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THE USING OF MODERN INTERNET MESSENGERS IN THE PROCESS OF TEACHING THE STUDENTS OF ENGINEERING AND PEDAGOGICAL DIRECTION

The article considers some aspects of modern Internet messengers using in the process of teaching students of computer profile's engineering and pedagogical specialties, analyses the tools for Internet communications. It was found that the rapid development of information technology causes the constant aging of even Internet communication tools. There is a problem of finding and using a method of communication with consumers that will meet the level of technology development and meet the needs of both parties.

The prospects and economic rationality of the use of mobile devices by companies to gain the attention of their consumers through the development of mobile versions of official websites, creation of special programs, registration and constant support of official pages in social networks are revealed.

The concept "Internet messenger" is studied. The analysis of literature sources is carried out, on the basis of which it is revealed that the issues of teaching students of computer profile's engineering and pedagogical specialties with the use of modern Internet messengers need further research. The need for future specialists to study the general principles of creating bots as services for modern managers, as they are widely used by companies for business development in particular for the Ukrainian market, as companies are just beginning to master this technology. And therefore, the demand for specialists to develop such services is growing.

The most popular social networks in the world as of April 2020 are analysed, which are ranked by the number of active users and their possibilities, advantages and disadvantages of use in the field of higher education are considered.

It is proved that for the development of a prototype of the system of interactive informing of students of Berdyansk State Pedagogical University, Telegram was chosen, which has the highest growth rates of the number of active users, and therefore the prospects of audience growth for the developed service.

This publication is the first in a series. The following articles will be devoted to the design, development and software implementation of the prototype of interactive information systems for students in the training of future engineers-teachers.

Keywords: *an educational process; students of computer profile's engineering and pedagogical specialties; Internet messenger; Telegram.*

Fig. 2. Ref. 13.

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ВИКОРИСТАННЯ СУЧАСНИХ ІНТЕРНЕТ МЕСЕНДЖЕРІВ В ПРОЦЕСІ НАВЧАННЯ СТУДЕНТІВ ІНЖЕНЕРНО-ПЕДАГОГІЧНОГО НАПРЯМУ

У статті розглянуто окремі аспекти використання сучасних інтернет месенджерів в процесі навчання студентів інженерно-педагогічних спеціальностей комп'ютерного профілю, аналізується саме

інструментарій для Інтернет-комунікацій. Виявлено, що стрімкий розвиток інформаційних технологій спричиняє постійне старіння навіть інструментів Інтернет-комунікацій. Виникає проблема пошуку та використання такого методу комунікації зі споживачами, який буде відповідати рівню розвитку технологій та задовольнить потреби обох сторін взаємодії

Розкрито перспективність та економічну раціональність використання саме мобільних пристроїв для завоювання уваги своїх споживачів через розробку мобільних версій офіційних сайтів, створення спеціальних програм, реєстрації і постійної підтримки офіційних сторінок у соціальних мережах.

Досліджено поняття "інтернет месенджер", проведено аналіз літературних джерел, на основі якого виявлено, що питання навчання студентів інженерно-педагогічних спеціальностей комп'ютерного профілю з використанням сучасних інтернет месенджерів потребують подальшого дослідження. Обґрунтовано необхідність вивчання майбутніми фахівцями загальних принципів створення ботів як сервісів для сучасних менеджерів, оскільки вони широко застосовуються компаніями для розвитку бізнесу, зокрема для ринку України, оскільки компанії тільки починають освоювати цю технологію, а отже, попит на спеціалістів з розробки таких сервісів стрімко зростає.

Проаналізовано найпопулярніші соціальні мережі в світі за станом на квітень 2020 р., які ранжовані за кількістю активних користувачів, та розглянуто їх можливості, переваги та недоліки саме в сфері вищої освіти.

Доведено, що для розробки прототипу системи інтерактивного інформування студентів Бердянського державного педагогічного університету обрано саме Telegram, який має найбільші темпи росту кількості активних користувачів, а тому й перспективи росту аудиторії для розроблюваного сервісу.

Ця публікація є першою із серії. Наступні статті будуть присвячені проєктуванню, розробці та програмній реалізації прототипу системи інтерактивного інформування студентів у процесі навчання майбутніх інженерів-педагогів.

Ключові слова: *навчальний процес; студенти інженерно-педагогічних спеціальностей комп'ютерного профілю; інтернет месенджер; Telegram.*

Problem statement and its connection with important practical tasks. The development and growth of popularity of Internet communication among real and potential consumers of companies leads to a significant reduction in the effectiveness of traditional marketing communication tools. In addition, the rapid development of information technology is causing the constant aging of even Internet communication tools. There is a problem of finding and using a method of communication with consumers that will meet the level of technology development and meet the needs of both parties. Today, users are increasingly accessing the Internet using a smartphone, spending their time searching for the necessary information and online communication. This necessitates the economic rationality of using by companies the mobile devices to gain the attention of their consumers through the development of mobile versions of official websites, the creation of special programs, registration and constant support of official pages on social networks.

The messenger platforms are a promising communication channel. According to The Economist, the average person spends 200 minutes a week using messaging services [11]. This is about 30 minutes per day, which creates significant potential for companies to use this time to achieve marketing goals.

The relevance of the study is the need to describe the general principles of creating bots as services for modern managers, as bots are widely used by various companies to develop their business. This is especially true for Ukrainian companies, as they are beginning to actively master this technology. It stimulates the growth of demand for specialists in the development of such services.

Analysis of research and publications. Issues of a general nature related to the introduction of information and communication technologies in the educational process are reflected in the works of H. Alieksieieva [1; 2; 10], M. Asherov [3], V. Bykov [4], I. Bukalh, R. Gurevych, O. Dovgiallo, Yu. Doroshenko, M. Zhaldak [6], Yu. Zhuk, V. Kukharenko, Yu. Ramsly, I. Robert, B. Hanter [8] etc.; didactic and psychological aspects of the application of information and communication technologies in the educational process are considered by V. Bezpalko, V. Liaudis, Yu. Mashbyts, A. Pyshkalo, O. Spivakovsky and others. The problems of future engineers-teachers' professional training were considered in the works of such scientists as S. Artyukh, A. Asherov [3], N. Briukhanova, O. Kovalenko, M. Lazarev, N. Nichkalo, L. Tarkhan, etc.; theoretical and methodological principles of computer profile future engineers-teachers professional training are quite fully considered by R. Gorbatiuk [5].

The theoretical foundations of the Internet using in marketing are set out in the works of many scientists and researchers, among them are I. Litovchenko, O. Varvysh, S. Iliashenko, V. Pylypchuk, Yu. Popova, V. Vysotska, O. Pankovetsky, P. Petrychenko and others. The scientists consider the essence of Internet marketing, distinguish the

instruments and determine their characteristics, pay attention to aspects of communication on the Internet. The principles of creating a bot are sufficiently covered in the domestic pedagogical science – namely in the works of N. Petrova, Yu. Petrov, L. Malygina, T. Abbasova, S. Polshin, A. Foltz, P. Kucherbaev, A. Bozon, G. Huben, K. Lebef, M. Story.

The interactive information system creation is covered in the works of P. Pat, M. Trubin, O. Andrusenko, O. Semusev, Z. Vorotnikova. The development and the work with Internet messengers are covered in the works of O. Shimon, M. Melentyeva, O. Lebedeva, I. Viakhk, I. Rekunenko. The development is covered in great detail by M. Zennaro, M. Rainone, E. Pietrosemoli (USA).

The analysis of research and publications allows us to conclude that messaging platforms have not been sufficiently researched as a full-fledged tool of the information system. The peculiarities of these platforms and the advantages of their practical application in pedagogical activity need to be determined.

The purpose of the article is to analyse the possibilities of using modern Internet messengers in the process of teaching engineering and pedagogical direction students.

The statement of basic material. Probable reasons for the great popularity of messengers are changes in the field of mobile Internet: high speeds, lower prices, and the widespread use of smartphones [7]. According to a study by statista.com as of April 2020, the number of active users in the most popular messengers is presented. The clear leader is WhatsApp with a total of about 1.5 billion users. It is followed by Facebook Messenger with 1.3 billion active users per month. Obviously, all messengers in this list are different. However, they have common features that have led to their success. Almost every one of them has a convenient, modern and clear user interface. Each of the messengers also supports group chats. Some of them support channels that partially replicate the functionality of chats, except that only users with the appropriate access rights have the ability to publish messages.

However, to analyse the advantages and disadvantages of Internet messengers, we also need to describe some of their differences. Virtually every one of them provides audio calling capabilities. Many have a video call feature. Telegram, LINE, Viber, Skype, WeChat and Facebook Messenger support user file transfer [9]. Let's compare WhatsApp as the largest in number of active users and Telegram as the fastest growing messenger.

There is a rapid increase in the number of active users of WhatsApp messenger in the period from January 2015 to December 2017. During this time, the number of active users has doubled from 700 million to 1.5 billion in months. It means, that every 5th person on the planet used WhatsApp every month.

Telegram is a messenger that is gaining popularity around the world. In the period from February 2016 to December 2017, the number of active users increased by 80% (Fig. 1) [13].

During the same period in WhatsApp, this figure increased by 50%. Telegram can be called the fastest growing messenger. As of April 2020, it has already crossed the mark of 200 million active users. Due to the constant presence in the lives of their users, social networks have a decisive social impact (Fig. 2).

It is also worth mentioning that Telegram offers the possibility of secret chats, during which it is almost impossible to access its content. Also compared to WhatsApp, Telegram works faster and allows you to transfer any files. It is also inconvenient that WhatsApp can be logged in only on one device and, according to the rules of use of the application, the user may be blocked by frequently transferring the account to different devices. In the last few years,

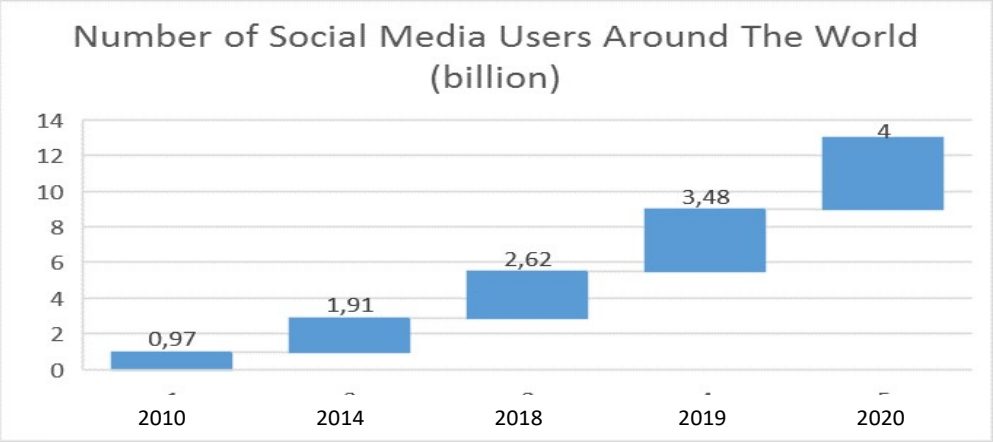

Figure 1. Global social networks by number of users 2020

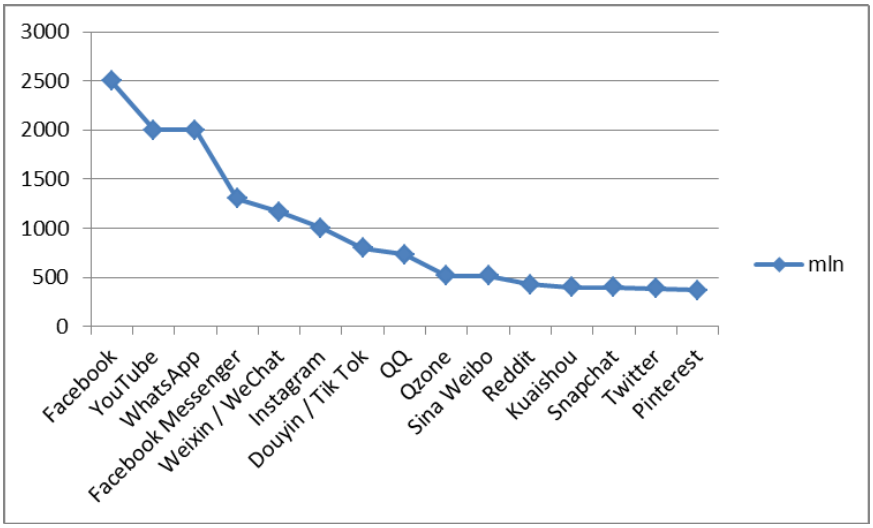

Figure 2. The most popular social networks in the world as of April 2020, ranked by number of active users (in millions)

traditional phone calls have become less popular than instant messaging or online services. Moreover, many people and companies prefer text or multimedia messages over calls. As a review of modern messengers has shown, they are an important part of modern online communication. Users prefer convenient, cheap and fast communication, so they choose messengers. Of course, there are a large number of applications of this type. However, Telegram has the highest growth rate of the number of active users, and therefore the prospects for audience growth for the developed service [7].

After analysing the various possibilities of using modern Internet messengers from a glider to an automated store, we came to the conclusion that it is necessary to create a prototype of a system of interactive information for students. We chose to develop an interactive information system for students as a means of creating a bot. This will raise both the quality of training of engineering and pedagogical specialists on the example of Berdyansk State Pedagogical University and National Aviation University, and will allow students to spend more time studying the material than searching for it.

This publication is the first in a series. The following articles will be devoted to the design, development and software implementation of the prototype of interactive information systems for students in the training of future engineers-teachers.

Conclusions from this study and prospects for further exploration in this direction. As a result of the study of Internet messengers, we found their underestimated potential for use in the training of future engineers-teachers. The use of Internet messengers in the field of education and directly in the activities of the future engineer-teacher becomes a general necessity. Their development and implementation in the educational process will ensure the gradual transition of education to a new, high quality level. The scientific novelty of the obtained results lies in the description of the general principles of building bots for modern messengers and the development of a prototype of an interactive system of informing students. The practical significance lies in the development of an interactive system of informing students and methodological recommendations for its development and use. The copy of the project is posted on the public repository [12].

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"Багато чого не зробиш, поки не вивчишся. Але багато треба зробити, щоб навчитись".

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