

для громадян, збільшення рівня довіри до діяльності влади. Проте, для повного використання потенціалу електронного урядування в ОМС необхідно подолати технологічні та інфраструктурні перешкоди.

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DEVELOPING CREATIVE THINKING SKILLS OF FUTURE SOFTWARE ENGINEERS IN THE PROCESS OF ENGLISH STUDY

The profession of highly skilled software engineers is in great demand due to the rising role of implementation and usage of information technologies and cloud computing on different levels in modern societies. Software engineering is knowledge-intensive, complex and intellectually challenging [1]. Besides, it involves huge human resources, software engineer skills, special professional competencies, critical thinking and creative abilities. Moreover, creative software engineers are able to cope with the unpredictable nature of the process and performance in various software projects. Therefore, the focus should be on people and the effective ways of mastering the necessary competencies of future specialists in software engineering in order to provide better outcomes and ensure the successful performance of their professional activity [4]. Thus, besides technical skills, software engineers should also form and further develop the ability to think creatively, to respond quickly to different challenges in the profession.

The competencies of future engineers are classified into two categories [1]: 1) the soft competencies that are divided into social competencies (communication skills, cooperation, interpersonal relation, ability to work in a team, conflicts resolution, knowledge

transfer, problem-solving skills) and the personal competencies (personal and professional development); 2) hard competencies (programming, coding skills, project management, analysis, software design, validation and verification, configuration management, test and quality, and documentation). S. Burbekova underlined the importance of soft skills and non-technical soft skills development for the IT professionals [3]. Balkova et al. paid special attention to the development of creative abilities and creative thinking as key competencies of future specialists who are able to respond to quick changes in different social spheres. Among creative skills of an employee the authors established the following ones: engagement; enthusiasm; open communication; cooperation; recognition; autonomy; responsibility etc. [2]. Information technology has become important for the business success, therefore organizational creativity is crucial for this sphere as it ensures the efficiency of organization, its competitiveness and the ability to create new e-services, new knowledge [5, p. 110-111]. Moreover, creativity with an IT-based support can be often developed in a company in the process of implementation of various projects. Consequently, it contributes to the improvement of quality of products and services, brings innovation, lowers supply costs, increases sales levels, and makes terms of product delivery shorter [5].

Creative thinking skills of future software engineers involve:

- The ability to generate new ideas and create something new [2]. This is considered to be one of the main creative skills. Idea generation is used in absolutely all areas of professional activity being its integral part.

- Analytical mindset: the type of thinking that helps understand and consciously percept information, making it easier to draw conclusions and make decisions based on them.

- Teamwork and cooperation: the skill lies in the coordinated and conscious actions of members of the same group, which are aimed at embodying a common idea [2; 3].

- Communication skills, team-building and leadership [3].

- Flexibility of thinking, empathy, effective listening, adaptability [4, p.28].

Foreign language classes have a great potential for the development of creative thinking skills of future specialists, software engineers in particular. Specially designed types of language activities are aimed not only at the improvement of students' communicative competence, but also foster the development of creative thinking skills.

In our research we have come to the conclusion that creative thinking of future software engineers in the process of English study can be effectively developed by the following types of language activities:

- Brainstorming and brainwriting: the type of activity that involves writing down all the ideas, even the most extraordinary and unusual ones. The most attractive ideas can be improved and further implemented.

- Problem-solving tasks: develop analytical thinking by solving tasks, educational problems and puzzles etc.; it involves discussing various topics, articles and books.

- Working in small groups: when working in a team you can share the responsibilities among everyone and fulfill your responsibilities. But it is also necessary to listen to peers and provide mutual assistance in order to strive together towards the same goal.

- Project-based learning: enables the development of imagination, communication skills, problem-solving skills and working in a team or independently.

- Activities for open communication skills development (foster communication skills development through discussions, debates, simulations etc.): collaborative skills development; development of leadership skills; setting achievable and understandable goals and motivating peers; developing team-working, getting constructive feedback.

Considering all of the above, we can say that along with special professional competencies of software engineers, creativity is considered to be essential for successful future professional activity. Moreover, the ability to develop and further implement creative skills makes a future specialist in software engineering an indispensable employee and a competitive specialist in the field of IT programming. Creative thinking skill is considered

to be one of the important competencies for software engineering. It enables a future specialist to develop in the job environment, think out of the box, cope with challenges in professional area, handle and solve conflicts more efficiently. Besides, creativity can contribute to benefits for the organizations as it becomes the driving force for the company and ensures a competitive advantage to cope in a dynamic and competitive environment.

Foreign language learning has a great potential for creativity development of future software engineers. Among the most effective language activities for fostering creative thinking skills we distinguish brainstorming and brainwriting; fulfillment of problem-solving tasks; working in small groups and project-based learning. Such types of activities promote students' creativity, flexibility of thinking, develop imagination and stimulate their motivation.

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ФОРМУВАННЯ ІНФОРМАЦІЙНОГО ПРОСТОРУ ЗВО ЗА ДОПОМОГОЮ ІКТ

Із розвитком інформаційного суспільства на початку ХХІ століття, який ознаменувався стрімким технологічним прогресом, зокрема, появою нових і удосконаленням існуючих інформаційно-комунікаційних технологій, роль інформації і знань у житті суспільства стала значно більшою. Зростала і кількість людей, зайнятих інформаційними технологіями, комунікаціями та створенням будь-яких інформаційних продуктів. Найголовніше – було створено глобальний інформаційний простір, який сприяв ефективній взаємодії людей та надав доступ до світових інформаційних ресурсів.

З того часу створено незлічену кількість каналів комунікації та інформаційних ресурсів, які керуються за допомогою інформаційних технологій (ІТ). Зараз ІТ охоплюють усі технічні рішення, засоби і протоколи, що використовуються у галузі інформаційних технологій для зберігання, обробки, передачі та обміну даними.