Title Organising Personalised Learning in the English Language Classroom: Computer Engineering and Information Technology Undergraduates Perspectives

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Abstract. The more rapidly the area of information technologies develops, the higher are the requirements for training Computer Engineering and Information Technology students. Computer Engineering and Information Technology students training should be aimed at equipping them with subject-specific knowledge, on the one hand, and skills of the 21st century including strong communication skills in English, on the other hand. As practice shows good communication skills in English may lead to better job opportunities, more stable and prosperous future. The desire to succeed in mastering communication skills in English is directly related to Computer Engineering and Information Technology students' attitudes towards both English as a discipline and activities used in the English language classroom. Computer Engineering and Information Technology students show interest and enjoy learning only when it becomes personally meaningful to them. The research aim is to find out Computer Engineering and Information Technology undergraduates' opinions on organising personalised learning in the English language classroom aimed at developing their communication skills. The researchers used a convenience sampling technique to select the research population. The research population comprised 273 Computer Engineering and Information Technology first and second year students from Kyiv National Economic University named after Vadym Hetman and Kyiv National University of Technologies and Design. To collect statistical data on Computer Engineering and Information

Technology undergraduates' opinions on organising personalised learning in the English language classroom the team of researchers developed a questionnaire and data collection took place in September-December 2023.

I. INTRODUCTION

Advances in the area of information technology are significantly changing the labour market worldwide and the university graduates as its new entrants should be able to respond to all the challenges of the 21st century. And that is especially true for Computer Engineering and Information Technology students, since the more rapidly the area of information technologies develops, the higher are the requirements for their training. Present-day scholars and practitioners from around the world express their opinion that university training (including the training of Computer Engineering and Information Technology students) should be aimed at equipping them with subject-specific knowledge, on the one hand, and skills of the 21st century including strong communication skills in English, on the other hand [1], [2]. Moreover, as practice shows good communication skills in English may lead to better job opportunities, more stable and prosperous future. The desire to succeed in mastering communication skills in English is directly related to Computer Engineering and Information Technology students' attitudes towards both English as a discipline and activities used in the English language classroom. Computer Engineering and Information Technology students show interest and enjoy learning only when it becomes personally meaningful to them.

Present-day scientific pedagogical literature operates with such a concept as personalised learning and present-day university teachers have all the possibilities (a wide

range of methods, techniques and tools) to personalise learning for their students. We believe that English as a medium of instruction creates favourable conditions for comprehensive development of good communication skills in English among Computer Engineering and Information Technology undergraduate students through personalising their learning.

Akyuz defines personalised learning as "an educational approach that aims to customise learning for each student's strengths, needs, skills and interests" [3].

Bulger claims that personalized learning "describes adaptation to a students' unique combination of goals, interests, and competencies and the ongoing process of shifting instruction as these conditions change" [4].

In the research "A systematic literature review of personalized learning terms" Shemshack and Spector explain that "Learning is formed through an individual's interactions, including the conveyance of knowledge and skills from others and experiences. So, learning is a personalized experience that allows one to expand their knowledge, perspective, skills, and understanding" [5]. The researchers are convinced that one of the main advantages of personalized learning is that educational process based on its principles can improve both learners' motivation and their academic achievements. Shemshack and Spector aim to find out the connection between such terms as "personalised learning" and "adaptive learning", "individualised instruction", and "customised learning".

We do believe that the main difference between individualised instruction and personalized learning is that individualised instruction "promotes either gaining or mastering students' theoretical knowledge and practical skills (including filling the gaps in their knowledge or skills) on the basis of their individual and psychological peculiarities, needs or interests" [6] and personalised learning is targeted at adapting learning to changing needs of students and to changes in their personal and professional development.

We define personalised learning as a teaching and learning approach focused on creating favourable learning conditions in the classroom with the aim to expand students' knowledge and develop soft skills necessary for achieving success in the personal and professional lives. In the English language classroom personalisation of learning means considering the levels of students' language proficiency, their learning styles, interests and needs with the aim to develop or master their English communication skills. Moreover, personalised learning in the English language classroom enables to increase students' motivation of learning English, to develop their self-learning, independent and critical thinking skills, to adapt learning content to their interests, learning styles and evident knowledge.

We fully agree with Shah, Syeda and Naseer that "communication skills include the ability to use language efficiently" [7] and their development is important for all aspects of students' lives, namely, personal, professional and social.

Gruba and Al-Mahmood focus on the fact that in Australia Computer Science graduates are expected to have good communication skills including interpersonal skills, teamwork and effective writing [8].

Havill and Ludwig believe that "as communication is central to research, the practice of oral communication in computer science can serve to introduce students to and excite them about conducting their own research" [9], computer science students should have good oral communication skills which include preparation skills, delivery skills and presentation skills.

Asemanyi expresses the idea that university education should promote the development of oral and written communication skills among students [10]. The researcher who is convinced that students should have these skills to communicate in a proper manner gives some examples of them, namely, note-taking and note-making skills, reading skills, conventions of usage and writing skills.

Thus, we can state that good communication skills of professionals in the field of Computer Engineering and Information Technology are crucial. Communication skills in general and English communication skills enable them to cooperate and collaborate with their colleagues and to interact with clients, to express their ideas and to ensure effective knowledge transfer.

The research aim is to find out Computer Engineering and Information Technology undergraduates' opinions on organising personalised learning in the English language classroom aimed at developing their communication skills.

II. MATERIALS AND METHODS

The researchers used a convenience sampling technique to select the research population. The research population comprised 273 Computer Engineering and Information Technology undergraduates from Kyiv National Economic University named after Vadym Hetman and Kyiv National University of Technologies and Design. Distribution of respondents is given in Table 1.

TABLE 1 DISTRIBUTION OF RESPONDENTS

Higher education Institution	Year of education	Respondents	
		Number	*Percent*
Kyiv National Economic University named after Vadym Hetman	1	67	24.54
	2	62	22.71
Kyiv National University of Technologies and Design	1	75	27.47
	2	69	25.27

Study: own study
N=273

To collect statistical data on Computer Engineering and Information Technology undergraduates' opinions on organising personalised learning in the English language classroom the team of researchers developed a questionnaire and data collection took place in September-December 2023.

The main questions that guided the research:

1. Do you believe that learning in the English language classroom aimed at developing your

communication skills is personalised to your needs and interests?

2. Do you believe that learning in the English language classroom aimed at developing your communication skills is personalised to your learning styles?

3. What methods of personalised learning used in the English language classroom do you find effective in developing your communication skills? Please, list as many methods of personalised learning used for developing your communication skills as you can.

4. Are you given the opportunity to choose activities aimed at developing your communication skills in the English language classroom?

5. What are the advantages of personalised learning in the English language classroom aimed at developing your communication skills?

To interpret the research results the researchers use descriptive statistics.

III. RESULTS

Question 1 is aimed to find out if respondents believe that learning in the English language classroom aimed at developing their communication skills is personalised to their needs and interests. The research findings to question 1 are presented in Fig. 1.
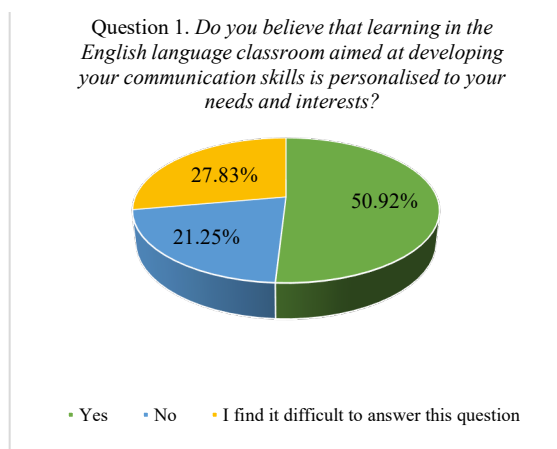

Fig. 1. Respondents' Responses to Question 1.

As results show, 139 respondents (50.92%) gave a positive answer to this question, 58 respondents (21.25%) gave a negative answer to the question and 76 (27.83) respondents found it difficult to answer.

Question 2 aims to find out if respondents believe that learning in the English language classroom aimed at developing their communication skills is personalised to their learning styles. The research findings to question 2 are presented in Fig. 2.
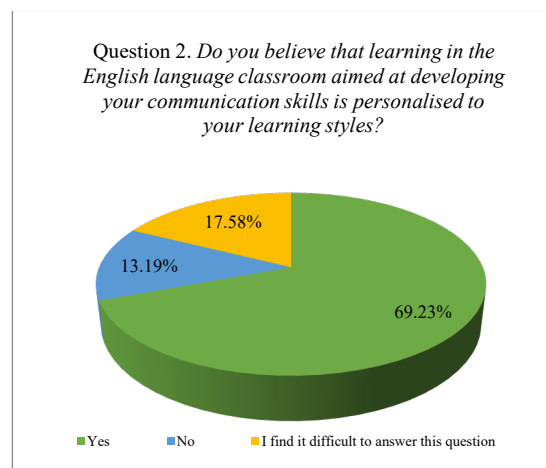

Fig. 2. Respondents' Responses to Question 2.

Replying to question 2, 189 respondents (69.23%) gave a positive answer, 36 respondents (13.19%) gave a negative answer and 48 (17.58%) respondents found it difficult to answer.

The main aim of question 3 is to single out personalised learning methods which, in respondents' opinion, are effective for developing their communication skills in the English language classroom. The research findings are demonstrated in Table 2.

TABLE 2 METHODS OF PERSONALISED LEARNING EFFECTIVE FOR DEVELOPING RESPONDENTS' COMMUNICATION SKILLS IN THE ENGLISH LANGUAGE CLASSROOM

Methods	Respondents	
	Number	*Percent*
Group projects	209	76.56
Group problem solving	203	74.36
Essay writing	185	67.76
Role games	228	83.52
Discussions and debates	251	91.94
Asking and answering questions to texts	139	50.92
Individual work with text	143	52.38
Group work with text	192	70.33
Presentation tasks	254	93.04
Word drawing games	93	34.07
Word guessing games	235	86.08
Story retelling	227	83.15
Discussing open-ended questions	183	67.03

Study: own study
N=273

Question 4 is aimed at finding out if respondents are given the opportunity to choose activities aimed at developing their communication skills in the English language classroom. 57 respondents (20.88%) claim that they can choose activities aimed at developing their communication skills in the English language classroom, 192 respondents (70.33%) give a negative answer and 24 respondents (8.79) find it difficult to answer this question.

The results concerning advantages of personalised learning in the English language classroom aimed at developing respondents' communication skills are given in Table 3.

TABLE 3 ADVANTAGES OF PERSONALISED LEARNING AIMED AT DEVELOPING RESPONDENTS' COMMUNICATION SKILLS IN THE ENGLISH LANGUAGE CLASSROOM

Advantages	Respondents	
	Number	*Percent*
Increase of motivation	214	78.39
Development of self-learning skills	196	71.79
Development of independent thinking	148	51.21
Development of critical thinking	209	76.55
Understanding of one's own needs	247	90.48
Devising effective strategies for developing communicative skills	175	64.10
Usage of various digital apps	122	44.68

Study: own study
N=273

IV. CONCLUSIONS

The research aim was to find out Computer Engineering and Information Technology undergraduates' opinions on organising personalised learning in the English language classroom aimed at developing their communication skills. 139 respondents (50.92%) believe that learning in the English language classroom aimed at developing their communication skills is personalised to their needs and interests. 58 respondents (21.25%) do not believe that learning in the English language classroom aimed at developing their communication skills is personalised to their needs and interests and 76 respondents (27.83%) find it difficult to answer this question.

189 respondents (69.23%) are convinced that learning in the English language classroom aimed at developing their communication skills is personalised to their learning styles. 36 respondents (13.19%) do not believe that learning in the English language classroom aimed at developing their communication skills is personalised to their learning styles and 48 respondents (17.58%) find it difficult to answer this question.

According to the obtained results the most effective methods of personalised learning aimed at developing Computer Engineering and Information Technology undergraduates' communication skills in the English language classroom are as follows: group projects, group problem solving, essay writing, role games discussions and debates, asking and answering questions to texts, individual and group work with text, presentation tasks, word drawing games, word guessing games, story retelling, discussing open-ended questions. In respondents' opinions the main advantages of personalised learning aimed at developing communication skills in the English language classroom include the increase of motivation, the development of self-learning skills, independent thinking, critical thinking, understanding one's own needs, devising effective strategies for developing communicative skills and the

usage of various digital apps. Thus, the use of the identified activities in the English language classroom can strongly improve Computer Engineering and Information Technology undergraduates' communication skills.

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