Using LMS Moodle in teaching CLIL: a case study

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Abstract — The paper describes Learning Management System (Moodle) usage in teaching CLIL course to pre-service teachers of Kazan Federal University. The research aim is to explore students' perceptions of learning in a virtual environment while content and language integrated learning (CLIL) with English being a medium of instruction. The results of the survey conducted among 56 students suggest that they found Moodle easy to navigate, useful, and accessible; it supports peer/ and student-tutor interaction and is effective in complementing face-to-face teaching. However, additional results of the survey show that students mostly use Moodle as a repository of materials and a structured set of audiovisual resources relevant to the subject taught in a foreign language. The proposition of implementing more Moodle tools in CLIL will be the aim of further research.

Keywords — *Learning Management System (LMS) Moodle, Content and Language Integrated Learning (CLIL), online CLIL course, pre-service teachers.*

I. INTRODUCTION

In view of growing students' mobility in recent decades, the issue of Content and Language Integrated Learning (CLIL) has become important and attracted attention of many researchers. This dual approach to learning has many apparent benefits in the form of improving students' foreign language proficiency and preparing them for functioning in a multilingual environment. The quality of CLIL practice depends on teacher background knowledge and professional development of teachers who understand how to put the innovative approach into practice in their classrooms. The role of computer-based digital technologies in providing new and quick access to multiple modes of representation in CLIL is crucial. The paper is focused on exploring pre-service teachers' perceptions of learning in Moodle to support content and language integrated learning with English being a medium of instruction.

Coyle et al. define CLIL as "a dual-focused educational approach in which an additional language is used for the learning and teaching of both content and language" [1, p.1]. In this definition, the use of the phrase 'additional language' mean learners' foreign language or it may also be a second language and heritage language.

Language learning in this integrative approach happens in an authentic and holistic way because a foreign language is acquired in a natural way (as a native language). Using two languages in the teaching-learning process presupposes that students will eventually be capable of using both languages for communicating effectively in context reduced and cognitively demanding contexts [2].

Possibility to put CLIL as an innovative approach into practice on a larger scale enhances if there are enough teachers who can teach subjects through an additional language, i.e. who are familiar with CLIL approach. Thus a CLIL course specially developed for pre-service teachers focuses on the pedagogical competencies of future CLIL practitioners. Information and Communication Technologies (ICTs) play an important role in education, having a special relevance in the instructional component, supported by e-learning systems. These platforms have many possibilities. E-learning platform represents a system, which provides integrated support for six different activities in teaching process: creation, organization, delivery, communication, collaboration and assessment [3].

Moodle is the most used e-learning platform in higher education, as well as the easiest to use. The name Moodle is an acronym for Modular Object-Oriented term Developmental Learning Environment and is a course management system (Course Management System - CMS) through the Internet, also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). Educators can use this free web application to create effective online learning sites [4]. One of its main advantages is its open source allowing any user with programming knowledge to modify and adapt the educational environment according to their own needs. Moodle can be installed at no cost at many servers. A teacher can manage the platform according to his or her needs. Although initially designed for universities, this platform has quickly become used across a broad range of organizations worldwide to conduct courses fully online or support blended learning.

Our CLIL course was held for students of Kazan Federal University during the winter semester of the academic year 2018/2019 in blended learning form. Learning Management Systems (LMS) Moodle supported the e-learning part of the curriculum. It was interesting for us to get feedback from participants and to explore students' perceptions of the learning experience in a virtual environment while blended learning using LMS Moodle.

The research question of the study is the following: to explore students' perceptions of learning CLIL course in a Moodle virtual environment while blended learning using content and language integrated instruction by means of English.

II. Methods

The Master of Education programme (Teaching English in secondary and tertiary education) offered at Kazan Federal University is a 2-year course. Content and Language Integrated Learning (CLIL), provided in both Russian and English, is a compulsory subject offered in the second year and is traditionally taught via lectures and practical sessions that involve face-to-face communication between educators and students. The CLIL course was delivered in a blended learning form with an e-learning part supported by Learning Management System Moodle. We supplemented the existing teaching modes with an online Moodle course. The course consisted of 72 academic hours including lectures (6 academic hours), practical sessions (10 academic hours) and self-guided work (52 academic hours).

At the beginning of the winter semester all the Master students (56 students) self-registered at CLIL Moodle course using individual user names and e-mail addresses. They were givend a brief instruction on the course structure and its usage. Two lecturers of Kazan Federal University were assigned both as lecturers and tutors.

Course structure was outlined by the regulations provided by the Kazan Federal University and was typical for all the University online Moodle resources. The course content in LMS Moodle was organized in topic format (Fig. 1). The online course content was designed using the following topic outlines.

1.A window on CLIL. Curricular variation in CLIL. CLIL as a theoretical concept.
2. Creating and evaluating materials and tasks for CLIL classrooms.
3. Assessment issues in CLIL. Summary of assessment principles.
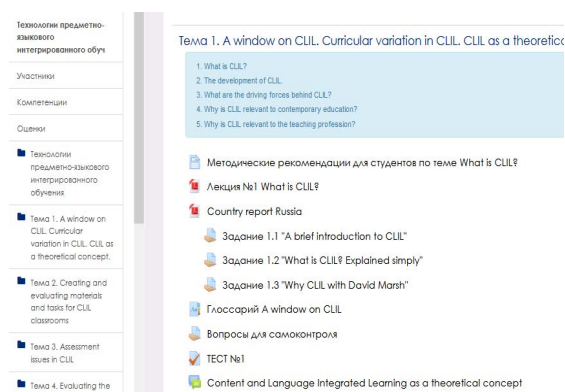4. Evaluating the impact of CLIL programmes.

Fig.1. The main page of the online CLIL course

The students were enrolled in 3 (6 academic hours) practical sessions and majority of curriculum content was supposed to be done online. Introducing the idea of teaching CLIL through CLIL, we designed all the assignments basing on CLIL principles and ideas. Taking into consideration the basic CLIL strategies like using meaningful authentic content and effective scaffolding techniques, intercultural awareness, rich interaction between participants, developing higher order thinking skills various practical tasks were developed by the tutors and uploaded beforehand so that the students were able to get ready for a class discussion [5].

Every section contained lecture notes in pdf format that students were able to download. Each session was accompanied by a set of audiovisual resources in forms of videos and presentations relevant to the subject taught. Students could either upload them or watch them online. A CLIL glossary and a special tutorial for performing the assignments were developed for every topic to enable better understanding of the topics presented. Every section allowed communication with peers and students-tutor interaction through a forum where tutors created special topics for discussion. A total of five tests, comprising various types of questions, were created to test the level of understanding the students possessed about the concepts studied. A bibliography and links to relevant websites were provided.

The survey was conducted among the students (pre-service teachers) of Kazan Federal University that studied in a non-native language during winter semester of 2018-2019. 56 students, pre-service teachers of English as a foreign language, responded to the survey. Students from Russia formed the largest group but there were also representatives of Turkey.

During the last week of the semester, the students were handed a questionary in order to evaluate their feedback on the implementation of online CLIL course based on LMS Moodle. The survey consisted of two parts.

In the **first part** the students evaluated the studied CLIL Moodle course including its ease of use, usefulness, accessibility, ability to support peer/ and student-tutor interaction and effectiveness in complementing face-to-face teaching. The frequency of the usage of CLIL Moodle course was analyzed.

In the **second part** of the survey, the students were supposed to provide a narrative response related to their overall perceptions of using CLIL Moodle course and being instructed in a non-native language.

III. Results

Of the registered users, 91% of the users enrolled within the first week of training. The site recorded a total number of 923 visits during the entire academic session. The largest amount of visits was recorded in the first two weeks (23%) as well as in the last week of the winter semester (45%). This can be explained by the students' enthusiasm of using the resource initially and also the necessity to fulfill all the course assignments in the last week of the winter semester. The total hits for various resources available in CLIL Moodle course are shown in Fig. 2.

As it was mentioned above, every section of the Moodle course consisted of the following parts: lectures, assignments with audiovisual resources, presentations, CLIL glossary, special tutorial, forums and tests.

The most frequently used content was lecture notes (18% of hits), various assignments that included audiovisual resources (49% of hits) and forums (13% of hits).
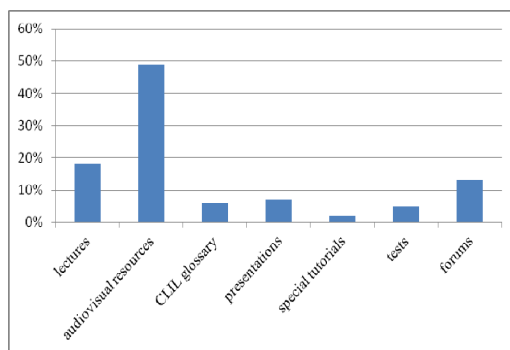
Fig.2. Total hits of students for the various Moodle tools

Considering the **first part** of the survey, most students found the online course content and all Moodle tools used in the CLIL course useful (87%), accessible (92%) and easy to use (96%).

The respondents (99%) believed that assignments containing audiovisual resources were the most useful. They also appreciated the online course structure but only limited number (22%) agreed that it allowed student-lecturer interactions and enabled peer interactions. Majority of respondents (61%) agreed that the course complemented traditional face-to-face learning, but still students preferred to study through conventional lessons.

From the **second** narrative response section, it was clear that students' motivation for studying in a foreign language was firstly based on the possibility of enhancing their employment opportunities and a chance to practice language skills. Their language skills varied from B2 to C1 according to the Common European Framework of Reference. Despite this fact some students had to search for CLIL materials in their native language (Russian and Tatar) to help them understand complicated theoretical concepts. This can be explained by the insufficient background knowledge in CLIL theory and practice and by the complicated theoretical content of the course. It should be also mentioned that by the end of the course more than 80% of respondents noticed considerable improvements in their language skills (especially writing and speaking). They observed that studying the content in a non-native language increased their intellectual flexibility and cognitive abilities, developed all sides of personality and promoted communicative skills.

Majority of students (85%) were satisfied with using CLIL course based on LMS Moodle. They mentioned that learning in a blended format allowed them to follow their own personal schedule and study at the most appropriate time and speed. The students found that the course was easy to navigate and they were equipped with sufficient ICT knowledge for learning in a virtual environment due to IT training in secondary school and university.

IV. DISCUSSION

Educators nowadays are experimenting with different ways of using LMS Moodle for either delivering fully online courses or as a supplement to their face-to-face teaching in a variety of university courses. Recently, Kazan Federal University has adopted Moodle as the main e-learning platform for all courses. Following this decision, we integrated a Moodle e-learning course called Content and Language Integrated Learning into the existing face-to-face teaching of CLIL to pre-service teachers of English as a Second Language. The following approach was taken due to the suggestion that blending online-/e-learning with traditional face-to-face teaching promotes deep and active way of learning that enhances students learning outcomes.

Our research aim was to explore students' perceptions of learning in a virtual environment while content and language integrated learning. The results of the survey showed that CLIL Moodle course was easy to navigate, use and access. However, students mentioned, that nevertheless the CLIL Moodle course allowed peer/ and student-tutor interaction they prefer to discuss their issues using different messengers, WhatsApp in particular.

They mentioned that blended learning allowed them to follow their own individual plan and study at the most suitable format. Due to this, it enriches and complements face-to-face teaching.

Some additional results of the survey were that students mostly use Moodle as a repository of materials and information and the structured set of audiovisual resources in forms of videos and presentations relevant to the subject taught.

Studying and implementing more LMS tools in CLIL will be the aim of further research, as digitizing is the mainstream trend in bilingual education by means of native and foreign languages.

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