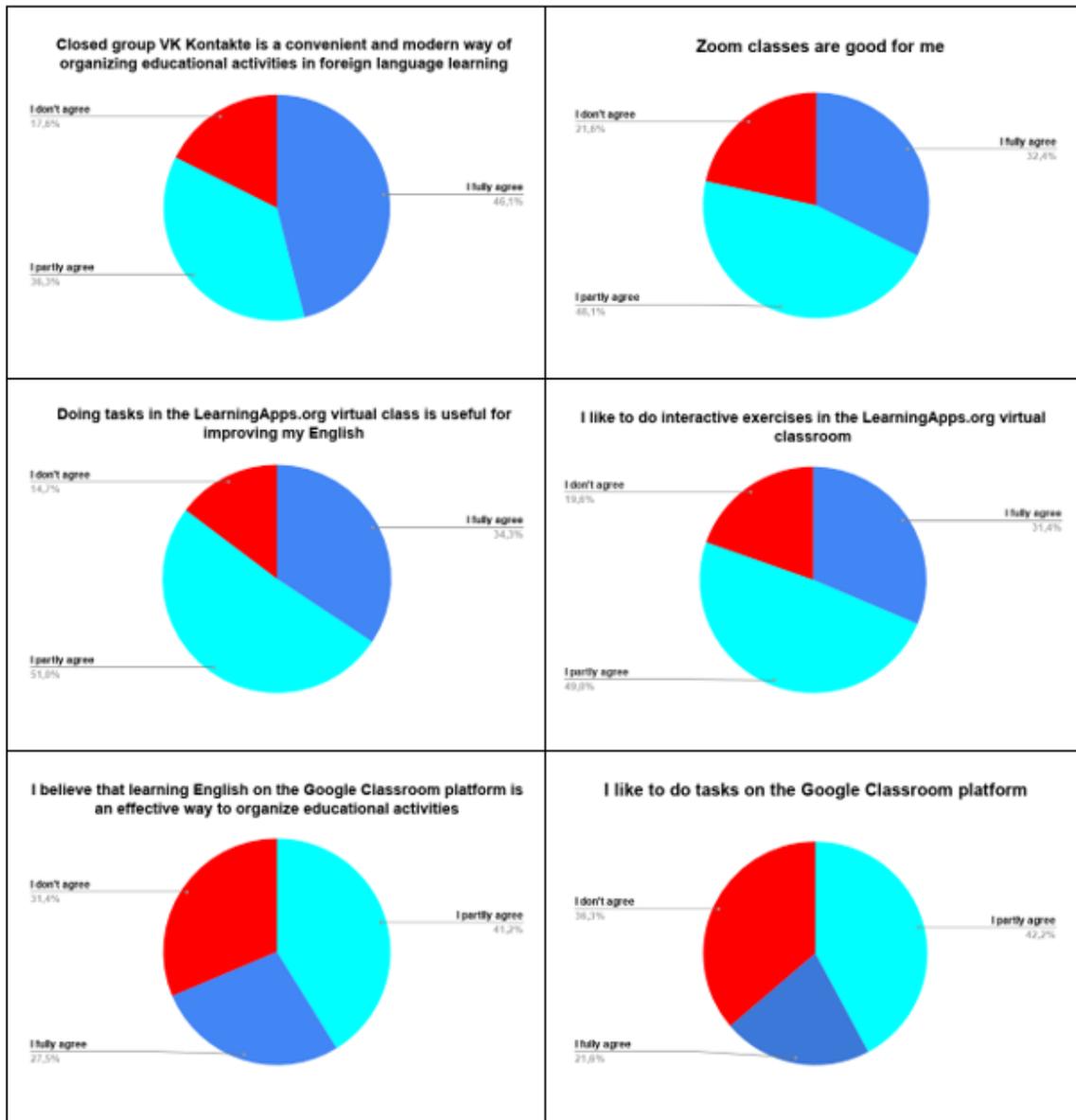
Figure 2: Learners' Attitudes to Digital English Challenges

and 58.8% sometimes) turn to performing tests and exercises on specialized portals. More than four fifths (84.3 percent) of the trainees (23.5 percent - always and 60.8 percent - sometimes) use videocasts in foreign languages. A little less popular was listening to podcasts, with less than four fifths of the respondents (76.6%, only 20.6% on a regular basis). Strangely enough, more than a third (35.3%) of the respondents.

Table 1: Use of Web Services in Independent Language Learning

When completing assignments and learning English on my own	Always (%)	Sometimes (%)	Never (%)
I use electronic dictionaries	48.0	37.3	14.7
I do tests and exercises on specialized portals to improve my English	29.4	58.8	11.8
I use mobile applications	51.0	38.2	10.8
I watch videocasts	23.5	60.8	15.7
I listen to podcasts	20.6	56.9	22.5
I watch films in English	30.4	47.1	22.5
I read articles in English on the Internet	22.5	42.2	35.3
I correspond with foreign friends	21.6	31.4	47.0

Conclusion

In the context of the pandemic, ZOOM provided much of the education in all educational institutions, but these interactions served only to fill learning deficits, limiting opportunities to develop the necessary skills. The creation of a digital environment for educational objectives should not only focus on the organization of educational activities through LMS educational platforms (content management, learning management), but should also take into account the needs of contemporary youth, which is very active in the use of public social services. In comparison, a study on the content of university courses in English has shown that students prefer off-line studies, as it provides a greater level of interest and engagement, provides more opportunities to interact with other participants in the educational process, to master teaching material [Damayanti & Rachmah] .

The experiment showed that the process of formation of foreign-language communicative skills can be quite successfully organized in a virtual (digital) environment based on social services and cloud technologies. However, students have a preference for using public network services. Thus modern students in the choice of tools of educational interaction practically do not use email, and are cool about the use of Google Class services. It is advisable to rely on widely used tools, such as the use of mobile applications for independent learning of a foreign language, in setting communicative goals to develop foreign-language skills. Electronic dictionaries are used effectively, and films in the original language are often viewed. Many students turn to performing tests and exercises on specialized portals and viewing videocasts. As these services are actively used by learners in their non-formal educational activities, the orientation towards their use in education stimulates the integration of formal and informal educational interactions of learners in a digital environment. This is important for continuing education of the individual, when educational interactions will continue beyond formal education.

It is important to rely on authenticity, multimodality, multimedia content and content variability for learners to choose relevant information and professionally oriented tasks, to the possibility of interactive interaction, changing situations of solving educational tasks in a digital environment. In organizing communication in a digital environment, it should be borne in mind that in case of difficulties, modern students prefer to consult the Internet first, then with teaching partners, and then with the educator.

The results of the study showed that, while there is an overall positive assessment of the use of digital technology in language learning, college students are not yet sufficiently prepared to work independently, and have some difficulties in independently solving educational tasks in the formation of foreign-language professional competences in a digital environment. This leads to the general conclusion that there is a need to improve the organization of independent learning activities in a digital learning environment. To this end, the use of digital tools must take into account the preferences of modern learners in an open network environment; in setting educational targets, it is necessary to focus on a plurality of options that allow educational choices to be made in the process of achieving the objective. In learning situations, increase the diversity of digital interactions with Internet resources, with training partners, and with the choice of ways to close feedback. This is important not only for achieving high levels of formal learning, but also for engaging learners in non-formal education as a foundation for continuing personal education in a digital society.

Acknowledgement

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