

CLASS: PROSPECTIVE IN DYNAMIC, COMPETITIVE, ECONOMIC WORLD

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Annotatsiya: Erasmus+ CLASS loyihasi Markaziy Osiyo (O'zbekiston va Qozog'iston) universitetlarida kompyuter lingvistikasi bo'yicha sohalararo magistratura dasturini rivojlantirishga qaratilgan. Loyiha 2017-yil oktyabrda boshlangan va 2020-yilgacha davom etadi. Ushbu maqolada loyiha ishtirokchilari tomonidan amalga oshirgan va oshiriladigan ishlar haqida ma'lumot berilgan.

Аннотация: Проект Эрасмуз + направлен на разработку и внедрение новой университетской программы в области компьютерной лингвистике между дисциплиной. Проект был начат в октябре и это продолжается 2020 году. Целью этой статьи является предоставление общего обзора относительно разработкой учебной программ и повышение квалификация кадров по компьютерной лингвистике.

I. Background

The European Union finances CLASS. This project named Development of the interdisciplinary master program on Computational Linguistics at Central Asian universities. CLASS, number 585845-EPP-1-2017-1-ES-EPPKA2-CBHE-JP) project on Computational linguistics. In this project following European and Asian universities participate Coruña university (UDC), Technological Educational Institution of Athens (TEIATH), Porto University (U.PORTO), Adam Mickiewicz University in Poznań (AMU), Urgench State University (UrSU), Samarkand State Institute of Foreign Languages (SamSIFL), Tashkent State University of the Uzbek language and literature (TSUULL), National University of Uzbekistan (NUUz), Kostanay State University (KSU), L.N. Gumilyov Eurasian National University (ENU), Al-Farabi Kazakh National University (KazNU). The project is devoted to improve the quality of education that answers the requirements of standard education system and preparing masters who can adjust dynamic and economical world in the sphere of Computational linguistics.

II. The necessity of master course on Computational linguistics in Uzbekistan

Nowadays development of science and technology is highly promoted by our government. Having established independence our country infrastructures namely the system economics and agriculture reforms gradually. Moreover, educational system has been progressed since those years with positive changes facing the world achievements. Especially, spreading in a large scale of information technologies and exposing of opportunity of using of Internet system have made open the door of the world in order to deal with serious issues which most of the domains of sciences crossing with computer capabilities, for instance, computational biology, computational economics and computational linguistics and so forth.

Computational linguistics is a new sphere in our country. Although it has been taught since 2000 years due to a lack linguistic resources for software it stays as a theoretical subject in HEI. Therefore, it is indispensable to prepare educators on computational linguistics in Uzbekistan and Kazakhstan universities. There are several concerns of computational linguistics: machine translation, speech synthesis, morphological analyzing and syntactic parsing, question answering, information retrieval system, and corpus. In order to create new platform of virtual bases and blended learning of the course required to create new curriculum and syllabus, video rolls, and information resources in frame of the project.

This project is being done under the initiatives of Uzbekistan and Kazakhstan universities. **Computational Linguistics**, and more generally Human Language Technologies are crucial for development of high information technologies, necessary for the industrial social and civilization progress. These technologies are in progress almost everywhere in the world but at different speed in the concerned countries. Computational linguistics master program will improve the situation

via training the students, stimulating research in computational linguistics to understand the nature of linguistic representations and linguistic knowledge is acquired and deployed in the production and comprehension of language; computing of the relation between form and meaning, facilitating document processing and information retrieval, providing with new data and instruments for learning languages (Kazakh, Uzbek, English) with good support for the Uzbek and Kazakh languages by the end of 2020.

III. Curriculum development

A main challenge for the project is the accreditation of the curriculum. To secure this issue the Ministry of Higher and Secondary Specialized Education (MHSSE) was integrated in the project consortium and was given a role with the tasks related to curriculum development. The expertise of CLASS will also be used in the modules development to make sure that they meet national standards and requirements. The obtained outcome will be important for the developing the master program curriculum and qualification description on CL. Via this outcome, the curriculum development instructions will be given by AMU (Adam Mickiewicz University) and the main aspects will be presented in order to integrate the master programs with good quality resources. This work package has two objectives: the creation of the new curriculum and the preparation of the necessary documentation for the accreditation.

The curriculum development uses the results of the needs-analyses. The European and Uzbek partners designed the analysis. In order to prepare the curriculum, it should be used pilot modules for master course of Computational linguistics.

IV. Implementation of the project

Santiago de Compostela university hosted for the kick-off meeting of Erasmus+ CLASS (19-20 February, 2018 in Spain) and all partner universities introduced own capacity and its capabilities in this meeting. During the kick off meeting Project quality Assurance Committee was defined to monitor and control project work plan activities.

After that in order to implement the project affectively a twice distance discussions environment through e-Talk platform were created by partners. Distance discussion focused on the problems and some essential issues to analyze the project and strong collaboration with European experts.



*(Introducing TSUULL in the kick off meeting in Santiago de Compostella)
(Nilufar Abdurakhmonova from TSUULL and Belinda Maia from Porto University in the kick-off meeting)*

All other Uzbek partners took part in the following activities: analysis of pilot Master course in the world universities, defining of literature list, develop and publish teaching materials, implementation of pilot course. The outcome is very important pillar of the project, as it is main source for launching the master program in Uzbekistan and Kazakhstan. So, all CA partners participate in the developing activity of curriculum content materials under the responsibility of three EU partner universities such as UDC, AMU and U.PORTO in the following distributed form:

- UDC is appointed to ENU and SamSIFL

- AMU is appointed to UrSU, KSU and NUUZ
- U.PORTO is for KazNU and TSUULL



EU partner university will supply CA partners with necessary material, resources and instructions. The curriculum content and materials will be developed in English, Uzbek and Kazakh languages.

At result of Erasmus+ CLASS activity, in this case the curriculum contains compulsory core components and optional modules, allowing for the adjustments on the individual student background and the institutional program levels at the

various partner institutions. The curriculum will be reviewed, consolidated and submitted to the Ministry of Education. Upon accreditation and licensing, information materials will be prepared for the public on the new education program.

The target groups of the project is be categorized into direct (students, academic staff of linguistics and computer science of the partner universities and associated partners. Because of



active partnership of creating new curriculum content materials with obtained EU experience and implementing blended learning technology, 35 academic staff (2 students, 1 master student and others professor teachers) from all CA partner universities have been trained on implementing blended learning technology and enhancing pedagogical capacity and methodologies in teaching CL courses with using previous existed NLP open sources. Training course consisted of three modules: Moodle 3.0: using guide for teachers, linguistics

analysis, NLP.

This training course has been implemented by Coruna university

(Thirty-five academic staff trained in Coruna on Computational linguistics and NLP) (Spain, on 18 June-4 July, 2018) and each members of this course were given certificate. At the end of study in Coruna Bologna academic quality assurance module (grounded in the European experience as guided by the Bologna agreement) introduced to the participants. We hope that teacher-training course guarantees the quality and sustainability of the master program so that make program of required principle of education.



*(The process of study of training course on NLP)
(Curriculum discussion with Nilufar Abdurakhmonova, Saodat Mukhamedova from TSUULL and Diana Rakhimova from KazNU)*



(Awarding with certificate at the end of study: TSUULL, ENU, KazNU, SamSIFL members.) (Exchange experience on virtual bases of education between Ana M.Pena Cabanas (Coruna) and Nilufar Abdurakhmonova (TSUULL)).

On October 5, 2018, the Tashkent State University of Uzbek Language and Literature hosted for Erasmus + Information Day-2018 Conference (Erasmus + Program Competitive Outline, Capacity building in higher education, , which aims to provide information for youth, International Credit Mobility-International Credit Finance, Joint Master Degree, Joint Master Programs, Jean Monnet, MSCA) organized by national office Erasmus+ in Uzbekistan (NEO). It also included the exhibition of international projects in the frame of Erasmus+ that implemented by Uzbekistan partner universities. At the same time, an exhibition (brochures, flyers, teaching and other materials, videos, photos) of the project "Development of a Master Program in Interdisciplinary Computer Linguistics in Central Asian Universities - CLASS" showed by TSUULL. Observers, foreign experts, and other project coordinators were very interested in the work carried out within our project. At the end of the event, Piia Heinamaki who is the expert on the projects gave the second place to CLASS exhibition and awarded with valuable gifts to our group.



The second meeting on agreement of curriculum on computational linguistics discussed by all the partners in 16-17 October 2018 in National University of Uzbekistan. Taking into consideration suggesting presentations of each participants, summered by selected experts of groups. According to this, there are three modules: national module, research module, NLP module including applications, Applied Linguistics module, Computational Technologies. The next day the contents of the curriculum divided compulsive and elective courses so that prepare syllabus distributed to the Asian universities participants.



Upon successful approval, the study program will operate according to internationally recognized academic quality assurance principles. The institutional providers will be engage in annual program and course monitoring (including student feedback); external monitoring will take place through the appointment of an external examiner and through feedback from professional representatives.

V. Acknowledgements

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МЕЖДИСЦИПЛИНАРНОСТЬ – ТРЕНД СОВРЕМЕННОГО ВЫСШЕГО ОБРАЗОВАНИЯ (НА ПРИМЕРЕ ПРОЕКТА ERASMUS+ CLASS)

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В статье рассматривается структурная и методологическая база новой магистерской программы по компьютерной лингвистике, создаваемой в рамках проекта Erasmus+ CLASS. Программа предполагает обучение в магистратуре студентов из различных направлений образования, что требует решения ряда методологических задач, как при построении учебного курса, так и в практике преподавания.

The article presents structure and methodological base of a new master program on computational linguistics designed in the framework of CLASS project. This program plans to form as MA students with different educational backgrounds which requires the solving of several methodological issues as for program building, as for teaching strategies.

Ушбу мақолада CLASS лойиҳаси доирасида яратилаётган компьютер лингвистикасини ўқитиш бўйича янги магистратура дастурининг структур ва методик базаси тадқиқ этилади. Дастур турли таълим йўналишларида магистратура талабалари учун мўлжалланган бўлиб у ўқув курсини ташиқил этиши ва амалиёт жараёнида учрайдиган қатор методик вазифаларнинг ечимини талаб этади.