Problems of forming marketing competencies in the digital economy

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Abstract. The spread of digital technology is transforming society and the economy. These changes affect the labor market. Modern employers need flexible marketing staff who can think creatively and make decisions in conditions of high environmental turbulence. For this, it is necessary to change the approach in training future specialists, namely, to use those tools and methods in teaching marketing disciplines that will allow their creative professional competencies to be developed as efficiently as possible. The object of the study was the online marketing training technology in terms of the formation of creative competencies. The aim of the study was to identify the problems of the formation of marketing competencies in the digital economy. The research methodology was based on the presentation of the structural components of marketing activity, characterized by varying degrees of demand for creative competencies. The existing approaches and strategies to stimulate creativity in the context of online marketing training were identified, the current state of the online marketing toolkit was analyzed. A correlation matrix has been developed for the tools for obtaining and implementing creative ideas and emerging marketing competencies for an online marketing course. A matrix has also been developed for correlating job types and emerging marketing competencies for an online marketing course. The selection of suitable tools and types of tasks will help to create professional competencies of a marketer at a high level of their creative component.

1. Introduction

The development of digital technology is one of the driving forces for the development of society and the economy. The digital economy is transforming the consumer experience of shopping; consumers are becoming more independent in their choice and demanding on the reputation assets of organizations [1, 2]. The emerging transformations of models of the social environment and the business environment require new competencies. As a result, there is a need to develop modern educational programs that meet the new needs of society and digital trends.

Digital skills are becoming critical from the perspective of employers. Automation of many operations and procedures leads to significant changes in the requirements for specialists. These include changing competency profiles, the need for quick adaptability of employees, and the presence of social and emotional intelligence.
Marketing competencies are one of the drivers of economic growth. Trends characterizing the situation in the field of formation of marketing competencies in the digital economy relate to employees' knowledge in the field of marketing and the expansion of entrepreneurial activity in the digital environment.

Dissemination of the concept of marketing organization on the principle of “every employee is a marketer” leads to the demand for marketing knowledge at workplaces that are not related to the formal marketing structure. Digital technology facilitates the creation and functioning of the small business entrepreneurial structure. Entrepreneurs need basic knowledge about marketing technologies and tools, and not just narrow rules for search engine optimization. Digital technologies, in turn, allow you to create and present an educational course, demanded when there is a need in any place and at any time.

Because of changes in society and the economy, educational models are transforming. Actual models of education are lifelong learning, omniscience, social learning, adaptive learning, distance learning, blended learning and project-oriented learning.

The spread of digital technology in the educational process has many advantages, but there are limitations and disadvantages associated with remote interaction. Many experts consider marketing as a creative field of activity, where the tools used can vary. Marketing decisions adopted in practice have ambiguous interpretations. Therefore, in the formation of marketing competencies, it is important to increase the creative potential of students.

The need to develop online marketing training technologies in terms of the formation of creative competencies has determined the purpose of the study and its relevance. The aim of the study was to identify the problems of the formation of marketing competencies in the digital economy.

To achieve this goal, the research objectives were identified:
- identification of existing approaches and strategies to stimulate creativity in the context of online marketing training;
- analysis of the current state of the toolkit of online courses in the field of marketing;
- development of a matrix of correlation of tools for obtaining and implementing creative ideas and emerging marketing competencies for an online marketing course;
- development of a matrix of correlation of types of tasks and emerging marketing competencies for an online marketing course.

1.1. Identification existing approaches and strategies to stimulate creativity in the context of online marketing training

Henard, McFadyen (2008) determined that creative knowledge, which leads to a significant competitive advantage of an organization, is based on the integration of new and existing knowledge of individual specialists. Achieved knowledge provides competitive parity, unique knowledge - a competitive advantage, and creative knowledge - a sustainable competitive advantage [3].

Redifer, Bae, DeBusk-Lane (2019) investigated whether implicit creativity theories will influence creative thinking similarly to the effects of implicit intelligence theories on academic tasks. Creative thinking relies on cognitive mechanisms similar to those used in other complex tasks, but the influence of implicit theories on creative thinking differs from their influence on traditional academic tasks [4].

Polevoy, Pavlova (2017) analyzed the existing scientific views and approaches to teaching students with a predominance of clip thinking. Thematic discussion, discussion, forum today are desirable in the educational process and can be conducted in the form of a chat organization. Chatting removes isolation and psychological barriers, helps to establish direct contact between the teacher, student and the study group [5].

Tanggaard (2014) developed a model for creative learning. The model is based on key concepts or principles of training, which can take various forms in specific conditions and social practices: immersion in a topic of interest, traditions and subject matter, experiments, study of requests [6].

DeHaan (2009) examined the relationship between creativity and higher-order cognitive skills, examined assessment methods, and learning strategies to improve creative problem solving.
to support the development of creativity requires clear strategies that foster cognitive flexibility. Students need to constantly remind and show how to be creative, integrate material in subject areas, question their own assumptions and present other points of view and opportunities [7].

Mahdi, Sukarmijan, Chan (2015) studied the development of creativity in education through involvement in innovative projects. Students participating in innovation, invention, and design projects consider themselves more confident and motivated to study than students not participating in them. Participation in the project helps in teamwork and the development of communication skills; teachers are more influenced by students than their friends [8].

Majeski, Stover, Valais (2018) investigated the relationship between emotional presence and teaching presence and how teaching presence can contribute to students’ emotional presence. Emotional presence in a learning presence can contribute to students' social presence and cognitive presence and lead to successful learning [9].

Chernykh, Rubtsova (2018) studied the possibilities of using electronic learning tools in the educational process of higher educational institutions for the development of cognitive activity of students. The means of developing students’ cognitive activity are differentiated tasks, the use of information and communication technologies, games, collective teaching methods, and a methodology for the theory of solving inventive problems. The development of cognitive activity is a necessary element of personal growth and development, a fundamental condition for continuing education [10].

Michalko (2011) has developed nine strategies for enhancing creativity that are applicable to the online environment: from creating a large number of ideas to collaboration [11].

Mintu-Wimsatt, Sadler, Ingram (2007) presented suggestions that help teachers increase their creative thinking among online students. Creativity can be improved and encouraged depending on the subject and teacher, the format and structure of the online course, and the ratings associated with the creativity element. Courses such as mathematics and statistics are less likely to use creativity, especially online. While marketing educators can use a variety of topics that integrate creativity into the course material. Creativity is enhanced by managing discussions and interaction in the online classroom, as well as using real business issues to stimulate students' creative thinking [12].

Muirhead (2005) defined creativity as ability, attitude, and process. To increase creativity in online classes, students should be given information about critical, reflective thinking. Teachers should use stories about creative ideas and their authors [13].

Majeski, Stover, Valais, Ronch (2017) proposed a specific course design and learning strategies that can stimulate emotional intelligence in adult students, especially those who are in an online learning environment, based on this model [14].

Sharp, Whaley (2018) investigated perceptions related to the benefits and challenges of using wiki technology to stimulate engagement and thinking [15].

Clemons (2005) explored creativity and suggested tips and strategies for online educators. Encouraging students to explore various websites dedicated to creative activities, or opening their own, can give an idea that creativity is appreciated in this online course. Presenting novelty, drawing up a plan of a problem and a strategy of divergent thinking are strategies that will help students develop a different view of the problem presented in an online course [16].

Valenzuela Vianna, Soriano de Alencar (2006) examined the extent to which creativity is encouraged in online training courses and what prevents the creation of suitable conditions for the creative development and self-expression of students of online courses. The most commonly reported barriers were related to student participation and behavior, such as a lack of interest in course content and difficulties in participating in online courses [17].

1.2. Analysis of the current state of the toolkit of online courses in the field of marketing

Educational courses with mass interactive participation using e-learning technologies and open access via the Internet (massive open online courses, MOOC) are one of the forms of distance education, which implements online marketing courses toolkit.
Bonnel, Meek (2007) explored the strategies and benefits of using high-quality tools for developing educational tasks on the Internet. High quality tools, such as interviews, observation and document verification, are especially effective in developing online assignments that promote active student-centered learning when teachers are physically absent. Tasks using quality tools complement technology by bringing a humanistic component to online education. Reflection improves self-esteem skills, as students build on previous experience and reflect on how the assignment contributed to their learning [18].

Vuopala, Hyvönen, Järvelä (2016) studied the interaction of students with each other when working with joint tasks in a virtual learning environment. Interaction in situations of cooperation was more often associated with the group than with the task. Group-related interaction focused on coordinating, planning, and organizing group work. The interaction associated with the tasks was carried out in the form of comments or responses to previous messages [19].

Griffith (2009) evaluated the degree of student participation in online conferences and the relationship between their participation and achievement. Students in three separate streams of the “Research Methods” online course were assigned the roles of Moderator, Researcher and Discusser for specific tasks. These roles were identified to optimize participation and, as a result, student participation was high in all three classes [20].

Lee, Ngampornchai, Trail-Constant, Abril, Srinivasan (2016) examined whether case-based online group work increased student satisfaction with their interactions in an online course. Group work did not affect student satisfaction with interactive interactions. Instead, students' perceptions of the importance of group work were related to their satisfaction with interacting in an online course [21].

Krasnov, Kalmykova, Abushova, Krasnov (2018) examined the quality of education problems at the Institute of Industrial Management, Economics and Trade of the St. Petersburg Polytechnic University using developed and implemented massive open online courses. The features of the development of online courses for teaching and the procedure for their use are described, the experience of introducing online courses in the educational process is disclosed, and the problems of the quality of education when using blended learning are analyzed [22].

Bataev (2017) examined the development trends of practical online courses that can improve the quality of higher education, analyzed the possibility of studying in various disciplines through a virtual laboratory using a cloud-based automated system that can provide students with the real work of a financial institution [23].

Popular platforms for massive open online courses: Alison, Coursera, edX, FutureLearn, iversity, NovoEd, OpenUpEd, Udacity, National Open Education Platform, Stepic, Lecture Hall, Universarium.

The National Open Education Platform Association presents a list of tasks with their descriptions that teachers can use when preparing online courses on this platform. A task is a component of a course that is designed to evaluate learning outcomes. The choice of the form of the assignment should correspond to the type of learning outcomes being evaluated. Types of tasks: a task consisting of a set of tasks with automatic verification of answers, a task with mutual evaluation or assessment by an assessor, a task with monitoring progress, a jointly performed task with automatic verification, a jointly performed task with mutual evaluation or evaluation by an assessor.

The standard Moodle has 14 different types of actions that the teacher can use: assignment (allows teachers to evaluate and comment on downloaded files and assignments created offline), chat (allows participants to conduct synchronous discussions in real time), choice (the teacher asks a question and indicates the choice of several answers), a database (allows participants to create, maintain and search a bank of records), feedback (to create and conduct surveys to collect feedback), a forum (allows participants to to participants to conduct asynchronous discussions), a glossary (allows participants to create and maintain a list of definitions, for example, a dictionary), a lesson (for delivering content in flexible ways), (LTI) an external tool (allows participants to interact with LTI-compatible learning resources and events on other web sites, they must be pre-configured by the administrator on the site before they are available in separate courses), a quiz (allows the teacher to develop and install test tests, which can be feedback and / or correct answers are automatically tagged and shown), SCORM
(allows you to include SCORM packages as course content), a survey (to collect data from students to help teachers learn about their class and reflect on their learning), wiki (web collection -pages that anyone can add or edit), a seminar (includes peer assessment).

Different types of practical and test tasks are required for different types of content: for remembering facts, understanding concepts and processes, applying procedures and strategic principles. The most commonly used question formats include: true or false (two-choice operator (true / false or yes / no), where only one is correct), multiple choice (a statement that provides different options, only one is correct, this type of interaction allows to provide different feedback for each chosen option), multiple answers (the correct answer consists of several options, each of which must be selected), correspondence (this type of interaction represented there are two series of elements, the student must associate each element of the first series with the element of the second), ordering (the student must arrange several elements in a sequence, for example, a logical sequence of several steps, steps or operations that must be performed), filling in the blanks (this can be incomplete statement filled out by students, or a sentence with one or more missing words or numbers, the student must fill in the blanks with appropriate terms, the answer is checked by a topic that provides appropriate feedback), short answer / short essay (the student is free to choose his own words to formulate the answer to the question, this makes it difficult to check the results of the student’s work, since it is impossible to foresee all possible answers, however, the answer, developed by an expert, can be offered for comparison, or an essay can be saved and sent to an online tutor).

Creativity is a difficult measure. This makes it difficult to prove that some methods and tools for its formation have or have not had a significant impact on this important aspect of critical thinking.

There are serious problems that developers of distance learning courses face. Lack of appropriate business models and educational models that impede the development of educational materials or open content, and, as a result, a decrease in the enthusiasm of students in their respective studies. The absence of any clear mechanism for ensuring quality, which can lead to fuzzy standards and, as a result, to poor quality distance education. The lack of support from the relevant governing bodies, which may be weakly involved, is caused by the lack of appropriate human and infrastructural capacity.

Liang, Chen (2012) noted that media wealth and its technological capabilities do not and do not guarantee the quality of online learning. This trend in the convergence of physical and Internet presence is likely to change interactions with people [24].

Baldwin, Trespalacios (2017) studied 28 assessment tools that are currently used to develop and review online courses in higher education institutions and categorized according to geographic coverage and the type of institution for which they were developed [25].

Hemby, Wilkinson, Crews (2006) indicated ways in which grades in a traditional classroom can be transformed for use in an e-learning environment. The emphasis is on the ways in which an electronic instructor needs to evaluate current assessment tools to determine the most appropriate assessment for student outcomes. The assessment should be in line with the project so that students are aware of the key components and what will be assessed in the assignments. With a review of modern assessment methods, there is a need to take the time to adapt the assessment so that students receive appropriate and timely feedback [26].

Arend (2019) examined the issues of online course assessment practices and how these practices relate to learning. Course assessment is important because it greatly affects learning and is an indicator of the quality of classroom instruction. In an online environment, assessment methods can be very different. Students report that the focus is on relatively more complex learning strategies, such as designing and critical thinking in rehearsal. However, online instructors must ensure that assessments are used strategically and that feedback is productive and actionable on the part of students [27].

Kebritchi, Lipschuetz, Santiago (2017) noted that online learning is changing all the components of teaching in higher education. Three main categories of results were identified: problems associated with online training, instructors and content development. Students' concerns include their expectations, readiness, personality, and participation in online courses. Teacher concerns include
changing roles, moving from personal communication to online communication, time management, and teaching styles. Content issues include the role of trainers in content development, the integration of multimedia in content, the role of training strategies in content development, and content development issues. To solve these problems in online education, higher education institutions must provide professional development of instructors, trainings for students and technical support for the development of content [28].

The problems of online learning are considered in the works of Bozhuk (2017), Gazizulina (2017) and several other authors [29-35].

2. Methods

The research methodology is based on the presentation of the structural components of marketing activity, characterized by varying degrees of demand for creative competencies.

In the work, the creative competencies of a marketer are understood as the ability to create new ideas and develop them into several alternative solutions.

When conducting the study, a literature review was used as a method, because it contributes to an understanding of the main area and the critical comments that were made on this topic. This helps in finding research gaps, combining disparate pieces of information and clarifying the research topic to an understandable level.

The authors rely on the model of a creative approach to problem solving proposed in “Creative Problem Solving Tools & Techniques. Resource Guide. Creative Education Foundation” [36].

The study used classifications of online assignments proposed in “E-learning methodologies. A guide for designing and developing e-learning courses. Food and Agriculture Organization of the United Nations” [37].

3. Results and Discussion

The main results are presented below.

3.1. Correlation of tools for obtaining and implementing creative ideas and emerging marketing competencies for an online marketing course

The professional competencies of a marketer are divided into two groups: technology for conducting marketing research using marketing mix tools, development and implementation of marketing programs using marketing mix tools.

The technology of conducting marketing research using marketing mix tools includes preparing for marketing research, conducting marketing research using marketing mix tools.

The development and implementation of marketing programs using marketing complex tools includes the development, testing and implementation of innovative goods (services), the creation of intangible assets (brands) and their management in organizations, the development, implementation and improvement of pricing policies in organizations, the development, implementation and improvement systems of distribution (distribution) and marketing policy in the organization, development, implementation and improvement of the marketing communications system in the organization, formation of the organization’s marketing strategy, planning and control of the organization’s marketing activities.

Existing tools and methods for obtaining and implementing creative ideas are analyzed in relation to the possibility of their use in the process of forming various marketing competencies (table 1). The matrix shows the correspondence of the tool and professional competence formed with its use (+) or the absence of such a relationship (-). If there is a certain (not maximum) possibility of using (+/-), this tool must be supplemented with another one that is uniquely suitable for the selected competency.

Table 1. Matrix of correlation of tools for obtaining and implementing creative ideas and emerging marketing competencies for an online marketing course
| Brainstorming | + | + | + | + | + | + | + | + |
| Brainstorming - StickEm Up | + | + | + | + | + | + | + | + |
| Brainwriting | + | + | + | + | + | + | + | + |
| PPCO | + | + | + | + | + | + | + | + |
| Dot Voting (His) | + | + | + | + | + | + | + | + |
| Highlighting | + | + | + | + | + | + | + | + |
| 50 Aspirations | - | - | + | + | + | + | - | +/- |
| Collage | - | - | + | - | - | + | - | - |
| DRIVE | + | + | - | - | - | - | + | + |
| Forced Connection | + | +/- | - | - | - | - | + | +/- |
| Give & Take | +/- | - | - | - | + | - | - |
| Group Doodle | - | - | + | + | +/- | + | - | - |
| Invitational Language Stems | + | + | - | + | + | - | + | + |
| Mindmapping | + | - | + | + | + | + | + | - |
| Pictures as Metaphors | - | - | + | + | + | + | - | - |
| Storyboarding | - | - | - | - | - | - | + | - |
| Storytelling | + | - | + | - | - | - | + | - |
| Visualization | - | - | + | + | +/- | + | - | - |
| 3 I's | + | + | - | + | + | + | + | + |
| Post & Cluster | + | - | + | + | + | + | - | - |
| Context Map | + | + | +/- | - | - | - | + | - |
| Empathy Map | + | + | + | - | - | - | +/- | - |
| 5 “W”s and an “H” | + | + | - | - | - | - | + | - |
3.2. Correlation of types of tasks and emerging marketing competencies for an online marketing course

Existing types of tasks are analyzed in relation to the possibility of their use in the process of forming various marketing competencies (table 2). The matrix shows the relationship between the types of tasks in the professional competence formed with its application. All types of tasks are involved in the formation of all professional competencies; however, their ratio varies depending on the presence of a creative component in them.

**Table 2. Matrix of correlation of types of tasks and emerging marketing competencies for an online marketing course**

| Types of tasks | Marketer Professional Competencies |
|----------------|-----------------------------------|
| Preparati on for a marketin g research | Conducti ng marketin g research using marketin g mix tools |
| Developmen t, testing and implementat ion of innovative goods (services), creation of intangible assets (brands) and their management in the organization | Developmen t, implementat ion and improvemen t of pricing policies in the organization |
| Developmen t, implementat ion and improvemen t of the distribution system (distribution ) and marketing policy in the organization | Development of the marketing strategy of the organizati on |
| The formation of the marketing strategy of the organizati on | Organizati on planning and control |
Each of the types of tasks has its own advantages and disadvantages. It is easy to create tasks of “True or False” type; however, students have a 50% chance of choosing the right option. Tasks such as “Multiple Choice” and “Multiple Responses” are quite flexible, because can be used for several purposes, but they are difficult to create, because it is necessary to develop reliable incorrect options. “Matching” assignments are easy to create, but there is a risk of being too easy for the student. “Ordering” tasks are also easy to create. However, in all these types of tasks the answer is not created by the student himself, but is initially developed by the teacher. Jobs such as “Fill-in the blanks” are easy to create, but they are rarely relevant and difficult to measure. A “Short answer / short essay” type assignment has an advantage over other types of assignments, since they are practically the only ones who use the student’s answer creation, but they are also very difficult to measure.

4. Conclusions
Key findings are presented below.

1. Creativity is associated with critical thinking and cognitive skills of students. To encourage students to be creative and innovative, teachers use a variety of tools and techniques. Studies show that successful learning, according to learners, and effective learning, according to teachers, is based on providing students with clear instructions on how to apply the necessary cognitive skills. Looser methods, without specific guidelines, have less impact on learning outcomes. These recommendations can be fully implemented with an online learning environment.

2. An analysis of the current state of the online courses toolkit showed that practical issues should be created for all topics and professional competencies. The text of the question should be as clear and unambiguous as possible. Wrong options should be believable. Too wrong options are of no use, because reduce student interest. Wrong options should not be aimed at distracting students, but at anticipating common mistakes so that useful information can be provided in feedback. Feedback should be explanatory. With regard to the teaching of economic disciplines, the following technologies are possible: synchronous (chat, individual messages, video conferences, audio conferences, live broadcasts), asynchronous (email, forum, wiki, blog, webcast).

3. Cognitive flexibility is one of the three main mental executive functions involved in creative problem solving. Studies show that various creativity training programs, including brainstorming and creative problem solving, increase student scores for tests of creative thinking skills. Among the methods used for the development of creativity: encouraging the generation of ideas, the cross-use of ideas, formulation of questions. Students need to help feel their creativity, expand their views, reflecting on concepts from different points of view.
4. The developed matrices for correlating the tools for obtaining and implementing creative ideas and types of tasks and emerging marketing competencies for an online marketing course provide the basis for developing a full-fledged online course in the discipline "Marketing". The selection of suitable tools and types of tasks will help to create professional competencies of a marketer at a high level of their creative component.

Teachers and students should also have the skills and confidence in the use of electronic equipment (computer, various gadgets, information technology in general) and have the necessary knowledge about the methods of delivery and receipt of information. These technologies can also be used to improve the quality of traditional education, and for blended learning.

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