PERSPECTIVES OF MARTECH COMPETENCIES DEVELOPEMENT

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Abstract. In the paper described research performed in four countries (Lithuania, Latvia, Romania and Portugal) about what digital marketing competencies and skills are required for nowadays marketing specialist.
Keywords: Martech; marketing technologies; digital marketing; ICT education.

1. IMPORTANCE AND BENEFITS OF MARKETING TECHNOLOGIES (MARTECH)

Information and communications technologies (ICT) is among the leading sectors in Europe making an increasingly important contribution to the economic growth and jobs creation in advanced economies. Enterprises in the EU are challenging to fill their vacancies for ICT specialists. According to Eurostat data 58 % enterprises reported having problems looking for specialists having relevant ICT skills (Eurostat, 2018). Experts assert that many young people are still not actively choosing ICT studies. Some school graduates who might be interested in ICT studies in the future do not study subjects related to ICT, choosing a different specialization at school. Those who finish ICT studies have a decent qualification, which, however, should be more proficient. High schools and universities provide students with only basic ICT knowledge. If students or graduates contemplate a specific workplace, usually they have additionally raise their qualification in centers of competence development. Current situation justifies the need for a multi-disciplinary approach to ICT education, new curriculum design and creation of opportunities (and conditions) to get required skills and knowledge as soon as possible (e.g. by using online courses, lifelong learning principles and etc.).

For this purpose FuseIT (Future competences pathways for marketing and ICT education) project was initiated by partners from Lithuania, Latvia, Romania and Portugal. The project addresses the education and labor market requirements for professional skills and knowledge for students and graduates in university (including life-long learning activities). FuseIT analyzes, designs, develops and implements an up-to-date curriculum, e-learning materials, blended learning environment, ICT knowledge and skills self-evaluation and knowledge evaluation system simulations. This project has been funded with support from the European Commission. More about the project: https://www.knf.vu.lt/en/fuseit.

2. STUDY ANALYSIS OF FUTURE DIGITAL MARKETING COMPETENCES

Study analysis was made before developing the whole training course. The main goal of research is to develop major requirements for building the FuseIT program by using

results for target groups' DMC (Digital Marketing Competence) needs on a base of EU labor market, and existing experience of partners best practices in marketing and ICT. This study also should identify the skills gap in the Digital Marketing area in all partners countries. The training needs will then be becoming apparent and become a base for creating learning and certification solutions in the following activities of the project.

2.1. Methodology of survey

Survey was performed in Lithuania, Latvia, Portugal and Romania. Design of survey is based on Digital Competence Frameworks such as The Digital Competence Framework for Consumers and The Digital Competence Framework for Citizens 2.1. Survey consists out of 5 parts.

First part of the survey collects general information about respondents. The second part of the survey is dedicated to the required level of competences necessary for digital marketing specialists (TABLE 1).

TABLE 4. LIST OF COMPETENCES NECESSARY FOR DIGITAL MARKETING SPECIALIST FOR RESPONDENT'S EVALUATION

COMPETENCES:		
Digital Strategy	Data Science & Big Data	Sustainable Growth marketing Strategies
Web Experience Management	Web Development - Custom	Programmatic Advertising
Usability / Design	Web Analytics & A/B Testing	Blockchain marketing use cases
Growth Hacking (Growth Marketing)	Computer science fundamentals and programming	Leadership
Retargeting	Strategic creativity	Intellectual property positioning and protection
Customer Engagement	Probability and statistics	Cyber security
Customer Experience UX	Data modelling and evaluation	Competitive Intelligence
User Acquisition	Customer loyalty, retention, and satisfaction campaigns design and execution	Business Intelligence
Expert storyteller	Strong communication	Crisis management in social networks
Targeting & Optimization	Predictive Analysis & Attribution	OTHER (please specify)
Understanding of customer personas and their needs	Software engineering and system design	-

The third part of the survey is dedicated for the required level of professional skills which are necessary for digital marketing specialists (TABLE 2).

TABLE 5.   THE LIST OF PROFESSIONAL SKILLS WHICH ARE NECESSARY FOR DIGITAL MARKETING SPECIALISTS

Professional skills:		
Content Marketing (*WordPress, Yoast SEO plug-in*)	Excel	Project Management (*JIRA, Basecamp, Timeforce, Trello*)
Digital Analytics (*Google Analytics, Adobe Analytics, Optimizel*)	Marketing and Sales Automation (*Marketo, Pardot, Bronto*)	Paid Search Marketing
Search Engine Optimization (SEO) (*Moz, Ahrefs, SEM Rush, Google Search Console*)	Video Marketing	Building and managing customer experience teams
Search Engine Marketing (SEM) (*Google AdWords, Bing Ads*)	Video editing	CRM
Conversion Rate Optimization (CRO) (*Optimizely, Google Tag Manager, Craft*)	Tableau	Mobile Marketing
Social Media Marketing (*Facebook Ads, Twitter Ads, LinkedIn Ads, Hootsuite, Instagram, YouTube*)	Email Marketing (*Mailchimp, Constant Contact, AWeber*)	Applying machine learning algorithms and libraries
Affiliate Marketing (*CJ by Conversant, Impact Radius*)	Geo-Targeting PPC	Applying Cyber security solutions software
Python, PHP, .NET, Java or other backend programming technologies	Web Development (*WordPress, Magento, Joomla, Drupal*)	OTHER (please specify)
SQL, Database administration	Web development - Content Management Systems	

The fourth part of the survey is dedicated for professional positions for which digital marketing competences and professional skills are necessary (TABLE 3).

TABLE 6.   PROFESSIONAL POSITIONS FOR WHICH DIGITAL MARKETING COMPETENCES AND PROFESSIONAL SKILLS ARE NECESSARY

Positions:		
Internet marketing content manager	Internet research specialist	Expert in Web Analytics/Data Analytics
E-marketing web designer	System analytic	Expert in *Business Intelligence*
PPC manager	IS designer	Marketing Metrics Manager
Social media specialist	Market analytic	Brand manager
Martech specialist	Product manager	OTHER (*please specify*)
E-marketing information specialist	IS quality assurance specialist	
Social media development administrator	*E. marketing* project manager	

Finally the survey collected data about business entities/types of organization for which digital marketing competences and professional skills are necessary (TABLE 4).

TABLE 7. BUSINESS ENTITIES/TYPES OF ORGANIZATION FOR WHICH DIGITAL MARKETING COMPETENCES AND PROFESSIONAL SKILLS ARE NECESSARY

Business entities/types of organization:		
Start-Ups	*E-marketing* and internet communication companies	International internet content organizations
(Traditional) Business companies	*E-sales* and marketing department	Market analytic service companies
Public and government bodies	Advertising agencies	OTHER (*please specify*)
Science and study sector	Media and technology companies	-

All multiple choices listed on Tables No. 2, 3, 4 was selected according to information provided in Digital Competence Frameworks such as The Digital Competence Framework for Consumers (Brečko and Ferrari, 2016) and The Digital Competence Framework for Citizens 2.1.(Carretero, Vuorikari and Punie, 2017) business reports e.g. 2020 Workplace Learning Trends Report: The Skills of the Future (Undemy for Business, 2020) or 5 Top marketing Jobs in 2020 (10digital, 2019) and supplemented taking into account Best Practice samples from Project Partners.

The multiple choices evaluation was implemented using scale adopted from Digital Competence Framework and using adopted (simplified) ranking points system (I don't know 0; Useless -4; Foundation 1; Intermediate 2; Advanced 3; Highly specialized 4).

Survey procedure divided into two parts:

1st part is a survey dedicated to students. It was planned to collect data from minimum 200 students out of ICT and marketing study programmes from all schools involved into the project (approx. 50 students per school/country).

2nd part is an interview dedicated to experts. The plan was to interview at least 40 experts in HEI and 20 in training centres for gathering info on task analysis.

2.2. Results of survey

355 respondents from 4 countries participated in the survey (101 respondents in Romania, 90 respondents in Portugal, 87 respondents in Latvia, 77 respondents in Lithuania). Respondents represented 6 different areas of occupation (students, HEI representative (academic), representative of business, training center representative, public administration representative, teacher of other educational levels). The majority of participants were students. The least were public administration representatives.

Analysis of results allows us to state that according to respondents most necessary competences to digital marketing specialist is related with strategic and basic aspects of marketing discipline and competences related with digitalization of marketing (Fig. 1).

Fig. 1. TOP 10 of competences necessary for digital marketing specialist

The analysis of professional skills (Fig. 2) allows to state that most necessary are skills related with ICT tools directly designed for marketing purposes The only exception is related with skills of Excel usage.

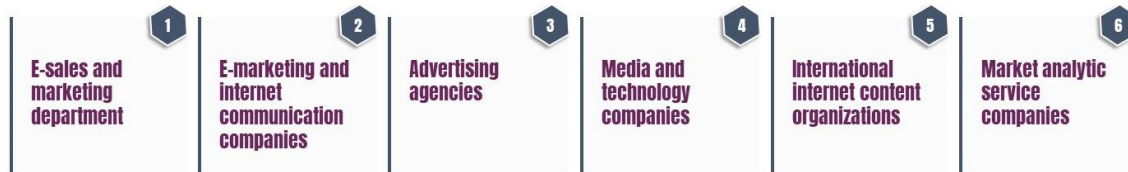**Fig. 2. TOP10 of professional skills necessary for digital marketing specialist**

Analysis of professional positions which requires digital marketing competences and professional conditionally possible to divide into three groups regarding types of professional activities: specialists; managers; analytics (Fig. 3).

Fig. 3. TOP 10 of positions necessary for digital marketing competences and professional skills

Analysis of business entities/types of organization conditionally possible to divide into two groups: traditional business activities which adapts digital marketing solutions and marketing departments (in business companies) and businesses based on digital marketing (Fig. 4).

1	2	3	4	5	6
E-sales and marketing department	E-marketing and internet communication companies	Advertising agencies	Media and technology companies	International internet content organizations	Market analytic service companies

Fig. 4. TOP ranking of business entities/types of organization which requires for digital marketing competences and professional skills

The 2nd part of Survey is an interview dedicated to experts. The plan was to interview at least 40 experts in HEI and 20 in training centres for gathering info on task analysis. Due changed circumstances and quarantine statement in project partners' countries according which it was impossible to organize an interview it was made decision to change interview to survey (similar form as for students) with additional asking to respondent to comment wide its opinion on surveys' form. Specialists expressed an opinion regarding 2 areas of Survey:

- Competences to develop necessary for digital marketing specialist;
- Professional skills to develop necessary for digital marketing specialist;

Feedback regarding competencies necessary for digital marketing specialist it is possible to divide into two areas related with nature of competences: personal competencies and professional competences (Fig. 5).

PROFESSIONAL COMPETENCES

1	2	3	4	5	6	7	8
Basics of strategic marketing	Mass-media channels management	Marketing complex (marketing MIX) management	Basics of promotion	Big Data Analysis	Text editing	Graphic design	Content Marketing skills

PERSONAL COMPETENCES

1	2	3	4
Team working and communication	Critical thinking	Creativeness	Flexibility

Fig. 5. Additional competences necessary for digital marketing specialist

Feedback regarding professional skills necessary for digital marketing specialists is also possible to divide into two areas related to the nature of competences: personal competencies and professional competences (Fig. 6).
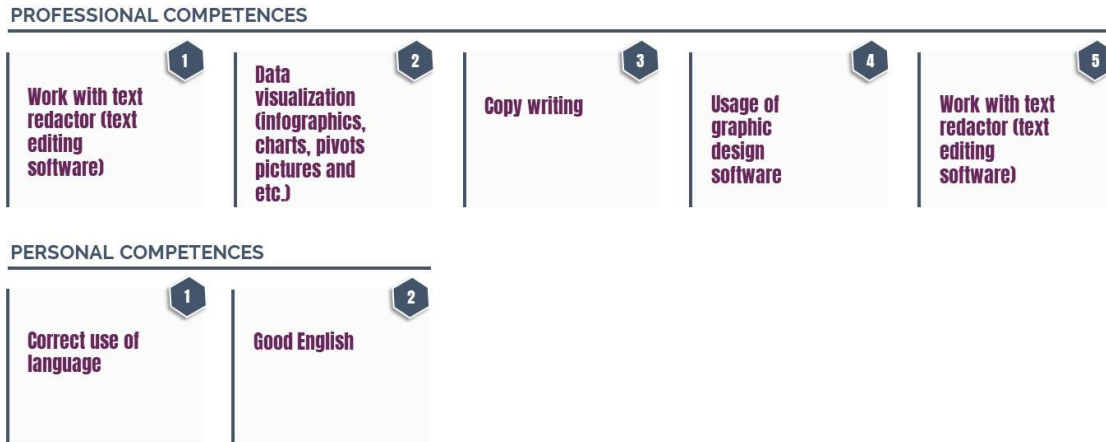
PROFESSIONAL COMPETENCES

1	2	3	4	5
Work with text redactor (text editing software)	Data visualization (infographics, charts, pivots pictures and etc.)	Copy writing	Usage of graphic design software	Work with text redactor (text editing software)

PERSONAL COMPETENCES

1	2
Correct use of language	Good English

Fig. 6. Additional professional skills necessary for digital marketing specialist

3.   MARTECH TRAINING COURSE GUIDELINES

Syllabus of the training course were developed following research results and insights of specialists. Blended training course participants will acquire knowledge about digital marketing and become Marketing technologies (MarTech) specialist.

Main course topics are provided in TABLE 5.

TABLE 8.   COURSE CONTENT

Subjects:	
Basics of marketing	Social media
Introduction to market research	Mobile marketing
Customer loyalty, satisfaction and engagement	Email marketing
Strategic creativity	Video marketing
Customer Experience Management	WEM (Web experience management)
Digital marketing	Decision making and business intelligence
Optimization of advertisement in Web	Design thinking
CRM analytics	Excel
Digital analytics	Local topics regarding research results in partner country

After this course participants will:
- Understand how to build, maintain and manage customer experience teams; what is social media marketing and how to use it with high efficiency; how search engine marketing works and how to optimize search engines; customers' personalities and how to identify their needs and build strong communication with them; how to develop and use strategic creativity.
- Gain skills in digital analytics and digital strategy development, email and mobile marketing, social media marketing, work with search engines, different programmes necessary for digitalization of marketing.

- Use Excel functions for digital marketing, use CRM systems, web resources and applications.
- Will be able to identify customers' needs and tools, use customer engagement by determining and building their loyalty, create retention and campaigns that would satisfy customers.

After successful finishing of this Course students will understand basic principles of marketing in digital domain, technical aspects of search engines and social media and non-technical aspects of digital marketing such as media planning, email marketing, etc.

4. CONCLUSION

Marketing is an open-ended discipline which does not have to be solely based on just the one subject. The nature of marketing allows students to develop marketing skills in the context of another subject, such as Consumer Behavior, Microeconomics, Copywriting, Big Data Analysis, WEB developing etc. The versatility of skills gained studying marketing determines a wide professional career path: it offers work in many fields and diverse career choice. Having marketing skills there is the potential for a year in industry, which allows an invaluable period of experience in real-life marketing roles and facilitates personal lifelong learning activities. Having in mind the fact that the marketing area attracts the most foreign overseas students to universities (the figure is more than double that of engineering & technology, the next highest subject group according Complete University Guide Ltd. 2007–17) it could serve as a proper platform for increasing the attractiveness of ICT studies.

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