

# Formation of Future Marketers' Digital Competence in Higher Education Institutions

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**Abstract:** This article presents the results of the research devoted to the issues of future marketers' digital competence formation while studying under the bachelor's degree program at a higher education institution. In the course of the study the main components of digital competence were determined and the necessity of their development by future marketers studying under the bachelor's program at the university was justified. The place of digital competencies in the competence model of a university graduate to achieve the goal of its compliance with the labor market requirements in the digitalization context has been determined. The specificity of digital competencies is substantiated, which consists in the fact that in the context of practical application they often act not as independent competencies, but as tools for the implementation of other competencies. To determine the current requirements for candidates for the position of a marketer, the relevant requests of employers were studied, which made it possible to identify the main expected competencies and use them to create a profile of the marketer's competencies digital component. The Integrated System of Digital Competence Formation has been proposed, which will allow shifting the focus in the future marketers training to ensure their compliance with the needs of the digital economy, which in turn will provide them with competitive advantages in employment.

## 1 INTRODUCTION

One of the key directions of the Federal project "Personnel for the Digital Economy", developed within the framework of the National Program "Digital Economy of the Russian Federation", is to provide the digital economy with competent personnel. An important role is assigned to the professional education system, including higher education institutions, whose task is to train specialists with developed digital competences, regardless of profession and position, industry and company's sphere of activity.

The article is devoted to the issue of future marketers digital competence formation studying under the bachelor's degree program at the university.

The purpose of the study is to develop a comprehensive system of the marketer digital

competence formation and the conditions for its implementation in higher education institution.

The scientific novelty of the research consists in the construction of the marketer's competencies digital component profile and developing on this basis a comprehensive system for the formation of digital competence for bachelor's degree training in marketing.

The practical significance of the research results lies in the possibility of their application by universities in the development of the future marketers' digital competence trajectory formation.

The marketing profession is one of the most multifaceted in the labor market. The duties of a marketer include research of commodity markets, study and formation of target audience, competitive analysis, improvement of assortment, development of pricing policy, formation of distribution channels, development of marketing communications system, formation of marketing strategy and management the

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of the marketing activities efficiency. The quality of these tasks depends on the level of professional competence of a particular marketer, which is formed in the course of mastering professional competences included in the competence model of a university graduate.

The competence model of a university graduate, which is his/her reference structural and conceptual image, along with professional competences, includes supraprofessional competences reflecting employers' requirements to a young specialist that go beyond his/her professional knowledge and are relevant for any profession and any type of work. Supraprofessional competences allow to improve the quality of professional tasks fulfilment (which is important for employers) and also play a determining role in the further professional career of an employee (which motivates students to develop these qualities themselves) (Leonteva and Pleshkov, 2021)., Such supraprofessional competencies as the ability to adapt quickly (both professional and social), the desire for constant development and improvement, analytical thinking, creativity, communication skills, the ability to multitask, manage a team, and make quick decisions in non-standard situations are the most important for a marketer.

However, mastering only the above competences (both professional and supraprofessional) is not enough for a future marketer to be in demand on the labour market. Digital transformation, which is actively penetrating into all spheres of social life, imposes strict requirements to the digital competence of university graduates, which necessitates the active integration of digital technologies into the educational process. Digital competence of a marketer is characterized by his/her ability to work with information in the digital environment, use models, mechanisms, methods and tools of digital management in the development of marketing solutions, form communicative relations with clients, partners and colleagues on the basis of digital technologies, comply with digital etiquette, ensure digital security, use the technical capabilities of modern digital devices and technologies and other aspects.

Considering the place of digital competencies in the competence model of a university graduate, it should be noted that digital competences can be included both in the group of supraprofessional and in the group of professional competencies, depending on their role. Supraprofessional digital competencies are universal for all spheres of professional activity, they are basic in relation to professional digital competences. Professional digital competences are

necessary to solve specific professional tasks, their development is impossible without mastering professional digital competences. The specificity of digital competences lies in the fact that in the context of practical application they often act not as independent competences, but as tools for realizing other competences.

The trajectory of the future marketer digital competence formation covers all stages of the life cycle of the competence formation of a university graduate, among which the authors distinguish the following stages: preliminary, the competences formation within the future profession framework, the formation competences in accordance with a professional role. (Leonteva, Pleshkov and Nikolaev, 2021) The preliminary stage covers the pre-university period and is primarily related to the formation of supraprofessional digital competences. At the stage of competence formation within the future profession framework, digital competences are mastered in the process of studying at a university in the educational program "Marketing". The formation of digital competences in accordance with the professional role determined by the specifics of the marketers functional responsibilities in a particular organization occurs during employment after being employed. At the same time, some specific competences can be formed in students while they are still studying at the university (during internships, case studies, course projects, graduate qualification works ordered by employers, etc.).

## 2 METHODOLOGY

The methods of analysis and synthesis, generalisation and systematisation, content analysis were used in the course of the research.

The theoretical basis of the study was the scientific works of domestic and foreign authors, devoted to the application of the competence approach in marketers training (Rakhova, 2023; Tatarinov, 2019; Crittenden and Peterson, 2019; Wrona, 2015; Galeeva, 2015; Mkhitarian and Danchenok, 2015), the technology of students digital competences formation in the university (Achkasova, Panasyuk, Shirokolobova and Larionova, 2022; Dmitriev, Alyabin, Brovko, Dvinina and Demyanova, 2021; Zhao, Sánchez Gómez, Pinto Llorente and Zhao, 2021; Zykova, Konovalova, Malinina, Ushakova and Khudyakova, 2021; Gladilina and Krylova, 2019; Sicilia, García-Barriocanal and Sánchez-Alonso, 2018; Torres-Coronas and Vidal-Blasco, 2015), methodological

aspects of the digital technologies in the educational process introduction (Selyutin, Yaremko and Glebova, 2023; Karstina, 2021; Koloskova, 2021; Andryukhina, Sadovnikov, Semenova, Sumina and Tserkovnikova, 2021; Armah and Westhuizen, 2020; Colás-Bravo, Reyes-de-Cózar and Conde-Jiménez, 2019). Materials provided on job search websites were used in the study of employer enquiries.

The structure of the research study includes:

Definition of digital competence and justification of the need for future marketers to master digital competencies.

Determination of the place of digital competences in the competence model of a university graduate - future marketer.

Identification of requirements for candidates for the position of a marketer based on the study of employers' requests.

Creating a profile of the digital component of the marketer's competences.

Development of the Integrated System of future marketer Digital Competence Formation.

### 3 RESULTS OF THE RESEARCH

Satisfaction of employers as consumers of the educational process result is the main criterion of the university graduates training quality (Pleshkov, Leonteva and Trukova, 2019). That is why job search websites were studied to form a complete picture of the competences that marketers should possess. In the course of the study, vacancies in the city of Cheboksary were reviewed and the requirements for candidates for the position of a marketer were identified.

Fifty-three vacancies for the position of a marketing specialist in various variations were considered: marketer, marketing manager, marketing specialist, etc. Among the considered vacancies there were offers from eight representatives of large businesses, three - medium-sized businesses, the rest - representatives of small businesses.

When analyzing the posted vacancies, the needs of employers were studied from the point of view of personal and professional competences possessed by candidates. According to the results, it was found that 26 vacancies out of 53 contained requirements for candidates' personal competences, and some vacancies contained only one desired personal competence "ability to work in multitask mode", "communication skills" or "creativity", and some contained a whole set of required personal skills (up to seven). The most demanded personal competences

were: communication skills (17.54% in the total structure of required personal skills), analytical mindset (14.06%) and creativity (12.28%). The second group in terms of the demand for personal competences is: ability to multitask (10.52%), ability to work in a team (8.77%), result-orientation, initiative and responsibility, aspiration for growth and development, which scored 7.02% each. Such personal competences as not being afraid of difficulties, ability to take responsibility, smartness, systematic approach to problem solving and attention to details are found in the posted vacancies only once each.

Among the professional competences required of marketers, the most demanded were: the ability to develop advertising materials, including the ability to interact with advertising agencies to create advertising materials (18.79% of the total structure of required professional skills), the ability to assess the effectiveness of advertising (11.52%), knowledge of methods of market analysis (10.3%), the development and implementation of marketing strategy (9.7%) and the ability to analyze the target market with the identification of the needs of target consumers (9.7%). The obtained data show that for employers the most demanded professional competences are the ability to organize and conduct effective advertising campaigns in accordance with the developed marketing strategy, as well as the ability to analyze the market and target consumers. In the second place by the degree of importance and demand for employers were competences in the sphere of planning, development and implementation of marketing activities (9.09%), skills in competitor analysis (7.88%), skills in determining the results of the organization's activity and analysis of its efficiency (6.67%). Also in this group of professional skills were included competences in the sphere of marketing budget management (formation, control, optimization), which occupy 4.85% of the total volume of required professional competences of a marketer. The same share is occupied by the ability to organize and ensure the organization's participation in exhibitions.

The least demanded professional competences were: the ability to develop and implement the organization's development strategy, product portfolio management and pricing policy management, which together scored 4.85% in the total structure of professional competences required by employers.

The study examined as a separate group the required digital competences specified by employers in posted vacancies. Various digital competences

were mentioned 133 times, among which the most demanded was "social media skills", which includes knowledge of advertising tools and the peculiarities of each social network, content creation and maintenance of social media accounts. This competence occupies 29.32% of the total structure of required digital skills. In second place in terms of demand were the skills of creating and developing an organization's website, which took a share of 18.8% among the digital competencies specified in the vacancies. In line with employers' demands, marketers need to understand how websites are built and run on different platforms, and how website and content are optimized to improve their performance.

In the third place in terms of employers' demand for digital competences with a share of 11.28% is the need for skills in graphic editors to develop and coordinate advertising materials.

Also relatively important competences are the ability to work with Microsoft Office package and CRM-systems, which occupy 6.02% and 5.26%, respectively, in the total structure of digital competences.

An insignificant number of employers noted the need to be able to use specialized services such as Yandex Direct, Yandex Metric, Yandex Maps, 2gis, as well as to know the basics of working in the 1C system.

Thus, based on the analysis of posted vacancies for the position of marketing specialist, we can conclude that among the professional competences of candidates for the position under consideration the most important are skills in the development of advertising materials and the use of social networks in promoting the company's business. Also, the results of the analysis show that there is currently a need in the labor market for marketers with a wide range of digital skills necessary for the successful functioning of the company in the conditions of total digitalization.

Digital competences, as emphasized above, are not just a standalone group of skills, but rather an integral component of any competence needed by a marketer. This is because all aspects of modern marketing activities are inevitably linked to digital technologies and tools. Everything from planning and executing advertising campaigns to analyzing consumer behavior and optimizing customer experience requires a deep understanding of digital platforms, analytical methods and advanced technologies. Let's highlight the digital component of a marketer's professional competences, highlighted in accordance with employers' requests in the posted vacancies (Table 1).

Table 1: Profile of the marketer's competences digital component.

Professional competences of a marketer	Digital competence component	Digital tools
Knowledge of the modern marketing basics	Mastery of information resources for studying marketing concepts and strategies, mastering new trends in the digital environment	Internet, electronic library systems, specialized chat rooms and forums.
Marketing research	Mastery of online questionnaires, social media and other tools for collecting and analyzing data.	Online survey services - Hotjar, SurveyMonkey; data analysis and result visualization - Metabase.
Target audience (consumers) analysis	Use of digital tools and technologies to collect, analyze and interpret consumer data. Ability to work with customer relationship management software systems.	Parsers for searching target audience from various sources. Analytical platforms - Yandex.Metrica, KISS Metrics, Adobe Analytics; keyword and search query analysis - Yandex.Wordstat, Semtools. CRM systems - Salesforce, Bitrix24, HubSpot.
Market analysis	Mastery of analytical tools and programs for collecting, analyzing and interpreting data on the market and its dynamics	Internet: World Bank data, Statista data collection; MS Excel package for basic calculations.

Professional competences of a marketer	Digital competence component	Digital tools
Competitive analysis	Possession of software tools for competitive analysis and competitor monitoring.	SimilarWeb, SEMrush, Ahrefs - allows you to analyze competitors' activity, their traffic, advertising campaigns and other indicators.
Analysis of promotion channels	Ability to search, analyze and evaluate promotion channels in the digital environment	Web analytics tools, analytical tools for tracking key promotion channel metrics, analytical tools for social platforms.
Strategic planning of marketing activities	Possession of marketing process automation and project management tools	Kaiten for marketing team collaboration, Trend ERP for business automation, i2c Engage for marketing planning, etc.
Media planning	Ability to use digital channels and tools to develop and optimize marketing communications, to select the most effective combination of advertising platforms	MS Excel package, any other spreadsheet service; specialized resources for media planning (e.g. MediaScope research); planning software for TV (PaloMars), radio (Radio AdsMan Pro), etc. advertising; social network advertising offices.

Professional competences of a marketer	Digital competence component	Digital tools
Budgeting of marketing activities	Knowledge of data mining tools and ability to use software products to define, allocate and optimize marketing budgets	Online resources, databases, specialized programs and tools for cost accounting and planning (Adesk, Calltouch), forecasting tools (Tableau) and budget modeling (Beyond, Adaptive planning, BPlan).
Developed communication skills	Use of information and communication tools and specialized platforms to effectively engage with target audiences and manage communication channels	Services for managing communications and loyalty programs (LeeLoo.ai, 1-Rarus, BonusPlus), messengers (Telegram, Viber, BotHelp.io), social networks, email and mail services, communication services (Sberbusiness Bot) and chat bots (Chaport), speech technology tools (automated call centers, voice mailings), and platforms for intra-branch communications.

Professional competences of a marketer	Digital competence component	Digital tools
Product portfolio management	Possession of tools for effective management and development of the product line	Complex solutions for analytics and product assortment management (Business-BI for Category Management, Product Assortment Management m 1-C), software for retail assortment management (Analyse2, Item Planning, Aptos Merchandising), complex software for analytics and trend identification for assortment optimization (Power BI, DataWeave).
Pricing policy management	Monitoring and optimizing pricing policy using information and communication technologies and relevant software products	Competitor price monitoring tools (Pricer24, Minderest), MS Excel package for data interpretation, price parsers from websites, SaaS services, pricing automation systems (Contour.Market, imPrice).
Product/service fulfilment management	Ability to optimize the distribution system in online and offline	E-commerce, marketplaces; predictive analytics, inventory

Professional competences of a marketer	Digital competence component	Digital tools
	channels using appropriate digital tools	optimization, omnichannel distribution (ikas, Shopware), personalization and automation of product recommendations (Flocktory, RichRelevance, Leadhit).
Promotion of goods/services	Ability to apply digital technologies and tools to promote goods and services both offline and online	Interactivity showcases; digital media; interactive projections; QR codes; Content marketing (websites, blogs, SMM); Performance marketing (contextual and targeted, CPA networks); CRM marketing (Push notifications, email marketing, SMS marketing and calls); SEO; Affiliate marketing; Influencer marketing (influencer marketing). Automated advertising management services.
Development of advertising materials	Ability to create effective and attractive materials to promote the company's goods and	Creating advertising creative using graphic tools (Supa, Picselcut, etc.), creating video content

Professional competences of a marketer	Digital competence component	Digital tools
	services, taking into account the characteristics of the target audience and the specifics of the means of advertising communication with the use of digital tools.	(Synthesia), creating text content (text.ru with AI, , creating infographics, creating audio content (Descript, Capcut).

The need to create a profile of the digital component of a marketer's competences is due to the strong dependence of all marketers on digital technologies. Consumers are spending more and more time online, so companies must utilize the potential of the digital environment to attract, engage and retain customers. In addition, the level of development of digital technologies during the fourth industrial revolution - Industry 4.0, has led to the fact that the possession of digital competencies becomes an integral element of the future marketer's competitiveness in the labor market. This indicates the need to form digital competence of future marketers in the process of professional training in higher education. To solve this problem, the authors propose the creation of the Integrated System of Digital Competence Formation for the training of bachelors in the field of marketing.

The complex system of formation of digital competence of future marketers is a system of interrelated and interdependent elements, functions and processes, which together provide training for the digital economy in the field of marketing.

The complex system of forming digital competence is based on three interrelated elements (Figure 1):

1. Teachers with relevant expertise in marketing and digital technologies.
2. Methodology that defines the ways, methods, principles, approaches that form the learner's digital competence.
3. Equipment and software necessary for mastering digital competences.

The Integrated System of Digital Competence Formation will provide students with an opportunity to bridge the gap between theory and practice,

developing their digital competences in marketing, taking into account the needs of the labor market in the conditions of total digitalization.

It should be noted that the practical implementation of the Integrated System of Digital Competence Formation implies its dependence on the individual needs of students, existing programs and resources, the specifics of marketing education and labor market requirements. In this regard, one of the key characteristics of the Integrated System of Digital Competence Formation for future marketers is its flexibility and adaptability to changes in external and internal conditions, which implies the ability of the system to respond to changes in such factors as new technologies, market requirements and the marketing industry.

An important point, in addition, is the interdependence of the system elements, which is expressed in the mutual coordination and mutual adaptation of the essential characteristics of each element included in the Integrated System of Digital Competence Formation. For example, the emergence of new digital marketing tools may entail the need to include them in the system within the framework of training, which will require updating methodological techniques and training of pedagogical staff corresponding to the new conditions.

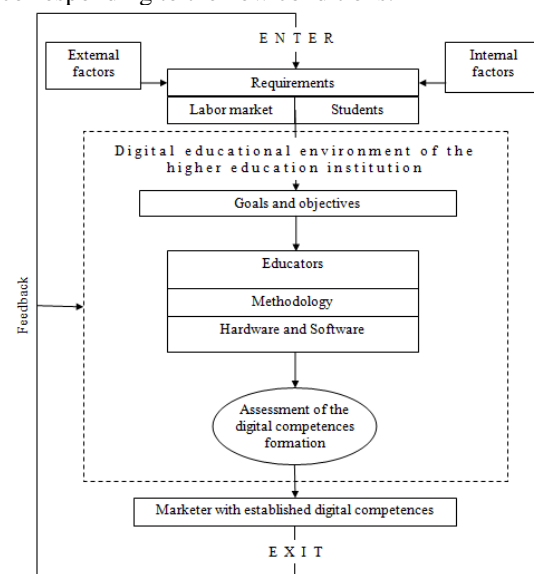


Figure 1: Integrated System of Digital Competence Formation.

## 4 DISCUSSION OF THE RESULTS

The creation and implementation of the Integrated System of Digital Competence Formation of future marketers can be a necessary preparatory stage in addressing the question of what exactly should be focused on in the training of bachelors receiving professional education in the field of marketing, in accordance with the prospective requirements of the market in the conditions of digitalization. At the same time, one of the most significant opportunities for overcoming the diversity of interpretations and multidimensionality of digital competence of future marketers is a certain individualization of the digital competence formation trajectory.

## 5 CONCLUSION

Thus, digital competencies are becoming an indispensable element of the competency model of a future marketer and a guarantee of his or her relevance in the labor market. Employers are increasingly expecting marketers to be able to effectively and creatively use digital technologies in their professional activities, to apply the whole range of technical, cognitive, emotional and social skills to adapt to the dynamic requirements of the digital environment, to communicate with target audiences, to solve problems and make decisions, as well as for self-development and innovation. It should be borne in mind that digital competence cannot be built once and for all. It requires continuous development and improvement in accordance with the changes taking place in socio-economic systems.

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