

CHALLENGES OF UPSKILLING WORKFORCE OF CREATIVE
INDUSTRIES IN ERA OF DATA ECONOMICS

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Abstract

The aim of this paper is to examine changes and challenges of creative industries caused by the development of information and communication technologies and present a project that addresses the issue of lack of sufficiently qualified workforce.

Development of technologies are changing the whole social and economic scene and requirements for the labour market also in creative industries. One of the main challenges facing almost all industries is the lack of specialists who, along with the specific skills of the sector, would also have sufficient understanding of technological developments and could contribute to the competitiveness of the company.

Keywords: creative industries, business analytics, technologies, entrepreneurship.

1. Introduction

Advances in information and communication technologies has brought changes in any area of human activity, from day-to-day communication to business models, international policy planning documents and strategies.

Many studies and reports have been published on the importance of technological change on a global scale. Researches show that technologies change how people, organisations and governments live, interact and work. Digital technology continues to be one of the major forces shaping our society today (Bandopadhyay, Wong, 2019). It transforms economies and societies. All industries and sciences are affected by the digital transformation including

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humanities and social sciences. Opportunities offered by information and communication technologies are progressively engaging also human disciplines, for example, history, archaeology, law, and politics (Schiuma, Carlucci, 2018).

The rapid development of information technologies comes with opportunities as well as challenges and changes for the entrepreneurs. Researches show that entrepreneurs will need to adopt their strategies to the new data economy age, adapt their organizational structures and reshape their business models to ones which support data-driven decision-making process and even predictive analysis (Hagen, et al., 2013).

It is particularly interesting to analyse the development of creative industries in the context of technology because of the long-standing opposition between the technology and creativity. Although technological development is highly regarded in the economic context, technology and creativity have been long perceived as incompatible concepts.

2. Opportunities enabled by development of technologies

Much work at European Union (EU) level has been done so far to create a favourable environment for business development. The importance of digital environment and competencies has been recognized by EU policy makers. One of European Commission's aims is integrating digitisation in all industrial technologies and societal challenges. A Digital Single market strategy is one of the strategies developed at EU level. The EU is committed to set global standards for emerging technologies and has set a goal to remain the most open region for trade and investment in the world. At the same time, EU aims to create an environment where companies of all sizes and in any sector can compete on equal terms, and can develop, market and use digital technologies, products and services at a scale that boosts their productivity and global competitiveness, and consumers can be confident that their rights are respected (European Commission, 2020). It is expected that the digitalization, new technologies and strengthening of the Digital Single Market will increase distribution and access to culture and creative production. Europe's General Data Protection Regulation (GDPR), the privacy legislation that went into effect in May 2018 represents the first large-scale effort in the world to offer consumers more legal protection. In the field of creative industries, an initiative Creative Skills Europe was launched in November 2014 by a partnership of European trade unions and employers' organisations.

As concluded by the Organisation for Economic Co-operation and Development, digital technologies allow organizations to access multiple geographical and product markets almost instantaneously, sharing ideas and exploiting increasing returns to scale. The benefits brought by advanced technologies outlined in their research are:

- a) Mobile connectivity has undergone major improvements starting with the launch of 3G at the beginning of the millennium and 5G is now in the early stages of roll out.
- b) The number and growth of top-level domains (TLDs) associated to websites provides an indication of the increased content hosted by the Internet. TLDs reached close to 350 million in the third quarter of 2018. By that time, the .com generic domain had reached 135 million out.
- c) Capacity for data transmission is increasing everywhere, including developing economies. Cross-border data flows enable businesses to effectively co-ordinate their, supply, production, sales, after-sales, and research and development processes in global markets.
- d) Data centres - the analysis of big data coming from ubiquitously networked end-user devices and the internet of things - has added to the value and growth of data centres (OECD, 2019).

If the results are compared with studies conducted in the analysis of creative industries, the conclusions are similar. The study, that examined the impact of the internet and digitalization on the creative sector in Europe, suggest that despite the fact that digitalization has brought some challenges for the creative sector, the creative industries have succeeded in adapting to the new digital reality and have returned to growth. Research shows, advance of new technologies has brought following main benefits:

- a) increase of revenue and employment;
- b) reduced production and distribution costs;
- c) development of new business models;
- d) more options and increased choice of content and services.

Internet coverage and accessibility has provided more consumers with access to more creative content than ever before. Online accessibility of content has removed many of the geographical, financial and social barriers. Reduced costs and increased capabilities in storing, processing, and sharing data have been amongst the most important breakthroughs. Innovations such as cloud computing have removed the need for content owners and distributors to purchase expensive processing power themselves, while advancements in data compression and encryption mean that content can be distributed digitally in a

secure way.

Creative industries authors have become more independent due to the fact that they are no longer so dependent on distributors, platforms, and can deliver content directly to their audiences. Reduced barriers to entry and increased competition have resulted in an explosion in the supply of creative content across the industry. Development of new technologies has contributed to the emergence of product innovation and new business models. The emergence of new companies taking advantage of digital opportunities has resulted in entirely new types of content being created (Oliver, Ohlbaum, 2017).

3. Challenges of upskilling the workforce

Advances of information technologies implies both challenges and opportunities for organisations to keep up with the changes. Technologies are influencing all areas of organisations' operations, including financial management, customer relationship management, marketing and communications. According to surveys with representatives of industry, one of the main challenges they face is attracting a properly skilled workforce (Bandopadhyay, Wong, 2019).

Various studies show that digital literacy cannot be underestimated. On the side of skills and business organisation, both the digital shift and globalisation have had a strong impact on cultural and creative operators. In a business-driven environment, they continually need to develop and adapt competences and contents to the rapid pace of the digital innovation combined with the competition of foreign markets (Daubeuf, et al, 2019.) However, balance between advanced technical competences and an unprecedented level of moral complexity that these technologies entail is needed. Being prepared to deal with the controversial technologies developed now is the only way to make sure one can fully engage in the conversations that shape the future of societies (Bandelli, 2018).

Scenario for the European creative industries towards 2030, described in study about key future developments, challenges and opportunities for culture and creative sectors, outlined the importance of workforce training activities. The support made available for representatives of creative industries to upskill their staff and adopt new technologies will lead to the creative industries being well adapted to the technological and digital transformation). The greater attention to training digital skills at education institutions will also increase the number of specialists available in the job market (Daubeuf, et al., 2019). It implies that educational institutions should assume greater responsibility for access to the labour market for skilled labour and develop education programmes, develop projects to address this problem.

4. Projects for development of digital literacy – case of Latvian College of Culture

Taking in account above mentioned situation, the Latvian College of Culture (LCC) has developed and started to implement a project to promote entrepreneurial information technology literacy and increase the skills of the workforce, specifically by analysing creative industries. The analysis takes into account the global context and local specificities.

At the beginning of the project, by analysing the business environment in Latvia and conducting interviews with entrepreneurs, employers informed about the lack of qualified employees in data analysis and visualization. Taking into account the LCC field of expertise and the experience in design and entrepreneurship education, a programme of data analysis bases and data visualization training was developed.

In the course of the project, it was concluded that companies experienced wider problems related to workforce qualifications. It showed not only a lack of knowledge and skills in data analysis and visualization, but also a lack of competence in business analysis technologies for existing and as well as potential employees. This is a global trend which is also confirmed by international workforce studies in different industries, including in the creative industry examined in this project. The project was therefore extended with an analysis of the competence/skills of business analysis technologies in the labour market.

From the above information, the following project aims and objectives were developed.

The project aim is to address labour skills problems related to the development of business information technologies (especially data analysis technologies) in the creative industry by developing different types of training programmes and raising public awareness of the importance of digital literacy in industry. The achievement of the aim is planned by analysing international and national employment and competence studies, documents, as well as the current situation in Latvian creative industry companies and organisations.

LCC has set the following project *objectives*:

1. Analyse international and national research and documents on the development and challenges of creative entrepreneurship in the era of data economics and information technologies
2. Examine knowledge, skills and competences that are currently needed and are expected to be needed in the future related to the development of information communication technologies and business analysis

3. To analyse current practice and challenges in creative industry regarding the workforce competences and upskilling with the digital literacy,
 - 3.1. to survey representatives of creative industries,
 - 3.2. to interview representatives of creative industries;
 - 3.3. to analyse knowledge, skills and competences mentioned in Latvian job advertisements;
4. To develop internationally competitive training and professional development programs;
6. To provide recommendations how to improve the external and internal business environment for the promotion of business competitiveness and upskilling workforce (with digital literacy);
7. To promote experience exchange activities of industry representatives regarding workforce upskilling activities.

LCC has set the following project *outcomes*:

1. A study on international and national trends of the impact of development of information communication technologies on the workforce skill-set
2. A study on skillset challenges of creative industries workforce regarding digital literacy;
3. Curriculum for internationally competitive training and professional development programs in the field of digital literacy and business analysis;
4. Recommendations for improvement of both internal and external business environment for better competitiveness;
5. Implemented activities for exchange of experience regarding workforce upskilling activities.

Within the framework of the project, a comprehensive analysis of the creative industry is planned. In order to ensure the representativeness of the data, different types of companies and organizations will be surveyed and analysed. The following criteria will be covered in the selection of companies and organizations:

1. Sector (private, public, NGO),
2. Business form,
3. Size of organisation (large, medium, small),
4. Region (Riga, cities, districts/provinces)

During the feasibility study, depth interviews with executives and project managers from publishing, information technologies, and music organisations were conducted. All interview participants acknowledged that there is a need for interdisciplinary educated professionals who not only knows how to analyse data but also understands business and can communicate the analysis results clearly and understandably to all involved parties (colleagues, executives,

clients and other stake-holders).

5. Conclusion

Development of information and communication technologies and digitisation are having an important impact on the creative sectors. Nevertheless, the uptake of newer technologies in some aspects appears to be limited. Organisations need to review strategies, reorganise their structure, review resources and apply modern infrastructure in order to benefit fully from the opportunities presented by digital technologies.

The adoption of new technologies is raising demand for digital skills in the labour market and there is a need to develop and implement various educational projects to address this problem.

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