e-mentor

SZKOŁA GŁÓWNA HANDLOWA · W WARSZAWIE ·

ICT in education
Lifelong learning
Business and technologies
New trends in management
Teaching methods and programs

Table of Contents

Dear "e-mentor" readers,

I am pleased to share the newest collection of papers. The current volume is mainly focused on the issues regarding the development of students' skills and attitudes, which reflects the struggle of many universities to provide graduates with a comprehensive set of competencies to support them not only as specialists but also as global and conscious citizens. In this issue, you can learn about the level and determinants of cultural intelligence of students of public economics universities, the possibilities of improving intercultural pragmatic competencies during online Spanish classes, and business students' declared knowledge of and readiness to follow the principles of corporate social responsibility. Noteworthy is the international context of the presented studies, illustrated by the examples from Poland, Spain, and the US.

Interesting are also two articles discussing the possibilities of boosting creativity, both in education and business. The first concerns practical applications of visual bricolage as a tool for enhancing formative discussions with students, and the second touches upon the problem of co-creation with consumers in the fuzzy front-end of new product development. Moreover, you can read about the concept of virtual university, infographics in social media, and objectivity in evaluating professional career development.

In this issue, you can also find useful recommendations of the forthcoming events and the most recent publications, such as the review of the book "Disruptive platforms. Markets, ecosystems and monopolists" by T. Doligalski, M. Goliński, and K. Kozłowski. I do hope that "e-mentor" will bring you a nice time during this summer holidays.

Further, I invite you to co-create "e-mentor" with us and submit your articles for publication. "E-mentor" is an open-access journal available for free both online and in printed form. All scientific papers are peer-reviewed. Every article gets its individual DOI registered in Crossref, and the journal is indexed in several global databases, including Web of Science ESCI and EBSCO. There is no publishing fee for the authors. More detailed instructions are available online at http://www.e-mentor.edu.pl/eng/page/8/Info_for_Authors. If you have any questions about the publications in "e-mentor", please contact the editorial team at redakcja@e-mentor.edu.pl.

Małgorzata Marchewka
Editor

SPECIAL OFFER FOR PH.D. CANDIDATES

After the success of last year's initiative addressed to Ph.D. students, we continue the next editions. The papers submitted by the Ph.D. candidates will get additional support while undergoing the reviewing and editing procedure. Both Polish and international students may participate.

To be eligible for this offer, an author should:
1. Stick to the hints for the authors published on the journal website at FOR AUTHORS;
2. Submit the paper using the submission form available at the same address;
3. Provide a valid university affiliation (e.g., the name of the doctoral school) and the name of the scientific promoter (in the Additional comments field) while filling in the form.

The scientific papers to be included in the English volume should cover the issues which may be of interest to both the national and international scholarly audience.

There is no charge for publishing with "e-mentor." Moreover, we cover the costs of proofreading of the papers accepted for publication in the English volume.
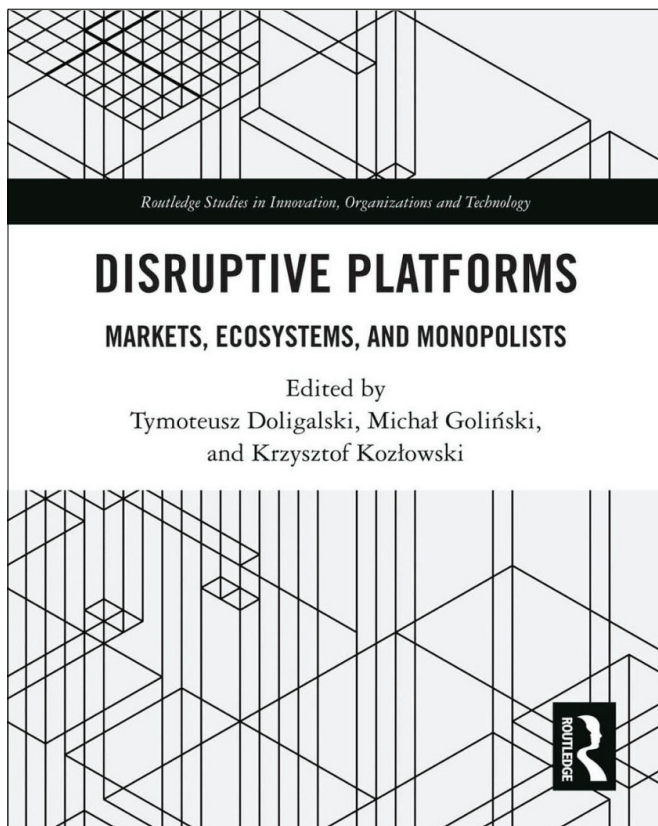
Disruptive platforms. Markets, ecosystems and monopolists – monograph review

The reviewed monograph entitled *Disruptive platforms. Markets, ecosystems and monopolists* (edited by Tymoteusz Doligalski, Michał Goliński, and Krzysztof Kozłowski, Routledge 2021) deals with an extremely important and topical subject relating to disruptive platforms. In the era of the fourth industrial revolution, with the increasing importance of mobile technologies, the Internet of Things, huge data streams (Big Data) and the encroaching advancing automation and robotization, the topic of disruptive platforms deserves special attention.

The deliberations concerning disruptive platforms take into account a wide spectrum of research specialisations shared by the authors, researchers from the Warsaw School of Economics and co-authors of individual chapters in the monograph. They cover a vast spectrum of research: from the areas of e-business and new business models, business informatics, logistics and supply chains, and international business to application of quantitative statistical methods in economic sciences. In addition, the authors include data scientists, researchers dealing with internet marketing, and social aspects of management science such as time hybridisation, as well as researchers in political science and international economic and political relations. The implementation of so many perspectives on the topic of contemporary technological transformation, which emanates from disruptive platforms, indicates on one hand the complexity of the socio-economic phenomenon we are currently dealing with, and on the other hand it does not allow us to confine our reflections in this field to a single discipline or research specialisation.

Interest in the subject of disruptive technologies, which completely change the functioning of the modern economy and everyday life of the global community, has particularly soared in recent years, with the spread of mobile technologies in which a great deal of attention is paid to user comfort and functionality, defined as User Experience (UX). Thus, the book *Disruptive platforms. Markets, ecosystems and monopolists* fits perfectly into the trend of in-depth scientific and empirically-grounded reflection on the direction of contemporary civilisational changes. The book should serve as a practical guide for understanding contemporary processes of digital transformation – helping to consolidate the knowledge of managers, business practitioners, and students of economics, and more broadly – the field of social sciences, but also the field of science and life sciences (computer science) and the field of engineering sciences (technical IT and telecommunications). Moreover, reading this very up-to-date book should also be useful to a wide range of readers interested in contemporary technological changes, which makes it even more informative and useful.

Marcin Kowalczyk, University of Warmia and Mazury in Olsztyn, Poland, https://orcid.org/0000-0003-2900-1464

The monograph consists of ten chapters, in which individual authors present the problems related to disruptive platforms, taking into account their own research specialisation and in-depth scientific interests. The monograph also contains an introduction, which presents the main thoughts, considerations and brief information on the content of individual chapters. The discussion on disruptive platforms opens with a chapter written by Prof. Tymoteusz Doligalski entitled *Platform canvas: Does the platform business model imply disruption and monopolisation?* It includes very interesting reflections on contemporary business models (business model canvas) in relation to disruptive platforms. Particularly interesting, apart from the characterisation of the specific components of the model, including Groups of customers, Value for platform customers, Objects and other resources, Matchmaking mechanism, Reputation system, Institutions and interventions, Value capture, Platforms diversity and a comparison of Platforms versus other business models for online companies, are reflections on the disruptive character of platforms, contrasted with monopolistic and oligopolistic tendencies – present in their business strategies. The reflections on the potential marginalisation of other market players by platforms belonging to the GAFA group (Google, Amazon, Facebook, Apple) are continued by Professor Michał Goliński in the second chapter, entitled *GAFA: Internal innovators and disruptive monopolists*. However, the author consciously limits his analysis to the four mentioned entities, noting that Chinese counterparts of GAFA, i.e. BATH (Baidu, Alibaba, Tencent, Huawei) may also require a similar study. Platforms co-creating the GAFA group, also referred to in the text as Giant Platform Operators (GPO), are presented in the historical context of the technological revolution initiated by the popularisation of the commercial Internet following 1995. Professor Golinski points to the process of reorientation of the original activities of the Bigtech companies over the years. Google, originally offering a browser service, is now increasingly successful in the field of Artificial Intelligence (AI) and quantum computing. Apple, which may have originally been associated with the Macintosh computer brand, is still committed to innovation and delivering efficient devices to its users, which are now primarily mobile, easy to use and increasingly smart. Facebook, which should be associated with the first global social network, is now increasingly adopting immersive technologies. Amazon, which was originally an online bookstore, is now focusing on optimising its operations by automating its warehouses and even testing a delivery service using autonomous drones. The GAFA group's financial revenue of almost USD 930 billion for 2021 is impressive, as is its R&D spending. With a combined total of more than USD 107.5 billion, these companies are at the very top of any ranking, when compared to nation states. The USA, China, Japan and Germany are the only countries which have higher R&D figures than GAFA put together. The author of this part of the study formulates a very interesting question about the gradual monopolisation of individual industries which are the domain of GAFA, as well as its dominance in terms of attracting money from advertisers. The virtually free aggregation of user data – providing highly personalised information about platform users through their activities within the services offered by GAFA – is becoming an important business incentive. Equally important are insights into the potential disruptive power of GAFA, as well as mechanisms related to deterring potential used to fend off competitors through the use of advanced predictive tools and, in effect, maintaining a comfortable *status quo* for GAFA and blocking potential innovations forced by market and technological competition. However, Michał Golinski also sees the disruptive potential of decentralised Blockchain technology, which may completely disrupt the digital market in the coming years.

The following chapters address the very topical issue of contemporary concepts related to supply chain management and the internationalisation of business through disruptive platforms. In the third chapter, entitled *Platforms in supply chain management. Disruption or evolution?* Professor Katarzyna Nowicka describes the most important changes concerning the perception of Supply Chain Management (SCM). The author pointed out a significant shift occurring as a result of platformisation, including the areas of sourcing, manufacturing and delivery. In the case of disruptive platforms, an increasingly important area relating to the use of IT technology in supply chain management, referred to as a Digital Supply Chain, was also identified, which is connection of individual parts of the system and responding in real time to changes relating to the parameters of demand and supply. Professor Nowicka also points to the growing importance of the concept of Extended Digital Supply Chains (EDSC), including the use of renewable energy sources in transport and multimodal sustainable transport platforms, as an answer to the challenges related to the increasingly important need to care for the environment. In the next, fourth chapter of the monograph, entitled *Digital platforms' internationalisation and its disruptive impact on international business*, Professor Marzanna Katarzyna Witek-Hajduk focused on the issue of internationalisation of disruptive platforms' activities, in particular the specificity of activities going beyond the domestic market. The article analyses the profiles of selected platforms (Amazon, Alibaba, AliExpress, Allegro, Booking.com, TripAdvisor, Not Just a Label, Uber) and their disruptive impact on international business, taking into account factors such as new ways of internationalising operations, new ways of acquiring knowledge and building relations, new ways of creating and delivering value to foreign customers, and significant changes in the competitive environment taking place in many industries.

In the fifth chapter, entitled *Market monopolisation through e-commerce? Analysis of Price behaviours at the Allegro.pl marketplace platform*, Dr. Adam Korczyński

characterises the tendency concerning the mechanism of price-setting within the digital marketplace. The author presented research on the functioning of the mechanism of price level adjustment, both in the case of an increase and decrease tendency of selected product categories on the most popular Polish auction portal, Allegro. Conclusions from the research may prove to be very important in a possible comparative analysis taking into account global sales platforms such as Amazon or Ebay. The issue of analytical platforms is presented in the sixth chapter, entitled *Analytics platforms in information technologies. A methodological approach*, by Professor Ryszard Szupiluk. The author pointed out the interdependencies between programming platforms and analytics platforms. Moreover, this part of the monograph characterises the latest phenomena and trends including Machine Learning and Deep Learning, Data Mining, Big Data, Artificial Intelligence and Data Science. The chapter concludes with the characteristics of disruptive analytics platforms, which may require less and less advanced programming knowledge from their users, focusing primarily on functionality and user experience (UX).

In the seventh chapter, entitled *Consumer shopping behaviours on social media platforms. Trends, challenges, business applications,* Professor Bogdan Mróz focuses on the analysis of a new demographic target group of buyers of goods and services, referred to as *digital natives*. Adapting activities to the needs and expectations of this specific group of recipients – who focus on critical reception of content and active co-creation (prosumption) instead of passive consumption of goods and services – may be a huge challenge for technological platforms. This group, however, is not homogeneous – which was perfectly illustrated by the author of this chapter in the characteristics of different categories of social media users: from the most active to the relatively passive users. Bogdan Mróz also points to new phenomena relating to shoppertainment (simultaneous use of social media and making purchases, mainly using mobile devices). Moreover, the author of this chapter points out the latest trends related to the application of Web 5.0 (Emotional Web) and the Internet of Behaviours (IoB). The topics related to focusing and maintaining attention of disruptive platform users were characterised in the next chapter, authored by Professor Bohdan Jung. It is entitled *Attention as a scarce resource in the platform economy*. The chapter depicts how the phenomenon of attention deficit and time hybridisation (combining work-related and leisure activities at the same time) influences adjustments in the strategies of reaching the audience through disruptive platforms. To be of interest, a message has to be very short – since, according to research commissioned by Microsoft, the average viewer maintains full attention on a new source of information for only eight seconds. Professor Jung rightly points out that regardless of time optimisation strategies, such as time hacking, life hacks, etc., we are all still limited by the fact that

the possibility of extending the 24-hour day has not been created. Time, unlike material resources, is a non-reproducible resource.

The penultimate, ninth chapter by Dr Jan Misiuna, entitled *Web platforms as a tool for financing 2020 election campaigns in the USA*, deals with the topic of fundraising platforms applied by the two biggest political competitors on the American political market: WinRed (GOP) and ActBlue (Democratic Party). The fundraising platforms are characterised both in terms of the previous decentralisation of similar campaign fundraising entities (an important reason for the creation of WinRed before the 2020 election series), effectiveness in raising funds even in the form of small contributions, and functionality and user experience (UX). ActBlue and WinRed functionality solutions are presented against the background of previous achievements during the 2016 election campaign by Bernie Sanders' staff. The article presents completely new opportunities related to the use of platforms, such as the "money bomb" strategy – raising funds from donors outside the particular state where the election race is taking place. Platforms can become not only a tool for fundraising, but above all for formulating optimal electoral strategies based on the collected data (it is worth mentioning the ethical dimension of irregularities related to the activities of Cambridge Analytica consultants during the 2016 US presidential elections). In the area of fundraising platforms, this is a specific 'arms race' in the form of breaking new records related to the amount of raised election funds.

In the final chapter of the monograph, entitled *Digital Platforms and Chinese state institutional capacity. Why digital platforms are essential for the Chinese way*, Professor Krzysztof Kozłowski looks at the modernisation processes taking place in China. Indeed, over the last few decades, we have witnessed huge economic and technological progress occurring in the Middle Kingdom, as well as a global power shift. At the same time, the modernisation processes in China are taking place in pursuit of the policy objectives of the state authorities, and not as an effect of free market forces. Appearances, as Krzysztof Kozłowski points out, may be deceptive. China has institutions typical of countries with a developed market economy, including a stock exchange, an independent central bank and commercial banks. China is also a member of the World Trade Organisation and has significant amounts of foreign direct investment (FDI). However, the processes of economic and technological transformation are not taking place as a result of free market forces. The sources of this phenomenon should be sought not so much in the reforms initiated by Deng Xiaoping in 1978-79, which resulted in economic liberalisation and the opening of the Chinese market to cooperation with developed countries, but rather in the earlier decades characteristic of Mao Zedong's reforms. The years of totalitarian terror (1949-1979) and the socially costly, bloody experiment in the form of the Great Leap Forward strategy, strengthened the

state apparatus. Institutional capacity of the state is the main factor responsible for China's smooth implementation of market reforms since 1979. China's institutional capacity is measured by one of the lowest crime, shadow economy, and corruption rates in the world, dynamic progress in education, and a rapidly increasing literacy rate. At the same time, China is distrustful when it comes to implementing Western technology platforms. The Chinese use their own platforms such as WeChat, QQ, and Qzone – which have the same functionalities as their Western counterparts.

We should appreciate the great multithreading in the description of the complex narrative related to the rapid technological progress taking place before our eyes, the effect of which is the increasing platformisation of the economy. However, the process of technological change characteristic of the Fourth Industrial Revolution, as measured, for instance, by disruptive platforms characterised by huge data flows, is not matched by the cognitive abilities of *homo sapiens*. The result of this disproportion is a widening information gap and a constant deficit of attention. It all comes down to the realisation that what may be crucial is not so much to optimise strategies for increasing material resources, but to find ways of saving the most precious, non-reproducible, individual resource – the time given to each of us. One can go a step further – technological progress, which is aimed for instance at making everyday life easier, may in the years to come – in the words of Yuval Noah Harari – be increasingly confined not so much to the domain of IT, but to biotechnology. In the future, technological development may be related not only to improving the quality of life and optimising time, but above all to the possibility of increasing this resource – through biotechnological improvement of human parameters and extension of human life. This specific quest for the Holy Grail will not fall to everyone. The engine of eternal progress, but at the same time one of the greatest flaws of our species, is eternal insatiability, which can also be described as greed. The beneficiaries of the changes associated with the coming biotechnological revolution will be relatively small groups, which can be compared to the current beneficiaries of platformisation, symbolised by GAFA.

In considering disruptive platforms that maximise economic performance, an important thread may be overlooked regarding, for example, the challenges associated with an environmentally sustainable development strategy. Current economic activities can be regarded as a struggle between the approach related to the maximisation of benefits achieved today and the problem of irreversible degradation of the ecosphere in the future. Concern for the ecosphere is present in the European Green Deal strategy, including decarbonisation in EU countries and reorientation towards renewable energy sources (RES). Greed has another face – if only in the form of unbridled territorial expansion. The effects of this destructive action can be seen in reports from across our eastern border, namely Russia's military aggression against Ukraine. Perhaps it is in the nature of our eternally insatiable species to seek destruction.

Disruptive platforms, focused on maximising usability (UX) and achieving their own economic results, may not provide a ready answer when facing the issues of future global challenges, especially as platform users are objectified – treated as a means of profit optimisation. However, the driving force for change in the way global challenges, including sustainability issues, are viewed may not be the disruptive platforms, but rather the public authorities and the active user community – described in the monograph as the *net generation*.

Contemporary technological transformations cannot be encapsulated in one simple narrative; phenomena related to digital transformation thus elude simplified categorisation. In this respect, the joint effort of the authors – academics from the Warsaw School of Economics, who co-wrote this very up-to-date and cognitively valuable monograph – should be particularly appreciated.

Bibliographic data: Tymoteusz Doligalski, Michał Goliński, and Krzysztof Kozłowski (Eds.), *Disruptive platforms. Markets, ecosystems and monopolists.* Routledge, 2021.

Marcin Kowalczyk is a researcher in the field of digital transformation. Author of the book entitled *Digital State* (*Cyfrowe Państwo. Uwarunkowania i perspektywy*), Wydawnictwo Naukowe PWN, Warsaw, 2019 – named the best scientific book of the year 2020 by the Polish Information Technology Society (PTI). He is employed at the Faculty of Law and Administration of UWM in Olsztyn. A graduate of the Warsaw School of Economics and the University of Warsaw (American Studies Center; Faculty of Journalism and Political Science, UW – major: journalism and social communication, specialisation: media marketing and PR; additional studies in national security at the Institute of International Relations of the University of Warsaw, in cooperation with the Office of National Security and the Ministry of National Defence). He holds a doctorate in political science from the Faculty of Journalism and Political Science of the University of Warsaw.

Understanding the declared knowledge and readiness to apply Corporate Social Responsibility of Polish and Spanish business students

Marzena Syper-Jędrzejak

Wojciech Ulrych

Victor Oltra

Abstract

The purpose of this paper is to compare two groups of business students from Poland and Spain regarding their declared knowledge and readiness to apply the principles of corporate social responsibility (CSR). The research was conducted in 2018 among students of two selected universities: the Faculty of Management at the University of Lodz in Poland (UL) and the Faculty of Economics at the University of Valencia (UV). A literature review was performed to compare the CSR education programs at both faculties and to investigate students' opinions about CSR. The Chi2 independence test was used to find any statistical differences between the two researched groups. In total, 607 students took part in the study. The findings revealed that UV students declare themselves to be better prepared than UL students to make sufficient CSR-based employment decisions. It was also found that UV students more frequently declared a readiness to take CSR measures such as encouraging the company's management to take an interest in CSR, or to personally promote CSR activities in the company. UV students also declared a willingness to work in a company guided by CSR values and activities even for lower remuneration. The findings may be affected by social as well as economic contextual factors and they make it possible to formulate concrete recommendations on how to improve students' awareness of CSR ideas.

Keywords: social corporate responsibility, higher education, business students, Poland, Spain

Introduction

The term *corporate social responsibility* (CSR) means the incorporation of social and environmental issues into corporate business activities. The definition of CSR is ambiguous and has been interpreted in many ways. Analysis of almost forty definitions of CSR has shown that despite the obvious differences, at the root of most CSR approaches is a company's environmental, social and economic pillars together with the need to engage stakeholders (Dahlsrud, 2008). The definition of CSR states that companies must not only pursue their main goal – to maximize profits, but also contribute to the well-being of society through voluntary efforts. CSR is growing in importance on a global scale and it is becoming increasingly vital for companies to engage in socially responsible activities to support the growth of their business (Barauskaite & Streimikiene, 2021, p. 278). Activities falling within CSR can be divided into those that are internal and external. The internal activities include shaping the organizational culture, human resources management, occupational health and safety, resource management, and the company's impact on the natural environment. The external activities concern relations with business partners, suppliers, recipients, public institutions, shareholders and customers, in order to benefit local communities and the natural environment (European Commission, 2001; Rok, 2004, p. 20). Both external and internal CSR activities of the company are important for employees and job applicants (Agnihotri & Bhattacharya, 2021; Zaleśna, 2018).

There is a lot of empirical research on students' attitudes towards the idea of ethics in business, or more specifically the issue of CSR (including Alonso-Almeida et al., 2015;

Marzena Syper-Jędrzejak, University of Lodz, Poland, https://orcid.org/0000-0003-0559-1332
Wojciech Ulrych, University of Lodz, Poland, https://orcid.org/0000-0002-9477-2479
Victor Oltra, University of Valencia, Spain, https://orcid.org/0000-0002-5009-4127

Elias, 2004; Eweje & Brunton, 2010; Larrán et al., 2018; Lämsä et al., 2008). On one hand, effective teaching of business ethics at universities (Dellaportas et al., 2006) provides an opportunity to shape the future behavior of business professionals (Marnburg, 2003). Clearly, however, the results of research on the impact of ethical education, awareness and ethical behavior are ambiguous (Neureuther et al., 2004; Tormo-Carbó et al., 2016; Tormo-Carbó et al., 2019). Student belief in CSR does not automatically mean that they would observe CSR principles in practice (Dearman & Beard, 2009).

On the other hand, the degree of involvement with the company largely depends on how young people are treated and which CSR principles are grounded in the company. Various publications indicate that this implementation of socially responsible activities translates into increased motivation, productivity and willingness to stay with the company (Burton & Goldsby, 2010; Gadomska-Lila, 2012). Moreover, in companies which are socially responsible towards their employees, a reduction in absenteeism and personnel turnover was found (Kim et al., 2010).

Taking all of the above into consideration, the aim of this paper is to compare two groups of business students from Poland and Spain regarding their declared knowledge and readiness to apply CSR principles. They will soon become either managers or employees responsible for effecting implementation of CSR ideas.

This comparison between the CSR approach of business students from the Faculty of Management at the University of Lodz (UL) in Poland and the Faculty of Economics at the University of Valencia (UV) in Spain is intended to shed light on CSR teaching and students' declared CSR knowledge and their readiness to apply CSR. The reason we have analyzed these two selected faculties is because of the similarities in their educational profiles. They educate future business-oriented managers and workers. Both of these state universities educate students in various fields of knowledge, with comparable numbers of research staff and structures organized into basic departments and specialist units.

We should compare CSR declarations made by Spanish students with those of their Polish counterparts. This could draw attention to the do's and don'ts of undertaking CSR activities and changes within BA faculty programs, and lead the way for further Polish CSR-oriented practices. Undoubtedly, the present economic state of these countries matters in this regard.

The main [hypothesis, supposition, assumption] was formulated in the following manner: the greater presence of CSR issues in Spanish universities and within public debate, together with broader use of market-oriented CSR practices, has much to do with Spanish students who are more acquainted with CSR. As a result, they are more self-confident and ready to take CSR measures in comparison to their Polish counterparts. The following research questions should be considered:

1. How do students assess themselves regarding their declared knowledge of CSR in terms of career decisions?
2. Do students think that a company's achievements in this area can be measured and that CSR itself can be used in various companies, regardless of their size?
3. How well are both Polish and Spanish students prepared to take CSR measures in terms of choosing an employer or promoting the idea of CSR in the workplace?

The research was carried out using a questionnaire originally developed for this purpose. The presented research had some limitations. Firstly, the sample of the two faculties tested is small and so was not representative in statistical terms. However, there are very few Polish – Spanish comparative studies on CSR, especially within the context of a business and economy study (Dziwiński et al., 2015; Klimkiewicz & Oltra, 2017; Lulewicz-Sas, 2013). Secondly, we take it for granted that in general students find CSR to be important for their career decisions. We only asked questions regarding declared, not factual knowledge. Many respondents are still learning CSR.

Literature review: Polish and Spanish students on CSR issues

Effective education in the field of CSR is fundamental to the development and understanding of the concept and its treatment as part of the corporate strategy. Soon students will become employees of companies, specialists and managers responsible for the shape of CSR practice in business. The number of university business and management courses containing elements of CSR in developed countries is still growing, with the USA being the leading example (Bridges & Wilhelm, 2008; Christensen et al., 2007; Evans & Marcal, 2005; Karbowski et al., 2006; Kozubek, 2016).

Poland is currently following the global trend of including aspects of CSR in higher education programs. Bearing this in mind, managers should be able to respond to various moral dilemmas and take action in the fields of business ethics and CSR (Gasparski, 2008; Rojek-Nowosielska, 2013). Most university economic programs offer courses and subjects containing elements of ethics, social aspects of management, and business ethics. In addition, management studies at master's degree level conform to the basic government-regulated study programs, and business ethics has been included as one of the five basic subjects in management sciences together with other courses, including management, macroeconomics, civil law and statistics (Klimkiewicz & Oltra, 2017). Unfortunately, the way the course is taught strictly depends on the teacher's experience and awareness. Meanwhile, it should be pointed out how crucial the role of academic teachers is in promoting social responsibility as a basic competence in university education (Martínez-Valdivia et al., 2020). In principle, it is difficult to determine that there is any integrated approach or standardization of teaching content in the area of CSR.

Research conducted in the last decade among students of the largest Polish universities showed that the

respondents recognized a place for ethics in business, but at the same time they admitted that competition and the desire for quick profits violate ethical principles in the operation of companies. According to Polish students, companies mainly strive to generate profits, while in most cases CSR is only a "catchy" element of company PR (Karbowski et al., 2006). Other studies indicate that students' knowledge of CSR is superficial and slogan-based (Kozubek, 2016), and the activities of various universities and institutions in the field of CSR education are poorly coordinated (Albińska et al., 2011; Dziwiński et al., 2015).

Apart from students studying economics or related fields, young Polish consumers and future employees, as yet, still have a poor knowledge of CSR. If they recognize the term at all, they only associate it with the promotion of enterprises (Ciemniewski & Buszko, 2009; Wagner, 2014, p. 115). At the same time, young Poles follow the charity activities of companies on social media, engage in protests against unethical players on the market (Piechota, 2014), and pay attention to the CSR activities of the potential employer when looking for a job (Klimkiewicz & Oltra, 2017). Recent reports indicate that CSR issues are perceived as important and relevant to about 70% of Polish employees under 29 years of age (Wołowiec, 2018).

Meanwhile, in Spain many universities offer courses that include CSR content in their curriculum. Such classes are conducted either by practitioners and entities specializing in CSR, or by academic teachers (the latter situation is much more common). Although three quarters of Spanish universities include CSR content in corporate management or related courses, this varies depending on the course. An analysis of the curricula of 62 Spanish universities that offer courses such as "Business administration and management" shows that less than 18% of them offer subjects or courses that refer to the concept of social responsibility or business ethics in their titles (Setó-Pamies et al., 2011, p. 611). Such classes are frequently offered as elective, suggesting that the competencies of future managers to construct and manage CSR programs are still not considered a core business skill. These results correspond to previous analyses carried out in other European countries (Barkhuysen & Rossouw, 2000; Cowton & Cummins, 2003; Macfarlane & Ottewill, 2004; Setó-Pamies et al., 2011). As in Poland, CSR courses [in Spain] are offered mainly in most postgraduate programs and hardly exist at the undergraduate level (Fernández-Fernández & Sanjuán, 2010). The conducted analyses also indicate that the introduction of CSR courses into master's degree programs is not treated as a priority by universities, but more often this is done by private higher education business schools (Miotto et al., 2018; Miotto & Rom-Rodríguez, 2017; Snelson-Powell et al., 2016). CSR education at university level can also be treated as a tool for shaping the ethical attitudes of future specialists and managers (Ruiz-Palomino et al., 2019). Society expectations in this respect are increasing. Stakeholders say that business schools should provide sustainable and responsible management education, to ensure smooth knowledge transfer and to conduct research regarding CSR. The real value is to train future leaders qualified to manage organizations in a manner that has a positive social, economic and environmental impact for all stakeholders and to be able to shape a better world (Miotto et al., 2020).

The approach of society towards CSR has recently evolved fairly rapidly. The unexpected recent pandemic required organizations to take specific measures related to CSR, such as donating funds, supporting social campaigns (#stayathome, #besafe), producing protective masks, creating new products to support the fight against the pandemic, publishing posts on their Facebook profiles, and taking additional preventive measures (Czajkowska, 2020; Firley, 2021; Forum Odpowiedzialnego Biznesu, 2021). These activities – dedicated to the local community, can be included in the area of Corporate Community Involvement (CCI), which is probably one of the most visible aspects of CSR (Cronin et al., 2001).

The above literature review of CSR teaching does not reveal that Spanish CSR teaching is superior to the Polish approach. Both CSR teaching programs have their drawbacks, with the main lack of CSR courses in bachelor study programs being the core observation. However, the Spanish CSR program appears to be more advanced due to a longer historical background with a capitalist market and experience of a democratic system. If this is so, UV students should be at a higher level regarding many CSR aspects than UL students. In turn, as far as Polish students' CSR preferences are concerned, the picture is even less clear. As indicated in the study, we proposed two hypotheses:

H1. Students of management and economics at the University of Valencia (UV) will obtain higher results than students of management at the University of Lodz (UL) in terms of their declared knowledge about CSR and its importance in the organization.

H2. Students of management and economics at the University of Valencia will obtain higher results than students of management at the University of Lodz in terms of their declared readiness to undertake CSR activities.

It is also imperative to compare the 'CSR only' and 'CSR-related' courses at the two faculties to see which curricula provide a better understanding of CSR ideas. In Valencia, all CSR-related courses are elective and offered in the later years of study. There are six basic BA degree programs, of which three offer partly CSR-oriented courses, namely "Quality and environmental management", "Corporate governance and social responsibility", "Corporate environmental policy", "Environmental economics", "Professional ethics and social corporate responsibility" and "Tourism and sustainable development". There are also HRM-related courses and other basic socially-oriented management courses which may refer to CSR-related topics (https://www.uv.es/uvweb/economy/en/undergraduate-degree-studies/degree-programmes-offered/degrees-1285848977179.html).

In turn, there are no typical CSR-oriented elective courses within any of the thirteen BA programs in Lodz either. However, some information regarding CSR is provided during other basic socially-oriented courses such as "Standards of HRM", "Social aspects of management" "Environmental management" and "Ethics of new technology". Interestingly, there are more CSR-related courses for students in programs provided in English, and on the Erasmus and Mobility programs ("Corporate Social Responsibility" or "Business Ethics"). (http://zarzadzanie.uni.lodz.pl/tabid/2853/Default.aspx).

There are four MA degree programs in Lodz, and the situation regarding CSR-related courses is similar to the BA degree programs. CSR issues occasionally appear in basic subjects within the curricula. CSR ideas are presented as a part of optional, specialty subjects, usually in the second year in subjects like "Ethics in public administration", "Customer relationship management", "Social responsibility in supply chain" or "Human Side of the Company".

Meanwhile in Valencia, sixteen MA programs are offered, and, depending on the program, CSR issues are found in basic-level subjects ("Advanced management accounting and corporate social responsibility" in the Accounting, Auditing and Management Control MA Degree, or in "Ethics and corporate social responsibility" in the Corporate Finance MA Degree) or are selected later by students as optional.

Methodology

The chi2 independence test was chosen to show significant statistical differences between items developed in the questionnaire (Appendix 1) between the two researched groups. It looked at how students view both their declared CSR knowledge regarding career decisions and company-related measurement, as well as their readiness to apply CSR in management and personal choices. The five-point Likert scale was used together with a dichotomy in the form of yes / no answers. The research was conducted between January 2018 and May 2018 among students of both selected faculties. The study did not capture any changes in opinions that could have been caused by the pandemic. In total, 607 students took part in the study, of whom 70% were female (36% were from UL and 34% from UV), while 30% of the respondents were male (7% on the Polish side and 23% on the Spanish side). The respondents mainly represented the fields of economics, finance and management – including HR management, business management, etc.

The sample represents students belonging to *Generation Z*, born between 1995 and 2010. In general, there is one feature common to Spanish and Polish young people: they were all brought up in VUCA conditions (volatility, uncertainty, complexity, ambiguity) featuring short-term contracts and never-ending technological change, with constant mobile internet access (Mazurek, 2019). Polish and Spanish Zennials constantly share information and practice internet communication skills using social media. They are multitasking individuals, adaptable and open, expect immediate reward for their efforts, and are highly competitive in the labour market, constantly looking for new challenges (Mazurek, 2019; Rubio Gil & Sanagustín-Fons, 2019).

There are also national differences. Spanish Zennials attend universities which are above the European average in terms of educational performance. Surprisingly, it is still hard for them to find employment, but they look with more optimism to the future, unlike previous generations (Rubio Gil & Sanagustín-Fons, 2019). In turn, Polish Zennials do not exhibit much empathy or self-control, are poor team workers, are unwilling to exchange opinions or to discuss their ideas, display a low level of ambition in terms of their career, and exhibit a low level of engagement in work colleges. They also assess their economic knowledge and competencies as low (Mazurek, 2019). Some findings show that although Polish Zennials expect fair and equal treatment in the workplace, surprisingly, they do not perceive ethical values as an important part of their job (Dobrowolski et al., 2022).

There is a weakness in the sample regarding a considerable number of the UV first- (36%) and second-year (16%) BA students compared to only a few of the UL first- and second-year BA students (1% for each year). The UV students could be less familiar with CSR ideas. This remark was included in the analysis and findings. However, the data in Table 1 shows that in Valencia a bachelor's degree usually lasts four

Table 1

Structure of respondents in terms of the type and year of study (N = 607)

Level and academic year	UL students		UV students		Total respondents %
	N	%	N	%	
1st year, bachelor's degree	3	1	124	36	21
2nd year, bachelor's degree	2	1	54	16	9
3rd year, bachelor's degree	68	26	64	19	22
4th year, bachelor's degree	n/a	n/a	49	14	8
1st year, master's degree	64	24	n/a	n/a	11
2nd year, master's degree	129	48	n/a	n/a	21
1st year (in Valencia), master's degree	n/a	n/a	50	15	8
Total	266	100	341	100	100

Note. In Valencia, a bachelor's degree usually lasts four years and a master's degree lasts one or two years, depending on the field of study.

n/a – not applicable

Source: authors' own work.

years and a master's degree lasts one or two years, depending on the field of study. In Lodz, a bachelor's degree lasts only three years, but a master's degree lasts two years. Despite the differences between the programs, students study for the same number of years, which allows the authors to make comparisons between the groups.

Results and hypothesis verification

The statistical analysis which was conducted using the chi2 independence test shows that the statements made by UV and UL students differ from each other in a statistically significant way (at the adopted level of $p < 0.05$). As far as declared CSR knowledge is concerned, the comparison of student responses from the two universities shows that more UV students have heard of the CSR concept than UL students (chi2 = –4.07, $p = 0.0001$). Both in the case of knowledge of the concept of CSR and its use in business, UV students more often answered in the affirmative (Table 2), and the same was true in the case of the belief that specific CSR achievements could be measured. In turn, Polish students were more enthusiastic about ethics and CSR in business.

Taking the whole sample into consideration, the knowledge of CSR declared by the respondents was not influenced by their gender. However, apart from nationality, the fact that some students in the two groups were employed (Fig. 1) was important for their knowledge of CSR (chi2 = 4.35, at $p = 0.04$).

The affirmative statements regarding CSR measurability shows that for all students there are no significant statistical differences in the respondents' answers due to their gender, employment or level of studies. The results also highlight that there is room for CSR and ethics in business, but women were less inclined than men to respond "no" (chi2 = –2.72, $p = 0.01$). The results of students in employment from both universities show that there is no significant difference between them in this regard. However, what really matters is the level of study, because bachelor's degree students more often chose the option "I don't know" (chi2 = 3.14, $p = 0.003$), while masters students more often expressed the belief that there is room for ethics and CSR in business (chi2 = –2.37, $p = 0.024$).

The results regarding whether the respondents believe that their knowledge of CSR is sufficient to make career-related decisions are interesting (Fig. 2). UL students gave statistically significant answers "strongly agree" (chi2 = 8.28, $p = 0.00$), while UV students more often gave more cautious answers: "disagree" (chi2 = –4.51, $p = 0.00002$), "neither agree or disagree" (chi2 = –3.56, $p = 0.0007$) and "agree" (chi2 = –3.81, $p = 0.0003$). It turns out that the presented results are influenced by the level of study – bachelor's degree students selected "strongly agree" more often than the higher level students (chi2 = 3.30, $p = 0.002$) who, in turn, showed less self-confidence in this matter, choosing more often the option "neither agree or disagree" (chi2 = 4.37, $p = 0.00003$) or "agree" (chi2 = 2.08, $p = 0.04$).

Table 2
Selected issues concerning the declared knowledge of various aspects of CSR

Issue	UL		UV		chi2	p
	N	*%*	*N*	*%*		
My knowledge of the concept of CSR is sufficient to make good career decisions	218	82	318	93	–4.07	0.00010
The company's CSR achievements can be measured	140	53	211	62	–2.19	0.03597
There is a place for ethics and CSR in business	253	99	309	90	2.388336	0.02303

Source: authors' own work.

Figure 1
Employment status of students from both Universities
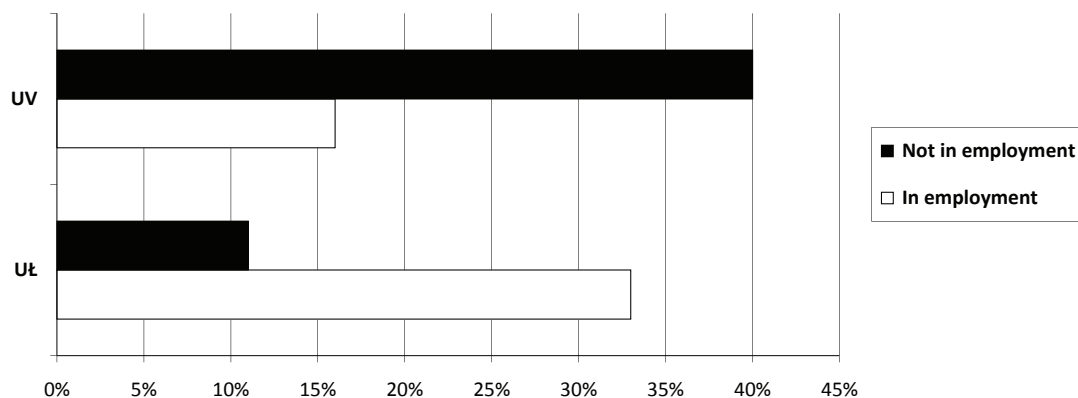
Source: authors' own work.

Figure 2

The respondents' opinions on whether their knowledge of CSR is sufficient to make decisions about choosing to work for a new company (in %)
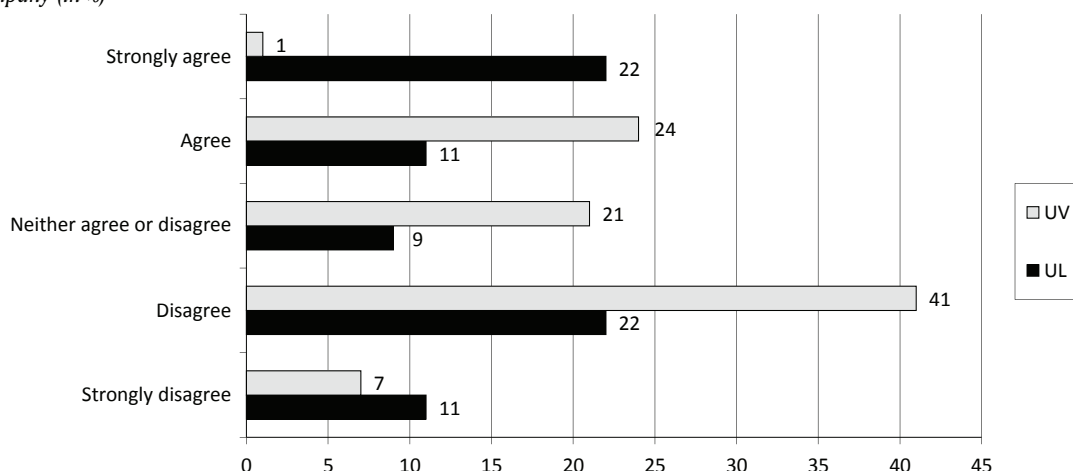
Source: authors' own work.

The first hypothesis (H1) states: Students of management and economics at the University of Valencia (UV) will obtain higher results than students of management at the University of Lodz (UL) in terms of their declared knowledge about CSR and its importance in the organization. Bearing the above results in mind, H1 can only be conditionally confirmed. As shown, the UV students more often declared that they were familiar with the concept of CSR, were convinced that its effects could be measured, and demonstrated that they knew in which organizations CSR could be used. However it was UL students who more often expressed the belief that there is a place for CSR and ethics in business. Nevertheless, the sample structure includes more UV bachelor students than UL students, and the former will definitely improve CSR knowledge over time.

As to declared readiness to undertake CSR activities, the results showed that there are statistically significant differences regarding affirmative answers in favor of UV students (Table 3).

We also found that the willingness to take independent measures promoting CSR in the company was influenced by the gender of the respondents: women from both universities more often selected "yes"

(chi2 = –3.75, p = 0.0004) or "no" (chi2 = –2.48; p = 0.02), while men were more hesitant in their opinions, selecting "I don't know" more often (chi2 = 5.48, p = 0.000). The level of study also played a role: bachelor's degree students declared such willingness more often (chi2 = 4.49, p = 0.00002), while master's students more often expressed uncertainty in this regard (chi2 = –5.13, p = 0.0000). The approach to declared readiness to promote CSR activities in the company also depended on whether the respondents were employed. Students in employment from both universities declared such readiness less often (chi2 = –5.65, p = 0.0000), whereas students not in employment more often expressed indecision (chi2 = 4.56, p = 0.000).

When it comes to the respondents' readiness to encourage the company's management to introduce CSR activities, in addition to nationality (Table 3), the gender of the respondents had an impact – women less often declared such readiness (chi2 = –3.092, p = 0.003), whilst men were more often undecided (chi2 = 2.79, p = 0.008). The issue of employment was also important – students in employment from both universities less often wanted to encourage management to introduce CSR activities (chi2 = –4.88,

Table 3

Declared readiness to promote and implement independent CSR activities

Issue	UL		UV		chi2	p
	N	*%*	*N*	*%*		
I'd be ready to take independent measures promoting the concept of CSR in business	21	8%	205	60%	–13.15	0.000
I'd be ready to encourage company owners / management in my workplace to introduce CSR tools into the organization	124	47%	287	84%	–9.70	0.000
I'd be ready to get involved in the promotion and implementation of CSR in my workplace	164	62%	288	84%	–6.25	0.000

Source: authors' own work.

$p = 0.000$), as opposed to students not in employment, who chose the negative answer less often (chi2 = 3.16; $p = 0.0028$). The level of study had a similar effect on the respondents' answers – the more experienced master's students expressed indecision more often (chi2 = –4.26, $p = 0.0005$), in relation to bachelor's degree students, who more often declared such readiness (chi2 = 4.29, $p = 0.004$).

Therefore, the findings show that the greater the respondents' experience (whether at work or at university) the greater the skepticism about the discussed issue. As for the declared readiness to engage in the promotion and implementation of CSR in the company, in addition to nationality (Table 3), the gender of the respondents had an impact – we found that men's responses were negative more often (chi2 = –2.57, $p = 0.015$). As in the case of employment, working students were less likely to engage in promoting and implementing CSR in their companies (chi2 = –3.19, $p = 0.002$), as opposed to the non-working students, who were more often undecided (chi2 = 2.27, $p = 0.003$), or felt ready to take such actions (chi2 = 2.21, $p = 0.003$). The level of study was not statistically significant here.

The greater readiness on the part of UV students to undertake CSR activities was also confirmed by the responses to the question about whether they would take up employment in a company conducting CSR activities if it offered slightly lower remuneration than the competition (Fig. 3). In a statistically significant manner, UV students more often selected "strongly agree" for employment (chi2 = 2.99, $p = 0.005$), while Polish students more often chose the answer "disagree" (chi2 = 2.92, $p = 0.006$).

Interestingly, statistically significant differences were not noted in the answers to the above question between the group of working students and the group of non-working students. This indicates that this declared readiness does not depend on the respondents' current employment experience. Other findings indicated that a certain link between readiness to take up employment in a company that conducts CSR activities but offers lower salaries and gender – women were less likely to reject such an option than men (chi2 = –2.49, $p = 0.02$); the level of study did not play any role in this regard.

The second hypothesis (H2) states: Students of management and economics at the University of Valencia will obtain higher results than students of management at the University of Lodz in terms of their declared readiness to undertake CSR activities. The results confirm H2. It was found that UV students declared their readiness to take CSR measures, such as encouraging the company's management to take an interest, or to personally promote CSR activities in the company, more often than UL students. UV students also declared their willingness to work in a company guided by CSR values and activities, even if remuneration was lower.

Discussion

It was initially supposed that there would be a huge gap between UV and UL students within the research areas, and indeed this proved to be the case. In the light of the findings, the features of the sample must be borne in mind, as there were far more BA respondents from Valencia than from Lodz. However, this research shows that UV students are more engaged in almost every studied CSR issue than UL students, and this defect in the sample mentioned in the methodology did not affect the UV students' results. Spanish students may simply observe many more CSR examples in their everyday life. For instance, there is a significant difference in the number of CSR reported practices between Poland and Spain, where in Spain more CSR activities were disclosed Spanish by stock listed companies

Figure 3

Declared readiness to take up employment in a company that conducts CSR activities, but offers lower remuneration (in %)
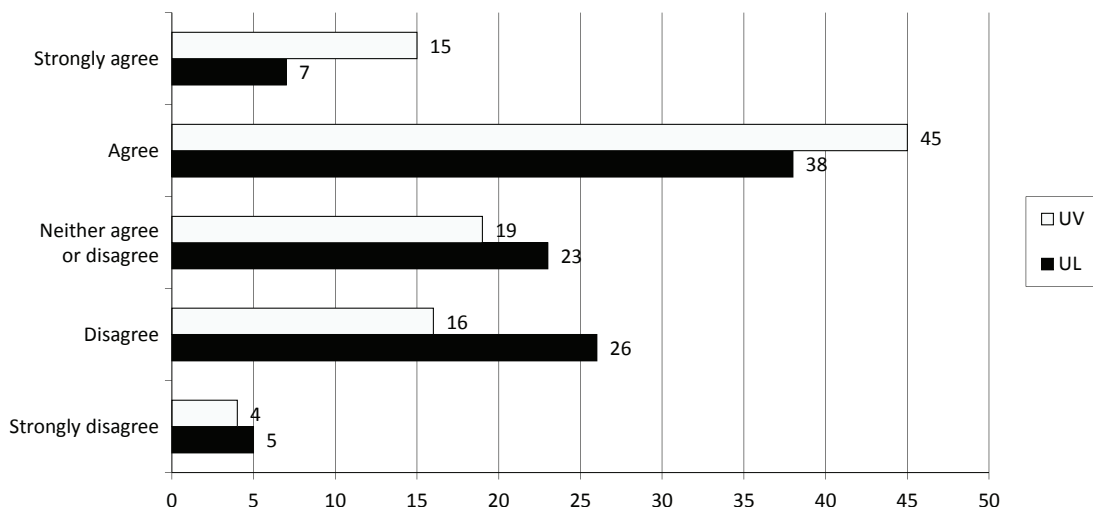
Source: authors' own work.

(Garstecki et al., 2019). UV students also have more elective CSR-related courses within BA and MA programs than UL students.

The results support their CSR involvement and determination but say little about their real knowledge. Only "a place for ethics and CSR in business" was favored more by UL students and may reflect the need to implement CSR more in Poland than in Spain. There are also some contextual factors which may also explain this. Polish students' positive reaction could derive from a far lower unemployment rate compared to Spain (4.1% to 16.4% in January 2018), but simultaneously they are considered a low-cost, well-educated resource with a minimum wage of almost half that in Spain (502 to 858 Euro in 2018, see: https://countryeconomy.com). CSR can also be seen as a remedy to balance the market and to regulate economic disparities. It needs to be borne in mind that CSR can be a consequence of the individual social preferences of entrepreneurs and shareholders, or the whim of well-meaning managers as the ultimate driving force behind any form of CSR (Kitzmueller, 2008). In fact, the influence of stakeholders on CSR is not fully understood and has not been explained. The same may apply to students' opinions on CSR knowledge and readiness to take action. However, in general, women from both faculties are more inclined than men to present an affirmative attitude towards CSR activities.

Implications for theory and for educational practice

Although Polish students were less familiar with the CSR concept, they considered themselves sufficiently equipped to make professional decisions. At first glance, this result could be interpreted as a manifestation of the psychological mechanism known as the Dunning-Kruger effect, in which unqualified people with insufficient knowledge in a given field tend to overestimate their skills in that field and therefore also make decisions based on limited knowledge (Dunning, 2011). However, there is too little data available, and this result can only be seen as a premise for further research.

It can be concluded that the concept of CSR is more widely known to UV students, but for both UL and UV students the number of people who consider their CSR knowledge as definitely sufficient to make career decisions is limited. This may be due both countries' CSR teaching problems. Although education in CSR does not guarantee actual, ethical behavior of students in their future professional life, institutions responsible for educating future managers should at least increase awareness of social responsibility and ethics in business (Alonso-Almeida et al., 2015; Godemann et al., 2014; Ruiz-Palomino et al., 2019). At the same time, CSR teaching from outside of the company can still be of great advantage for society (Księżak, 2016). Additionally, students in employment from both faculties are more familiar with the CSR concept, but simultaneously less ready to both promote CSR activities in the company and encourage

management to introduce CSR activities. This needs to be examined in depth.

The findings make it possible to formulate firm recommendations on how to improve students' awareness of CSR ideas: (1) each BA program at both faculties should include at least a CSR-related course either as elective or even as a basic course, with significant ECTS points. This could direct a student's attention to be more familiar with common interests of stakeholders in the EU market place; (2) the current situation is a specific opportunity to formulate new theses in the field of education and to implement the idea of CSR in practice. Business schools and universities specializing in business should become even more involved in CSR education; (3) CSR teaching could improve future managers' professional development and practices, and ultimately support economic growth in Poland as a result; (4) CSR-related contextual factors regarding students' CSR apprehension should be taken into consideration when teaching the course. The strengths of Zennials must be used to promote CSR ideas. Workshops and internship programs including practical activities could be a remedy to improve student engagement.

Conclusion

When answering the research questions posed in this study, it should be noted that: (1) the CSR knowledge in the UV students' self-assessment is higher than that of UL students, but highly limited for both groups. This might be due to CSR teaching, which is still far from perfect (2).

UL and UV students report that a company's CSR achievements may be measured. They seem to derive their knowledge from convictions regarding their basic knowledge of management. Last but not least (3) UV students are more willing to undertake CSR measures more often than UL students, and are even inclined to earn less to work for entrepreneurs that subscribe to CSR values. It needs to be borne in mind that young people are especially sensitive to the issue of CSR and are convinced that companies should strive to make the world a better place (Connell et al., 2012; Howe & Strauss, 2000). Consistent with these ideas, when we take a closer look at the findings, it appears that the more experience students have, the less engaged they are in CSR.

The highlighted gap between UV and UL students should be a basis for deep reflection among those who are responsible for teaching programs. Due to the growing impact of the CSR concept on management in terms of economic, social and environmental responsibility (Montiel, 2008), it is important to educate employees with particular emphasis on managerial staff (Miotto et al., 2020; Ojala, 2019).

References

Agnihotri, A., & Bhattacharya, S. (2021). CSR fit and organizational attractiveness for job applicants. *International Journal of Organizational Analysis*. Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IJOA-12-2020-2514

Albińska, E., Andrejczuk, M., Krawcewicz, K., Kurzyp, K., & Oczyp, P. (2011). *Responsible business in Poland 2011. Good practices.* FOB.

Alonso-Almeida, M. D. M., Fernández de Navarrete, F. C., & Rodriguez-Pomeda, J. (2015). Corporate social responsibility perception in business students as future managers: a multifactorial analysis. *Business Ethics: A European Review*, *24*(1), 1–17. https://doi.org/10.1111/beer.12060

Barauskaite, G., & Streimikiene, D. (2021). Corporate social responsibility and financial performance of companies: The puzzle of concepts, definitions and assessment methods. *Corporate Social Responsibility and Environmental Management, 28*(1), 278–287. https://doi.org/10.1002/csr.2048

Barkhuysen, B., & Rossouw, G. (2000). Business ethics as academic field in Africa: Its current status. *Business Ethics: A European Review*, *9*(4), 229–235. https://doi.org/10.1111/1467-8608.00196

Bridges, C. M., & Wilhelm, W. B. (2008). Going Beyond Green: The "Why and How" of integrating sustainability into the marketing curriculum. *Journal of Marketing Education, 30*(1), 33–46. https://doi.org/10.1177/0273475307312196

Burton, B. K., & Goldsby, M. G. (2010). The moral floor: A philosophical examination of the connection between ethics and business. *Journal of Business Ethics*, *91*(1), 145. https://doi.org/10.1007/s10551-009-0074-4

Christensen, L. J., Peirce, E., Hartman, L. P., Hoffman, W. M., & Carrier, J. (2007). Ethics, CSR, and sustainability education in the Financial Times top 50 global business schools: Baseline data and future research directions. *Journal of Business Ethics*, *73*(4), 347–368. https://doi.org/10.1007/s10551-006-9211-5

Ciemniewski, W., & Buszko, M. (2009). *Young consumers about CSR, Research report*. Gemius and Forum Odpowiedzialnego Biznesu. https://odpowiedzialnybiznes.pl/wp-content/uploads/2009/11/FOB2009_-Mlodzi_konsumenci_o_CSR_Gemius_FOB.pdf

Connell, J. A., McMinn, N. E., & Bell, N. (2012). How will the next generation change the business world? A report on a survey. *Insights to a Changing World Journal*, *4*, 100–113.

Cowton, C. J., & Cummins, J. (2003). Teaching business ethics in UK higher education: Progress and prospects. *Teaching Business Ethics*, *7*(1), 37–54. https://doi.org/10.1023/A:1022665221990

Cronin, C., Zappalà, G., & Clarkson, M. (2001). Measuring the social impact of companies in Australia: The Smith family's participation in the Good Reputation Index. *Research and Social Policy Briefing Paper*, *9*.

Czajkowska, A. (2020). Wpływ pandemii COVID-19 na działania CSR podejmowane przez przedsiębiorstwa. *Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie*, *3*(987), 45–62. https://doi.org/10.15678/ZNUEK.2020.0987.0303

Dahlsrud, A. (2008). How corporate social responsibility is defined: an analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management, 15*(5), 1–13. https://doi.org/10.1002/csr.132

Dearman, D., & Beard, J. (2009). Ethical issues in accounting and economics experimental research: inducing strategic misrepresentation. *Ethics & Behavior*, *19*(1), 51–59. https://doi.org/10.1080/10508420802623674

Dellaportas, S., Cooper, B. J., & Leung, P. (2006). Measuring moral judgement and the implications of cooperative education and rule-based learning. *Accounting & Finance, 46*(1), 53–70. https://doi.org/10.1111/j.1467-629X.2006.00161.x

Dobrowolski, Z., Drozdowski, G., & Panait, M. (2022). Understanding the impact of generation Z on risk management—a preliminary views on values, competencies, and ethics of the generation Z in public administration. *International Journal of Environmental Research and Public Health, 19*(7), 3868. https://doi.org/10.3390/ijerph19073868

Dunning, D. (2011). The Dunning–Kruger effect: On being ignorant of one's own ignorance. *Advances in Experimental Social Psychology*, *44*, 247–296. https://doi.org/10.1016/B978-0-12-385522-0.00005-6

Dziwiński, P., Barcik, A., Sanchez-Hernández, M. I., & Gallardo-Vázquez, D. (2015). Current trends in CSR in Spain and Poland. Case study: La Caixa and PKN Orlen. *Zeszyty Naukowe Wyższej Szkoły Humanitas. Zarządzanie, 1*, 25–33. bit.ly/3yRLMcJ

Elias, R. Z. (2004). An examination of business students' perception of corporate social responsibilities before and after bankruptcies. *Journal of Business Ethics, 52*(3), 267–281. https://doi.org/10.1023/B:BUSI.0000037558.74693.d5

European Commission. (2002, July 19). *Green Paper: Promoting a European framework for Corporate Social Responsibility.* Commission of the European Communities. https://ec.europa.eu/commission/presscorner/api/files/document/print/en/doc_01_9/DOC_01_9_EN.pdf

Evans, J. F., & Marcal, L. E. (2005). Educating for ethics: Business deans' perspectives. *Business and Society Review*, *110*(3), 233–248. https://doi.org/10.1111/j.0045-3609.2005.00014.x

Eweje, G., & Brunton, M. (2010). Ethical perceptions of business students in a New Zealand university: do gender, age and work experience matter? *Business Ethics: A European Review*, *19*(1), 95–111. https://doi.org/10.1111/j.1467-8608.2009.01581.x

Fernández-Fernández, J. L., & Sanjuán, A. B. (2010). The presence of Business ethics and CSR in the higher education curricula for executives: the case of Spain. *Journal of Business Ethics Education*, *7*, 25–38.

Firley, K. (2021). Społeczna odpowiedzialność biznesu w Polsce w świetle celów zrównoważonego rozwoju. *Problems of Economics and Law*, *6*(1), 35–53. https://journals.anstar.edu.pl/index.php/pel/article/view/362/403

Forum Odpowiedzialnego Biznesu. (2021). *Odpowiedzialny biznes w Polsce. Dobre Praktyki 2020*. https://odpowiedzialnybiznes.pl/wp-content/uploads/2021/04/FOB_Raport2020.pdf

Gadomska-Lila, K. (2012). Corporate social responsibility in relation to employees. *Central European Management Journal*, *20*(2), 41–52. https://doi.org/10.7206/mba.ce.2084-3356.4

Garstecki, D., Kowalczyk, M., & Kwiecińska, K. (2019). CSR practices in Polish and Spanish stock listed companies: A comparative analysis. *Sustainability*, *11*(4), 1054. https://doi.org/10.3390/su11041054

Gasparski, W. (2008). *Responsible management education*. Academic and Professional Press – Kozminski University.

Godemann, J., Haertle, J., Herzig, C., & Moon, J. (2014). United Nations supported Principles for Responsible Management Education: purpose, progress and prospects. *Journal of Cleaner Production*, *62*, 16–23. https://doi.org/10.1016/j.jclepro.2013.07.033

Howe, N., & Strauss, W. (2000). *Millennials rising: The next great generation*. Knopf Doubleday Publishing Group.

Karbowski, A., Bielińska, A., Żygłowicz, M., Selwa, M., Chlebek, M., & Makuch, Ł. (2006). *Raport z badania – CSR oczami studentów*. SGH.

Kim, H. R., Lee, M., Lee, H. T., & Kim, N. M. (2010). Corporate social responsibility and employee-company identification. *Journal of Business Ethics*, *95*, 557–569. https://doi.org/10.1007/s10551-010-0440-2

Kitzmueller, M. (2008). *Economics and corporate social responsibility*. EUI Working Papers. ECO 2008/37. https://cadmus.eui.eu/bitstream/handle/1814/9816/ECO_2008_37.pdf?sequence=1&isAllowed=y

Klimkiewicz, K., & Oltra, V. (2017). Does CSR enhance employer attractiveness? The role of millennial job seekers' attitudes. *Corporate Social Responsibility and Environmental Management*, *24*(5), 449–463. https://doi.org/10.1002/csr.1419

Kozubek, R. (2016). Postawy wobec koncepcji społecznej odpowiedzialności biznesu wśród przyszłej kadry zarządzającej na przykładzie studentów WOIZ PŚL. *Zeszyty Naukowe Politechniki Śląskiej: Organizacja i Zarządzanie*, *98*, 71–73.

Księżak, P. (2016). The benefits from CSR for a company and society. *Journal of Corporate Responsibility and Leadership*, *3*(4), 53–65. https://doi.org/10.12775/JCRL.2016.023

Larrán, M., Andrades, F. J., & Herrera, J. (2018). An examination of attitudes and perceptions of Spanish business and accounting students toward corporate social responsibility and sustainability themes. *Revista de Contabilidad*, *21*(2), 196–205, https://doi.org/10.1016/j.rcsar.2018.02.001

Lämsä, A. M., Vehkaperä, M., Puttonen, T., & Pesonen, H. L. (2008). Effect of business education on women and men students' attitudes on corporate responsibility in society. *Journal of Business Ethics*, *82*(1), 45–58. https://doi.org/10.1007/s10551-007-9561-7

Lulewicz-Sas, A. (2013). Corporate social responsibility in selected EU countries. *Ekonomia i Prawo*, *12*(4), 537–550. https://doi.org/10.12775/EiP.2013.039

Macfarlane, B., & Ottewill, R. (2004). Business ethics in the curriculum: Assessing the evidence from UK subject review. *Journal of Business Ethics*, *54*(4), 339–347. https://doi.org/10.1007/s10551-004-1823-z

Marnburg, E. (2003). Educational impacts on academic business practitioner's moral reasoning and behaviour: effects of short courses in ethics or philosophy. *Business Ethics: A European Review, 12*(4), 403–413. https://doi.org/10.1111/1467-8608.00341

Martínez-Valdivia, E., Pegalajar-Palomino, M., & Burgos-García, A. (2020). Social responsibility and university teacher training: Keys to commitment and social justice into schools. *Sustainability, 12*(15), 6179. https://doi.org/10.3390/su12156179

Mazurek, M. (2019). Generation Z as a challenge for the traditional corporate culture in Poland. *Kwartalnik Kolegium Ekonomiczno-Społecznego „Studia i Prace", 1*(37), 167–180. https://econjournals.sgh.waw.pl/kwes/article/view/2164

Miotto, G., & Rom-Rodríguez, J. (2017). CSR in business schools: A theoretical framework. *Business and Society*, *16*, 1410–1419. https://doi.org/10.21125/iceri.2017.0453

Miotto, G., Blanco González, A., & del Castillo Feito, C. (2018). Social responsibility: A tool for legitimation in Spanish Universities' strategic plans. *Trípodos*, *42*, 59–79. bit.ly/3PI5QE7

Miotto, G., Blanco-González, A., & Díez-Martín, F. (2020). Top business schools legitimacy quest through the Sustainable Development Goals. *Heliyon*, *6*(11), e05395. https://doi.org/10.1016/j.heliyon.2020.e05395

Montiel, I. (2008). Corporate social responsibility and corporate sustainability: Separate pasts, common futures. *Organization & Environment, 21*(3), 245–269. https://doi.org/10.1177/1086026608321329

Neureuther, B. D., Swicegood, P., & Williams P. (2004). The efficacy of business ethics courses when coupled with a personal belief system. *Journal of College Teaching and Learning*, *1*(4), 17–22. https://doi.org/10.19030/tlc.v1i4.1930

Ojala, A. (2019), Business schools' competitive strategies: whose goals, which aims? *Management Research Review, 42*(8), 954–970. https://doi.org/10.1108/MRR-06-2018-0232

Piechota, G. (2014). Społeczeństwo obywatelskie w dobie social media. *Athenaeum: Polskie Studia Politologiczne*, *41*, 231–248. bit.ly/3MPuiSc

Rojek-Nowosielska, M. (2013). Edukacja jako instrument kształtowania wiedzy o społecznej odpowiedzialności przedsiębiorstw. *Studia Ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach, 131*, 42–50. bit.ly/3Gc6VzY

Rok, B. (2004). *Odpowiedzialny biznes w nieodpowiedzialnym świecie*. Akademia Rozwoju Filantropii w Polsce. Forum Odpowiedzialnego Biznesu. https://bit.ly/3lE2q7S

Rubio Gil, M. A., & Sanagustín-Fons, M. V. (2019). Generation Z in Spain: Digital socialisation and intellectual capital. In C. Scholz & A. Rennig (Eds.), *Generations Z in Europe* (*The changing context of managing people*) (pp. 61–87). Emerald Publishing Limited. https://doi.org/10.1108/978-1-78973-491-120191012

Ruiz-Palomino, P., Martínez-Cañas, R., & Jiménez-Estévez, P. (2019). Are corporate social responsibility courses effective? A longitudinal and gender-based analysis in undergraduate students. *Sustainability, 11*(21), 6033. https://doi.org/10.3390/su11216033

Setó-Pamies, D., Domingo-Vernis, M., & Rabassa-Figueras, N. (2011). Corporate social responsibility in management education: Current status in Spanish universities. *Journal of Management & Organization*, *17*(5), 604–620. https://doi.org/10.5172/jmo.2011.17.5.604

Snelson-Powell, A., Grosvold, J., & Millington, A. (2016). Business school legitimacy and the challenge of sustainability: A fuzzy set analysis of institutional decoupling. *Academy of Management Learning & Education*, *15*(4), 703–723. https://doi.org/10.5465/amle.2015.0307

Tormo-Carbó, G., Oltra, V., Klimkiewicz, K., & Seguí-Mas, E. (2019). „Don't try to teach me, I got nothing to learn": Management students' perceptions of business ethics teaching. *Business Ethics: A European Review, 28*(4), 506–528. https://doi.org/10.1111/beer.12236

Tormo-Carbó, G., Oltra, V., Seguí-Mas, E., & Klimkiewicz, K. (2016). How effective are business ethics/CSR courses in higher education? *Social and Behavioral Sciences, 228*, 567–574. https://doi.org/10.1016/j.sbspro.2016.07.087

Wagner, A. (2014). Młodzież jako partner dialogu społecznego. Społeczna odpowiedzialność biznesu w społeczeństwie ryzyka. *Jagiellońskie Studia Socjologiczne*, *2*, 109–119. https://www.ejournals.eu/pliki/art/3758/pl

Wołowiec, M. (2018, April 30). *Rynek pracy*: *Odpowiedzialne firmy atrakcyjniejsze dla pracowników*. MichaelPage. https://www.michaelpage.pl/dla-medi%C3%B3w/informacje-prasowe/rynek-pracy-odpowiedzialne-firmy-atrakcyjniejsze-dla-pracownik%C3%B3w-0

Zaleśna, A. (2018). Oczekiwania potencjalnych kandydatów do pracy wobec przyszłego pracodawcy w świetle koncepcji CSR. *Edukacja Ekonomistów i Menedżerów*, *47*(1), 175–189. https://doi.org/10.5604/01.3001.0012.1426

Marzena Syper-Jędrzejak holds a PhD in economics and is an Assistant Professor at the Faculty of Management at the University of Lodz, Poland. She deals with the issues of people management in organizations. Her research interests are related to career development, work-life balance, corporate wellness, and stress prevention in contemporary organizations.

Wojciech Ulrych holds a PhD in economics and is an Assistant Professor at the Faculty of Management at University of Lodz, Poland. His professional interests are concentrated on a systemic approach to organization management. In his scientific work, he deals with the issues of lean management, employee performance management, remuneration, and humanization of work.

Victor Oltra holds a PhD in economics and is an Associate Professor of Management at the Faculty of Economics, the University of Valencia, Spain. His research interests focus on human resource management, innovation and knowledge management, business ethics and corporate social responsibility, and the links between these issues.

WE RECOMMEND
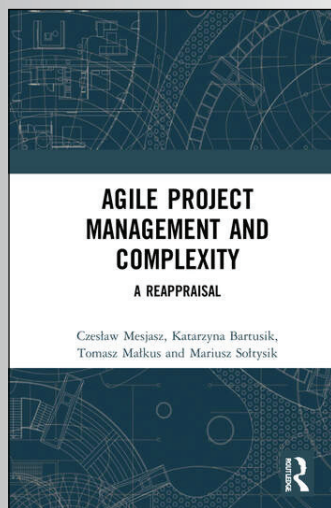
Czesław Mesjasz, Katarzyna Bartusik, Tomasz Małkus, & Mariusz Sołtysik,
Agile Project Management and Complexity. A Reappraisall

This research monograph presents an inter-disciplinary study of the impact, and current status, of applications of complexity-related concepts in the early stages of development of Agile Project Management (APM). The results serve as an introduction for exploring more profound relations between complexity-related ideas and APM in the future.

The increasing complexity of software projects and their environment in the 1990s constituted the main determinants of the development of the family of methodological frameworks called Agile Project Management. Development of APM has been shaped by a broadly defined area of research called complexity science or complexity theory based on complex adaptive systems (CAS) and on their characteristics: Complexity, chaos, the edge of chaos, emerging properties, non-linearity, self-organization, etc. In the 21st century, due to the expansion of Agile beyond software development, the challenges deriving from the complexity of projects and the environment are even more urgent or compelling. Such phenomena demand more profound inter- and multi-disciplinary studies. This book examines the impact of applications of complexity-related ideas deriving from intuitive complexity and from complexity science in the early stages of development of the Agile methodological frameworks in project management and considers the current status of those applications. It questions the usefulness of those applications for the practice and theory of APM, and then proposes a conceptual framework for further theoretical studies and several ways of improvement and refinement of the Agile Project Management necessary to deal with broadly defined complexity in project management.

Publisher: Routledge, 2022
Source of the description of the book: the website of Routledge

Improving intercultural pragmatic competencies in online L2 Spanish classrooms through task-supported learning

Jeremy W. Bachelor

Abstract

Learners of a second language often have limited access to the native culture of that language in an authentic way, resulting in them committing linguistic and intercultural mistakes. One of the main advantages of task-based learning is that it can expose students to real-world circumstances, which makes learning a language more meaningful and inclusive of appropriate language behaviour. Task-based learning has become an accepted method for learning a language in face-to-face classroom environments, but its applicability to online learning is largely unaddressed. The author proposed well-organised online role-plays based on a task-based approach involving native speakers, which helped students interact in an authentic way and demonstrate their understanding of culture. The author conducted the research to increase intercultural pragmatic competencies in online L2 classrooms regarding common pragmatic speech acts as to not only increase their pragmatic competency but to also motivate students. The students from the online experimental group who were exposed to task-supported role-plays performed better than the online control group of students; however, student motivation was only mildly impacted. Thus, pragmatics and interculturality can be effectively taught in online L2 classrooms through task-supported learning, though motivation may require longer interventions.

Keywords: interlanguage pragmatics, intercultural communication, online learning, motivation, task-based language teaching

Introduction

Language is a core element of the existence of human society and represents a primary factor in observing the human personality. Therefore, no human society has ever existed without language and culture (Soomro et al., 2015). Every culture has its norms, beliefs, customs and traditions. Therefore, the second-language (L2) acquisition process cannot be completed without emphasising culturally appropriate behaviour while interacting in the second language. It is for this very reason that the National Council of State Supervisors for Languages (NCSSFL, 2018) created intercultural competence standards stating that it is essential for all novice students to recognise "obviously inappropriate behaviors in familiar everyday situations," "avoid major social blunders," and "transition smoothly from formal to informal styles of behavior" in the target language (p. 6).

Accordingly, some schools have developed sample learning targets in which the students are motivated to follow cultural norms while interacting. For example, in Bellevue School District (Washington, United States), language learning targets are developed around cultural contexts in which students must accept or refuse invitations based on culturally appropriate norms for the target language. Students have to follow different culturally appropriate standards while offering or receiving gifts, requesting assistance, using appropriate body language, turn-taking, interrupting and agreeing while interacting with others (Bellevue School District, 2015, p. 4). These intercultural competence standards require students to have a basic understanding of pragmatic norms and speech acts. This is where intercultural competence and pragmatics intersect.

Jeremy W. Bachelor, Heartland Community College (Normal, IL), USA https://orcid.org/0000-0002-6447-5385

Pragmatic errors are likely to occur when the learners are not aware of the target language's cultural factors. It is challenging to avoid social blunders if the learners do not have ample knowledge of speech acts. It is equally challenging for educators to teach pragmatics to learners of a second language.

Many learners of a second language have less exposure to using authentic language within its cultural contexts. They have fewer or no opportunities to learn the target language out of the classroom, and they rely on teachers' instructions, textbooks, and visual programmes (Webb, 2013). Teachers may not be properly trained in how to teach pragmatics to students (Vellenga, 2011), which is problematic for two reasons: 1) students may not be able to meet intercultural standards, and 2) pragmatic errors may be perceived as more serious than grammar errors due to real-life implications (Wolfe et al., 2016).

In Spanish, refusals, requests and invitations are among the most commonly used speech acts (Langer, 2011). Strategies employed when carrying out speech acts vary greatly from culture to culture (Yoko, 1995). According to Langer (2011), the most common forms of invitations tend to be more direct in Spanish than in English. Requests in Spanish vary based on the level of imposition (the more imposition is used, the more courteous the request is). Finally, refusals are generally indirect in Spanish and often include an explanation or postponement.

According to Smith (2009), the above differences are not commonly taught in L2 classrooms. Smith also observed that Spanish learners are unfamiliar with native-like responses to requests and invitations. In Spanish, these responses are commonly brief, and typically, learners do not have the pragmatic skills to express what would be appropriate for the target culture (Smith, 2009). Like pragmatic errors, there are several challenges that educators face while teaching Spanish to elementary-level learners. However, teachers can make maximum use of non-verbal and verbal cues to minimise pragmatic errors.

Due to the outbreak of the COVID-19 pandemic, teaching activities shifted online, with teachers having to help their learners gain second-language competencies using virtual platforms, which posed great challenges especially for those teachers who had never delivered online classes before. This rapid transition from campus-based face-to-face teaching to virtual teaching required them to acquire online teaching skills. It was also necessary to adapt their teaching methods, structure, content and pedagogy (Rad et al., 2021). Several studies support the idea of teaching a second language online by employing a wide array of technologies (Herrera Díaz & González Miy, 2017; Jabeen & Thomas, 2015; Moneypenny & Aldrich, 2016). These technologies have only rarely been used to aid the development of students' pragmatic competence (Taguchi & Sykes, 2013; Yang, 2017).

Nevertheless, their effectiveness was suggested in a previous study (Kaliska, 2018). The author stated that digital sources offer teachers an opportunity to create tasks focusing on structure and collocations. Thus, educators can help increase students' pragmatic competence.

For the language teacher of this study, task-based and supported learning, in which tasks could be developed with the help of digital technology and multimedia, seemed like the answer to increasing students' pragmatic intercultural competence in the online environment due to the fact that task-supported learning has been shown to increase other language competencies, as explained below.

Literature review

The term "task" has been defined in multiple studies over the years. According to González-Lloret (2019), task-based activities and pragmatic instruction go hand-in-hand in the L2 classroom. Willis (1996) refers to a task as "a goal-oriented communicative activity with a specific outcome, where the emphasis is on exchanging meaning, not producing specific language forms" (p. 36). Skehan (1996) distinguishes between "weak" and "strong" versions of task-based language learning (TBLT). "Strong" refers to a task-based curriculum, whereas "weak" is when the curriculum has varying levels of task-based features. While the curriculum for this present study was not a task-based curriculum, it did implement many tenants of task-based learning to enhance the pragmatic competence of students, thus providing them with "task-supported" or "weak" versions of TBLT.

Another potential benefit of task-supported activities is that it may help motivate students to become life-long language learners. "Enhancing learners' motivation has always been a primary and widespread concern of most language teachers" (Hejrati et al., 2017, p. 233). Furthermore, motivation is key to the long-term retention of students in higher education language programmes (Rodriguez-Garcia, 2011). It was observed that the students' motivation level was higher in the case of TBLT than in the case of traditional langauge-learning methods (Namaziandost et al., 2017). To keep this motivation intact, the teaching approach must be engaging, and a task-based approach may be the solution. Some previous scholars explain that task-based approaches and task-supported activities may increase student motivation by making a language class goal-oriented rather than grammar-focused (Namaziandost et al., 2017). Due to its proposed effectiveness, task-based teaching has been a widely-discussed topic in the academic body of literature.

Language learning approaches have changed over time. Until the 1970s, language training used to be teacher-controlled, also known as the presentation-practice-production model (Hilsenbeck, 2011). Task-based language education denotes a shift in pedagogy from the traditional theoretical and teacher-oriented method of language learning to a goal-focused and student-centric approach. According to the language scholars of the 1980s, language is the core medium

of communication, and students should know the appropriate application of the L2. Teachers and scholars have always expressed their concern about the gap between language teaching in the classroom and their application outside of the classroom (Singhasiri & Thepsiri, 2015). Past studies have focused on the importance of the task-based learning approach (González-Lloret & Nielson, 2014; Willis & Willis, 2007). A task-based curriculum allows students to be creative with language and solve problems. They are encouraged to better comprehend course material, since it is presented in the form of meaningful tasks where they can apply the language. It is a modern learning method in which students are exposed to the natural context to communicate (Permatasari et al., 2021). According to Nunan (2007), the seven principles of task-based language teaching are *Scaffolding*, *Task dependency*, *Recycling*, *Active learning*, *Integration*, *Reproduction to creation* and *Reflection*. In the Scaffolding principle, the teacher has to provide the language training required to complete the assigned task. The Task dependency principle states that the assigned tasks should be interconnected and arranged in sequence. Through recycling, students can learn how the target language functions in the related context. In the Active Learning principle, one learns language by using it actively. The teachers' role is passive. The educator should ensure that linguistic forms, communicative function, and semantic meaning are incorporated (*Integration*). The reproduction to creation principle states that students reproduce the language the teacher provides and use it to apply their own creativity. Overall, a task-based curriculum focuses on meaning but does not overlook form. The emphasis is on engaging learners' natural abilities to acquire a second language. It aims at engaging the learners with language as a meaning-making tool and is different from the structural approach in which language is perceived to be the object that is to be taught systematically, and learning is intentional (Ellis et al., 2019).

TBLT is rested on the belief that language learners need to be exposed to meaningful input from the very early stage. Even though they have limited linguistic resources they should try to engage in meaningful communication in the second language. Therefore, the learners' focus should be placed on the meaning and not on the grammar or linguistic accuracy. Language knowledge is built on the implicit knowledge that the learner acquires during conversations and interactions in the respective language (Van den Branden, 2016).

Even though most students learn a language so that they can use it, language scholars have observed that traditional textbooks do not meet real-world needs (Wen-Cheng et al., 2011). Therefore, the effectiveness of task-based education has come to the forefront. More innovative learning approaches may include task-based learning. González-Lloret and Nielson (2014) carried out a study that aimed at evaluating task-based learning in the context of learning Spanish in a government agency. The aim of conducting this language course was to help the employees become more efficient and productive language users. The authors' findings suggested that a task-based course to learn Spanish prepared learners to complete critical job tasks in the L2 (González-Lloret & Nielson, 2014).

One of the pioneers of the task-based approach, Prabhu (1987) stated that the effective learning of a L2 is possible only when students are engaged in language tasks, rather than just learning about the language. To make the task-based method smoother, Mosquera (2012) suggested some further recommendations and introduced two stages of TBLT. According to the author, teachers should prepare apprehensive students significantly in the pre-task stage. It will help reduce students' anxiety level, and their language acquisition confidence will be improved. Pre-task stage preparation will also assist in bringing spontaneity and fluency, making language learning a pleasurable experience for students. In addition, the task-based model helps to achieve a significant degree of communicative and linguistic competence among students. According to Willis and Willis (2007), "This is one of the most valuable things we can give a learner: the confidence and willingness to have a go, even if their language resources are limited" (p. 2).

Ellis (2003) focused on some of the principal features of a task in the context of the language education process. First, the author states that the task is a work plan and focuses on the meaning. Second, it is designed to use the language in a real-world environment. Third, it consists of any of the language skills; listening, reading, writing, and speaking. Finally, a task engages cognitive processes and has a clearly defined communicative outcome. This is where it seems plausible that task-based activities could support the acquisition of pragmatic competence among students, even in online contexts.

Materials and methods

Considering the effectiveness of the task-based approach in both online and offline education processes, the present research is based on analysing the positive outcomes of the task-based approach in enhancing pragmatics competence in Spanish L2 classrooms. The research purposes are as follows:
- Explore students' intercultural competence in the online L2 classroom concerning common pragmatic speech acts in Spanish.
- Explore students' motivation to learn Spanish in higher education (leading to retention).
- Provide justification for pragmatic lessons in the online L2 classroom.

Research questions
The following research questions were developed:
- What effects do task-supported role-plays have on online L2 Spanish students' intercultural pragmatic competence?

- What effects do task-supported role-plays have on online L2 Spanish students' motivation to learn the language?

Participants

The research was conducted in a higher education institution in central Illinois (United States) during the autumn of 2020 after the midterm and after having received approval from the Institutional Review Board. According to U.S. News & World Report (2020), this is a public institution with approximately 5,000 students. The ethnicity of the institution is primarily White - approximately 72% of students. The average student age is 22 years old, and 54% are female and 46% are male. This demographic information is consistent with that of the students who participated. A total of 32 students fully participated in the study, which was experiment-based. They had an elementary level of competence in Spanish (SPAN 101). Participation was voluntary, and the students had equal opportunities to participate in the experiment. The participants were divided into two groups; one was the control group, which included 10 participants. The other was the experimental group, consisting of 22 participants. The experimental group included task-based role-plays to promote pragmatic language acquisition. The control group was taught without using a task-based approach. They instead carried out role-plays, as explained below, without going through the task-supported steps. Both groups were taught online.

Data collection and instruments

Three interventions were performed in the experimental group, consisting of task-supported role plays involving requests, invitations, and refusals (one each). In the final cumulative role-play, all three speech acts were incorporated. Thus, the final, cumulative role-play was performed in both the control and experimental groups. The purpose behind performing the final role-play in both groups was to make a comparative analysis. Aside from assessing the final role-plays for pragmatic ability, an additional instrument was used for the present study. This was a Multiple-Choice Discourse Completion Test (MCDCT) (Langer, 2011) taken in two phases, pre and post-intervention in both groups. Along with the test, pre and post-motivation surveys (Al Khalil, 2011) were conducted as well. MCDCTs have been used with success in past pragmatic research (Bachelor, 2016, 2020). Additionally, the motivation survey developed by Al Khalil (2011) was selected since it looks at integrative motivation and attitudes toward L2 learning.

The task-supported role-plays were conducted in three steps for the experimental group: pre-task, task, and post-task. In the pre-task phase, students watched an authentic video of a native Spanish speaker performing the speech act in question. In the task phase, the learners completed the task via role-play with a speaker from the TalkAbroad platform, which uses online video conferencing to connect students enrolled in an L2 course with native speakers of the target language. This step promotes the use of the speech act in question in order to complete the task. The conversations of the students were recorded. In the third and last process, the post-task process, the students reviewed the recorded conversation, filled out a self-evaluation checklist, and repeated the scenario with their classmate using Zoom through Canvas integration.

An example of one of the task-supported role-plays assigned to the experimental participants is provided below.

> **Person A**. Social distancing has led to tutoring taking place on Zoom. At the end of the tutoring session, you decide to invite your tutor to your Zoom movie club (you and other friends watch Netflix movies and then have a movie club, similar to a book club, on Friday nights). Your task is to convince your tutor to try out your movie club this Friday.
> **Person B**. Social distancing has led to tutoring taking place on Zoom. You are a tutor and also a student. At the end of your tutoring session, your tutee invites you to a Zoom movie club. Your task is to find out the pertinent details and decide if you want to attend or not.

The self-evaluation checklist for the student consisted of "yes" or "no" questions concerning students' ability to present main ideas clearly in Spanish with some details, to provide simple and easily comprehensible questions and answers, to get the point without offending the other person, to use strategies to avoid unfamiliar language and compensate by using familiar language, and ultimately, to determine if the student was successful in completing the task.

The final task-supported role-play that took place in both groups was as follows:

> **Person A**. One of your classes is on Zoom. The professor has added you to a breakout room with Person B. You invite Person B to a Zoom coffee meeting after class and also request their notes. Your task is to convince your classmate to meet up later and give you their notes.
> **Person B**. One of your classes is on Zoom. The professor has added you to a breakout room with Person A, who asks you to have a Zoom coffee meeting and for your class notes. Your task is to turn down/refuse the note request and to instead invite Person A to another Zoom event of your choosing.

The MCDCT used in this study was based on a Discourse Completion Test (DCT) created by Langer (2011) that measured three different speech acts: Invitations, requests, and refusals. Under these acts, a total of ten scenarios were formulated; three for the request, three for refusals, and four for the invitation.

An example is given below.
The participants will ask their close friends whether they can use their friends' Spanish textbook.

A. ¿Me das tu libro?
B. Quisiera tener tu libro, por favor.
C. Por favor, dame tu libro.

The data regarding the motivation level of the learners towards task-based learning was acquired through Likert-scale questions. For this study, Likert questions were in the form of statements in which the respondents had to show their agreement ranging from 1 to 4, with one indicating that the statement was "absolutely true" for the student, and four indicating that it was "not true at all." A four-point scale was employed to force participants to express a positive or negative opinion. The questions were based on an L2 learner motivation survey created by Al Khalil (2011). There are 15 items in total, five to evaluate integrative motivation and ten to evaluate attitudes toward L2 learning.

The following is an example:
Studying Spanish is important to me because it will allow me to make friends among Spanish speakers.

At the end of the study, the final role-play conversation was analysed using criteria based on Félix-Brasdefer (2018), García (2008), and Langer (2011), as to assign a *pragmatic* score (see Table 1).

Statistical procedures

The procured data from the experiment and the survey were analysed using statistical tools. Descriptive statistics were calculated using Microsoft Excel to compare the pre and post-motivation survey results, with a focus on the mode. Paired *t*-tests were performed to test the pre and post-MCDCT in the control and experiment groups. Post-to-post scores (control vs. experimental) on final role-play were obtained by applying unpaired *t*-tests. The effect size is procured using the unpaired *t*-test result from the final role-play.

Results

In terms of the Likert-scale motivation survey, some positive movements in the mode were observed in the experimental group only. There were no negative changes observed. The control group did not undergo changes. For example, there was a 1-point increase on questions 6, 10, and 11. It is presented in Table 2.

Regarding the MCDCT, the paired *t*-test results indicated an insignificant statistical difference in either group, using a significance level of .05 (see Table 3).

Table 1

Types of conversations

Invitations	Requests	Refusals
• Direct invitation • Suggestive invitation • Collective invitation • Downplaying inconvenience • Insistence	• The level of courtesy matches the level of imposition (command or present tense for very low level vs. conditional for high level)	• Excuse/explanation • Puts off the decision making until later

Source: author's own work based on findings by *Pragmatics & Discourse at Indiana University,* C. Félix-Brasdefer, 2018 (https://pragmatics.indiana.edu/speechacts); Different realizations of solidarity politeness: Comparing Venezuelan and Argentinean invitations, C. García, 2008. In K. P. Schneider, & A. Barron (Eds.), *Variational pragmatics: A focus on regional varieties in pluricentric languages* (pp. 269–305), John Benjamins (https://doi.org/10.1075/pbns.178.13gar); *The effects of pragmatic instruction in the Spanish language classroom* (Unpublished doctoral dissertation), B. D. Langer, 2011, University of California.

Table 2

Positive mode changes observed on the motivation survey

Question	Statement	Change
#6	Learning Spanish is really good	2-1
#10	Learning Spanish is one of the most important things for me as I grow as a person	3-2
#11	I like the atmosphere of my online Spanish class	3-2

Source: author's own work.

Table 3

MCDCT results

Control group			Experimental group		
	Mean	Standard Deviation		Mean	Standard Deviation
Pre-test	32	16	Pre-test	40	15
Post-test	39	10	Post-test	44	16
$t(9) = 1.65$		$p = 0.13$	$t(21) = 1$		$p = 0.33$

Source: author's own work.

Control group scores from pre-test ($M = 32$, $SD = 16$) and the post-test ($M = 39$, $SD = 10$); $t(9) = 1.65$, $p = 0.13$ indicate an insignificant statistical difference. Experimental group scores from pre-test ($M = 40$, $SD = 15$) and the post-test ($M = 44$, $SD = 16$); $t(21) = 1$, $p = 0.33$ indicate an insignificant statistical difference.

Finally, an insignificant difference between the score from the control and experimental group was observed in the final role-play when running an un-paired t-test, as shown in Table 4. Scores from control ($M = 59$, $SD = 36.12$) and experimental ($M = 75$, $SD = 30.58$); $t(14) = 0.192$, $p = 0.37$ indicate an in-significant statistical difference, using a significance level of 0.05.

studies regarding the impact of task-supported learning on pragmatic competence; however, these other studies were not conducted in the online teaching and learning contexts, nor were they focused exclusively on intercultural pragmatic competence.

In this present study, when the control and experimental groups were observed, it was found that the experimental group performed better than the control group when producing spoken language, according to the large effect size. Thus, the research findings are similar to the findings of Lou, Chen, and Chen (2016). Likewise, Pearson (2006) carried out a study in which a similar experiment was conducted for L2 learners as was carried out in the present research. The author targeted 94 L2 learners of Spanish, in which they watched

Table 4
Final role-play comparison between control and experimental groups

Control group		Experimental group	
Mean	Standard Deviation	Mean	Standard Deviation
59	36.12	75	30.58
$t(14) = 0.192$		$p = 0.37$	

Source: author's own work.

However, Cohen's d effect size calculation using the final cumulative role-play resulted in the following:

$$d = (79.55 - 55) / 27.27 = 0.9$$

This is considered a "Large effect" in which 82% of students in the control would perform worse than students in the experimental group on a similar role-play task, according to Coe (2002).

Discussion

The present research aimed at investigating the outcomes of using task-supported role plays on L2 students' intercultural pragmatic competence and motivation to learn the language. The objective of the experiment was to justify the pragmatic lessons in the classroom and enhance student motivation. The effect size findings indicate that the task-supported role-plays that students completed were effective in improving the pragmatics skills among Spanish L2 learners when producing language during role-plays. However, this was not the case when recognising language on the MCDCT. Task-supported role plays may also increase student motivation and retention, though a longer intervention period may be required for more significant findings.

Several previous studies have discussed the importance of pragmatic competence in the target language context and how to improve pragmatic competence among language learners (Allami & Naeimi, 2011; House, 2013). For example, Youn (2018) found that task-based learning was essential for language communication and pragmatics. The findings from this present study are consistent with these previous

a scene from the video series *Destino*. The students were asked to identify four speech acts (thanks, apologies, commands, and requests). The students practiced these acts through role-plays. However, the students found the videos boring and outdated (not relevant to the present context). It indicates that while designing the role plays for L2 students, it should be ensured that the videos complement the context. A merely task-based approach is, therefore, not sufficient.

It is important to support language learners to acquire intercultural pragmatic competence and thus enhance their motivational level. Motivation is necessary to be maintained while successfully achieving second language learning goals. According to Kusnierek (2015), by using role-plays teachers promote real-world learning. It is the interaction among the learners with similar competence and language abilities. Role plays motivate learners and teachers to take the initiative to interact constructively with other students involved in learning activities.

According to Zhang and Papi (2021), students with high intrinsic motivation are more likely to acquire pragmatic competence earlier than students who lack it. However, it cannot be expected that all students from language classrooms have intrinsic motivation. The teacher has to create external factors related to improving pragmatic competence. Extrinsic motivation can be given through rewards, which leads to individual satisfaction and happiness. The task-based learning approach motivates students to communicate in order to complete a specific learning task. According to Tan et al. (2017), when the language learning experience is pleasurable and cultural-specific, it leads to positive outcomes of language learning and pragmatic competence.

There are several challenges in task-based learning, especially in pragmatic competencies. Pragmatics has been directly associated with the culture of the language, and therefore its competence depends upon the cultural literacy of the learners. According to Hamouda (2014), pragmatic failure is an unintentional offensive action and error of the learners. However, it is not an intentional mistake. The cultural diversity and lack of awareness of pragmatic rules are the primary obstacles in realising the speech act in other cultures. Lack of appropriate media facilities can also cause a problem in language acquisition and the pragmatic competence process. Lack of time is another challenge. Due to time constraints, teachers do not always include pragmatic instructions. Nevertheless, these challenges can be mitigated with appropriate strategies, such as through task-supported role plays. Regardless of these challenges, the task-based model has shown to be effective, relevant and ideal in teaching languages to online L2 learners.

Although the researchers tried to be multidimensional in their approach, there are some limitations to the design. Therefore, it is highly recommended that future research overcomes them while carried out in the same area.

Limitations

The first limitation is the sample size, which is considerably small, making it more difficult to generalise the findings to larger populations. Only 32 Spanish learners participated in the experiment. A larger sample size means a larger volume of data. The larger sample size helps to obtain more precise and accurate mean values. For example, the mean value of 32 participants would certainly differ with 100 participants, providing more accuracy. The larger sample size also enables being closer to the population, which helps to remove outliers or other data points. Due to these outliers, the data may be mispresented.

The data collection period is another limitation of our research, as we collected data for one semester only. It was cross-sectional, one-time research. If the data of the whole year had been available, the findings might be different, impacting the accuracy of the research. Considering this limitation, the author recommends procuring annual data.

Additionally, pragmatics is culturally-focused. Cross-cultural pragmatics is also a separate topic of study. In the case of Spanish, there are various dialects, with Spanish spoken in Spain, Latin America, Mexico, Caribbean countries, and other geographical zones. Though the language is the same, the culture may differ. For example, Mexican culture is different from Spanish culture. In such circumstances, the pragmatics taught in universities may not be applied while communicating with all Spanish-speaking regions. Hence, it is highly recommended that the pragmatic tasks be designed considering the target cultural context.

The assessment tool used in the research also has some limitations. In the experiment, the researcher divided the students into two groups, control and experimental, to observe their performance. However, a one-time experiment may lead to several errors, especially while assessing students' language competence. Many participants are likely to be conscious if they realise that they are part of an experiment. The experiment method should have been supported with observation and interview methods. With the presence of these three assessment tools, the results could have been more accurate and spontaneous.

The present research discussed a task-based approach in motivating students to acquire the Spanish language. However, the study did not focus on other motivational factors that are equally important. Separate research can be conducted focusing on motivational factors behind the language learning process in the classroom. This study did also not focus on other dimensions of the task-based approach such as the duration of tasks, interest-generating ability, the effectiveness of individual, pair or group tasks etc. The focus was mainly on role-plays. However, several other tasks could be assessed.

Conclusion

The present research analysed the success of task-supported role-plays in an online classroom on pragmatic competence and student motivation in the L2 Spanish context. Therefore, the author proposes role-plays as an effective task in the language acquisition process of learners specific to certain speech acts. These role-plays should be based on a real-world scenario. Furthermore, previous studies have elucidated the significance of the task-based approach. The shift from the presentation-practice-production model (teachers-centric traditional learning approach) to the interactive task-based approach may increase the motivation level of students. The approach is based on the active learning principle in which students need motivation. If students lack intrinsic motivation, teachers have to create such a motivational learning environment. The researcher gathered evidence to suggest the significance of the task-based approach in increasing the ability to produce speech acts during role-play; certain motivation points were also impacted.

Considering the changing needs of students, pragmatics should be taught in an online L2 classroom with a task-based approach. However, several challenges and issues need to be addressed while using a task-based approach. First, teachers should be trained in pragmatic teaching (Vellenga, 2011). Second, they must have the knowledge and skills to design tasks for students (Bryfonski, 2021). Interesting tasks should engage students and motivate them to learn the language. Finally, teachers should be supported within their departments to implement curricular changes that help students improve their pragmatic competencies through task-supported learning.

References

Al Khalil, M. K. (2011). *Second language motivation: Its relationship to noticing, affect, and production in task-based interaction* (Unpublished doctoral dissertation). Georgetown University.

Allami, H., & Naeimi, A. (2011). A cross-linguistic study of refusals: An analysis of pragmatic competence development in Iranian EFL learners. *Journal of Pragmatics, 43*(1), 385–406. https://doi.org/10.1016/j.pragma.2010.07.010

Bachelor, J. W. (2016). La interdependencia pragmático gramatical en el aprendizaje de español como lengua extranjera (ELE) [Interdependence of pragmatics and grammar in the learning of Spanish as a foreign language]. *Lenguaje*, *44*(2), 147–175. https://doi.org/10.25100/lenguaje.v44i2.4619

Bachelor, J. W. (2020). Assessing L2 pragmatic proficiency using a live chat platform: A study on compliment sequences. *The Language Learning Journal*. https://doi.org/10.1080/09571736.2019.1709887

Bellevue School District. (2015). *NCSSFL interculturality can-do statements*. https://bsd405.org/api/wp-content/uploads/sites/32/2015/10/Intercultural-Can-Do-Statements.pdf?x49552

Bryfonski, L. (2021). From task-based training to task-based instruction: Novice language teachers' experiences and perspectives. *Language Teaching Research*. https://doi.org/10.1177/13621688211026570

Coe, R. (2002). *It's the effect size, stupid: What effect size is and why it is important*. https://f.hubspotusercontent30.net/hubfs/5191137/attachments/ebe/ESguide.pdf

Ellis, R. (2003). *Task-based language learning and teaching*. Oxford University Press.

Ellis, R., Skehan, P., Li, S., Shintani, N., & Lambert, C. (2019). *Task-based language teaching – Theory and practice*. Cambridge University Press.

Félix-Brasdefer, C. (2018). *Pragmatics & Discourse at Indiana University*. https://pragmatics.indiana.edu/speechacts

González-Lloret, M. (2019). Task-based language teaching and L2 pragmatics. In N. Taguchi (Ed.), *Routledge handbook of Second Language Acquisition and pragmatics* (pp. 338–352). Routledge.

González-Lloret, M., & Nielson, K. (2014). Evaluating TBLT: The case of task-based Spanish program. *Language Teaching Research, 19*(5), 525–549. https://doi.org/10.1177/1362168814541745

García, C. (2008). Different realizations of solidarity politeness: Comparing Venezuelan and Argentinean invitations. In K. P. Schneider, & A. Barron (Eds.), *Variational pragmatics: A focus on regional varieties in pluricentric languages* (pp. 269–305). John Benjamins. https://doi.org/10.1075/pbns.178.13gar

Hamouda, A. (2014). The effect of explicit instruction on developing Saudi EFL learners' pragmatic competence in refusal formulas. *Research Journal of English Language and Literature*, *2*(1), 138–160.

Hejrati, S., Bazargani, D., & Arabani, A. (2017). On the comparability of strong and weak versions of ask-based approaches to improving Iranian elementary-level EFL learners' reading comprehension. *Journal of Language and Cultural Education, 5*(1), 229–244. https://doi.org/10.1515/jolace-2017-0014

Herrera Díaz, L. E., & González Miy, D. (2017). Developing the oral skill in online English courses framed by the community of inquiry. *PROFILE, 19*(1), 73–88. http://dx.doi.org/10.15446/profile.v19n1.55957

Hilsenbeck, A. (2011). *Task-based language learning and teaching and students' use of the mother tongue*. Seminar Paper. GRIN. https://www.grin.com/document/170578

House, J. (2013). Developing pragmatic competence in English as a lingua franca: Using discourse markers to express (inter)subjectivity and connectivity. *Journal of Pragmatics, 59*, 57–67. https://doi.org/10.1016/j.pragma.2013.03.001

Jabeen, S. S. & Thomas, A. J. (2015). Effectiveness of online language learning. In S. I. Ao, C. Douglas, W. S. Grundfest, & J. Burgstone (Eds.), *Proceedings of the World Congress on Engineering and Computer Science 2015* (pp. 297–301). http://www.iaeng.org/publication/WCECS2015/WCECS2015_pp297-301.pdf

Kaliska, M. (2018). Developing pragmatic competence through language digital resources. In R. Biasini & A. Proudfoot (Eds.), *Using digital resources to enhance language learning – case studies in Italian* (pp. 5–15). Research Publishing. https://doi.org/10.14705/rpnet.2018.24.794

Kusnierek, A. (2015). Developing students' speaking skills through role-play. *World Scientific News, 7*(1), 73–111. http://www.worldscientificnews.com/wp-content/uploads/2012/11/WSN-1-2015-73-1112.pdf

Langer, B. D. (2011). *The effects of pragmatic instruction in the Spanish language classroom* (Unpublished doctoral dissertation). University of California.

Lou, Y., Chen, P., & Chen, L. (2016). Effects of a task-based approach to non-English-majored graduates' oral English performance. *Creative Education, 7*(4), 660–668. https://doi.org/10.4236/ce.2016.74069

Moneypenny, D. B. & Aldrich, R. S. (2016). Online and face-to-face language learning. A comparative analysis of oral proficiency in introductory Spanish. *The Journal of Educators Online, 13*(2), 105–133. https://doi.org/10.9743/JEO.2016.2.2

Mosquera, L. (2012). Using tasks to assess Spanish language learning. *Gist Education and Learning Research Journal, 6*, 147–158.

Namaziandost, E., Bohloulzadeh, G., & Pazhakh, A. (2017). The effect of task-based language teaching on motivation and grammatical achievement of EFL junior high school students. *Advances in Language and Literary Studies*, *8*(2), 243–259. http://dx.doi.org/10.7575/aiac.alls.v.8n.2p.243

NCSSL. (2018). *Intercultural communicative competence*. National Council of State Supervisors for Languages. https://ncssfl.org/wp-content/uploads/2019/05/LF-Intercultural_Can-Do.docx

Nunan, D. (2007). *What is this thing called language?* Palgrave Macmillan.

Pearson, L. (2006). Patterns of development in Spanish L2 pragmatic acquisition: An analysis of novice learners' production of directives. *The Modern Language Journal*, *90*(4), 473–495. https://doi.org/10.1111/j.1540-4781.2006.00427.x

Permatasari, Y. D., Nurhidayati, T., Rofiq, M. N., & Masrukhin, A. R. (2021). The task-based language teaching as method in Google Classroom application for English learning approach. *IOP Conference Series: Earth and Environmental Science*, *747*(012052), 1–7. https://doi.org/10.1088/1755-1315/747/1/012052

Prabhu, N. S. (1987). *Second language pedagogy*. Oxford University Press.

Rad, F., Otaki, F., Baqain, Z., Zary, N., & Al-Halabi, M. (2021). Rapid transition to distance learning due to

COVID-19: Perception of postgraduate dental learners and instructors. *PLOS ONE, 16*(2). https://doi.org/10.1371/journal.pone.0246584

Rodriguez-Garcia, L. M. (2011). *Influential factors that affect retention and language acquisition in beginning ESL adults students* (Unpublished doctoral dissertation). Walden University.

Singhasiri, W., & Thepsiri, K. (2015). Teachers' beliefs about task-based language teaching for science and engineering students. In P. Darasawang, & H. Reinders (Eds.), *Innovation in language learning and teaching. New language learning and teaching environments* (pp. 89–108). Palgrave Macmillan. https://doi.org/10.1057/9781137449757_7

Skehan, P. (1996). A framework for the implementation of task-based instruction. *Applied Linguistics, 17*, 38–62. https://doi.org/10.1093/applin/17.1.38

Smith, J. B. (2009). *The acquisition of pragmatic competence: compliment response strategies in learners of Spanish* (Unpublished doctoral dissertation). Louisiana State University.

Soomro, S., Kazemian, B., & Mahar, B. (2015). The importance of culture in second and foreign language learning. *Dinamika llmu: Journal of Education*, *15*(1), 1–10. https://doi.org/10.2139/ssrn.2656713

Taguchi, N., & Sykes, J. M. (Eds.). (2013). *Technology in interlanguage pragmatics research and teaching*. John Benjamins Publishing Company.

Tan, T. G., Lim, T. H., & Hoe, F. T. (2017). Analysing the relationship between L2 motivational self system and achievement in Mandarin. *International Academic Research Journal of Social Science*, *3*(1), 104–108.

U.S. News & World Report. (2020, April 13). *Community colleges*. https://www.usnews.com/education/community-colleges

Van den Branden, K. (2016). Task-based language teaching. In G. Hall, *The Routledge Handbook of language teaching* (pp. 238–251). Routledge.

Vellenga, H. E. (2011). Teaching L2 pragmatics: Opportunities for continuing professional development. *TESL-EJ*, *15*(2). http://www.tesl-ej.org/wordpress/issues/volume15/ej58/ej58a3/

Webb, C. (2013). Teaching pragmatics to international students in private language schools in the UK. *Contemporary English Teaching and Learning in Non-English-Speaking Countries*, *2*(2), 27–41.

Wen-Cheng, W., Chien-Hung, L., & Chung-Chieh, L. (2011). Thinking of the textbook in the ESL/EFL classroom. *English Language Teaching*, *4*(2), 91–96. https://doi.org/10.5539/elt.v4n2p91

Willis, J. (1996). *A framework for task-based learning*. Longman.

Willis, D., & Willis, J. (2007). *Doing task-based teaching*. Oxford University Press.

Wolfe, J., Shanmugaraj, N., & Sipe, J. (2016). Grammatical versus pragmatic error: Employer perceptions of nonnative and Native English Speakers. *Business and Professional Communication Quarterly*, *79*(4), 397–415. https://doi.org/10.1177%2F2329490616671133

Yang, L. (2017). The effects of L2 proficiency on pragmatics Instruction. A web-based approach to teaching Chinese expressions of gratitude. *L2 Journal, 9*(1), 62–83. https://doi.org/10.5070/L29132729

Yoko, U. (1996). Japanese compliment responses: A comparison to American English norms. *Japan Journal of Multilingualism and Multiculturalism*, *2*(1), 52–62.

Youn, S. (2018). Task-based needs analysis of L2 pragmatics in an EAP context. *Journal of English for Academic Purposes*, *36*, 86–98. https://doi.org/10.1016/j.jeap.2018.10.005

Zhang, Y., & Papi, M. (2021). Motivation and second language pragmatics: A regulatory focus perspective. *Frontiers in Psychology*, *12*, 1–11. https://doi.org/10.3389/fpsyg.2021.753605

Jeremy W. Bachelor is an Associate Professor of Spanish and the Coordinator of Modern Languages at Heartland Community College (Normal, IL). He earned his MA in Spanish with specialisations in world language pedagogy and Hispanic cultural studies from Illinois State University and his PhD in Spanish Applied Linguistics/Education from UNINI-Mexico and the University of Granada-Spain. Apart from his duties at HCC, he teaches graduate courses for Southern Oregon University's MA in Spanish Teaching programme during the summer months and serves as the action research thesis advisor for the programme. His research interests include interlanguage pragmatics, technology and online learning in the L2 classroom, and action research.

WE RECOMMEND
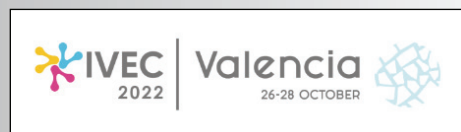
4th International Virtual Exchange Conference 2022, October 26–28, 2022
Hybrid format: online and Valencia, Spain

IVEC is the largest and most prominent event on Virtual Exchange, providing a forum for instructors, administrators, instructional designers, and educational leaders from institutions around the world interested in technology, international education, and new pedagogies.

Virtual Exchange (also known as Collaborative Online International Learning – COIL, Globally Networked Learning, or Telecollaboration) extends authentic opportunities for intercultural and transnational learning to students within K-16 classrooms, as well as through co-curricular activities.

More information at: **https://iveconference.org/**

Diagnosis of the level of cultural intelligence among students of economics universities in Poland

Dorota Teneta--Skwiercz

Abstract

An analysis of literature shows that higher education institutions can actively influence the development of students' cultural intelligence (CQ) and thus express their social responsibility. The article's main aim is to diagnose the level of cultural intelligence among students of public economics universities in Poland and to determine the relationship between CQ and factors such as field of study, degree, and gender. This article was developed using research methods such as literature analysis, organizational documentation analysis, participant observation, and a Computer-Assisted Web Interview (CAWI) survey. The respondents were second-year full-time students, both bachelor and master's degree, of two majors: Management and International Economic Relations (in Polish Międzynarodowe Stosunki Gospodarcze – MSG for short). The study shows that the cultural intelligence of students of public economics universities in Poland is relatively high. No influence of gender on CQ was determined. Contrary to assumptions, it was not observed that MSG studies influence students' CQ development. The correlation between the degree of reflection and the level of cultural intelligence differs depending on the field of study. At each of the three universities studied, no significant differences were found in the overall level of cultural intelligence between students of the two studied majors.

Keywords: cultural intelligence, factors of cultural intelligence, university, social responsibility of higher education institutions, student

Introduction

According to the European Commission report "The World in 2025", a higher education institution (HEI for short) should take into account the complex problems of the modern world, such as limited resources, climate change, ageing societies, environmental degradation (European Commission, 2009). In addition to the teaching and research functions, referred to in the scientific literature as the first and second missions, a contemporary HEI is entrusted with building and developing relations with the environment, referred to as the third mission. Moreover, it is expected to be socially responsible in the same way as the commercial sector. This is confirmed not only in voluntary regulations created at the initiative of higher education institutions (e.g. The Principles of Responsible Management Education-PRME, The Talloires Declaration), but also in the acts regulating the functioning of universities. In Poland, Article 3 point 2 of the Law on Higher Education and Science states that "The system of higher education and science shall operate in accordance with international standards, principles of ethics and good practices in education and scientific activities, with particular regard to the social responsibility of science" (Ustawa z dnia 20 lipca 2018 r. Prawo o Szkolnictwie Wyższym i Nauce, 2018).

A socially responsible university is an organization serving the environment (Leja, 2008), engaging in community development, innovation development and human capital formation (Boucher et al., 2003; Chirileasa, 2013), developing students' social awareness, including basic social competences, understanding the need for participation, providing social contribution, and an ability to perceive and solve significant problems (Berman, 1990). An essential aspect of the social responsibility of universities is the development of professional competencies desired by the market. It should

Dorota Teneta-Skwiercz, Wroclaw University of Economics and Business, Poland, ⓘ https://orcid.org/0000-0003-0168-622X

be noted that multiculturalism, work at the point where cultures converge, has become a distinctive feature of the current labor market. Organizations need people with strong adaptive skills to cope with unpredictable work situations and adapt to diverse social contexts (Pulakos et al., 2000; Suharti et al., 2019). Not to be underestimated in these conditions is cultural intelligence (CQ for short). One of the manifestations of a university's social responsibility will be the development of students' cultural intelligence, which companies expect from their employees.

Earley and Ang (2003) defined cultural intelligence as adapting to different cultural realities. CQ refers to the traits and skills by which people adapt quickly and with minimal stress to interactions in cultures other than the one in which they were socialized (Brislin et al., 2006; Thomas et al., 2008). This type of intelligence helps people adapt to multicultural environments and cope with stress, cultural barriers, and difficulties in cross-cultural communication and interaction (Le et al., 2018). Ng, Van Dyne, and Ang (2012) identify four core dimensions/components of CQ: metacognitive, cognitive, motivational, and behavioral. The metacognitive dimension reflects individuals' thought processes to acquire and understand cultural knowledge, including knowledge of and control over individual culture-related thought processes. The cognitive dimension of CQ reflects knowledge of the standards, practices and conventions of different cultures, gained both through education and personal experience. The motivational extent of CQ demonstrates the ability to direct attention and energy towards learning and functioning in situations characterized by cultural differences. The behavioral dimension of CQ reflects the ability to take appropriate verbal and non-verbal actions when interacting with people from different cultures.

Students' cultural intelligence – a review of current research

The level of cultural intelligence of university students has been the focus of many researchers. Mahasneh, Gazo and Al-Adamat (2019) compared the level of cultural intelligence among teachers and university students. They also tested whether there were statistically significant gender differences in the level of cultural intelligence. Mejri (2019) sought to determine whether American first-year college students' political party affiliation and level of cultural intelligence are related to social distance from international students. Other studies have analyzed the relationships between CQ and social and emotional intelligence (Social Skills Inventory), personality (Big Five), and self-assessment of students' cross-cultural experiences (Ang et al., 2006; Starčević et al., 2017; Ward et al., 2009). The relationships between the level of CQ and adaptability of international exchange students were analyzed (Suharti et al., 2019; Tamannaeifar and Hesampour, 2016). Crowne (2013) attempted to determine how different cultural exposures affect emotional intelligence and cultural intelligence. Shannon and Begley (2008)

noted that international work experience predicts CQ. Crown reached similar conclusions, saying that cultural exposure, taking place in employment and education abroad, influences CQ (Crowne, 2008). She emphasized the importance of the depth of exposure, i.e. the number of countries a person has visited for educational and professional purposes. Takeuchi and Tarique (2008) have shown that the number and length of international experiences students have had before entering university (even at a young age) positively affects cultural intelligence. Hartini et al. (2017) proposed a conceptual model regarding the impact of CQ on student engagement, particularly international students. Some researchers have tried to explain the role that factors related to education play in the development of CQ (Eisenberg et al., 2013; Robledo-Ardila et al., 2016).

There is relatively little research on the level of cultural intelligence of students coming from Central and Eastern Europe. In Romania, the cultural intelligence of business students was studied by Brancu, Munteanu and Golet (2016). In Croatia, Bobanovic and Grzinic (2019) measured Juraj Dobril University students' CQ in Pula studying tourism. On the other hand, in Poland, research related to the subject was conducted by Barzykowski, Majda, Szkup and Przyłęcki (2019), Kolano and Olszewski (2011), and Piwowarczyk (2016). The first team focused on the relationship between the level of CQ and the evaluation of experiences with other cultures and subjectively assessed success in intercultural contacts (respondents were university students and graduates from countries such as Poland, Lithuania, Hungary). Members of the second team investigated the possibility of applying the concept of cultural intelligence in medical education in Poland. Piwowarczyk (2016) pointed to the exemplary tools serving to improve students' cultural intelligence, such as the selection of content, forms and teaching methods and adoption of the right attitude by the teacher, who should be a representative and interpreter of foreign culture at the same time.

Because of the perceived research gap, it was decided to conduct research with the main objective of diagnosing the level of cultural intelligence of students of public economics universities in Poland and to determine the relationship between CQ and factors such as field of study, degree and gender.

Theoretical foundation and development of hypotheses

Numerous studies assessing the impact of academic courses in intercultural management on students' CQ (Eisenberg et al., 2013; MacNab, 2012; Putranto et al., 2015, Ramsey & Lorenz, 2016) prove that education has a positive effect on CQ. This article examined the relationship between CQ and the field of study in Polish public universities of economics. The majors chosen for the study are those found at all public universities of economics: Management and International Economic Relations (in Polish Międzynarodowe Stosunki

Gospodarcze – MSG for short). Both majors educate students in soft competencies, which are particularly important in advancing the internationalization of economic activity. While the Management major lacks courses in cultural conditions of conducting business activity, students in the MSG major participate in such courses. The MSG program is designed to support cultural intelligence and skills related to teamwork in international teams. In the MSG bachelor degree, students attend such semester courses as International Business and International Human Resources Management. The MSG master's degree covers subjects such as Cultural Aspects of International Business and Etiquette in International Business. An analysis of the syllabuses indicates that all these courses are taught using interactive lectures, exercises and case studies. Thus, they are not only theoretical but also practical in nature. It could be argued that MSG studies foster the development of cognitive/metacognitive, motivational and behavioral competencies required for effective cultural interaction (MacNab, 2012). The following hypothesis was formulated:

> H1: MSG students have higher cultural intelligence than Management students.

The level of cultural intelligence can be influenced by the study program and the period during which the student acquires different types of international experience (both academic and professional). As a result, the CQ of a master's degree student should be higher than the CQ of a bachelor degree student. This difference results from the description of the course and the profile of the bachelor degree and master's degree student. Therefore, it is possible to pose a hypothesis:

> H2a: Master's degree MSG students have higher CQ than bachelor degree MSG students.
> H2b: Master's degree Management students have higher IC than bachelor degree Management students.

As the HEIs selected for the study are exclusively public HEIs located in large cities with similar curricula and offering equal opportunities for students to gain experience and develop cultural competencies (for example through student exchange programs, lectures by visiting professors, international student organizations, international academic projects), a similar level of CQ of students at all the HEIs studied was assumed.

> H3a: There are no significant differences in the overall level of cultural intelligence between MSG students of the studied universities.
> H3b: There are no significant differences in the general level of cultural intelligence between students majoring in Management at the studied universities.

Previous research on the relationship between CQ and gender is inconclusive. Studies by Keavanloo, Seyedahmadi, Mokhtari (2013) indicated that there were statistically significant gender differences in cultural intelligence in favor of men. According to Boba-

novic and Grzinic (2019), women and men differ in their level of cultural intelligence, with women showing more significant sophistication in the behavioral component of CQ. In a study by Bücker et al. (2015) women had higher CQ scores than men, and were better equipped to develop this type of intelligence. According to the authors, the higher CQ of women than men makes them effective in cross-cultural communication. In contrast, studies by Mahasneh et al. (2019), Al-Jarrah (2016), Engle and Nehrt (2012), Ward and Fischer (2008) did not demonstrate statistically significant gender differences in cultural intelligence. Taking this into account, it was decided to investigate this issue in the conditions of Polish universities.

> H4: Women, regardless of the university they attended, show higher cultural intelligence than men.

Materials and methods

CAWI surveys were conducted in November – December 2020, and before they were conducted permission was obtained on 11.05.2020 from the Cultural Intelligence Center to use the Cultural Intelligence Scale (CQS) to collect research data and publish the results in scientific journals. The CQS consists of 20 items covering the four dimensions of CQ: *four metacognitive* (I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds;

I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me; I am conscious of the cultural knowledge I apply to cross-cultural interactions; I check the accuracy of my cultural knowledge as I interact with people from different cultures), *six cognitive* (I know the legal and economic systems of other cultures; I know the rules e.g., vocabulary, grammar of other languages; I know the cultural values and religious beliefs of other cultures; I know the marriage systems of other cultures; I know the arts and crafts of other cultures; I know the rules for expressing non-verbal behaviors in other cultures), *five motivational* (I enjoy interacting with people from different cultures; I am confident that I can socialize with locals in a culture that is unfamiliar to me; I am sure I can deal with the stresses of adjusting to a culture that is new to me; I enjoy living in cultures that are unfamiliar to me; I am confident that I can get accustomed to the shopping conditions in a different culture) and *five behavioral* (I change my verbal behavior, e.g., accent, tone, when a cross-cultural interaction requires it; I use pause and silence differently to suit different cross-cultural situations; I vary the rate of my speaking when a cross-cultural situation requires it; I change my non-verbal behavior when a cross-cultural situation requires it; I alter my facial expressions when a cross-cultural interaction requires it). Each of the four dimensions was rated on a Likert scale from one to seven (1 = strongly disagree, 7 = strongly agree). The respondents were second-year full-time students, both first and second degree, of

two majors: Management and International Economic Relations. No incentive was offered to participate in the study. Prior to data collection, the rectors of all five public universities of economics in Poland, i.e. in Wroclaw, Warsaw, Krakow, Poznan and Katowice, agreed to conduct the study. The questionnaires were sent by internal mail to all students of the analyzed years and faculties. Finally, out of 202 completed questionnaires, 155 were selected for analysis (85 questionnaires from Wroclaw University of Economics, 35 from Poznan University of Economics and 35 from Krakow University of Economics). Questionnaires from UE Katowice and SGH Warsaw (in total 15 questionnaires) were rejected due to insufficient sample size, which prevented proper statistical analysis, inference and generalization. Another 32 questionnaires were omitted due to lack of data or biased responses.

Results

As part of the statistical analyses conducted, Cronbach's Alpha coefficient was calculated to measure the reliability of the research questionnaire. Reliability tests were needed because the questionnaire was translated into Polish and used in a different culture and at another time than in previous studies. A value of 0.9 for the major scale was accepted as an acceptable limit for scale reliability in educational measurement. Cronbach's Alpha coefficient for the whole IC scale of the translated questionnaire was 0.93. To test hypothesis H1 stating that MSG students have a higher level of cultural intelligence than Management students, an analysis using a t-test for independent samples was conducted. This analysis showed no direct effect and thus no significant differences between MSG students ($M = 96.7$; $SD = 16.4$) and Management students ($M = 95.8$; $SD = 17.4$) in terms of cultural intelligence $t(153) = 0.3$, Cohen's d = 0.05. Hypothesis H1: MSG students have higher cultural intelligence than Management students was not confirmed.

To test the hypothesis that MSG master's degree students have a higher level of cultural intelligence compared to MSG bachelor degree students, an analysis was conducted using the Mann-Whitney U test for independent samples (due to non-homogeneous variance). The results of this analysis showed a statistically insignificant effect of degree and thus no difference between master's degree students ($M = 95.29$; $SD = 20.86$) and bachelor degree students ($M = 97.31$; $SD = 14.36$) in terms of cultural intelligence $Z = 0.41$, ni. Hypothesis H2a: Master's degree MSG students have higher CQ than bachelor degree MSG students was not confirmed.

To test whether master's degree Management students have a higher level of cultural intelligence than bachelor degree Management students, an analysis was conducted using a t-test for independent samples. The results of this analysis showed a statistically significant effect of degree of study and thus a difference between master's degree students ($M = 91.9$; $SD = 18$) and bachelor degree students

($M = 100$; $SD = 15.7$) in terms of cultural intelligence $t(97) = 2.46$, $p < 0.02$, Cohen's d = 0.5. Thus, it can be concluded that Management students differ in their level of CQ depending on their degree of study, the opposite of the hypothesis. It turns out that it is the bachelor degree students who have a higher level of CQ than the master's degree students. Hypothesis H2b: Master's degree Management students have higher CQ than bachelor degree Management students was not confirmed.

To check whether MSG students of particular universities differ in the general level of CQ, a one-way analysis of variance was performed, which showed a statistically insignificant effect of the variable university $F(2, 53) = 0.39$, ni., eta2 = 0.01. Students of particular universities have a similar level of C: UE Wroclaw ($M = 98.56$; $SD = 15.12$), UE Krakow ($M = 95.83$; $SD = 20.39$), UE Poznan ($M = 93.55$; $SD = 12.72$). In conclusion, MSG students studying at the three universities considered have similar levels of cultural intelligence. Hypothesis H3a: No significant differences in the overall level of cultural intelligence between MSG students of the universities studied were confirmed.

A one-way analysis of variance was conducted to test whether there are differences between the MSG students of the three universities studied in terms of the level of the different dimensions that make up cultural intelligence, i.e. the metacognitive, cognitive, motivational and behavioral dimensions for the independent groups. This analysis showed:

- statistically insignificant effect of the variable university in the metacognitive dimension $F(2, 53) = 0.13$, ni., eta2 = 0.01. Students of individual universities have a similar level of IC in the metacognitive dimension: UE Wroclaw ($M = 20.93$; $SD = 4.16$), UE Krakow ($M = 20.94$; $SD = 5.18$), UE Poznan ($M = 20.18$; $SD = 2.86$),
- statistically insignificant effect of the variable university in the cognitive dimension $F(2, 53) = 0.3$, ni., eta2 = 0.01. Students of particular universities have a similar level of IC in the cognitive dimension: UE Wroclaw ($M = 26.15$; $SD = 4.66$), UE Krakow ($M = 25.11$; $SD = 6.52$), UE Poznan ($M = 26.55$; $SD = 4.91$),
- statistically insignificant effect of the variable university in the motivational dimension, $F(2, 53) = 1.3$, ni., eta2 = 0.05. Students of particular universities have a similar level of IC in the motivational dimension: UE Wroclaw ($M = 25, 89$; $SD = 5.45$), UE Krakow ($M = 26.22$; $SD = 5.65$), UE Poznan ($M = 22.91$; $SD = 6.77$),
- statistically insignificant effect of the variable university in the behavioral dimension $F(2, 53) = 0.5$, ni., eta2 = 0.02. Students of particular universities have a similar level of IC in the behavioral dimension UE Wroclaw ($M = 25.59$; $SD = 6.13$), UE Krakow ($M = 23.56$; $SD = 9.21$), UE Poznan ($M = 23.91$; $SD = 5.7$).

In conclusion, in each of the four dimensions, MSG students studying at the three universities considered have similar levels of the components of Cultural Intelligence. To test whether the Management students of the different universities differ in their level of CQ, a one-way analysis of variance was performed, which showed the effect of the university variable at the trend level $F(2,96) = 2.89$, $p < 0.07$, eta2 = 0.06. Post hoc comparisons using the Bonferroni test showed no differences between the students of the different universities. These differences were demonstrated using the NIR test. It showed that students of UE Wroclaw have the lowest level of CQ ($M = 92.38$; $SD = 17.99$) and differ on a statistically significant level ($p < 0.05$) from students of UE Poznan ($M = 100.63$; $SD = 14.42$), and from students of UE Krakow ($M = 100.94$; $SD = 17.32$) on the level of trend ($p < 0.08$). It was also investigated whether there were differences between the Management students of the universities studied in terms of the various dimensions that make up cultural intelligence. For this purpose, a one-way analysis of variance for independent groups was conducted. This analysis showed:

- statistically insignificant effect of the variable university in the metacognitive dimension $F(2, 96) = 2.07$, ni., eta2 = 0.04. Students of individual universities have a similar level of CQ in the metacognitive dimension: UE Wroclaw ($M = 20.69$; $SD = 3.89$), UE Krakow ($M = 21.29$; $SD = 4.19$), UE Poznan ($M = 22.54$; $SD = 3.01$),
- statistically insignificant effect of the variable university in the cognitive dimension $F(2, 96) = 2.19$, ni., eta2 = 0.04. Students of particular universities have a similar level of CQ in the cognitive dimension: UE Wroclaw ($M = 24.6$; $SD = 6.22$), UE Krakow ($M = 24.71$; $SD = 6.74$), UE Poznan ($M = 27.54$; $SD = 4.44$),
- statistically insignificant effect of the variable university in the motivational dimension $F(2, 96) = 2.0392$, ni., eta2 = 0.04. Students of particular universities have a similar level of CQ in the motivational dimension: UE Wroclaw ($M = 23.22$; $SD = 6.8$), UE Krakow ($M = 26.71$; $SD = 6.94$), UE Poznan ($M = 25.13$; $SD = 6.17$),
- statistically significant effect of the variable university on the behavioral dimension $F(2, 96) = 3.44$, $p < 0.04$, eta2 = 0.07. The level of CQ in the behavioral dimension: UE Wroclaw ($M = 23,86$; $SD = 6,49$), UE Krakow ($M = 28,24$; $SD = 5,74$), UE Poznan ($M = 25,42$; $SD = 5,37$).

In conclusion, in the behavioral dimension, differences were noted between the Management students of the three universities studied. In the other dimensions, students, regardless of university, have similar levels of the components of Cultural Intelligence. Hypothesis H3b stating that there are no significant differences in the overall level of Cultural Intelligence between the Management students of the studied universities was confirmed.

In order to verify the hypothesis that women have a higher level of cultural intelligence compared to men, an analysis was conducted using the t-test for independent samples. The results of this analysis showed no gender effect and thus no differences between women ($M = 94.97$; $SD = 17.2$) and men ($M = 98.43$; $SD = 16.56$) in terms of cultural intelligence $t(153) = 1.2$, ni., Cohen's d = 0.2. Hypothesis H4, stating that women, regardless of the university studied, show higher cultural intelligence than men, was not confirmed.

Discussion

The study results did not support the assumption that studying MSG translates into higher levels of CQ for students. This conclusion applies to each of the three universities studied. For an explanation of this state of affairs, one can refer to the study of Brancu et al. (2016), who found that globalization, new technologies and media have led to a relative homogenization of the CQ profile. As a result, the influence of these factors on the CQ level is stronger than the influence of the diversity of the field of study. Undoubtedly, open-mindedness is an essential moderator of course effectiveness. Individuals who are open to new experiences and tolerant of different cultural norms and practices benefit more from a training intervention than individuals who do not possess this personality trait (Fischer, 2011). This study omitted the influence of this factor, so it is not entirely clear how strongly it influenced the results.

What is puzzling is the lack of statistically significant differences in the overall level of CQ between bachelor degree and master's degree MSG students and the statistically significant differences in the level of CQ between bachelor degree and master's degree Management students. In the latter case, it appeared that it was the bachelor degree Management students who had higher CQ. Thus, it was erroneous to assume that an MSG student has richer international academic/professional experience that translates into a higher level of CQ. In the search for a possible explanation for the results obtained, it is worth noting two issues: the quality of the courses and the student's involvement in building relationships and developing international experience.

The lack of longitudinal studies makes it impossible to draw direct conclusions about the quality of the implemented courses. The author of the study, as an academic teacher with 20 years of experience, additionally acting as a tutor in the BIPS programme (Business Individual Study Programme) and supervisor of the Enactus scientific circle, has made some observations related to the process of engaging students in building relations and acquiring foreign experience. They show that students in the three-year Bachelor's program are more willing than students in the Master's program to get involved in various university projects to build networks, including international contacts. This includes not only activi-

ties in international student organizations, but also participation in foreign exchanges, which is of considerable importance in shaping CQ. Indeed, a literature analysis shows that student exchange programs help prepare individuals to work effectively in a culturally diverse environment (Azevedo, 2018), serve holistic development through exposure to the challenges of living and working in a foreign environment (Leung et al., 2008), and as a result foster an increase in students' CQ. Meanwhile, master's degree students tend to focus on active job search and alienate themselves from the university and the academic community, and thus do not take full advantage of the opportunity to develop CQ. There is another explanation for this result. Gannon and Poon (1997) observed that it is not the lack of international experience but this experience itself that makes older students more realistic about the possibility of conflicts and misunderstandings in intercultural interactions, which in turn translates into a lower willingness to effectively interact with people from different cultural backgrounds and, consequently, the motivational dimension of CQ. Similar conclusions were reached by Fischer (2011), who noted that a series of lectures on intercultural management fosters awareness of gaps in one's cultural knowledge. In turn, the shift from unconscious to conscious incompetence results in a decrease in self-reported cognitive and metacognitive dimensions of CQ.

The study was designed based on the assumption that since the three surveyed universities are public schools, similar in size, located in large cities, with similar curricula and offering equal opportunities for students to gain experience and develop cultural competencies, the level of CQ of students at these three universities will be similar. Meanwhile, while in the case of the MSG major, this assumption proved to be true, in the case of Management, students at one of the surveyed universities differ statistically significantly from the other two.

A comparative analysis was conducted to determine how the individual dimensions of CQ of Polish students compare to students from other European countries (Table 1). The results of the study were used in the analysis: Brancu et al. (2016), focusing on Romanian students, Bobanovic and Grzinic (2019) surveying Croatian students and Eisenberg et al. (2013), studying students from Austria. As can be seen, the CQ levels of students from Austria and Poland were higher than those from the other two countries. To indicate the reasons for this, more extensive research is needed in an international context. In each of the countries analyzed, the metacognitive dimension was the best developed. Students from Poland and Austria were found to have higher levels of this dimension than students from the other two universities. The motivational extent was ranked second in the studies of Brancu et al. (2016), Bobanovic and Grzinic (2019) and Eisenberg et al. (2013). This place of the motivational dimension was confirmed in the majors at MSG Wrocław, MSG Krakow and Management Krakow. In the case of MSG Poznan, Management Wroclaw and Management Poznan, the behavioral dimension came second. The least developed CQ was, at most of the compared universities, in the cognitive dimension. Similar to the studies of Mahasneh et al. (2019), Al-Jarrah (2016), Engle and Nehrt (2012), Ward and Fischer (2008), no statistically significant differences were found in the cultural intelligence of Polish students by gender.

Table 1

Average values for particular dimensions of cultural intelligence – comparison of research results from Romania, Croatia, Austria and Poland

Dimensions of CQ	Poland*						Brancu L. et al. (2016), Romania**	Bobanovic M. K. and Grzinic J. (2019), Croatia***	Eisenberg J. et al. (2013), Austria****
	MSG Wroclaw	MSG Krakow	MSG Poznan	Management Wrocław	Management Krakow	Management Poznan			
Metacognitive	5.23	5.23	5.04	5.17	5.32	5.63	3.98	4.10	5.12
Cognitive	4.36	4.18	4.42	4.10	4.12	4.59	2.99	3.68	4.55
Motivational	5.18	5.24	4.58	4.64	5.34	5.03	4.00	4.00	5.56
Behavioral	5.12	4.71	4.78	4.77	5.65	5.08	3.47	3.61	4.93

Note.

* In order to ensure comparability of results, the arithmetic averages given earlier for individual dimensions of CQ of Polish students were divided by the number of items per dimension. For the metacognitive dimension it was 4, cognitive – 6, motivational – 5, behavioral – 5.

** Comparisons were made with students who completed courses in intercultural management; the result was rounded off to two decimal places.

*** Comparisons are made with results of management students who completed courses in intercultural management (post-test results).

**** To compare results of students who completed courses in intercultural management (post-test results).

Source: author's own work.

Conclusions

The level of cultural intelligence of students of public economics universities in Poland is relatively high compared to students from Croatia and Romania. The influence of the MSG major on the level of CQ was not confirmed. The correlation between the degree of study and the level of cultural intelligence differs depending on the field of study. At each of the three studied universities, no significant differences were found in the overall level of cultural intelligence between students of the studied majors. Although the subject of the research was not the quality of the courses, the lack of statistically significant differences between the CQ of MSG and Management students makes us reflect on the curriculum of the MSG course. This major is oriented towards the development of knowledge, attitudes and skills required for effective cultural interaction, so potentially also for the effect of CQ. Perhaps we are dealing here with the short internationalization of the MSG program at all the universities surveyed.

The literature analysis shows that higher education institutions can actively influence the development of students' CQ and thus express their social responsibility. However, it should be emphasized that the responsibility for the success of this process lies with both parties. If the student does not learn foreign languages, is not open to new experiences, and does not seek opportunities for intercultural interaction, the actions taken by universities may not be sufficient.

References

Al-Jarrah, A. (2016). The cultural intelligence level among international students in Jordanian Universities. *Educational Research Quarterly*, *39*(3), 23–36. https://files.eric.ed.gov/fulltext/EJ1166750.pdf

Ang, S., Van Dyne, L., & Koh, C. (2006). Personality correlates of the four-factor model of cultural intelligence. *Group and Organization Management*, *31*(1), 100–123. https://doi.org/10.1177/1059601105275267

Azevedo, A. (2018). Cultural intelligence: Key benefits to individuals, teams and organizations. *American Journal of Economics and Business Administration*, *10*(1), 52–56. https://doi.org/10.3844/AJEBASP.2018.52.56

Barzykowski, K., Majda, A., Szkup, M., & Przyłęcki, P. (2019). The Polish version of the Cultural Intelligence Scale: Assessment of its reliability and validity among healthcare professionals and medical faculty students. *PLoS ONE*, *14*(11), 1–22. https://doi.org/10.1371/journal.pone.0225240

Berman, S. (1990). Educating for social responsibility. *Educational Leadership. Service Learning, General*, *43*, 75–80.

Bobanovic, M. K., & Grzinic, J. (2019). Teaching tourism students with cultural intelligence. *UTMS Journal of Economics*, *10*(1), 85–95. https://www.utmsjoe.mk/files/Vol.%2010%20No.%201/UTMSJOE-2019-1001-07-Kostic%20Bobanovic-Grzinic.pdf

Boucher, G., Conway, C., & Van Der Meer, E. (2003). Tiers of engagement by universities in their region's development. *Regional Studies*, *37*(9), 887–897. https://doi.org/10.1080/0034340032000143896

Brancu, L., Munteanu, V., & Golet, I. (2016). Comparative evidences of cultural intelligence profile for management and non-management students. *Revista de Management Comparat International/Review of International Comparative Management, Faculty of Management, Academy of Economic Studies*, *17*(4), 308–319. https://ideas.repec.org/a/rom/rmcimn/v17y2016i4p308-319.html

Brislin, R., Worthley, R., & Macnab, B. (2006). Cultural intelligence: Understanding behaviors that serve people's goals. *Group & Organization Management*, *31*(1), 40–55. https://doi.org/10.1177/1059601105275262

Bücker, J., Furrer, O., & Lin, Y. (2015). Measuring cultural intelligence (CQ): A new test of the CQ scale. *International Journal of Cross Cultural Management*, *15*(3), 259–284. https://doi.org/10.1177/1470595815606741

Chirileasa, I. C. (2013). University and insertion environment – progresses in the knowledge of relationship between the two entities. *Analele Universit ii din Oradea, Seria Geografie*, *2*, 321–332. https://bit.ly/34mPrSP

Crowne, K. A. (2008). What leads to cultural intelligence? *Business Horizons*, *51*(5), 391–399. https://doi.org/10.1016/j.bushor.2008.03.010

Crowne, K. A. (2013). Cultural exposure, emotional intelligence, and cultural intelligence: An exploratory study. *International Journal of Cross Cultural Management*, *13*(1), 5–22. https://doi.org/10.1177/1470595812452633

Earley, C., & Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures*. Stanford University Press.

Eisenberg, J., Lee, H. J., Brück, F., Brenner, B., Claes, M. T., Mironski, J., & Bell, R. (2013). Can business schools make students culturally competent? Effects of cross-cultural management courses on cultural intelligence. *Academy of Management Learning and Education*, *12*(4), 603–621. https://doi.org/10.5465/amle.2012.0022

Engle, R. L., & Nehrt, C. C. (2012). Antecedents of cultural intelligence: The role of risk, control, and openness in France and the United States. *Journal of Management Policy and Practice*, *13*(5), 35–47.

European Commission. (2009). *The world in 2025. Rising Asia and socio-ecological transition*. Publications Office. https://data.europa.eu/doi/10.2777/2539

Fischer, R. (2011). Cross-cultural training effects on cultural essentialism beliefs and cultural intelligence. *International Journal of Intercultural Relations*, *35*(6), 767–775. https://doi.org/10.1016/j.ijintrel.2011.08.005

Gannon, M. J., & Poon, J. M. L. (1997). Effects of alternative instructional approaches on cross-cultural training outcomes. *International Journal of Intercultural Relations*, *21*(4), 429–446. https://doi.org/10.1016/S0147-1767(96)00035-1

Hartini, H., Yaakub, S., Abdul-Talib, A.-N., & Saud, M. B. (2017). The efects of cultural intelligence on international students' engagement. *International Journal of Business, Economics and Law*, *12*(2), 18–25.

Keavanloo, F., Seyedahmadi, M., & Mokhtari, R. (2013). A comparison of cultural intelligence in students. *Inter-*

national Research Journal of Applied and Basic Sciences, 6(4), 481–483. https://irjabs.com/files_site/paperlist/r_1713_131014114808.pdf

Kolano, A., & Olszewski, J. (2011). Poziom inteligencji kulturowej a jego związek z doświadczeniem międzynarodowym oraz oceną doświadczeń z innymi kulturami. *Przedsiębiorczość i Zarządzanie*, *12*, 52–69. http://piz.san.edu.pl/docs/e-XII-4.pdf

Le, H., Jiang, Z., & Nielsen, I. (2018). Cognitive cultural intelligence and life satisfaction of migrant workers: The roles of career engagement and social injustice. *Social Indicators Research*, *139*(1), 237–257. https://doi.org/10.1007/s11205-016-1393-3

Leja, K. (2008). Uniwersytet organizacją służącą otoczeniu. In K. Leja (Ed.), *Społeczna odpowiedzialność uczelni* (pp. 57–72). Katedra Zarządzania Wiedzą i Informacją Politechniki Gdańskiej.

Leung, A. K., Maddux, W. W., Galinsky, A. D., & Chiu, C. (2008). Multicultural experience enhances creativity: The when and how. *American Psychologist*, *63*(3), 169–181. https://doi.org/10.1037/0003-066X.63.3.169

MacNab, B. R. (2012). An experiential approach to cultural intelligence education. *Journal of Management Education*, *36*(1), 66–94. https://doi.org/10.1177/1052562911412587

Mahasneh, A. M., Gazo, A. M., & Al-Adamat, O. A. (2019). Cultural intelligence of the Jordan teachers and university students from the Hashemite University: Comparative study. *European Journal of Contemporary Education*, *8*(2), 303–314. https://doi.org/10.13187/ejced.2019.2.303

Mejri, S. B. (2019). Examining the correlation between American students' cultural intelligence, political affiliations, and their social distances from their international peers. *Journal of International Students*, *9*(3), 873–895. https://doi.org/10.32674/jis.v0i0.81

Ng, K.-Y., Van Dyne, L., & Ang, S. (2012). Cultural intelligence: A review, reflections, and recommendations for future research. In A. M. Ryan, F. T. L. Leong, & F. L. Oswald (Eds.), *Conducting multinational research: Applying organizational psychology in the workplace* (pp. 29–58). American Psychological Association. https://doi.org/10.1037/13743-002

Piwowarczyk, A. J. (2016). Istota i znaczenie inteligencji kulturowej w kontekście kształcenia uniwersyteckiego. *e-mentor*, *1*(63), 4–13. https://doi.org/10.15219/em63.1225

Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000). Adaptability in the workplace: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology*, *85*(4), 612–624. https://doi.org/10.1037/0021-9010.85.4.612

Putranto, N. A. R., Gustomo, A., & Ghazali, A. (2015). Analysis of cross cultural management course pedagogy methods in developing students' cultural intelligence.

Procedia – Social and Behavioral Sciences, *169*, 354–362. https://doi.org/10.1016/J.SBSPRO.2015.01.320

Ramsey, J. R., & Lorenz, M. P. (2016). Exploring the impact of cross-cultural management education on cultural intelligence, student satisfaction, and commitment. *Academy of Management Learning and Education*, *15*(1), 79–99. https://doi.org/10.5465/AMLE.2014.0124

Robledo-Ardila, C., Aguilar-Barrientos, S., & Román-Calderón, J. P. (2016). Education-related factors in cultural intelligence development: A Colombian study. *Journal of Teaching in International Business*, *27*(1), 41–58. https://doi.org/10.1080/08975930.2016.1172541

Shannon, L., & Begley, T. (2008). Antecedents of four-factor model of cultural intelligence. In S. Ang, & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 41–55). M.E. Sharpe Inc.

Starčević, J., Petrović, D. S., & Komnenić, D. (2017). Validation of the Cultural Intelligence Scale on a Serbian sample. *Primenjena Psihologija*, *10*(2), 165–184. https://doi.org/10.19090/pp.2017.2.165-184

Suharti, L., Handoko, Y. A., & Huruta, A. D. (2019). Linking cultural intelligence and adaptive performance: Do intercultural interactions and Host University Support™ play important roles? *Business, Management and Ekonomics Engineering*, *17*(1), 36–48. https://doi.org/10.3846/bme.2019.8831

Takeuchi, R., & Tarique, I. (2008). Developing cultural intelligence: The role of non-work international experiences. In S. Ang, & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 56–70). M. E. Sharpe, Inc.

Tamannaeifar, M., & Hesampour, F. (2016). The relationship between cultural and emotional intelligence with students' adjustment to university. *International Academic Journal of Organizational Behavior and Human Resource Management and Organization Review*, *3*(3), 1–13.

Thomas, D. C., Elron, E., Stahl, G., Ekelund, B. Z., Ravlin, E. C., Cerdin, J. L., Poelmans, S., Brislin, R., Pekerti, A., Aycan, Z., Maznevski, M., Au, K., & Lazarova, M. B. (2008). Cultural intelligence: Domain and assessment. *International Journal of Cross Cultural Management*, *8*(2), 123–143. https://doi.org/10.1177/1470595808091787

Ustawa z dnia 20 lipca 2018 r. Prawo o szkolnictwie wyższym i nauce (Dz. U. 2018 poz. 1668). (2018). bit.ly/3MzPZWX

Ward, C., & Fischer, R. (2008). Personality, cultural intelligence & cross-cultural adaptation: A test of the mediation hypothesis. In S. Ang, & L. Van Dyne (Eds.), *Handbook of cultural intelligence: Theory, measurement, and applications* (pp. 159–173). M. E. Sharpe, Inc.

Ward, C., Fischer, R., Zaid Lam, F. S., & Hall, L. (2009). The convergent, discriminant, and incremental validity of scores on a self-report measure of cultural intelligence. *Educational and Psychological Measurement*, *69*(1), 85–105. https://doi.org/10.1177/0013164408322001

Dorota Teneta-Skwiercz is an associate professor at the Wroclaw University of Economics and Business. Her research interests include sustainable development, corporate social responsibility, business ethics, and business self-regulation and compliance.

Boosting creativity in co-creation with consumers in the fuzzy front-end of new product development: A literature review and organising framework

Mieszko Olszewski

Abstract

Interest in consumer co-creation in the fuzzy front-end of the new product development (NPD) process has increased in recent years. It is generally acknowledged that integrating consumers into collaborative idea generation leverages the potential of social interactions, knowledge sharing and collective creativity, and it may improve the success of NPD. Despite extensive literature on value co-creation, little is known about how creativity can be enhanced and encouraged in this process. Based on a thorough literature review, the author develops an organising framework and six propositions on how creativity can be stimulated at the fuzzy front-end of the innovation process. By exploring the relevant literature, this study extends the understanding of the role that creativity plays in co-creation for NPD and provides some guidelines that may help boost the creative output and interest in co-creation activities during the development stage of an idea.

Keywords: creativity, co-creation, new product development, idea generation, ideation

Introduction

Creativity is considered to be an important organisational resource (Styhre & Sundgren, 2005; de Vasconcellos et al., 2019), which is to a great extent a determinant of new product success (Sethi et al., 2001; Xu, 2020) – to gain advantage a firm needs to effectively innovate, that is to implement more creative ideas than its competitors (Im et al., 2013), as any innovation invariably begins with new ideas, regardless of whether they are sourced externally or internally (O'Brien, 2020). These innovation capabilities are no longer limited by the boundaries of the organisation (Chesbrough, 2006; West & Bogers, 2017). Creative ideas can be also acquired externally from suppliers, customers or rivals and blended together with internal ideas (Chesbrough, 2012; Chesbrough et al., 2018). One source of external ideas are consumers (Hoyer et al., 2010; Roberts & Darler, 2017), who can potentially add value to the firm's innovation process (Füller et al., 2012; Loureiro et al., 2020; Payne et al., 2008). In this sense consumers can be used as a simple source of ideas for new products (von Hippel, 2005) or can be transformed into active partners with whom ideas are co-created through dialogue (Sawhney et al., 2005). The underlying assumption is that creativity as a key resource can be acquired directly from consumers through co-creation (Djelassi & Decoopman, 2013). With this in mind, companies should ensure that the process of co-creation is conducive to creative behaviour, which means that creative thinking is encouraged and supported. Many studies show that creativity can, to a large extent, be enhanced (Sternberg, 2019). However, a thorough review of extant literature showed that little attention is being paid to how creativity can be fostered in consumer co-creation for new product development. Herein we address this research gap by exploring the relevant literature and transposing selected findings to the praxis of co-creation.

Mieszko Olszewski, Kozminski University, Poland, https://orcid.org/0000-0002-6115-587X

Co-creation for New Product Development

The role of consumers in NPD, further defined as "a systematic process in which ideas are converted into commercial products" (Guzel et al., 2020, p. 1048; Costa & do Vale, 2018), has changed over the last decade. Firstly, the concept of customer centricity has shifted the marketing perspective from serving customer segments to delivering unique value to customers considered as individuals (Chesbrough, 2017; Piller et al., 2010). Secondly, the emergence of the open innovation paradigm has allowed companies to cross boundaries of the organisation to explore, assimilate and exploit external sources of ideas (Chesbrough, 2006; Chesbrough et al., 2018; West & Bogers, 2017). Thirdly, the advent of service-dominant logic revealed that value is always co-created in interactions among producers and consumers (Boukhris et al., 2017; Vargo et al., 2008). Lastly, technology, especially social media, has allowed for knowledge transfer on a scale heretofore unknown (Zhang et al., 2020). Consequently, once passive, consumers have now become empowered (Fuchs et al., 2010; Nguyen et al., 2020) and active participants of the innovation process (Hoyer et al., 2010; Roberts et al., 2022).

According to recent literature reviews (Galvagno & Dalli, 2014; Leclercq et al., 2016; Ranjan & Read, 2016; Tran, 2017), co-creation can occur in a variety of contexts and a broad range of applications (e.g. branding, innovation). Moreover, it comes in many forms, e.g. crowdsourcing (Rayna & Striukova, 2015); it can be classified into numerous categories, e.g.: co-conception of ideas, co-design (Frow et al., 2015); it may take on a variety of forms, e.g.: competitions, gamification (Mazurek-Łopacińska, 2021; Patricio et al., 2020); and it is possible to be ventured in both virtual and non-virtual environments (Kohler et al., 2011). One context, which has received particular attention, is NPD, in which co-creation is defined as "a collaborative NPD activity in which customers actively contribute and/or select various elements of a new product offering" (Hoyer et al., 2010, p. 287; Morgan et al., 2021; O'Hern & Rindfleisch, 2010). This active collaboration can appear either at the front end (idea generation and concept development) or at the back end (product design and testing) of the innovation process (Piller et al., 2010), as well as across all stages of the NPD process (Hemonnet-Goujot et al., 2020; Hoyer et al., 2010). It is suggested that co-creation can provide an opportunity to humanise the NPD process (Roberts & Darler, 2017).

Active involvement of consumers in NPD reflects some underlying assumptions. Firstly, it is believed that ideas generated through co-creation will mirror complex consumer needs more closely and will be more likely valued by consumers (Hoyer et al., 2010; Mahr et al., 2014; Witell et al., 2011). Secondly, need information and solution information are often 'sticky'

– the costs of transferring information in a usable form from the source to a specified site is often high (von Hippel, 2005). Thirdly, counterintuitively, ideas generated by ordinary consumers can be more original than ideas developed by professionals (Kristensson et al., 2004; Kristensson & Magnusson, 2010; Poetz & Schreier, 2012). And lastly, the literature suggests that co-creation in NPD is beneficial also to consumers, as it leads to a better fulfilment of their needs and provides other benefits, such as social, learning, and hedonic (Gemser & Perks, 2015; Zare et al., 2019).

Creativity for new product development

Creativity has proved to be a complex phenomenon. Despite ongoing debates, creativity is frequently conceptualised as an outcome – that is, *the production of novel and useful ideas* (Amabile & Pratt, 2016; Runco & Jaeger, 2012; Stein, 1953). However, more recently researchers have begun to highlight the need for more dynamic conceptions of creativity to account for the fact that the assessment of creative outcomes is subjective, context-dependent, time-related and should entail both instances of creative achievement and creative inconclusiveness (Beghetto & Corazza, 2019; Corazza, 2016; Glăveanu & Beghetto, 2021; Walia, 2019). In this dynamic optics creativity is most frequently defined as "a context-embedded phenomenon requiring potential originality and effectiveness" (Corazza & Lubart, 2020, p. 2).

Creativity is usually perceived as a starting point for innovation, further defined as *the successful implementation of creative ideas within an organisation* (Amabile & Pratt, 2016; Anderson et al., 2014; April et al., 2019). The predevelopment phase of the innovation process – the fuzzy front end (FFE)[1] (Koen et al., 2001; Schweitzer et al., 2018), defined "as the early stage/early phase of the innovation process, where ideas are generated and evaluated, potential concepts are formulated, and further development is initially planned" (Chamakiotis et al., 2020, p. 182) – seems to have a particularly significant impact on the future product performance (Henard & Szymanski, 2001; O'Brien, 2020) and may exert substantial influence on the succeeding formal NPD process (Zhang & Doll, 2001). Hence, it is assumed that innovation would not appear without creative ideas developed at the FFE.

Research method

The aim of this study is to answer the following research questions: how can creativity be enhanced in co-creation with consumers in the fuzzy front-end of new product development? The study is based on an extensive literature review in the field of co-creation and creativity. Three databases were used to collect information for the literature review: Scopus, Web of Science and Google Scholar. Various combinations of

---

[1] The FFE is described as 'fuzzy' because *it usually involves informal, unstructured, chaotic processes by which new ideas are born or sought out* (O'Brien, 2020).

keywords were used to identify the pertinent articles (e.g. to identify the research gap a combination of keywords 'co-creation' OR 'cocreation' AND 'creativity' OR 'idea generation' OR 'ideation' was used). Additionally, a number of supplementary papers were identified through backward sampling (Jalali & Wohlin, 2012), i.e. screening the references cited by the sampled papers to minimise the risk of missing out on important studies pertaining to the scope of the research. Based on the literature review, an organising framework for enhancing creativity of co-creation in NPD has been proposed, leading to the development of six propositions. The number of propositions is limited by the need to comprehensively explain the chosen factors.

Organising framework

Figure 1 presents the organising framework, which constitutes a theoretical groundwork for how creativity in co-creation can be enhanced. The central tenet of this paper is that co-creation can be classified as a specific form of creative activity – collective and time-constrained. Based on this assumption, the framework has been established on four rudimentary *attributes of creativity* referred to as the 4P's, which stands for: *Person*, *Process*, *Product*, and *Press* (Rhodes, 1961). In the 4P framework (Lubart, 2017; Sternberg & Karami, 2022) the Person refers to diverse attributes of those who create, e.g. their intellectual, personality or biographical characteristics, the Process pertains to the chain of actions and events involved in creative work, the Press denotes the environmental forces that stimulate creative thinking and behaviour, and the Product refers to the outcomes of the creative process. The optics of the 4P's model has been conceptually transposed to the context of co-creation: a group of individuals taking part in a co-creation activity (the first element of the model depicted in the Figure 1, i.e. the Co-creation Participants), whose members engage in the act of co-creative expression embedded in a virtual or physical environment (i.e. the Environment of Co-creation) and follow iteratively through the co-creation process (i.e. the Co-creation Process), generating ideas for new products (i.e. the Co-creation Outcomes). The iterative relationship between the co-creation process and outcomes of co-creation is represented by the dashed arrow that connects these two elements. Each of the four aspects is further elaborated in subsequent sections.

Creative person: creative actors and co-creation

In co-creation, actors[2] are considered to be the source of operant resources (e.g. knowledge and skills, networks of relationships), which act upon physical and tangible operand resources (e.g. raw material and infrastructure) to create value (Arnould et al., 2006;

Vargo et al., 2008). As a source of operant resources for the firm, actors enrich the process of value co-creation by co-opting their competencies and expertise (Prahalad & Ramaswamy, 2000; Waseem et al., 2018), self-efficacy and social capital (Alves et al., 2016), networks (Hunt & Derozier, 2004), and contributing creativity (Ind & Coates, 2013).
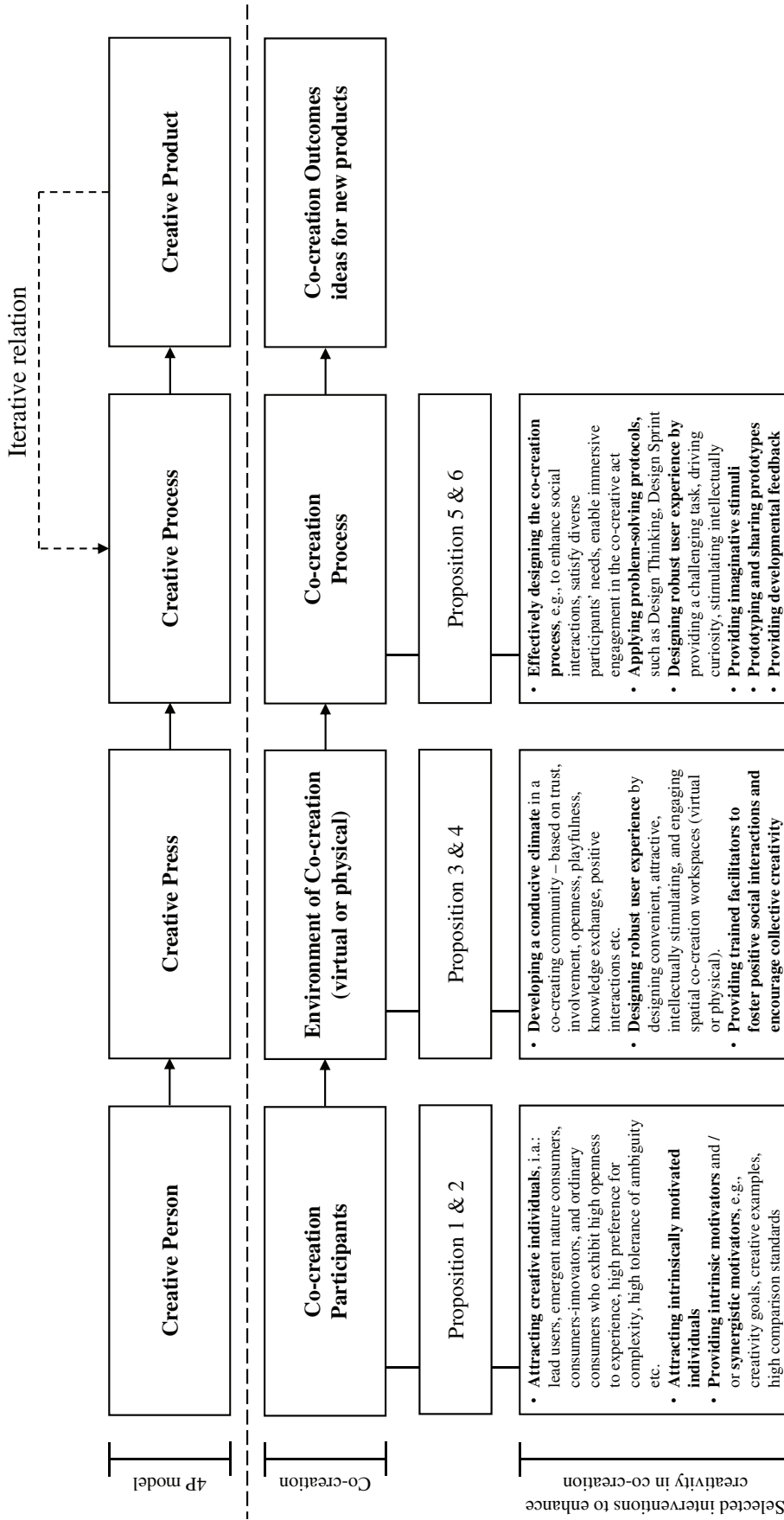
Prior literature has identified various profiles of actors that may engage in the value co-creation process (Leclercq et al., 2016). Lead users can serve as a need-forecasting laboratory for marketing research (von Hippel, 1986). They experience needs ahead of a marketplace trend and expect relatively high benefits from obtaining a solution, which makes them a valuable source of ideas and concepts (Franke et al., 2006). Emergent nature consumers possess the rare capability to imagine or envision how concepts might be developed in order to be successful. These actors exhibit high openness to experience, possess large amounts of internal reflection and the ability to synergistically process information in rational, experiential, verbal, and imaginal styles; their emergent nature is also correlated with creativity and optimism (Hoffman et al., 2010). Some studies indicate that ordinary consumers, who are not aware of technological restrictions, can also generate ideas that are more radical and higher in customer benefit than professionals or advanced users, provided that they understand how the product or service creates value for them (Kristensson et al., 2004; Kristensson & Magnusson, 2010; Poetz & Schreier, 2012). It is believed that some of ordinary consumers may be more creative and more likely to experiment with a firm's offering. These 'creative consumers' adapt, modify, or transform products, motivated often by their personal interest. They represent a gold mine of ideas and business opportunities for firms (Berthon et al., 2007).

Although the firm may collaborate with various actors, it is an individual's ability to come up with creative ideas that constitutes the foundation of co-creation. In their study exploring the impact of Amabile's components of creativity (Amabile, 1996) on various aspects of co-creation projects, Füller et al. (2012) observed that whereas the absence of domain-relevant skills (i.e. factual knowledge, technical skills, domain-relevant talents) does not have a strong impact on idea generation, the higher a person's score in creativity-relevant skills (i.e. cognitive style, knowledge of heuristics, work style), the better it is for ideation. Thus, it seems reasonable for firms to attract the most creative individuals to the co-creation process.

There is abundant research identifying individual traits that determine creativity. In general, creative people are characterised by high openness to experience (Zare & Flinchbaugh, 2019; McCrae, 1987), defined as "an imagination and curiosity when con-

---

[2] The term 'actors' is used in this text in a wide context, relating to all potential participants of the co-creation process.

Figure 1
Organising framework for enhancing creativity in co-creation for NPD

4P model	Creative Person	Creative Press	Creative Process	Creative Product

Iterative relation

Co-creation	Co-creation Participants	Environment of Co-creation (virtual or physical)	Co-creation Process	Co-creation Outcomes ideas for new products

| Selected interventions to enhance creativity in co-creation | Proposition 1 & 2 | Proposition 3 & 4 | Proposition 5 & 6 | |

Proposition 1 & 2
- **Attracting creative individuals**, i.a.: lead users, emergent nature consumers, consumers-innovators, and ordinary consumers who exhibit high openness to experience, high preference for complexity, high tolerance of ambiguity etc.
- **Attracting intrinsically motivated individuals**
- **Providing intrinsic motivators** and / or synergistic motivators, e.g., creativity goals, creative examples, high comparison standards

Proposition 3 & 4
- **Developing a conducive climate** in a co-creating community – based on trust, involvement, openness, playfulness, knowledge exchange, positive interactions etc.
- **Designing robust user experience** by designing convenient, attractive, intellectually stimulating, and engaging spatial co-creation workspaces (virtual or physical).
- **Providing trained facilitators to foster positive social interactions and encourage collective creativity**

Proposition 5 & 6
- **Effectively designing the co-creation process**, e.g., to enhance social interactions, satisfy diverse participants' needs, enable immersive engagement in the co-creative act
- **Applying problem-solving protocols,** such as Design Thinking, Design Sprint
- **Designing robust user experience by** providing a challenging task, driving curiosity, stimulating intellectually
- **Providing imaginative stimuli**
- **Prototyping and sharing prototypes**
- **Providing developmental feedback**

Source: author's own work.

sidering new ideas, sensations, and feelings" (Runco, 2014, s. 281; McCrae & Sutin, 2009), high intuition, high self-confidence and assertiveness (Feist, 2010), high tolerance of ambiguity (Zenasni et. al., 2008), high self-efficacy (Bonetto, 2020; Prabhu et al., 2008), high curiosity (Schutte & Malouff, 2020), high creative imagery abilities (Jankowska & Karwowski, 2015), high risk tolerance, autonomy, flexibility, preference for complexity (Runco, 2014), sensitivity (Bridges & Schendan, 2019), as well as by low conscientiousness, low neuroticism and low conventionality (Feist, 1988; Fürst et al., 2016; Puryear et al., 2017), among others. In addition, creativity may be partly domain-dependent; for example, creative artists and scientists may possess different sets of personality traits (Feist, 1988). It may also be that no one trait alone leads directly to creativity, but rather they create (often paradoxical) constellations of traits that allow for unconventional creative expression (Runco, 2014).

Proposition 1. Creative individuals certainly represent a distinct and distinguishable group of people (Feist, 1988). That said, an assumption can be made that co-creation activities can and should be addressed principally to this valuable group of talented individuals, with the aim to attract them, hold their attention over time and, in doing so, presumably enhance the creative output of the co-creation process. Hypothetically, this goal could be fulfilled by designing a co-creation task, which would reflect specific needs of the creative user's profile. For example, designing robust experience environments (Prahalad & Ramaswamy, 2004; Verleye, 2015) that drive curiosity, challenge conventionality, and intellectually stimulate open to experience and ambitious consumer-creators could be beneficial. Similarly, such a profile could serve as a basis for recruitment, marketing activities and targeted communication with present and potential participants.

The consumers' motivation to engage in co-creation activities is thought to be another essential factor for successful collaborative NPD. As co-creation goes beyond transactions, it is a form of engagement behaviour emerging from motivational drivers (van Doorn et al., 2010). Co-creation requires individuals to activate their cognitive skills to ideate, and to be willing to share their ideas. But most importantly, consumers are expected to invest a substantial amount of their time, the use of which reflects economic, social, and psychological costs (Etgar, 2008). Therefore, it is emphasised that the propensity of individuals to contribute constitutes the bedrock of co-creation (Zwass, 2010).

Generating and maintaining participants' engagement in co-creation projects over time has been the focus of numerous studies. It is generally suggested that individuals can be intrinsically and extrinsically motivated (Füller, 2010; Roberts et al., 2014). Intrinsic motivation refers to 'doing something because it is inherently interesting or enjoyable', whereas 'extrinsic motivation refers to doing something because it

leads to a separable outcome' (Ryan & Deci, 2000, p. 55). According to Füller (2010), while extrinsically motivated consumers' interest lies in utility obtained from interactions, and by extension they seem to favour goal-oriented behaviour, intrinsically motivated consumers focus more on an enjoyable experience and thus have a tendency to favour experiential-oriented behaviour. It should be noted that co-creators can also dynamically switch between intrinsic or extrinsic motivations during the innovation process (Shah, 2006; Suhada et al., 2021).

Intrinsic motives may have a more desirable influence on the creative performance of co-creation than the extrinsic ones. It is believed that intrinsic motivation (i.e. interest in innovation, curiosity and willingness to show ideas) drives engagement, whereas extrinsic motivation (i.e. monetary compensation) positively influences the participation frequency (Füller, 2006). This view is supported by other researchers, who also suggest that in comparison to intrinsic motives, financial rewards are less important motivators for individuals' willingness to engage (Fernandes & Remelhe, 2016; Frey et al., 2011), may result in only goal-oriented contributions (Roberts et al., 2006), and supersede intrinsic motivation (Zwass, 2010). Recently, Mandolfo et al. (2020) have not observed any significant influence of extrinsic motivations on the willingness to co-create, but have found strong evidence that it is positively affected by intrinsic motivations and internalised extrinsic motivations, understood as behaviour aligned with personal values and lifestyle that have separate rewards, e.g. an opportunity to enhance technology knowledge. Hence, although some studies do not detect only negative effects of monetary compensation (Dargahi et al., 2021; Roberts et al., 2006; Zhu et al., 2018), intrinsic motivation seems to be desired in the first place. In addition, intrinsically motivated participants are also more interested in co-creation, more creative and more knowledgeable (Füller, 2010).

Although the significance of the role that motivation plays in co-creation activities seems to be well recognised, not much has been said about how its different types influence creativity of co-created ideas. Schemmann et al. (2016) have found no evidence that implemented ideas are more likely to come from highly motivated consumers who suggested many ideas. However, they have found that potential innovativeness of an idea significantly increased the likelihood of an idea being implemented. Therefore, we may assume that within the field of co-creation, motivation that leads to high-quality ideas, i.e. creative, is more desirable than motivation that results in many average ideas.

Motivation has been a widely acknowledged antecedent of individuals' creativity (Amabile, 1996). It is believed that intrinsic motivation (when people are motivated by the sheer enjoyment, interest, or personal challenge of the task itself) is conducive to creativity, whereas with extrinsic motivation this is the case only under certain specific conditions (Ama-

bile & Pratt, 2016; Hennessey, 2010; Liu et al., 2016). Indeed, task motivation as the Amabile's creativity component (Amabile, 1996) has been found not only to be a prerequisite for consumers' participation in virtual generation of new ideas and problem solutions, it has been also recognised as an enhancement factor that, when delivered above a certain level, increases the creative output and interest in co-creation activities in the development stage of an idea (Füller et al., 2012).

In contrast, extrinsic motivation (i.e. rewards, expected evaluation, recognition, surveillance, competition) seems to have, in general, a detrimental effect on creative achievement (Hennessey, 2010), although mainly when it undermines intrinsic motivation by leading people to feel controlled by the situation (Hennessey & Amabile, 2010) or when it displaces attention from the task towards the reward (West & Richter, 2008). However, if extrinsic motivators acknowledge competence, convey useful information in a complementary way (informational extrinsic motivators) or enable people to do what they were already intrinsically motivated to do through directly increasing the person's involvement (enabling extrinsic motivators), it may increase intrinsic motivation and enhance creativity (Amabile, 1993; Byron & Khazanchi, 2012). This type of motivators are called 'synergistic extrinsic motivators' and are the most effective with strong initial levels of intrinsic motivation (Amabile, 1997; Hennessey & Amabile, 2010).

Both intrinsic and extrinsic motivation can take the form of a temporary state and a relatively stable personality trait (Amabile, 1993). As a state, motivation can be affected by environmental conditions, some of which may positively influence an individual's motivation to act creatively, whereas others may have a detrimental effect on intrinsic motivation and creative behaviour. Thus, it is assumed that creativity can be enhanced by providing appropriate context. Contextual factors may include intrinsic motivators, such as a challenging task intended to maximise intrinsic motivation (Amabile, 1993), a mobilising creativity goal (Shalley, 1995), a creative example (Shalley & Perry-Smith, 2001), high comparison standards (Paulus & Brown, 2003), prosocial motivation (Grant & Berry, 2011), gamification (Treiblmaier & Putz, 2020), as well as synergistic extrinsic motivators, for example informational evaluation (Shalley & Perry-Smith, 2001), or informational (Zhou, 1998) or developmental feedback (Zhou, 2008).

Proposition 2. One could hypothesise that creativity and participation in co-creation activities could be enhanced by three motivational procedures. Firstly, addressing co-creation activities to consumers who are primarily intrinsically motivated (motivation as a personality trait). Secondly, providing intrinsic motivators such as a challenging and highly creative task or a creative example. Thirdly, providing synergistic extrinsic motivators that do not displace attention from the task towards the reward but rather acknowl-edge the participant's competence and convey useful information.

Creative press: environmental conditions of co-creation and creativity

Creativity is a contextually embedded phenomenon (Lubart, 2010). Certain environmental influences can either facilitate creativity (though not absolutely assure it) or inhibit creative expression (Runco, 2014; Woodman et al., 1993). The social environment is particularly important for creative behaviour (Perry-Smith & Mannucci, 2017). For example, social interaction with diverse others and communication of information and ideas generally facilitates creative cognition – during conversations an individual is prone to exposure to new knowledge that may lead to conceptual combination (synthesis of previously separate knowledge) or conceptual expansion (developing of new ideas) (Perry-Smith & Shalley, 2003). The significance of social interaction is increased by the fact that some creative solutions can be seen as the products of a momentary collective process or collective creativity (Hargadon & Bechky, 2006).

The social environment seems to be similarly important for co-creation (Prahalad & Ramaswamy, 2004) – value co-creation is an enactment of interactional creation (Ramaswamy & Ozcan, 2018). If ideas tend to be developed by groups working together, "rather than focusing on how to spot individual creativity, co-creation practitioners should concentrate on how to make groups productive by working to create an atmosphere where people trust each other and the organisation" (Ind & Coates, 2013, p. 92). Indeed, trust has been found to have a positive effect on consumers' willingness to participate in co-creation activities and on consumer knowledge development (Cortese, 2014). In addition, some studies suggest that both a very high and very low cooperative climate enhance innovative performance of co-creative idea contests (Bullinger et al., 2010), while other researchers claim that coopetition is more conducive to creativity, in comparison to cooperation or collaboration, as it results in generating more ideas, and more creative ones at the same time (Zhao et al., 2017). Despite these few studies, not much is said in regard the 'atmosphere' that could possibly improve social interactions and creativity of co-creation activities.

In organisational literature, the importance of climate and climate perceptions, at both the individual and group level, is stressed by many researchers (Hunter et al., 2007). According to this meta-analysis, a work environment is the most conducive to creativity when employees have positive relationships with colleagues with whom they can exchange ideas and are provided with challenging, meaningful and intellectually stimulating tasks. In a similar vein, Isaksen and Lauer (2002) maintain that the most creative teams experience the revealingly distinct climate of, inter alia, challenge and involvement, freedom, trust and openness, idea time, and playfulness. The authors also suggest that the climate for successful

team creativity and performance is clearly identifiable, measurable and manageable; we believe that as such it can be established among communities taking part in co-creation activities.

Proposition 3. One could hypothesise that a similar set of climate-related factors can enhance creativity in the co-creation process. Managed by trained facilitators, such a climate might be established and nourished through the suitable design of a co-creation activity which provides a meaningful and challenging task, fosters knowledge exchange, develops positive and cooperative interactions based on trust, openness and humor.

Spatial context may facilitate or reduce the enhancement of creativity by allowing certain cognitive processes while restricting others (Kristensen, 2004). This pertains also to co-creation, which, as earlier mentioned, can take place in both virtual and non-virtual environments. Recently, a virtual platform was found to have a moderating effect on customer creativity and co-creation experience in new idea generation (Nohutlu et al., 2021). Similarly, other authors suggest that interaction tools that inspire consumers to actively engage in virtual co-creation trigger the experience of empowerment and enjoyment of a virtual NPD task; they may also improve realistic product understanding and enhance consumers' creative articulation (Füller et al., 2009). Verleye (2015) suggests that the co-creation experience depends on the one hand on customer characteristics, such as *expected benefits* and *customer role readiness* (i.e., the degree to which customers are ready to engage in co-creation), and on the other hand on characteristics of co-creation environments, such as *technologisation* (i.e. the availability of technical solutions that help achieve a co-creation goal) and *connectivity* (i.e. the availability of help from other co-creators).

Thus, in order to make the co-creation task fun and enjoyable, and also boost creative outcomes, virtual platforms should be designed specifically to enable supportive navigation and smooth cooperation between peer participants (Nohutlu et al., 2021). They may also include various gamification mechanics, through which participants' engagement toward a co-creation platform can be created, amplified, and maintained (Leclercq et al., 2017). A physical or virtual workspace should at the same time be attractive, intellectually stimulating, and symbolically reflect creativity-conducive values, such as open-mindedness and collaboration (Oksanen & Ståhle, 2013).

Proposition 4. Regardless of whether the co-creation workspace is virtual or physical, it should be mindfully crafted to foster engagement, stimulate creative thinking, and reinforce creative production. A vast array of communication tools and gamification features, presented in an aesthetically pleasing way, may help provide meaningful and relevant experiences to users.

Creative process: processual dimensions of co-creation and creativity

The creative process is traditionally defined as a series of thoughts and actions that lead to an original and appropriate production (Lubart, 2001; 2018). There are many models of the creative process (see Botella et al., 2018 for a review), the earliest being Wallas' (1926) model of creative production, comprising a linear series of four independent steps: preparation, incubation, illumination and verification. The recent dynamic perspective (Corazza, 2016) adopts a different view and suggests that the creative process is nonlinear – numerous stages of the creative process, including i.a.: ideation, illumination and realisation, occur in a highly dynamic, recursive and complex way while intensively interacting with each other (Botella & Lubart, 2019; Botella et al., 2018; Botella et al., 2019).

It is acknowledged, not surprisingly, that creativity understood as a process can be managed (Leonard-Barton & Swap, 1999; Slavich & Svejenova, 2016). Importantly, organisational and social creativity-relevant processes have been found to be a comparably important factor to the group having creative members (Bissola & Imperatori, 2011; Taggar, 2002). Moreover, it seems to be the case that the application of various cognitive stimuli or problem-solving protocols during brainstorming, such as Design Thinking, may enhance the creative quality of the ideas produced (Howard et al., 2010; Rao et al., 2021). Since co-creation also has a processual dimension, it can be accordingly designed to benefit all the involved contributors and their creative output.

Proposition 5. One could assume that some creativity-relevant techniques and methodologies, such as Design Thinking (da Silva et al., 2020) or de Bono's six thinking hats (de Bono, 2000), could be applied to the improvement of the creative quality of ideas generated in co-creation. Literature on brainstorming and creativity provides some guidelines and solutions that the author of this article believes could be helpful in achieving this goal. Some of them are presented in Table 1. The author also believes that the outcome could be greatly improved if the co-creation process followed the iterative approach, known from agile project management methodologies; in fact, creativity is an iterative process of trials and errors, in which ideas are explored, modified, transformed, extended, combined or rejected (Ward, 2004).

Intrinsic or extrinsic motivation alone may not fully explain consumers' participation in co-creation activities – their needs are multifaceted and complex; individuals may be driven by a multidimensional combination of various motives and benefits (see Table 2 for details). The design of the co-creative process should reflect these needs, as well as provide an opportunity for participants to satisfy them.

Table 1

Chosen creativity-relevant techniques improving the quality of outcomes of the co-creation process

Feedback	It is acknowledged that feedback can enhance creativity (Ezzat et al., 2017). Creativity-relevant feedback can improve the intrinsic motivation of the recipient, additionally becoming a source of information helpful in learning and clarifying the standards of creative output, facilitating the acquisition of creativity-relevant skills and strategies (Zhou, 2008). Füller also observed that feedback is slightly more important for creative consumers than less-creative ones (Füller, 2010).
Facilitators	Trained facilitators can enhance productivity of brainstorming groups by increasing participants' motivation (e.g. by asking to "do one's best" and generally energising a group) and maintaining a tight procedural structure (delaying the evaluation of ideas, preventing interruptions, and asking participants for additional ideas) (Kramer et al., 2001).
Sequential priming	Cognitive stimulation through exposure to external ideas from low accessible categories reduces information overload and may lead to new associations. Diverse stimuli seem to be particularly effective if they are presented sequentially (Paulus & Brown, 2003).
Stimulating mental imagery	Some researchers have found that stimulating mental imagery through a suitable instruction (that stimulates self-relatedness) and/or by prior practice can improve the creative quality and quantity of ideas generated by ordinary individuals involved in a co-creation activity (Vellera & Gavard-Perret, 2016).
Explicit instructions to be creative	Ideation performance and divergent thinking can be enhanced by providing explicit instructions to be creative and original (Runco, 2010). Explicit instructions are especially potent if they include relevant information on how to find or identify original ideas (Runco et al., 2005).
Sharing ideas and building on each other's ideas	Group idea sharing can enhance cognitive stimulation and idea production of a group taking part in a brainstorming session (Dugosh et al., 2000). Explicit instructions to build on each other's ideas in group brainstorming may lead to the production of more original and feasible ideas (Kohn et al., 2011).
Pleasantness of the task	Some studies suggest that perceived pleasantness of divergent thinking tasks increases the number of ideas generated (Zenasni & Lubart, 2011). Designing a co-creation activity should be focused around it being a pleasant experience for the participants.
Upward comparison	Brainstorming groups are strongly affected by performance information about other groups. Providing high performance expectations can increase creative performance by almost 40% (Paulus & Dzindolet, 2008).
Prototyping	Prototypes help people to summarise, express and communicate their ideas to others. When shared, they can also inspire others, leading to improved outcomes, exploration, and group rapport (Dow et al., 2011).

Source: author's own work.

Table 2

Selected drivers of consumer participation in co-creation

Authors	Motives and perceived benefits	Examples
Füller, 2010; Mandolfo et al., 2020; Roberts et al., 2006	Purely intrinsic	Curiosity, intrinsic playful task
	Internalised extrinsic	Altruism – community support, making friends, self-efficacy, information seeking, skill development, recognition – visibility
	Purely extrinsic	Personal need – dissatisfaction, compensation – monetary rewards
Nambisan & Baron, 2009	Cognitive and learning	Knowledge about products and technologies
	Social integrative	Social identity, sense of belongingness
	Personal integrative	Sense of self-efficacy and reputation among peer consumers
	Hedonic	Mental or intellectual stimulation, a sense of pleasure
Leclercq et al., 2016	Altruistic	Helping others
	Non-altruistic:	Expecting benefits from participation
	1) extrinsic	Monetary rewards, social recognition, willingness to work with companies
	2) Intrinsic	
	a) social	Need for personal development, fun, escapism, passion, desire to increase skills, competencies
	b) personal	Need for belonging, recognition, feedback
Suhada et al., 2021	Non-pecuniary (intrinsic)	Altruism enjoyment, ideological reasons self-efficacy
	Delayed-pecuniary initially	Personal development, reputation building, reciprocity, sense of community
	Pecuniary (extrinsic)	Career development, financial interest
Franke & Shah, 2003	Dissatisfaction with the product	
Hoyer et al., 2010	A sense of self-expression, pride or positive affect that enhances creative action	

Source: author's own work.

Proposition 6. Individuals taking part in co-creation are driven by multifarious motives. Meeting them allows for behavioural, cognitive and emotional engagement in the act of co-creation, which is a sine qua non condition for capturing creative potential of the contributors.

Creative product: Outcomes of co-creation activities

Within the narrowly defined context of co-creation with consumers for NPD, creative outcomes of co-ideation primarily take the form of ideas for innovative products (Frow et al., 2015). Once successfully generated, creative ideas are often evaluated by the involved participants, based on selected assessment criteria, such as: originality (novelty), user benefits, technical feasibility, quality, desirability and user benefits (Filieri, 2013; Trischler et al., 2017). However, if they do not meet the adopted evaluation criteria or are not deemed sufficiently attractive for other reasons, they may be improved in further co-creation iterations. This reciprocal relation is depicted by a dotted arrow that connects the last two elements of the 4P model in Figure 1. Alternatively, if a company employs an idea management programme (Gerlach & Brem, 2017), generated ideas can be stored in a repository and serve as a starting point or an inspirational stimulus (Goucher-Lambert & Cagan, 2019) in future ideations.

Conclusions

In this article the author discussed the role of creativity in co-creation at the fuzzy front-end of the innovation process. The main theoretical assumption was that the creative behaviour that lead to novel and useful ideas for NPD in co-creation can and should be encouraged and enhanced. It was hypothesised that creative output may be improved through, among others, recruiting creative individuals, fostering certain forms of motivation, facilitating social interactions, designing robust user experiences, establishing a climate conducive to creativity and through application of creativity-supporting techniques. As a result, an organising framework for how creativity in co-creation can be enhanced was proposed. The main limitation is that the suggested propositions are yet to be tested empirically. Future studies could also examine other antecedents of creativity within the context of co-creation and develop other propositions.

References

Alves, H., Ferreira, J. J., & Fernandes, C. I. (2016). Customer's operant resources effects on co-creation activities. *Journal of Innovation & Knowledge*, *1*(2), 69–80. https://doi.org/10.1016/j.jik.2016.03.001

Amabile, T. M. (1993). Motivational synergy: Toward new conceptualizations of intrinsic and extrinsic motivation in the workplace. *Human Resource Management Review*, *3*(3), 185–201. https://doi.org/10.1016/1053-4822(93)90012-S

Amabile, T. M. (1996). *Creativity in context: Update to "The Social Psychology of Creativity*." Westview Press.

Amabile, T. M. (1997). Motivating creativity in organizations: On doing what you love and loving what you do. *California Management Review*, *40*(1), 39–58. https://doi.org/10.2307/41165921

Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in Organizational Behavior*, *36*, 157–183. https://doi.org/10.1016/j.riob.2016.10.001

Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, *40*(5), 1297–1333. https://doi.org/10.1177/0149206314527128

April, S., Oliver, A. L., & Kalish, Y. (2019). Organizational creativity-innovation process and breakthrough under time constraints: Mid-point transformation. *Creativity and Innovation Management*, *28*(3), 318–328. https://doi.org/10.1111/caim.12326

Arnould, E. J., Price, L. L., & Malshe, A. (2006). Toward a cultural resource-based theory of the customer. In R. F. Lusch, & S. L. Vargo (Eds.), *The service-dominant logic of marketing: Dialog, debate and directions* (pp. 91–104). M. E. Sharpe.

Beghetto, R. A., & Corazza, G. E. (Eds.). (2019). *Dynamic perspectives on creativity: New directions for theory, research, and practice in education*. Springer International Publishing.

Berthon, P. R., Pitt, L. F., McCarthy, I., & Kates, S. M. (2007). When customers get clever: Managerial approaches to dealing with creative consumers. *Business Horizons*, *50*(1), 39–47. https://doi.org/10.1016/j.bushor.2006.05.005

Bissola, R., & Imperatori, B. (2011). Organizing individual and collective creativity: Flying in the face of creativity clichés. *Creativity and Innovation Management*, *20*(2), 77–89. https://doi.org/10.1111/j.1467-8691.2011.00597.x

Bonetto, E., Pichot, N., Pavani, J., & Adam-Troïan, J. (2020). Creative individuals are social risk-takers: Relationships between creativity, social risk-taking and fear of negative evaluations. *Creativity. Theories–Research-Applications*, *7*(2), 309–320. https://doi.org/10.2478/ctra-2020-0016

Bono, E., de (2000). *Six thinking hats*. Penguin Books.

Botella, M., & Lubart, T. (2019). From dynamic processes to a dynamic creative process. In R. A. Beghetto, & G. E. Corazza (Eds.), *Dynamic perspectives on creativity: New directions for theory, research, and practice in education* (pp. 261–278). Springer International Publishing. https://doi.org/10.1007/978-3-319-99163-4_15

Botella, M., Nelson, J., & Zenasni, F. (2019). It is time to observe the creative process: How to use a creative process report diary (CRD). *The Journal of Creative Behavior*, *53*(2), 211–221. https://doi.org/10.1002/jocb.172

Botella, M., Zenasni, F., & Lubart, T. (2018). What are the stages of the creative process? What visual art students are saying. *Frontiers in Psychology*, *9*, 2266. https://doi.org/10.3389/fpsyg.2018.02266

Boukhris, A., Fritzsche, A., & Möslein, K. (2017). Co-creation in the early stage of product-service system development. *Procedia CIRP*, *63*, 27–32. https://doi.org/10.1016/j.procir.2017.03.316

Bridges, D., & Schendan, H. (2019). Sensitive individuals are more creative. *Personality and Individual Differences*, *142*, 186–195. https://doi.org/10.1016/j.paid.2018.09.015

Bullinger, A. C., Neyer, A. K., Rass, M., & Moeslein, K. M. (2010). Community-based innovation contests: Where competition meets cooperation. *Creativity and Innovation Management*, *19*(3), 290–303. https://doi.org/10.1111/j.1467-8691.2010.00565.x

Byron, K., & Khazanchi, S. (2012). Rewards and creative performance: a meta-analytic test of theoretically derived hypotheses. *Psychological Bulletin*, *138*(4), 809–830. https://doi.org/10.1037/a0027652

Chamakiotis, P., Boukis, A., Panteli, N., & Papadopoulos, T. (2020). The role of temporal coordination for the fuzzy front-end of innovation in virtual teams. *International Journal of Information Management*, *50*, 182–190. https://doi.org/10.1016/j.ijinfomgt.2019.04.015

Chesbrough, H. (2006). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business Press.

Chesbrough, H. (2012). Open innovation: Where we've been and where we're going. *Research-Technology Management*, *55*(4), 20–27. https://doi.org/10.5437/08956308X5504085

Chesbrough, H. (2017). The future of open innovation: The future of open innovation is more extensive, more collaborative, and more engaged with a wider variety of participants. *Research-Technology Management*, *60*(1), 35–38. https://doi.org/10.1080/08956308.2017.1255054

Chesbrough, H., Lettl, C., & Ritter, T. (2018). Value creation and value capture in open innovation. *Journal of Product Innovation Management*, *35*(6), 930–938. https://doi.org/10.1111/jpim.12471

Corazza, G. E. (2016). Potential originality and effectiveness: The dynamic definition of creativity. *Creativity Research Journal*, *28*(3), 258–267. https://doi.org/10.1080/10400419.2016.1195627

Corazza, G. E., & Lubart, T. (2020). The big bang of originality and effectiveness: A dynamic creativity framework and its application to scientific missions. *Frontiers in Psychology*, *11*, 575067. https://doi.org/10.3389/fpsyg.2020.575067

Cortese, M. (2014). *Co-creating products with customers* (Unpublished doctoral dissertation). LUISS Guido Carli.

Costa, C., & do Vale, R. C. (2018). To tell or not to tell? The impact of communicating consumer participation in new product development. *Journal of Product & Brand Management*, *27*(2), 158–171. https://doi.org/10.1108/JPBM-07-2016-1276

Dargahi, R., Namin, A., Ketron, S. C., & Saint Clair, J. K. (2021). Is self-knowledge the ultimate prize? A quantitative analysis of participation choice in online ideation crowdsourcing contests. *Journal of Retailing and Consumer Services*, *62*, 102644. https://doi.org/10.1016/j.jretconser.2021.102644

Djelassi, S., & Decoopman, I. (2013). Customers' participation in product development through crowdsourcing: Issues and implications. *Industrial Marketing Management*, *42*(5), 683–692. https://doi.org/10.1016/j.indmarman.2013.05.006

Doorn, J., van, Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer engagement behavior: Theoretical foundations and research directions. *Journal of Service Research*, *13*(3), 253–266. https://doi.org/10.1177%2F1094670510375599

Dow, S., Fortuna, J., Schwartz, D., Altringer, B., Schwartz, D. & Klemmer, S. (2011). Prototyping dynamics: sharing multiple designs improves exploration, group rapport, and results. In *Proceedings of the SIGCHI Confer-ence on Human Factors in Computing Systems*, *CHI '11* (pp. 2807–2816). https://doi.org/10.1145/1978942.1979359

Dugosh, K. L., Paulus, P. B., Roland, E. J., & Yang, H. C. (2000). Cognitive stimulation in brainstorming. *Journal of Personality and Social Psychology*, *79*(5), 722–735. https://psycnet.apa.org/doi/10.1037/0022-3514.79.5.722

Etgar, M. (2008). A descriptive model of the consumer co-production process. *Journal of the Academy of Marketing Science*, *36*(1), 97–108. https://doi.org/10.1007/s11747-007-0061-1

Ezzat, H., Camarda, A., Cassotti, M., Agogué, M., Houdé, O., Weil, B., & Le Masson, P. (2017). How minimal executive feedback influences creative idea generation. *PLOS ONE*, *12*(6), e0180458. https://doi.org/10.1371/journal.pone.0180458

Feist, G. J. (1988). A meta-analysis of personality in scientific and artistic creativity. *Personality and Social Psychology Review*, *2*(4), 290–309. https://doi.org/10.1207%2Fs15327957pspr0204_5

Feist, G. J. (2010). The function of personality in creativity. In J. C. Kaufman, & R. J. Sternberg (Eds.), *The Cambridge handbook of creativity* (pp. 113–130). Cambridge University Press. https://doi.org/10.1017/CBO9780511763205.009

Fernandes, T., & Remelhe, P. (2016). How to engage customers in co-creation: customers' motivations for collaborative innovation. *Journal of Strategic Marketing*, *24*(3–4), 311–326. https://doi.org/10.1080/0965254X.2015.1095220

Filieri, R. (2013). Consumer co-creation and new product development: a case study in the food industry. *Marketing Intelligence & Planning*, *31*(1), 40–53. https://doi.org/10.1108/02634501311292911

Franke, N., Hippel, E., von & Schreier, M. (2006). Finding commercially attractive user innovations: A test of lead-user theory. *Journal of Product Innovation Management*, *23*(4), 301–315. https://dx.doi.org/10.2139/ssrn.721182

Franke, N., & Shah, S. (2003). How communities support innovative activities: an exploration of assistance and sharing among end-users. *Research Policy*, *32*(1), 157–178. https://doi.org/10.1016/S0048-7333(02)00006-9

Frey, K., Lüthje, C., & Haag, S. (2011). Whom should firms attract to open innovation platforms? The role of knowledge diversity and motivation. *Long Range Planning*, *44*(5–6), 397–420. https://doi.org/10.1016/j.lrp.2011.09.006

Frow, P., Nenonen, S., Payne, A., & Storbacka, K. (2015). Managing co-creation design: A strategic approach to innovation. *British Journal of Management*, *26*(3), 463–483. https://doi.org/10.1111/1467-8551.12087

Fuchs, C., Prandelli, E., & Schreier, M. (2010). The psychological effects of empowerment strategies on consumers' product demand. *Journal of Marketing*, *74*(1), 65–79. https://doi.org/10.1509%2Fjmkg.74.1.65

Füller, J. (2006). Why consumers engage in virtual new product developments initiated by producers. *Advances in Consumer Research*, *33*(1), 639–646.

Füller, J. (2010). Refining virtual co-creation from a consumer perspective. *California Management Review*, *52*(2), 98–122. https://doi.org/10.1525%2Fcmr.2010.52.2.98

Füller, J., Matzler, K., Hutter, K., & Hautz, J. (2012). Consumers' creative talent: Which characteristics qualify consumers for open innovation projects? An exploration of asymmetrical effects. *Creativity and Innovation Management*, *21*(3), 247–262. https://doi.org/10.1111/j.1467-8691.2012.00650.x

Füller, J., Mühlbacher, H., Matzler, K., & Jawecki, G. (2009). Consumer empowerment through internet-based co-creation. *Journal of Management Information System*, *26*(3), 71–102. https://doi.org/10.2753/MIS0742-1222260303

Fürst, G., Ghisletta, P., & Lubart, T. (2016). Toward an integrative model of creativity and personality: Theoretical suggestions and preliminary empirical testing. *The Journal of Creative Behavior, 50*(2), 87–108. https://doi.org/10.1002/jocb.71

Galvagno, M., & Dalli, D. (2014). Theory of value co-creation: a systematic literature review. *Managing Service Quality*, *24*(6), 643–683. https://doi.org/10.1108/MSQ-09-2013-0187

Gemser, G., & Perks, H. (2015). Co-Creation with customers: an evolving innovation research field: virtual issue editorial. *Journal of Product Innovation Management*, *32*(5), 660–665. https://doi.org/10.1111/jpim.12279

Gerlach, S., & Brem, A. (2017). Idea management revisited: A review of the literature and guide for implementation. *International Journal of Innovation Studies*, *1*(2), 144–161. https://doi.org/10.1016/j.ijis.2017.10.004

Glăveanu, V. P., & Beghetto, R. A. (2021). Creative experience: A non-standard definition of creativity. *Creativity Research Journal*, *33*(2), 75–80. https://doi.org/10.1080/10400419.2020.1827606

Goucher-Lambert, K., & Cagan, J. (2019). Crowdsourcing inspiration: Using crowd generated inspirational stimuli to support designer ideation. *Design Studies*, *61*, 1–29. https://doi.org/10.1016/j.destud.2019.01.001

Grant, A. M., & Berry, J. W. (2011). The necessity of others is the mother of invention: Intrinsic and prosocial motivations, perspective taking, and creativity. *Academy of Management Journal*, *54*(1), 73–96. https://doi.org/10.5465/amj.2011.59215085

Guzel, M., Sezen, B., & Alniacik, U. (2020). Drivers and consequences of customer participation into value co-creation: a field experiment. *Journal of Product & Brand Management*, *30*(7), 1047–1061. https://doi.org/10.1108/JPBM-04-2020-2847

Hargadon, A. B., & Bechky, B. A. (2006). When collections of creatives become creative collectives: A field study of problem solving at work. *Organization Science*, *17*(4), 484–500. https://doi.org/10.1287/orsc.1060.0200

Hemonnet-Goujot, A., Abecassis-Moedas, C., & Manceau, D. (2020). When external design and marketing collaborate to develop new products: A typology of patterns. *Creativity and Innovation Management*, *29*, 51–62. https://doi.org/10.1111/caim.12382

Henard, D. H., & Szymanski, D. M. (2001). Why some new products are more successful than others? *Journal of Marketing Research*, *38*(3), 362–375. https://doi.org/10.1509%2Fjmkr.38.3.362.18861

Hennessey, B. A. (2010). The creativity–motivation connection. In J. C. Kaufman, & R. J. Sternberg (Eds.), *The Cambridge handbook of creativity* (pp. 342–365). Cambridge University Press.

Hennessey, B. A., & Amabile, T. A. (2010). Creativity. *Annual Review of Psychology*, *61*, 569–598. https://doi.org/10.1146/annurev.psych.093008.100416

Hippel, E., von (1986). Lead users: a source of novel product concepts. *Management Science*, *32*(7), 791–805. https://doi.org/10.1287/mnsc.32.7.791

Hippel, E., von (2005). *Democratizing innovation*. MIT Press.

Hoffman, D. L., Kopalle, P. K., & Novak, T. P. (2010). The "right" consumers for better concepts: Identifying consumers high in emergent nature to develop new product concepts. *Journal of Marketing Research*, *47*(5), 854–865. https://doi.org/10.1509%2Fjmkr.47.5.854

Howard, T. J., Dekoninck, E. A., & Culley, S. J. (2010). The use of creative stimuli at early stages of industrial product innovation. *Research in Engineering Design*, *21*(4), 263–274. https://doi.org/10.1007/s00163-010-0091-4

Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M., & Singh, S. S. (2010). Consumer cocreation in new product development. *Journal of Service Research*, *13*(3), 283–296. https://doi.org/10.1177%2F1094670510375604

Hunt, S. D., & Derozier, C. (2004). The normative imperatives of business and marketing strategy: grounding strategy in resource-advantage theory. *Journal of Business & Industrial Marketing*, *19*(1), 5–22. https://doi.org/10.1108/08858620410516709

Hunter, S. T., Bedell, K. E., & Mumford, M. D. (2007). Climate for creativity: A quantitative review. *Creativity Research Journal*, *19*(1), 69–90. https://doi.org/10.1080/10400410709336883

Im, S., Montoya, M. M., & Workman Jr, J. P. (2013). Antecedents and consequences of creativity in product innovation teams. *Journal of Product Innovation Management*, *30*(1), 170–185. https://doi.org/10.1111/j.1540-5885.2012.00887.x

Ind, N., & Coates, N. (2013). The meanings of co-creation. *European Business Review*, *25*(1), 86–95. https://doi.org/10.1108/09555341311287754

Isaksen, S. G., & Lauer, K. J. (2002). The climate for creativity and change in teams. *Creativity and Innovation Management*, *11*(1), 74–86. https://doi.org/10.1111/1467-8691.00238

Jalali, S., & Wohlin, C. (2012). Systematic literature studies: database searches vs. backward snowballing. In *Proceedings of the 2012 ACM-IEEE international symposium on Empirical software engineering and measurement* (pp. 29–38). IEEE. https://doi.org/10.1145/2372251.2372257

Jankowska, D., & Karwowski, M. (2015). Measuring creative imagery abilities. *Frontiers in Psychology*, *6*, 1591. https://doi.org/10.3389/fpsyg.2015.01591

Koen, P., Ajamian, G., Burkart, R., Clamen, A., Davidson, J., D'Amore, R., Elkins, C. Herald, K., Incorvia, M., Johnson, A., Karol, R., Seibert, R., Slavejkov, A., & Wagner, K. (2001). Providing clarity and a common language to the "fuzzy front end". *Research-Technology Management*, *44*(2), 46–55. https://doi.org/10.1080/08956308.2001.11671418

Kohler, T., Fueller, J., Matzler, K., Stieger, D., & Füller, J. (2011). Co-creation in virtual worlds: The design of the user experience. *MIS Quarterly*, *35*(3), 773–788. https://doi.org/10.2307/23042808

Kohn, N. W., Paulus, P. B., & Choi, Y. (2011). Building on the ideas of others: An examination of the idea combination process. *Journal of Experimental Social Psychology*, *47*(3), 554–561. https://doi.org/10.1016/j.jesp.2011.01.004

Kramer, T. J., Fleming, G. P., & Mannis, S. M. (2001). Improving face-to-face brainstorming through modeling and facilitation. *Small Group Research*, *32*(5), 533–557. https://doi.org/10.1177%2F104649640103200502

Kristensen, T. (2004). The physical context of creativity. *Creativity and Innovation Management*, *13*(2), 89–96. https://doi.org/10.1111/j.0963-1690.2004.00297.x

Kristensson, P., Gustafsson, A., & Archer, T. (2004). Harnessing the creative potential among users. *Journal*

of Product Innovation Management, 21(1), 4–14. https://doi.org/10.1111/j.0737-6782.2004.00050.x

Kristensson, P., & Magnusson, P. R. (2010). Tuning users' innovativeness during ideation. Creativity and Innovation Management, 19(2), 147–159. https://doi.org/10.1111/j.1467-8691.2010.00552.x

Leclercq, T., Hammedi, W., & Poncin, I. (2016). Ten years of value cocreation: An integrative review. Recherche et Applications en Marketing (English Edition), 31(3), 26–60. https://doi.org/10.1177%2F2051570716650172

Leclercq, T., Poncin, I, & Hammedi, W. (2017). The engagement process during value co-creation: Gamification in new product-development platforms. International Journal of Electronic Commerce, 21(4), 454–488. https://doi.org/10.1080/10864415.2016.1355638

Leonard-Barton, D., & Swap, W. C. (1999). When sparks fly: Igniting creativity in groups. Harvard Business Press.

Liu, D., Jiang, K., Shalley, C. E., Keem, S., & Zhou, J. (2016). Motivational mechanisms of employee creativity: A meta-analytic examination and theoretical extension of the creativity literature. Organizational Behavior and Human Decision Processes, 137, 236–263. https://doi.org/10.1016/j.obhdp.2016.08.001

Loureiro, S. M. C., Romero, J., & Bilro, R. G. (2020). Stakeholder engagement in co-creation processes for innovation: A systematic literature review and case study. Journal of Business Research, 119, 388–409. https://doi.org/10.1016/j.jbusres.2019.09.038

Lubart, T. (2001). Models of the creative process: Past, present and future. Creativity Research Journal, 13(3–4), 295–308. https://doi.org/10.1207/S15326934CRJ1334_07

Lubart, T. (2010). Cross-cultural perspectives on creativity. In J. C. Kaufman, & R. J. Sternberg (Eds.), The Cambridge handbook of creativity (pp. 265–278). Cambridge University Press. https://doi.org/10.1017/CBO9780511763205.017

Lubart, T. (2017). The 7 C's of creativity. The Journal of Creative Behavior, 51(4), 293–296. https://doi.org/10.1002/jocb.190

Lubart, T. (Ed.). (2018). The creative process: Perspectives from multiple domains. Springer.

Mahr, D., Lievens, A., & Blazevic, V. (2014). The value of customer cocreated knowledge during the innovation process. Journal of Product Innovation Management, 31(3), 599–615. https://doi.org/10.1111/jpim.12116

Mandolfo, M., Chen, S., & Noci, G. (2020). Co-creation in new product development: Which drivers of consumer participation? International Journal of Engineering Business Management, 12. https://doi.org/10.1177/1847979020913764

Mazurek-Łopacińska, K. (2021). Open innovations as a form of customer value co-creation. Marketing of Scientific and Research Organizations, 39(1), 93–118. https://doi.org/10.2478/minib-2021-0005

McCrae, R. R. (1987). Creativity, divergent thinking, and openness to experience. Journal of Personality and Social Psychology, 52(6), 1258–1265.

McCrae, R. R., & Sutin, A. R. (2009). Openness to experience. In M. R. Leary, & R. H. Hoyle (Eds.), Handbook of individual differences in social behavior (pp. 257–273). Guilford Press.

Morgan, T., Obal, M., & Jewell, R. D. (2021). Strategic change and innovation reputation: Opening up the innovation process. Journal of Business Research, 132, 249–259. https://doi.org/10.1016/j.jbusres.2021.03.055

Nambisan, S., & Baron, R. A. (2009). Virtual customer environments: testing a model of voluntary participation in value co creation activities. Journal of Product Innovation Management, 26(4), 388–406. https://doi.org/10.1111/j.1540-5885.2009.00667.x

Nguyen, L. T. V., Conduit, J., Lu, V. N., & Rao Hill, S. (2020). Collective empowerment in online communities: conceptualization, scale refinement, and validation. Journal of Marketing Theory and Practice, 28(3), 301–317. https://doi.org/10.1080/10696679.2020.1758568

Nohutlu, Z. D., Englis, B. G., Groen, A. J. & Constantinides, E. (2021). Customer cocreation experience in online communities: antecedents and outcomes. European Journal of Innovation Management, 25(2), 630–659. https://doi.org/10.1108/EJIM-08-2020-0313

O'Brien, K. (2020). Innovation types and the search for new ideas at the fuzzy front end: Where to look and how often? Journal of Business Research, 107, 13–24. https://doi.org/10.1016/j.jbusres.2019.09.007

O'Hern, M. S., & Rindfleisch, A. (2010). Customer co-creation. In N. K. Malhotra (Ed.), Review of Marketing Research, 6 (pp. 84–106). Emerald Group Publishing Limited.

Oksanen, K., & Ståhle, P. (2013). Physical environment as a source for innovation: investigating the attributes of innovative space. Journal of Knowledge Management, 17(6), 815–827. https://doi.org/10.1108/JKM-04-2013-0136

Patricio, R., Moreira, A., Zurlo, F., & Melazzini, M. (2020). Co-creation of new solutions through gamification: A collaborative innovation practice. Creativity and Innovation Management, 29(1), 146–160. https://doi.org/10.1111/caim.12356

Paulus, P. B., & Brown, V. R. (2003). Enhancing ideational creativity in groups. In P. B. Paulus, & B. A. Nijstad (Eds.), Group creativity: Innovation through collaboration (pp. 110–136). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195147308.003.0006

Paulus, P. B., & Dzindolet, M. (2008). Social influence, creativity and innovation. Social Influence, 3(4), 228–247. https://doi.org/10.1080/15534510802341082

Payne, A. F., Storbacka, K., & Frow, P. (2008). Managing the co-creation of value. Journal of the Academy of Marketing Science, 36, 83–96. https://doi.org/10.1007/s11747-007-0070-0

Perry-Smith, J. E., & Mannucci, P. V. (2017). From creativity to innovation: The social network drivers of the four phases of the idea journey. Academy of Management Review, 42(1), 53–79. https://doi.org/10.5465/amr.2014.0462

Perry-Smith, J. E., & Shalley, C. E. (2003). The social side of creativity: A static and dynamic social network perspective. Academy of Management Review, 28(1), 89–106. https://doi.org/10.5465/amr.2003.8925236

The full list of references is available in the online version of the journal

Mieszko Olszewski is a Ph.D. candidate at the Faculty of Management, Leon Kozminski University. His research focuses primarily on creativity management in business organizations and agile project management.

Objectivity in evaluating professional career development

Klaudia Blachnicka

Abstract

Adopting a proactive attitude focused on professional development is essential in the contemporary, volatile environment. Objective and subjective indicators are used when evaluating the development of a professional career. However, the adequateness of the criteria chosen for evaluation is ambiguous due to the limitations of both objective and subjective measures. In this article, on the basis of a review of literature, objective and subjective measures of professional progression were characterized, and the possible distortions of objective evaluation resulting from applying them were identified. The evolution of the career paradigm results in the need to verify professional development in the modern approach, which strongly highlights the subjective prospects of a professional career that reflect an individually planned concept of oneself. Nevertheless, a possible criticism regarding subjective measures is lack of objectivity in career evaluation. Therefore, the purpose of this article is to analyze the relationship between the objective and subjective measures of professional careers. The study was based on an online questionnaire which covered 190 employees employed in large and medium-sized companies in Poland. The study confirmed the positive relationship between the measures, and shows the direction of the relationship, showing that the subjective and objective criteria commensurately indicate career development. Career satisfaction can be successfully used in the assessment of professional development, thus giving reliable results for its advancement.

Keywords: professional career, subjective success, objective success, professional development, career evaluation measures

Introduction

The processes of integration, globalization, and dynamic development involve civilization and business changes. These transformations, when used skillfully, may be the source of competitive advantages, from the point of view of the economy, organizations, and individuals. A number of new opportunities, blurring borders of all kinds, and changes in the standards binding on the labor market, cause the evolution of professional careers. The traditional understanding of these is being replaced by non-linear and adaptive professional career routes.

A change in the construct of professional careers and success is noticeable in the literature in the form of new dimensions and perspectives of the term being defined. In 1961, Wilensky defined a *career* as an ordered sequence, consisting in moving from positions located lower in the hierarchy and with little prestige to higher and more respected ones. Less than twenty years later, Super (1980) turned his attention to a set of roles played throughout someone's entire life. Finally, at the beginning of the twentieth first century, the universal definition of a *career* is a sequence of professional experiences evolving in time (Arthur et al., 2005). Such a transformation in the approach to a career from professional duty, and even the resulting pressure, towards accumulating experiences, highlights the growing significance of subjective professional space.

The new reality requires verification of the methods of professional career exemplification. The subjective approach to career and the resulting consequences of the individual creation of a professional path must coexist with ensuring the reliability and validity of assessment. The risk of losing objectivity resulting from inadequate selection of parameters for career assessment can be reduced by proving the correlation between the parameters. Due to the diversified approach to operationalizing the careers in the existing literature, there is a great need to specify the relationships

Klaudia Blachnicka, Cracow University of Economics, Poland, (iD) https://orcid.org/0000-0002-9788-9082

between the subjective and objective parameters. Evaluating the development of a professional career could prove crucial in better understanding the needs of employees and the strategies of their professional careers. The purpose of this article is to assess career progression by means of objective and subjective measures and to examine the relationship between them. Moreover, the aim is to analysis of the simultaneous occurrence of objective and subjective success and identification of the dependencies and impact of objective measures on subjective satisfaction with one's career. The research is preceded by a review of literature to determine the essence of subjective and objective measures of a professional career and their limitations that have a negative impact on the objectivity of the evaluation.

Choosing the career evaluation criteria is often problematic, not only for scholars and scientists, but also for individuals who are creators of the career path. Professional success is undoubtedly desirable, however, owing to differing priorities and value systems of particular individuals, to grasp it is highly contextual and complex. For this reason, analysis of subjective measures of career progression seems crucial. Moreover, those measures represented by career satisfaction have not received as much attention and research in Central and Eastern Europe as in Western Europe or America (Kowal & Roztocki, 2015). Therefore, in empirical research conducted by the author it is important to take into account both the Polish labor market and the contemporary approach to a professional career.

Objective and subjective career measures

A career, its development, and professional success achieved are one of the more important fields of interest of both management theoreticians and practitioners. The positive effects of a career being pursued are multi-dimensional, starting from individual motivations, self-evaluation, living conditions, to organizational aspects, such as an increase in a company's market value, growing profits, or creating a competitive position within a strategic group. A career is both a certain descriptive method of determining the course of subsequent stages and phases of one's professional life, as well as a term which is evaluating and verifying in nature, referring to changes in professional development (De Vos & Soens, 2008).

The main categorization of careers and career success is the division into the objective and subjective dimensions performed by Hughes (1937). The attributes of an objective approach to a career are the measurability and verifiability by an unbiased third party, and the subjective understanding of the career points to the exclusive perspective of, and evaluation by the person directly experiencing it. Thus, the objective indicators will be measurable achievements, examples of which are: remuneration, promotion, professional status, authorization to delegate work, or serving a management function.

The objective parameters are an important determinant of the degree of fulfilment of basic daily needs (Nicholson & De Waal-Andrews, 2005), but also reflect the efficiency of an individual being assessed by the employer. Defining professional success in the objective and externally observable categories is characteristic for the traditional career model. However, the current understanding of career highlights that success is no longer a totally static and objective fact, but a social and very dynamic structure (Savickas, 2005).

The subjective career development measure is how a person judges their own professional abilities and achievements, and evaluates the potential of the human capital created. In addition, an important role is played by the satisfaction with the course of one's career and particular experiences accumulated throughout someone's whole professional life (Srivastava et al., 2010). Subjectively perceived career results cover a long time period, and are associated with a sense of security and the perceived socio-economic status, but also a sense of identity and the balance between private and professional life (Finegold & Mohrman, 2001). Among the subjective measures, there is another notable distinction. A comparative standard may be a subjective belief, which refers to oneself or others in the environment (Heslin, 2005). In the first case, a satisfaction level is used to judge individual aspirations. The second dimension is based on evaluation in comparison to a certain reference group, and the social standards prevailing in it.

At the moment, literature does not favor significantly any of the approaches to operationalizing careers. The focus is on both the objective and the subjective results of individual professional experiences. Although the subjective and objective career effects are separate constructs, they are related to a large extent and can overlap and strengthen each other (Spurk et al., 2018). While examining the relationship between subjective and objective professional success, Abele and Spurk (2009) prove that a positive change in the objective success parameters in a community being analyzed leads to a positive change in the subjectively experienced success. A longitudinal study performed over nine years made it possible to verify the long-term impact of the two dimensions on each other. The main discovery of the authors is a strong, positive impact of the subjective success on the objective results. It turns out that the subjective success is not only a result or by-product of measurable, and often financial professional achievements, but rather it is a determinant of measurable long-term achievements.

Previous studies on the link between objective professional success and the subjective assessment of an employee in traditional professional career models also indicate a positive correlation (Judge et al., 1995). Valcour and Ladge (2008) confirm the link between professional success internal and external measures, highlighting the relation between income

and satisfaction with one's career. Card et al. (2012) indicate, however, that this dependence occurs only up to a certain level of received income. The author shows that an increase in salary above the median does not increase satisfaction. Moreover, a systematic review of literature revealed certain career predictors that may have different effects on subjective and objective career indicators (Spurk et al., 2018). Van den Born and Witteloostuijn (2013) identified for instance the work-life balance motivations. Striving for flexibility and balance has a positive effect on subjectively assessed professional success, but in the case of objective exemplification, the relationship is negative.

Limitations in evaluating professional career development

In order to evaluate the achievements, it is necessary to determine certain standards that an individual will apply to evaluate and make comparisons (Schwarz, 1999). Success in a career is the actual or perceived achievement attained by an employee as a result of their professional actions and experience (Judge et al., 1999), but the value attributed to them is specific for each person individually, due to varying reference points based on idiosyncratic templates. Professional success is what an individual defines using the notion referred to above, because their point of view depends on their individual needs and social roles. When measuring and evaluating one's career, the limitations both in the objective and subjective measures must be taken into consideration.

One restriction of the subjective measures is their strong dependence on individually presented attitudes, ambitions, and actions. Evaluating the development of a career by means of subjective measures may cause a certain disproportion in the professional progress achieved. This results from a different system of values, motivations, and specific goals, and a different amount of material and intangible wealth that brings satisfaction (Judge & Kammeyer-Mueller, 2012). Additionally, the subjective measures of development are moderated by psychological variables, such as personality, temper, propensity for optimism, and specific characteristics, such as self-confidence, or belief in one's capabilities. The attitude of researchers towards the subjective measures is often marked by a low level of trust, since they are not based on evidence and facts. There is a certain probability of manipulation in how people process and interpret questions, and thus how they answer and provide material for analyses. Any cognitive problems resulting from insufficient understanding, different perception, or insufficient stability of individual evaluations, which may change over time, or the mood of a person being surveyed, require particular attention and focus when interpreting the data and drawing conclusions on that basis (Bertrand & Mullainathan, 2001).

On the other hand, despite the fact that the objective approach seems to be adequate and reliable, it may also distort the real picture to some extent. Ob-jective success is a construct experienced and defined differently for example, on the basis of a profession, its rules, the working environment, or location. A person's investments in their education and developing skills are rewarded and valued by the labor market differently. Thorndike (1963) also pointed out that there are groups of professions in which the objective criteria related to careers very much restrict evaluations of achievements and employee development, and thus the professional success achieved. Examples include groups of professions with rigid and institutionalized remuneration and promotion rules, such as civil services or armed forces.

The objective indicators are restricted by the need to continuously adjust them to changing organizational and market conditions. They are hardly comparable between sectors which operate on different principles, work systems, and financial and social norms (Dette et al., 2004). The current devaluation of this group of parameters is also based on continuously declining significance of hierarchical career models with a clear and predictable career path (Reitman & Schneer, 2003). One of the premises is the shrinking sizes of organizations or the extensive use of outsourcing (Evans et al., 1997). As a result, the hierarchical progression is being replaced by enrichment of work, greater autonomy, or the possibility of personal development (Hall, 2004).

Studies

Research methodology

The evolution of a career that assigns the status of career ownership to a specific individual entails the need for subjective understanding and evaluation (Cybal-Michalska, 2013). Subjective assessment of a career in the present reality takes on an increasingly important role. On the other hand, it is also worth considering the proof of the reliability of career exemplification through satisfaction. In ensuring objectivity in evaluating professional careers, it seems important to check the relationship between subjective and objective career parameters. To check this correlation in the current, Polish conditions and the new subjective approach to careers, an original study was conducted, in which the following hypotheses were verified:

H1: There is a positive correlation between objective and subjective career measures.

H2: The objective indicators of a professional career influence satisfaction with one's career.

In order to verify the hypotheses, a study was conducted based on an online questionnaire addressed to employees in large and medium-sized enterprises in Poland. Responses were obtained from 190 respondents, of which 49% were women, and 51% were men. 14% of respondents seniority is more than 20 years, 21% are between 10 and 20 years old. The largest group, constituting 32% of the population, had between 5 and 10 years of professional experience. 36% of the employees held managerial functions, of lower,

average, or upper management level, and 46% held an expert or specialized position. The characteristics of the group in terms of position (which is also one of the objective measures of career development) and seniority are presented in Table 1.

Table 1

Characteristics of the group being studied

Variable	% of the group
Type of position occupied	
Upper management position	8.42%
Middle management position	12.63%
Lower management position	15.27%
Position not related to management (specialist)	45.79%
Position not related to management (basic/operational)	17.89%
Seniority	
Less than 2 years	10.5%
From 2 to 5 years	22.6%
From 5 to 10 years	32.1%
From 10 to 20 years	20.6%
Over 20 years	14.2%

Source: author's own work.

All analyses were prepared in the SPSS statistical application, version 27. The significance level adopted was equal to $\alpha = 0.05$. The correlations between the variables were analyzed using Pearson's correlation coefficient r. In order to fulfill the linear regression assumptions regarding the normality of the dependent variable's and the independent variables' distributions, a logarithmic transformation of the distributions of these variables that deviate from the normal distribution was performed. Given that the tendency in all these distributions was negative, first the distributions were reflected in positively skewing distributions. Due to that reflection, the Beta values in the regression analyses were analyzed in reverse (a negative value as a positive one, a positive as a negative) for the transformation of only one variable, and in the same way as if the transformation had been performed on

a dependent and an independent variable. In order to examine whether or not gender and seniority were significant moderators for particular relations in the regressions, the independent variables were centered by means of centration based on standardization of a variable's results.

Measures

Subjective measure in career evaluation: To examine the subjectively perceived success of career and career development, the career satisfaction scale (CSS), authored by Greenhaus, Parasuraman, Wormley (1990) was used. It consists of five items evaluating an individual's satisfaction with their progress in terms of promotions, income, and competence development, but also the professional success perceived or the professional goals achieved. The respondents provided answers on Likert's 7-grade scale. This survey is a commonly used tool for studying careers, and is recognized as one of the best measures available in literature (Judge et al., 1995).

The subjective measure in research is therefore represented by satisfaction with a career in the five areas.

Objective measure in career evaluation: In order to examine career development objectively, an index has been designed that concerns an employee's promotions, their remuneration, participation in training and development undertakings, and the position held. The questionnaire defining objective measures consisted of single-choice questions relating to quantifiable aspects of career development. The respondents were asked how often their remuneration is increased, how fast they get promoted, how many times per year they participate in training courses, and what position they hold from the lowest operational, specialized, and managerial work position, taking into account division into lower, average, and upper management level.

Results

The results of the analysis of the correlation between the subjective and objective measures are presented in Table 2. Each objective measure of development was correlated positively with its subjective equivalent ($p < 0.050$ for all analyses), and thus the subjective and objective professional

Table 2

Analysis of the correlations between the subjective and objective measures of development (cumulatively and separately)

Subjective measures	r	Objective measures
Subjective measure of development (cumulatively)	0.36***	Objective measure of development (cumulatively)
Particular items to the scale		**Particular items to the scale**
Satisfaction with professional success	0.46***	Position held
Satisfaction with remuneration	0.36**	Wage rise frequency
Satisfaction with promotions	0.19**	Promotion frequency
Satisfaction with new skill development	0.17*	Frequency of participation in training

Note. r – Pearson's correlation coefficient r; *** $p < 0.001$; ** $p < 0.010$; * $p < 0.05$.

Source: author's own work.

success are co-existing variables. The value of the correlation coefficient indicates a statistically significant co-relation of poor or moderate strength. The higher/lower the objective development measure (both cumulatively and separately), the higher /lower the subjective development measure, which makes it possible to confirm H1.

To verify whether or not, based on the values of the objective measures of development, the values of the subjective parameters could be predicted, a series of multidimensional regression analyses was performed, where the dependent variables were particular subjective measures of development. The predictors in each model were: objective measure of development (cumulatively, or separately), gender, and seniority, (less than ten years and more than ten years), interaction between the objective measure and gender, and interaction between the objective measure and seniority. For particular variables relating to the objective measures of development, a logarithmic transformation of the distributions was performed, due to the skewing, or kurtosis being too big. The models were prepared by means of the stepwise method.

The final models explained 3% to 14% of the values of the dependent variables. In almost all models, the only significant predictor was the given measure of objective development, and therefore H2, which refers to the impact of the objective measures on career success, was partly confirmed due to a weak, but statistically significant co-relation. As shown in Table 3, along with the increase in the total value of the objective measure by 1%, the total value of the subjective measure grew by 0.05 of a unit ($p < 0.001$). The higher the position held, the higher the satisfaction with the professional success achieved ($p = 0.006$). A change in the value of the variable related to the frequency of wage increases by 1% meant that a change could be predicted in the value of the satisfaction with remuneration variable by 0.01 of a unit ($p < 0.001$). Together with an increase in the training participation frequency value by one unit, the value of satisfaction with developing new skills grew by 0.31 of a unit ($p = 0.019$). In the models described, no interaction between the variables relating to the objective measures of development and gender and seniority was observed (the dependencies analyzed were significantly similar for both genders, and for people with shorter and longer seniority). In the model regarding satisfaction with promotions, two significant predictors were left – promotion frequency, and interaction between this variable and gender. Together with an increase in the value of the promotion frequency variable by 1%, the value of the satisfaction with promotions variable grew by 0.006 of a unit ($p = 0.013$). Further studies showed that the dependence between this predictor and the dependent variable was higher for women ($p = 0.030$).

Table 3

Analyses of the, multidimensional linear regression for the subjective measure of development (cumulatively and individually)

Dependent variable: Subjective measure of development (cumulatively); F(1; 188) = 29.59; p < 0.001				
Predictor	*β*	*SE*	*p*	*R2*
Objective measure of development (cumulatively)	−5.05	0.93	< 0.001	0.14
Dependent variable: Satisfaction with professional success achieved; F(1; 188) = 7.59; p = 0.006				
Predictor	*β*	*SE*	*p*	*R2*
Position held	−0.55	0.20	0.006	0.04
Dependent variable: Satisfaction with remuneration; F(1; 188) = 23.15; p < 0.001				
Predictor	*β*	*SE*	*p*	*R2*
Wage rise frequency	−0.95	0.20	< 0.001	0.11
Dependent variable: Satisfaction with promotions; F(1; 188) = 4.92; p = 0.008				
Predictor	*β*	*SE*	*p*	*R2*
Promotion frequency	−0.56	0.22	0.013	0.05
Promotion frequency * gender	0.27	0.12	0.030	
Dependent variable: Satisfaction with developing new skills; F(1; 188) = 5.60; p < 0.019				
Predictor	*β*	*SE*	*p*	*R2*
Frequency of participation in training	0.31	0.13	0.019	0.03

Note. β – beta coefficient value; *SE* – standard error.

Source: author's own work.

Conclusions

The analysis of the research material collected indicates a correlation between the objective and subjective measures of professional careers. The strongest relationship exists between subjectively perceived professional success and the associated satisfaction, and the position occupied by the surveyed person. There is also a statistically significant correlation between the interaction between satisfaction with the goals achieved associated with remuneration and wage rise frequency, which may indicate a developing career, increasing responsibility, or job enrichment.

Apart from the proven simultaneous occurrence of the variables, there is also a cause-effect relationship between them. This makes it possible, to some extent, to predict satisfaction with one's career based on changes in the objective indicators of the professional career. Seniority was not demonstrated to be a significant moderator of the relationships between the career measures, and, on the other hand, in the case of gender, it only diversified the interactions in terms of promotions. For women, the frequency of promotion better explained the satisfaction with achieving goals related to promotion than for men.

Summary

At the moment, the progressing changes in the professional environment require a multi-contextual approach to careers and their measurement. The binary formulation of a career, namely in objective and subjective terms, makes it possible to comprehensively analyze and evaluate the achievements of an individual. The choice of the parameters for evaluating a professional career should take account of a broad spectrum of factors, such as the specificity of the group being studied, its characteristic features, or the context of the problem area being addressed by the author. In addition, awareness of the limitations both of the objective and subjective measures is necessary.

In general, the main purpose of the studies is their reliability and objectivity, making it possible to credibly present the results and conclusions resulting from the studies conducted, without bias. The common career measures used to date, such as remuneration or the position held, both because of the evolution of the career paradigm and new models, and the impossibility to determine fixed comparative standards among diverse industries and professions, hinder a reliable evaluation of the progression of a career. Professional development is a continuous and progressive process, and one contemporary reflection of professional success is having valuable competences and their constant evaluation, and not just the power to give instructions to others. An individual's view of themselves is present in what they do, and for this reason the current understanding of a career highlights the importance of the subjective parameters.

Dynamic changes in career models imply the need to update the methods of measurement, while maintaining the objectivity of evaluation. In addition to the contemporary approach to career, another aspect that gives research originality is the focus on the work environment in Central and Eastern Europe.

Confirmation of the relationship between objective and subjective measures means that they can be considered as equivalents, without disqualifying any of them in the process of making a reliable career assessment.

The objective and subjective career measures are correlated and complement and explain each other. They are used to measure the same construct but from another perspective. Conditioning a career and its effects by means of many factors creates a diversified evaluation framework, which, in consequence makes it impossible to indicate a universal, more significant and reliable measurement method. The criteria chosen depend on the research context. The simultaneous occurrence of the variables demonstrated indicates, however, the justification of using one of two approaches to operationalize a professional career. An increase in the objective assessment value of a career is accompanied by an increase in the subjective satisfaction with the career. For this reason, in the process of measuring a professional career, these measures may substitute each other. Moreover, the conclusion may be that the use of subjective measures of career development meets the condition of an objective evaluation.

References

Abele, A. E., & Spurk, D. (2009). How do objective and subjective career success interrelate over time? *Journal of Occupational and Organizational Psychology, 82*(4), 803–824. https://doi.org/10.1348/096317909X470924

Arthur, M. B., Khapova, S. N., & Wilderom, C. P. M. (2005). Career success in a boundaryless career world. *Journal of Organizational Behavior, 26*(2), 177–202. https://doi.org/10.1002/job.290

Bertrand, M., & Mullainathan, S. (2001). Do people mean what they say? Implications for subjective survey data. *American Economic Review, 91*(2), 67–72. https://doi.org/10.1257/aer.91.2.67

Card, D., Mas, A., Moretti, E., & Saez, E. (2012). Inequality at work: The effect of peer salaries on job satisfaction. *The American Economic Review, 102*(6), 2981–3003. https://doi.org/10.1257/aer.102.6.2981

Cybal-Michalska, A. (2013). Świat, w którym „kariera robi karierę" – o satysfakcji z kariery i poczuciu zawodowego sukcesu. *Studia Edukacyjne, 26*, 19–38. https://repozytorium.amu.edu.pl/bitstream/10593/10095/1/19-38.pdf

De Vos, A., & Soens, N. (2008). Protean attitude and career success: The mediating role of self-management. *Journal of Vocational Behavior 73*(3), 449–456. https://doi.org/10.1016/j.jvb.2008.08.007

Dette, E. D., Abele, A. E., & Renner, O. (2004). Zur Definition und Messung von Berufserfolg – theoretische

Überlegungen und metaanalytische Befunde zum Zusammenhang von externen und internen Laufbahnerfolgsmaßen. [Definition and measurement of vocational success: Theoretical considerations and meta-analytical results on the relationship between external and internal measures of career success]. *Personnel Psychology, 3*(4), 170–183. https://doi.org/10.1026/1617-6391.3.4.170

Evans, M. G., Gunz, H. P., & Jalland, R. M. (1997). Implications of organizational downsizing for managerial careers. *Canadian Journal of Administrative Sciences, 14*(4), 359–371. https://doi.org/10.1111/j.1936-4490.1997.tb00142.x

Finegold, D., & Mohrman, S. A. (2001). *What do employees really want? The perception vs. the reality.* University of Southern California.

Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. (1990). Effects of race on organizational experiences, job performance evaluations, and career outcomes. *Academy of Management Journal, 33*(1), 64–86. https://doi.org/10.5465/256352

Hall, D. T. (2004). The protean career: A quarter-century journey. *Journal of Vocational Behavior, 65*(1), 1–13. https://doi.org/10.1016/j.jvb.2003.10.006

Heslin, P. A. (2005). Conceptualizing and evaluating career success. *Journal of Vocational Behavior, 26*(2), 113–136. https://doi.org/10.1002/job.270

Hughes, E. C. (1937). Institutional Office and the Person. *American Journal of Sociology, 43(3*), 404–413. https://doi.org/10.1086/217711

Judge, T. A., Cable, D. M., Boudreau, J. W., & Bretz, R. D. (1995). An empirical investigation of the predictors of executive career success. *Personnel Psychology, 48*(3), 485–519. http://dx.doi.org/10.1111/j.1744-6570.1995.tb01767.x

Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrik, M. R. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel Psychology, 52*(3), 621–652. https://doi.org/10.1111/j.1744-6570.1999.tb00174.x

Judge, T. A., & Kammeyer-Mueller, J. D. (2012). On the value of aiming high: The causes and consequences of ambition. *Journal of Applied Psychology, 97*(4), 758–775. https://doi.org/10.1037/a0028084

Kowal, J., & Roztocki, N. (2015). Job satisfaction of IT professionals in Poland: does business competence matter? *Journal of Business Economics and Management, 16*(5), 995–1012. https://doi.org/10.3846/16111699.2014.924988

Nicholson, N., & de Waal-Andrews, W. (2005). Playing to win: Biological imperatives, self-regulation, and trade-offs in the game of career success. *Journal of Organizational Behavior, 26*(2), 137–154. https://doi.org/10.1002/job.295

Reitman, F., & Schneer, J. A. (2003). The promised path: a longitudinal study of managerial careers. *Journal of Managerial Psychology, 18*(1), 60–75. https://doi.org/10.1108/02683940310459592

Savickas, M. L. (2005). The theory and practice of career construction. In S. D. Brown, & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 42–70). John Wiley & Sons.

Schwarz, N. (1999). Self-reports. How the questions shape the answers. *American Psychologist, 54*(2), 93–105. https://doi.org/10.1037/0003-066X.54.2.93

Spurk, D., Hirschi, A., & Dries, N. (2018). Antecedents and outcomes of objective versus subjective career success: Competing perspectives and future directions. *Journal of Management, 45*(1), 35–69. https://doi.org/10.1177/0149206318786563

Srivastava, A., Locke, E. A., Judge, T. A., & Adams, J. W. (2010). Core self-evaluations as causes of satisfaction: The mediating role of seeking task complexity. *Journal of Vocational Behavior, 77*(2), 255–265. https://doi.org/10.1016/j.jvb.2010.04.008

Super, D. E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior, 13*, 282–298. https://doi.org/10.1016/0001-8791(80)90056-1

Thorndike, R. L. (1963). The prediction of vocational success. *Vocational Guidance Quarterly, 11*(3), 179–187. https://doi.org/10.1002/j.2164-585X.1963.tb00007.x

Valcour, M., & Ladge, J. J. (2008). Family and career path characteristics as predictors of women's objective and subjective career success: Integrating traditional and protean career explanations. *Journal of Vocational Behavior, 73*(2), 300–309. https://doi.org/10.1016/j.jvb.2008.06.002

Van den Born, A., & Witteloostuijn, A. (2013). Drivers of freelance career success. *Journal of Organizational Behavior, 34*(1), 24–46, https://doi.org/10.1002/job.1786

Wilensky, H. L. (1961). Orderly careers and social participation: The impact of work history on social integration in the middle mass. *American Sociological Review, 26(4),* 521–539. https://doi.org/10.2307/2090251

Klaudia Blachnicka is a PhD student and assistant at the Institute of Management at the University of Economics in Cracow. Her research interests concentrate on current trends in the management of modern enterprises. Moreover, she analyses new career models and identifies factors that accelerate professional development.

Infographics in social media. Selected issues

Elżbieta Sroka

Abstract

Technological progress and changes in the lives of contemporary humans have led to a situation in which traditional forms of transferring information by means of text have become too slow, as it takes recipients more time to learn the content of such messages. Researchers emphasise that humans acquire graphic messages better than text. For this reason, presenting information in the form of infographics has become a popular method. The purpose of this article is to present the issue of infographics, including: definitions, types of infographics, and using infographics in different areas of life. An example of their wide use are social media. Based on this example, research was conducted using a searching technique, the purpose being to verify infographics in selected social media. The results of the research allow to acquire information about infographics in terms of popularity in a selected period, scope of topics in infographics and information about sectors and specialists who share infographics in social media most often.

Keywords: infographics, visualisation information, social media, searching, designing infographics

Introduction

Nowadays it is very important for messages to be communicable and interesting for the recipient (see also Litwic-Kaminska, 2011, p. 177). Traditional forms of transferring information by means of text have become too slow, because recipients need more time to learn the content of such messages. We know that "recipients expect messages to be shorter, more intensive, easier to read and – more importantly – pictorial, because we live in visual times where pictures help to precise, sum up and illustrate facts" (Płaneta, 2013, p. 45). Researchers emphasise that humans acquire graphic messages better than text. For this reason, presenting information in the form of infographics has become popular. Szews (2017, p. 124) points out that the existing need for visual presentation of information may have arisen due to the following reasons. The first one is technological development, connected with the layout of magazines, then the Internet, which ensures new forms of presenting information, and finally a last factor concentrating on the needs of recipients who "want to receive as much information as possible and be able to embrace it as soon as possible in the most accessible form" (Szews, 2017, p. 124). In addition, research shows that humans acquire graphic information much better than text (see also Osińska, 2016, pp. 67–70). This is due to the fact that our vision absorbs information that gets to our central nervous system in 87% (Bartos, 2010, p. 160). Pictures can fulfil a very important role in the efficiency of a message, and each message is more attractive for the recipient when it is filled with graphic information (Chorodyński, 2020). One of the most often used data visualisation methods are infographics, which are most popular in a network environment (Wójcik, 2017, p. 161).

Definition and origins of infographics

In literature there are different definitions of infographics. Many of them emphasise that infographics are a visual form of presenting information popular in media (Płaneta, 2013, p. 46), also sometimes called 'information graphics' or 'explanatory graphics', connecting textual information and graphic presentation (Iskierka, 2016, pp. 142–143). Infographics let you convey different messages, combining complex information in

Elżbieta Sroka, Pedagogical University of Krakow, Poland, https://orcid.org/0000-0001-8952-2187

such a way that the recipient can easily understand the message (Iskierka, 2016, p. 143). Additionally, infographics, as visual representation of data, let "people learn faster and remember things more efficiently and effectively through the use of text and visuals than using the conventional textual method alone. Infographics can be used in visualiation to enhance data interpretation and knowledge discovery" (Shahbazi et al., 2021, p. 45). The above definitions are combined below by Zimniak-Rucińska (2019):

> Infographics (sometimes called 'information graphics' or 'explanatory graphics') are a visual form of presenting information. In infographics the text and picture coexist with each other – they interpenetrate and complement each other. It should be pointed out that pictures in infographics do not play a solely decorative or simply eye-catching role. Text and picture are equally involved in the process of explaining the message content and facilitating its understanding. The aim of using the infographic form to present the content is to ensure the greatest possible transparency and readability. (p. 10)

Why are infographics effective? Zimniak-Rucińska (2019) gives a few scientific reasons to explain this. Firstly, our brain is created to transform pictures, because vision reigns over our other senses. Secondly, vision precedes words – since we were young we have been creating connections between visual objects and behaviours, even before we learned to describe these objects or behaviours with words" (Zimniak-Rucińska, 2019, p. 24). Thirdly, our brain does not like boredom – due to large amounts of information from all around us, we choose eye-catching information that we can focus on. Fourthly, our brain likes emotions in the form of a picture which evokes them. Different emotions can build picture emotions such as shapes, typefaces, colours. Pictures allow emotions to be better remembered by the recipient. Next, in order to interest the recipient, a human being should be at the centre of attention. The final reason is that we remember pictures better (based on Zimniak-Rucińska, 2019, pp. 24–26).

The history of infographics (see also Biecek, n.d.; Szklarek, & Klamka, 2020, pp. 46–50; Zimoląg, 2020, pp. 302–306) dates back to the times of cave paintings, which are the oldest method of telling a story and presenting information. This was followed by the picture letter period, where each picture meant one term, for example in ancient Egypt in the form of hieroglyphs. A variety are pictograms, which nowadays are on road signs or warning signs. "Replacing a written word with a graphic element is more readable and speeds up the understanding of a message. Pictograms allow to avoid language barriers" and are also used in infographics (Zimniak-Rucińska, 2019, p. 14). New forms of data visualisation arose over time – developed for specific purposes. One interesting examples is an illustration by William Playfair, which presents differences between export and import in England (see Figure 1).

Another interesting and novel graphic information form are the infographics made by Florence Nightingale, who created the coxcomb chart (a pie chart with a bar). Nightingale prepared graphic information showing an analysis of the numbers and reasons of deaths during the Crimean War (see Figure 2). "The chart influenced the rulers' imagination and convinced

Figure 1

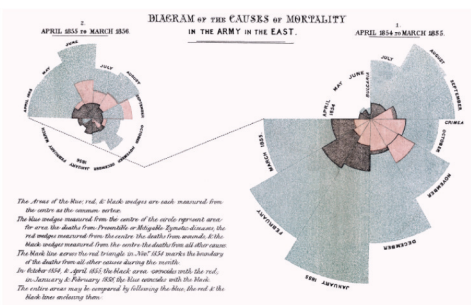*Balance sheet chart from The Commercial and Political Atlas by William Playfair*
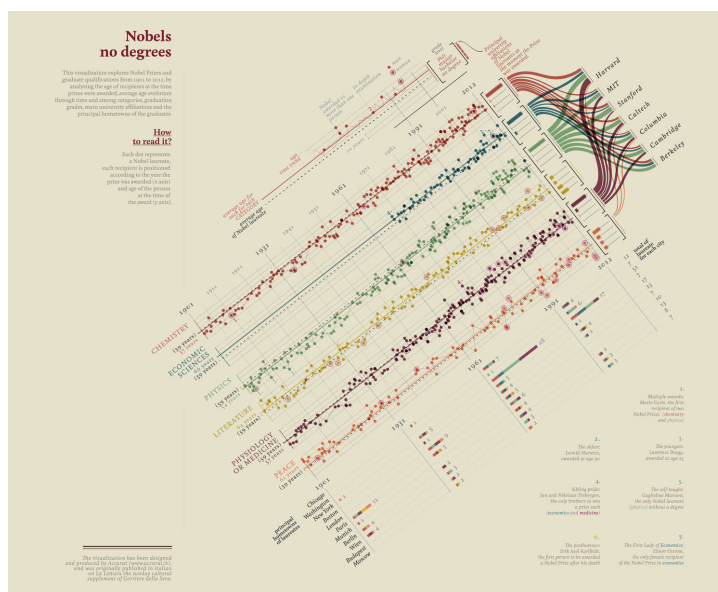
Source: Odkrywać! Ujawniać! Objaśniać! Zbiór esejów o sztuce prezentowania danych, P. Biecek. Retrieved September 20, 2021 from http://www.biecek.pl/Eseje/indexHistoria.html

them that it was necessary to improve the conditions in hospitals" (Zimniak-Rucińska, 2019, p. 17).

A map is an information visualisation method used by engineers like Ch. J. Minard (see Figure 3). He used a map to show the enormity of the defeat suffered by Napoleon. His graphic contained statistical, geographical and meteorological data. Another interesting example of such use was a map by J. Snow, showing the grouping of cholera cases during the 1854 epidemic. Contemporary figures related to infographics include: Edward Tufte (see more https://www.edwardtufte.com/tufte), who advocates message clarity, David McCandless (see https://informationisbeautiful.net), and Nigel Holmes (who uses simple drawings, pictograms and humour) (see more http://www.nigelholmes.com/gallery).
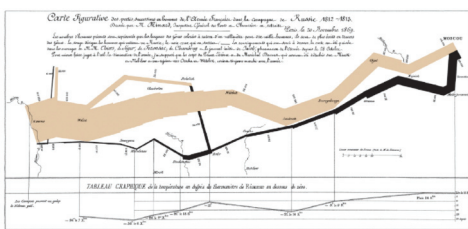
Figure 2

Diagram of the causes of mortality in armies in the East by Florence Nightingale

Source: Odkrywać! Ujawniać! Objaśniać! Zbiór esejów o sztuce prezentowania danych, P. Biecek. Retrieved September 20, 2021 from http://www.biecek.pl/Eseje/indexHistoria.html

Figure 3

Charles Minard's Figurative Map of the successive losses in men of the French Army in the Russian campaign 1812–1813

Source: Odkrywać! Ujawniać! Objaśniać! Zbiór esejów o sztuce prezentowania danych, P. Biecek. Retrieved September 20, 2021 from http://www.biecek.pl/Eseje/indexHistoria.html

Type of infographics, designing infographics

Infographics present different kinds of information, such as: knowledge, research results, statistics, processes, instructions, curricula vitae, history, ideas (Zimniak-Rucińska, 2019, p. 11). Various typologies of infographics are proposed in literature. Wildbur and Turk distinguish infographics according to their use: informing travellers, explaining actions, involving interactions, multi-layered and complex maps and diagrams (Szews, 2017, p. 132). Bojakowski (2020), on the other hand, takes into account the division into explanatory and exploratory graphics. The former concentrate on passing specific messages (Bojakowski, 2020, p. 191). The latter enable the recipients to explore data, while the designer's task is to "present data in such a way that the public could make different discoveries" (Bojakowski, 2020, pp. 191–192). Infographics let the recipient observe different "correlations between data, make comparisons, introduce a hierarchy of individual story threads" (Bojakowski, 2020, pp. 191–192).

Infographics can be distinguished according to the way they present their content. Zimniak-Rucińska (2019) distinguished the following:

- timeline – information is presented in chronological order;
- list – bulleted lists of elements;
- comparison – two objects are compared in order to be compiled, for example to show similarities and differences;
- visualised articles – articles in visual form, where there is a clear division between the article's elements; this type includes different aspects and facts related to the subject;
- process, i.e. visualising steps in a given process, for example in the form of instructions;
- map – can be used to explain aspects related to such things as location points of a company or information about an event and its environment;
- numerical infographics – presenting large sets of numerical data or statistics;
- anatomy – the central point is the discussed object from which particular elements of this object are shown (pp. 40–47).

Infographics can come in static form, as an animation (video) or have an interactive form (Dur, 2014, p. 44).

Designing infographics is a process that consists of such elements as: idea and assumptions, collecting information and its selection, designing and promotion (Zimniak-Rucińska, 2019, p. 10). It is important to remember for whom the infographic is designed, what is its purpose and context and what we want to achieve. In addition, Juan Velasco underlines features describing practically each infographic:

- visual explaining, which helps to understand or discover things easily,
- using graphics as the main means of operation but, if necessary, also integrating words with the picture in a smooth and dynamic way,

- functioning independently,
- showing information which was previously hidden and invisible,
- facilitating the understanding of presented content,
- being universally understood (Communication Nation, 2007).

Different forms of visualisation are used in infographics, such as charts, tables, maps, illustrations. Their choice depends on the context, recipients and the designer's idea. Infographics consist of several elements, such as a heading (title), graphic elements, description (short description of graphic elements), background (Chorodyński, 2020). While designing infographics it is useful to have some knowledge about design basics, including structure, composition of elements, hierarchy of elements, colour, typeface and psychological aspects about ordering elements, for example the Gestalt Principles (see also Osińska, 2016, pp. 78–80; Pielużek, 2020, pp. 126–134). These elements are described in detail by Osińska (2016), Smiciklas (2014), Zimniak-Rucińska (2019).

One contemporary designer, Giorgia Lupi (2020a, 2020b, 2020c), describes the process of creating infographics prepared for the magazine La Lettura (GiorgiaLupi, 2012) (see also Figure 4). Infographics can be more extensive and less extensive, and of a more or less artistic nature. Lupi describes an example of creating an infographic that is more extensive. In such extensive infographics there are more points, making the process of their creation longer. Lupi claims the purpose of this work is to supply rich visual narration, i.e. complex stories told with the help of data visualisation. The team choose the subject of infographics taking into consideration today's cases or historical, cultural aspects. They then analyse and compare different data collections. To prepare infographics, questions are asked which require an answer, and next the data is ordered according to context, revealing new facts and correlations: "We start from a question or an intuition and work from there, then try to put the information in context and find additional facts and material to potentially correlate" (GiorgiaLupi, 2012). The designer emphasises that infographics should include information that is convincing and appealing to the audience: "once the audience's attention has been 'caught' by the aesthetic features of the image, the presentation of the information must be clear" (GiorgiaLupi, 2012).

Infographics can be created using many free edition tools, such as Piktochart, Canva, Infogram, Easel.ly. But to create a more extensive infographic (as in the mentioned example by Giorgia Lupi) of a more artistic nature, the author must use more advance tools for editing.

What does a good infographic look like? Literature stresses that it should be: understandable, attractive, persuasive, readable, substantive and not too long (see also Centrum Cyfrowe, 2013, Ozorowski, 2017, Święcicki, n.d., pp. 3–4; Zimniak-Rucińska, 2019, pp. 55–57). Designers and specialists who prepare infographic messages for the Internet underline three features characterising a good infographic. Firstly, the role of data visualisation in the whole process of message transfer. Next, "a colour palette, adjusted to the overall message, significantly emphasising important elements, hierarchies and dependencies. (...) The third factor influencing the convenience of reading the information contained in the infographic are its physical dimensions, i.e. size" (Nowakowski, 2014, p. 126). Properly selected shapes and dimensions facilitate the reception (traditional form) or reading on a monitor or mobile device (digital form). The digital form of infographics should therefore be customised to the dimensions of monitors or mobile devices.

Figure 4
Nobels, no degrees
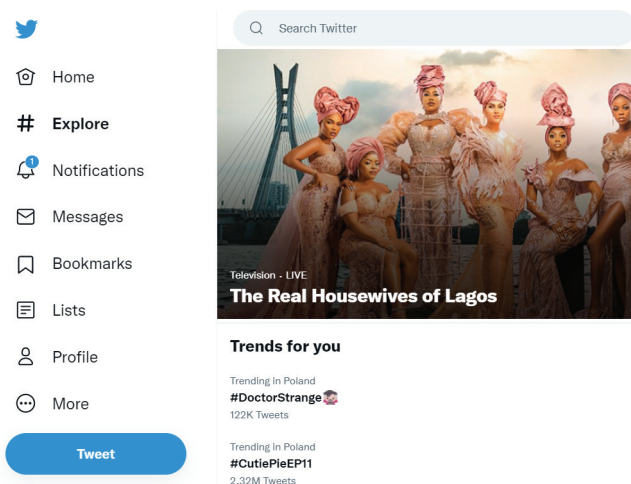
Source: Visual Data – La Lettura. GiorgiaLupi, 2021 (http://giorgialupi.com/lalettura).

Application of infographics in different areas

Infographics are used in different areas and sectors. "Infographics help to avoid distortion and ambiguity in a message or communication. They can be used in information visualisation to enhance data interpretation and knowledge discovery in disciplines ranging from computer science, business intelligence to humanities. The current wave of infographics usage is gaining momentum in business (Shahbazi et al., 2021, p. 45). Infographics are a tool that can illustrate complex information limited by text, "commonly used as a visual communication tool in various fields such as marketing, education, healthcare, transportation, and others" (Shahbazi et al., 2021, p. 46).

Infographics can be seen in magazines (see also Leszkowicz, 2020, pp. 31–32), including scientific magazines, for example as graphic abstracts. An example is Elsevier Publishing, which uses this method (Osińska et al., 2016, p. 72). In addition, infographics can also be used independently, for example in La Lettura (GiorgiaLupi, 2021).

Infographics are an important tool in education (see also Kołowska-Gawiejnowicz et al., 2018; Mokwa-Tarnowska, 2019; Ren-Kurc et al., 2018) and science (see also Osińska, 2016), and can be used for educational purposes, for example as a tool for teachers or for providing new information to students as a more accessible form of communication for the younger generation. Teachers can use it to explain new issues, provide important information about the school, for example the school statute or classroom rules. In science we can use infographics for example to illustrate research results or help in scientific considerations.

Infographics can also be used in business (see also Szklarek & Klamka, 2020; Nowakowski, 2014) in two forms. The first one includes information about a company, for example about its products or history. The second form of business infographics is for building a company's image, where "the topic of infographics is not directly the brand or company. (…) The infographics include information related to the company or industry" (Zimniak-Rucińska, 2019, p. 30), for example a visual article in social media. Business infographics can come in different forms, for example statistics, sales indicators, market research, production processes, or product promotion. "Well--designed infographics should bring a specific value to customers and employees and at the same time serve to achieve a specific business goal" (Iskierka, 2016, p. 146). In addition, using business infographics in social media can allow for better interaction with clients. "Infographics are a powerful tool for illustrating extensive, complex information with very little text, for example as a visual communication tool in various fields such as marketing, education, healthcare, transportation, and others" (Shahbazi et al., 2021, p. 46).

Social media and infographics

Social media (see also Matwiejczyk, 2020, pp. 171–173) are a very popular information channel for a large part of society. "In 2020 over 3.6 billion people used social media worldwide, a number projected to increase to almost 4.41 billion in 2025" (Statista, n.d.). Popular social media sites include Facebook, Twitter and Instagram (see also Matwiejczyk, 2020, pp. 174–176). Their popularity is related to the fact that information travels faster on social media than on informative portals (Hrabiec-Hojda &Trzeciakowska, 2019, p. 177). Social media use infographics because they are "an important addition to your social media strategy" (Copypress, 2020). Social media, such as Facebook and Twitter, allow people all over the world to share information with one another.

Searching in social media

When it comes to searching information in social media it is important to understand what a hashtag is. "A hashtag is a word or a set of words prefaced by the hash sign: #, for example #article" (Hrabiec-Hojda & Trzeciakowska, 2019, p. 179, see also Bartosz, 2017). In some social media it may occur that searching according to hashtags and classical keywords can show different results (see more Hrabiec-Hojda & Trzeciakowska, 2019, p. 180). When using # in the search, we find not only posts related to the keyword, but also addressed to a given group of recipients searching for the given thematic scope. Hashtags allow you to organise content according to a given topic or related content into thematic cycles. On Twitter, clicking on a hashtag will show all the tweets that have been tagged with that hashtag. By entering the keyword without #, all tweets that contain this word will be displayed in the results, e.g. in the username or in the text of the tweet, while when searching for words with #, we should find tweets that are related to the given topic #, even if the tweet does not contain the word, but relates to the given thematic scope.

While searching information in social media we can use basic search engines, and in selected social media also advance search engines.

On Twitter having an account is not required to search published content, e.g. Google. Twitter offers an option of searching in posts with the use of hashtags, which can be searched by means of the Explore search engine. You can also narrow the searched information and use the advance search engine form, with results ordered according to access tabs: top, last, people, photo, video (see Tab. 1).

Facebook (FB), on the other hand, requires you to have an account if you want to search more information. After logging in you can choose the FB basic search engine, which is located on the left side of the interface. The results might be incomplete, because some users may set access limits to their content and not every user has hashtags in their posts. The results can be filtered according to the following criteria: ev-

Table 1

Searching without an account			Searching with an account				
	Searching in Google keywords: #infographic Twitter/ Facebook – effect	List of results without an account	Basic search	Basic search with #	Basic search – filters	Hints in search words	Advanced search form
Twitter	In the results you can get a list of tweets with # and you can filter: 1) users (from everyone, from people who you observe – you should log in or register on Twitter) 2) localisation (everywhere or near you)	+	Tab: Explore and search engine	+	+ 1) Filters: People, Location 2) Sorting the results: Top, Last, People, Photos, Videos	+	+ In the Advanced search form you can narrow your searching to: words including hashtags, language, accounts, filters, engagement, date from/to. You can save searches and change search settings (Hide sensitive content, remove blocked and muted accounts)
Facebook	In the results you can see one profile with these keywords and information to log in or register	–	search engine	+	+ 1) Filters: Everything, Posts, People, Photos, Video, Marketplace, Pages, Places, Group, Events 2) Sorting results: Each filter can be sorted according to selected criteria (they can differ according the selected filter, eg. Posts can be sorted by: newest, displayed by the user, date posted, posts from, location)	+	–

Source: author's own work.

erything, posts, people, photos, video, marketplace, pages, places, group and events. On the results list you can see a specified list of the latest results (see Tab. 1).

Infographics in selected social media – research

Infographics are an interesting visual form of presenting information, but are they a popular form of publication in selected social media?

The aim of the research was to obtain information in the range of publishing infographics in selected social media, such as Twitter and FB. The results of the research allowed provided information about infographics in terms of popularity in a selected period, scope of topics in infographics and information about sectors and executives who share infographics in social media most often. For this research we used some search techniques, including basic search and advanced searches, searching with hashtags, which were used to search information about infographics (general) and infographics for a selected area (UX – User Experience, Science) in the selected social media.

The research attempted to answer the following questions:
- Will the searching of infographics with the use of hashtags allow to get relevant results with this form of publication?[1] (Twitter)

---

[1] You can write a post using words and hashtags connected with the post subject. But, on the other hand, you can also write a post on a completely different topic and use an off-topic hashtag. And this could be the reason why some results are completely unnecessary. For: Hrabiec-Hojda, P. (2017, May 5). *Wyszukiwanie informacji na Twitterze krok po kroku*. Rynek Informacji. https://rynekinformacji.pl/twitter

- Are hashtags (#) used to post infographics? (Facebook)
- What is the scope of infographic topics in a selected period? (Twitter, Facebook)
- Which executives / professionals share infographics in social media most often? (Facebook)
- What languages are used to access infographics in selected social media? (Twitter)
- Are UX and science infographics available on Twitter? (Twitter).

Twitter – data analysis, research results

The first part of the research focused on searching on Twitter. For this purpose a search engine in the Explore tab was used. The first searched keyword was: #infografika (Polish for infographics). The results list contained different forms of infographics, part of them were enclosed as links to materials in social media posts, while others were presented directly as social media posts. Some of them had photographs with text. Others were presented in a more classical form providing data in the form of different types of visualisations, such as charts, maps, graphs, diagrams. The infographics on the results list deal with different topics. The topics concerned: COVID (preparing a vaccine, vaccines), the economy (e.g. investments, development), information from different countries, e.g. the speed limit in Paris in 2021, road repairs, rape statistics, extradition of terrorists, number of people injured in accidents, maximum and minimum air temperatures, nuclear power plants around Poland, exhaust emissions, forests, information on financing programmes (SMEs), and EURO2020. They also included business information, such as a company's client satisfaction, stakeholders of the digital environment for the implementation of tachographs (product / service promotion), developed technologies of mobile operators, e-commerce, information on a given issue (10 things about basketball). Some of the topics concerned humorous issues. The infographics represented the following languages: English, Polish, Latvian, Czech, Serbian, Uzbek, Croatian, Slovenian, Bosnian.

Searching on Twitter was then narrowed and the used keyword was #infografika in the period 01.07–31.07 for several years (2021, 2020, 2019). The results were checked in the order of their popularity. The most results were obtained for 2019 (31 results), then for 2020 (20 results) and the least for 2021 year (13 results). The range of topics changed over the selected years. The results list of 2019 included information about: product promotion (e.g. Nike), blog promotion, event sponsors (Runmageddon), tips about publishing content in social media and issues concerning internet marketing, popular authors, the anniversary of a taxi company, the number of workers in a company, product development (car brands, app systems), political issues (authorities of the Balkans), farm finances, reports about health and e-clients. The infographics were in: English, Czech, Croatian, Polish (more than in the following years), Latvian.

In the results list for 2020 infographics connected with the global situation regarding COVID were common. The disseminated infographics presented information about COVID: number of those infected, information about the COVID situation in selected countries (e.g. Slovenia), travelling in a selected country and information about it (Czechia), information about rescuing an industry (e.g. Slovenia). In 2020 infographics showing information from a selected country were less popular, such as police data (infographics with statistics of police officers), information about the number of people in a selected area, saving water, finances (Latvia), money of unknown origin, tragic events in Srebrenica (Czechia), business information (reports), and health issues (jogging, fruits). The languages in which users provided infographics were: Croatian, Czech, Polish, Latvian, Slovenian.

In 2021 fewer infographics included COVID information. There was information about history icons, changes in temperature, interest rates, the price of petrol (last 20 years) as well as reports on hate crimes, on the extradition of terrorists, court proceedings for an attempted terrorist attack, tourist traffic (Czechia). The infographics were available in: Czech, Polish, Uzbek, Hungarian.

The next part of the research on Twitter concerned verifying infographics according to a selected criteria – User Experience. We checked if the infographics available on Twitter can help to remember important information regarding a selected criteria. The first searched keywords were #infografika #UX, without an indicated period. The result were eight posts, and among them were infographics with information of the process of designing a website, internet use by seniors, touch screen (easy and difficult to use), factors which influence the conversion in a website, the profile of a Polish UX Specialist. The information was mainly prepared in Polish, but also in Czech. Due to the low count of results in previous searches, we decided to connect infographics and UX and search for the keywords #infographic #UX. The results were too numerous, so we decided to narrow the period (10.08.2021–10.09.2021). The result was 11 posts. The obtained infographics were mainly in English and showed UX issues, which were shared by UX specialists and one company (twice). The issues which were on the list of results included: tips – how can the User Experience team become more useful for the company, information about the elements taken into account in the experience design, as well as information on architecture, UX strategy, UX vs UI, 70 Features for a Successful Small #Business Website, information about changes in electronic banking. The results also covered favourite visualisation tools from #infographic, so it was on the list of results.

The next part of the study was searching information about infographics on Twitter in concerning science, so we decided to use keywords with a Boolean operator AND narrowed to a specific period

(10.08.2021–10.09.2021): #infographic AND #science. It gave 12 results in English. The infographics concerned issues from chemistry, biology, astronomy, research and included: The Botanical Classification of fruits, structure of a mushroom, elements of an astronaut's outfit, Bunsen burner, reasons why humour and comedy are important, interaction with elements, COVID vaccination rate.

The analysis and results of this part of research indicated that searching for infographics with # allowed to find this form of publication on Twitter using a basic search, as well as narrowing down the search to a certain time period using an advanced search. In addition, searching for selected thematic ranges (UX and Science) was possible with the use of keywords with # and the Boolean operator to the second search area in order to obtain a higher search result. In the case of searching for UX infographics, a better result was obtained when using an English-language word (as #infographic). To sum up, Twitter is a source of infographics also in the scope of the UX discipline and science. Using keywords with hashtags and narrowing the searching scope (for example narrowing the time period) are helpful searching tools. You can also use the Boolean operator.

Facebook – data analysis, research results

Due to the fact that Facebook users can limit access to their page's contents and do not use hashtags, the results could be incomplete. Still, interesting information was obtained in accessible resources. The search was made with the use of the Facebook search engine and a private FB account (Polish version). The first searched keyword was: #infografika. We discovered that 2,500 users published posts on this topic. The results were narrowed to the period from 11.06.2021 to 2.09.2021 (to the end of the page which is displayed). We learned which trades often share infographics and what the scope of topics in infographics is. In this study we could see on the results list that a lot of infographics concern a healthy lifestyle and diets. These infographics are presented by dieticians. The infographics occur as information about products, nutritional ingredients, meal ideas, types of diets, daily caloric requirement, how to stick to a diet (e.g. the 80/20 principle), diet jokes. In addition, we observed the popularity of infographics published on FB pages/fanpages by personal trainers and fanpages concerning a healthy lifestyle, beauty and psychological issues. There were infographics by a personal trainer sharing information about training goals, first workouts, warm-up, daily caloric requirements, looking after oneself. Another fanpage that concerned a healthy lifestyle shared information about seasonal vegetables, fruits, vitamins or pains of different parts of the body. Administrators of pages concerning beauty (e.g. shops selling cosmetics and hairdressing accessories) prepare graphic information about products, beauty issues, e.g. hair care. On the results list there are also posts with infographics concerning psychology and psychotherapy, such as theories, exercises, descrip-

tions of illnesses, causes of psychological problems. These are followed by educational infographics, which include explanations of terms or processes, e.g. in the field of forestry. In addition, the infographics on FB promote companies' tools, and allow for interaction with users and clients. In this type of infographics, for example an art tools shop fanpage, we found instructions for spray painting, a company selling car parts had infographics concerning automotive issues, and a language school shared infographics with words in a foreign language.

The next part of the research covered searching with the keyword #infographic (English version). The results list showed that 41,000 users published posts on this topic. The results (for the period: 22.08.2021––20.09.2021) showed that, as in previous search results (#infografika), a lot of infographics relate to diets, healthy eating and lifestyle, psychology, education and science (e.g. Recommendations for the prevention of exercise-induced muscle cramps; how to become a great programmer). There are also infographics on information and organisation fanpages (e.g. about natural resources, women in the government on high positions, statistics, reports, COVID), promotion of one's own graphic works in the infographics area (e.g. infographics about preparing for pregnancy for people with diabetes, design), promotion of companies and interaction with clients/users (e.g. infographics: fanpages of cafes – promoting the café's offer, a car showroom – infographics about the causes of a broken battery, a real estate agency – presentation of an employee, an IT company – information about a programme, a marketing company – marketing advice). These infographics are in English, Russian, Arabic.

The analysis and results of this part of the study showed that hashtags are used in posts in which infographics are used. Infographics are quite a popular form that is shared and tagged with a hashtag in FB posts. This was observed while searching for the Polish and English versions of the word infographics. In this research the limited period option was helpful.

Research conclusion

To sum up the research results in selected social media, we observed that infographics are shared on Twitter and FB, represent different scopes of topics and are published in different languages. Thanks to the research on Twitter, we observed that infographics are not only used to present a company or interaction with clients, but also with regard to the changing situation in the world and accompanying events (COVID). This was visible in the results list in selected years. Infographics constitute an educational resource that can broaden knowledge in a selected discipline, as was observed while searching UX and science. On the other hand, thanks to the results on FB, we saw that infographics are used as a communication means in selected industries, e.g. to present a company and its employees, promote products and keep in touch with clients/users. Finally, we saw that infographics are a very popular form of contact in social media.

Summary

To sum up our research, we can observe that infographics are a powerful form of communication and can be used in different areas and sectors. Infographics can be designed with the use of different types of visualisation of information/elements, such as charts, tables, maps and others. Their choice depends on such factors as the purpose of a given infographic, its context and recipients. Contemporary recipients are demanding and expect information to be both fast and readable. Infographics make this possible. Using infographics was presented by means of a search technique that shows the most popular scopes of topics and the sectors that apply them in selected social media.

References

Bartos, K. (2010). Wizualizacja danych jako medium komunikacji gospodarczej w dobie społeczeństwa informacyjnego. *Zeszyty Naukowe Uniwersytetu Szczecińskiego. Ekonomiczne Problemy Usług, 58,* 159–168.

Bartosz. (2017, November 9). *Jak korzystać z hashtagów w mediach społecznościowych*. https://www.studiolokomotywa.pl/korzystac-hashtagow-mediach-spolecznosciowych

Biecek, P. (n.d.). *Odkrywać! Ujawniać! Objaśniać! Zbiór esejów o sztuce prezentowania danych*. Retrieved September 20, 2021 from http://biecek.pl/eseje/index.html

Bojakowski, W. (2020). Wyjaśnienie czy eksploracja? Projektowanie infografik jako planowanie interakcji. In M. Wszołek, & M. Pielużek (Eds.), *Manual – information design. Podręcznik z zakresu projektowania komunikacji* (pp. 173–200). Wydawnictwo LIBRON.

Centrum Cyfrowe. (2013). *Jak pracować z (info)grafikami w organizacji pozarządowej?* https://centrumcyfrowe.pl/czytelnia/jak-pracowac-z-infografikami-w-organizacji-pozarzadowej/#more-8597

Chorodyński, G. (2020, April 25). *Co to są infografiki i jak je tworzyć?* https://zdobywcysieci.pl/wiedza/co-to-sa-infografiki-i-jak-je-tworzyc/

Communication Nation. (2007, April 6). *What is an infographic?* https://communicationnation.blogspot.com/2007/04/what-is-infographic.html

Copypress. (2020). *5 tips for creating infographics for social media*. https://www.copypress.com/kb/infographics/5-tips-for-creating-infographics-for-social-media/

Dur, B. U. (2014). Data visualization and infographics in visual communication design education at the age of information. *Journal of Arts & Humanities, 3*(5), 39–50. https://theartsjournal.org/index.php/site/article/view/460

GiorgiaLupi. (2012). *Visual Data – La Lettura*. http://giorgialupi.com/lalettura

Hrabiec-Hojda, P., & Trzeciakowska, J. (2019). Information retrieval techniques in social media for open source intelligence purpose. *Studia Politologiczne, 54*, 175–190. https://doi.org/10.33896/SPolit.2019.54.7

Hrabiec-Hojda, P. (2017, May 5). *Wyszukiwanie informacji na Twitterze krok po kroku*. https://rynekinformacji.pl/twitter

Iskierka, I. (2016). Środki komunikacji wizualnej i infografiki w edukacji, biznesie i innych obszarach życia społecznego. *Dydaktyka Informatyki, 11,* 138–147. https://doi.org/10.15584/di.2016.11.18

Kołowska-Gawiejnowicz, M., Kołodziejczak, B., Siatkowski, I., Topol, P., & Zych, J. (2018). Infografiki – nowy trend wizualizacji informacji wspomagający procesy edukacyjne. *Edukacja – Technika – Informatyka, 2*(24), 138–148. https://doi.org/10.15584/eti.2018.2.18

Leszkowicz, M. (2020). *Czytanie informacyjne. Infografiki w procesach poznawczych*. Wydawnictwo Naukowe UAM.

Litwic-Kaminska, K. (2011). Kultura obrazkowa w dydaktyce – szanse i zagrożenia. *Forum Dydaktyczne: przeszłość, teraźniejszość, przyszłość, 7/8*, 177–188. http://repozytorium.ukw.edu.pl/handle/item/1772

Lupi, G. (2020a). Architektura wizualizacji danych. In M. Wszołek, & M. Pielużek (Eds.), *Manual – information design. Podręcznik z zakresu projektowania komunikacji* (pp. 349–367). Wydawnictwo LIBRON.

Lupi, G. (2020b). Naucz się patrzeć – inspiracje wizualne i wizualizacja danych. In M. Wszołek, & M. Pielużek (Eds.), *Manual – information design. Podręcznik z zakresu projektowania komunikacji* (pp. 317–326). Wydawnictwo LIBRON.

Lupi, G. (2020c). Piękne powody – estetyka w narracji danych. In M. Wszołek, & M. Pielużek (Eds.), *Manual – information design. Podręcznik z zakresu projektowania komunikacji* (pp. 327–347). Wydawnictwo LIBRON.

Matwiejczyk, A. (2020). Media społecznościowe jako narzędzie marketingu internetowego na przykładzie Netflixa. *Akademia Zarządzania, 4*(2), 170–186.

Mokwa-Tarnowska, I. (2019). Zastosowanie infografik do kształcenia umiejętności twardych i miękkich na zajęciach z języka angielskiego technicznego. *Zeszyty Naukowe Wydziału Elektrotechniki i Automatyki Politechniki Gdańskiej, 65*, 81–86. https://doi.org/10.32016/1.65.13

Nowakowski, M. (2014). Infografika jako nowoczesna forma prezentacji danych biznesowych. *Zeszyty Naukowe Uniwersytetu Szczecińskiego. Studia Informatica, 35,* 125–137. http://wneiz.pl/nauka_wneiz/studia_inf/35-2014/si-35-125.pdf

Osińska, V. (2016). *Wizualizacja informacji. Studium informatologiczne*. Wydawnictwo Naukowe UMK.

Osińska, V., Malak, P., & Bednarek-Michalska, B. (2016). Rozwój badań nad wizualizacją informacji. *Annales Universitatis Paedagogicae Cracoviensis. Studia ad Bibliothecarum Scientiam Pertinentia, 14*, 58–76. https://doi.org/10.24917/20811861.14.4

Ozorowski, J. (2017). *Infografika jako element strategii w marketingu internetowym*. https://mobiletry.com/blog/infografika-element-strategii-marketing-internetowy

Pielużek, M. (2020). *Design danych, czyli o procesie wizualizacji danych*. In M. Wszołek, & M. Pielużek (Eds.), *Manual – information design. Podręcznik z zakresu projektowania komunikacji* (pp. 113–171). Wydawnictwo LIBRON.

Płaneta, P. (2013). Infografika w prasie: między przejrzystą informacją a jałową estetyzacją. In K. Wolny-Zmorzyński, W. Furman, J. Snopek, & K. Groń (Eds), *Komunikacja wizualna w prasie i w mediach elektronicznych* (pp. 45–58). Wydawnictwo Poltext.

Ren-Kurc, A., Roszka, M., Kowalewski, W., Mokwa-Tarnowska, I., & Dutkiewicz, A. (2018). Infografika – aktywizujące środowisko edukacyjne. *Edukacja – Technika – Informatyka, 2*(24), 129–137. https://doi.org/10.15584/eti.2018.2.17

Shahbazi, M., Megat Mohd. Zainuddin, N., Yusoff, R., Wong Hooi Ten, D., & Wan Hassan, W. A. (2021). Design principle for public transportation infographic. *International Journal of Innovative Computing, 11*(1), 45–52. https://doi.org/10.11113/ijic.v11n1.293

Smiciklas, M. (2014). *Infografiki. Praktyczne zastosowanie w biznesie.* Wydawnictwo Helion.

Statista. (n.d.). Number of global social network users 2017–2025. Retrieved September 20, 2021 from https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/

Szews, P. (2017*). Wizualizacja przekazu w dziennikarstwie. Infografika i data journalism w wybranych mediach* (Unpublished doctoral dissertation). Uniwersytet Łódzki. https://bit.ly/3Qs7Kt6

Szklarek, Sz., & Klamka, K. (2020). Infografika jako forma wizualizacji danych w biznesie. In E. Śnieżek (Ed.), *Trendy w biznesie* (Vol. 3) (pp. 45–59). Wydawnictwo SIZ. https://www.wydawnictwo-siz.pl/wp-content/uploads/2020/10/Trendy-w-biznesie-DRUK.pdf

Święcicki, W. (n.d.). *Infografika: krótki poradnik*. Retrieved September 20, 2021 from https://nauka.uj.edu.pl/documents/74541952/4d5cd0d8-236a-4f62-9dea-405b1986129e

Wójcik, M. (2017). Rola wizualizacji w komunikacji naukowej. Nowe sposoby wizualizacji danych. *Przegląd Biblioteczny*, *85*(2), 157–168. https://doi.org/10.36702/pb.446

Zimniak-Rucińska, M. (2019). *Infografika. Sztuka atrakcyjnego prezentowania treści*. Wydawnictwo Helion.

Zimoląg, A. (2020). Wizualizacja danych – sztuka obserwacji. In M. Wszołek, & M. Pielużek (Eds.), *Manual – information design. Podręcznik z zakresu projektowania komunikacji* (pp. 301–316). Wydawnictwo LIBRON.

Elżbieta Sroka, PhD is an assistant professor at the Institute of Information Sciences of Pedagogical University of Krakow a Senior Specialist at Łukasiewicz-EMAG, and certified UX designer. She specializes in testing information users, designing user-friendly websites and mobile applications, and digitalization and application of new technologies with respect to their accessibility to persons with disabilities. She has taken part in projects focused on fighting social exclusion and developing new technologies in society.

WE RECOMMEND

14th Annual International Scientific Conference Theoretical and Practical Aspects of Distance Learning "E-learning in the Transformation of Education in Digital Society", October 17–18, 2022, Cieszyn, Poland

The theme and the priorities of the conference reflect the conceptual principles underlying the modernization of education and the reform of the educational systems in European countries, as well as national development strategies for the XXI century. One of the European Union's key educational objectives is the provision of equal opportunities for all with regard to access to learning and knowledge, regardless of gender, financial and physical ability, and place of residence. That is why, distance learning has now been granted a status of high priority. If introduced on a wide scale, distance learning and teaching may make significant contribution towards the achievement of educational goals in member states.

More information at: **https://www.dlcc.us.edu.pl/**

The 11th Computer Science Education Research Conference (CSERC '22), November 21–22, 2022 Hybrid format: online and Zoetermeer, The Netherlands

The Computer Science Education Research Conference (CSERC) is an international forum for researchers with interests in educational aspects of all computing disciplines including computer science, computer engineering, software engineering, and information systems. It embraces a broad view of the current and future trends in computing education and aspires to be a lively environment for presenting the latest research and empirical results.

More information at: **https://www.ou.nl/web/cserc/cserc**

Ryszard Ćwiertniak

Przemysław Stach

Katarzyna Kowalska--Jarnot

Karolina Worytkiewicz--Raś

Barbara Wachułka--Kościuszko

Addressing students' perceived value with the virtual university concept

Abstract

Since the beginning of the COVID-19 pandemic, digital transformation has significantly accelerated in many industries, including somewhat slow-changing higher education. The epidemic situation pushed students, faculties, and administrators to experiment to a much greater degree with online classes, digital cooperation, and virtual student services. For the majority of the academic community, this situation created a completely new reality. Indeed, the digital experience in higher education was for some community members quite challenging, if not traumatic. Fairly soon, however, the digital experiment proved successful in many areas. In some cases, even more effective than conservative practices.

The Virtual University Concept (VUC) has been a topic of debate for quite some time, but only now has it found a receptive audience in all sectors of the academic community. In the following articles, the authors will attempt to conceptualize the virtual university as an innovative way to address contemporary challenges for Higher Education Institutions (HEI), specifically their ability to identify, create and capture value for students. The concept of the VUC is grounded in a literature review, the professional experience of the authors, as well as the student survey, which was conducted in one of Cracow's private colleges. The authors have listed fundamental areas of focus that need to be addressed before attempting to model the VUC. They include the technical and technological capacity of a HEI, faculty development, cost management, innovation, and students' and employers' value perceptions. All this must be done with the goal of providing value to key stakeholders at a reasonable cost. All the authors' inquiry streams seem to suggest that if well designed and implemented, the VUC can be a source of significant value to students and therefore should be considered in HEI expansion and turnaround strategies.

Keywords: virtual university concept, perceived value, distance learning, e-learning, Higher Education Institution (HEI)

Introduction

The outbreak of the pandemic related to the spread of the SARS-CoV-2 virus at the beginning of 2020 caused temporary restrictions on the functioning of educational institutions in many countries around the world. On March 30, 2020, as the pandemic was accelerating, educational institutions of all levels were closed in 167 countries. Schools were closed for the longest periods in India (60 weeks), Argentina (59 weeks), and the United States (58 weeks). In Poland, schools were closed for 43 weeks (UNESCO, n.d.). Due to the pandemic, the World Health Organization introduced a state of epidemic on March 11, 2020 (World Health Organization, 2020). On that day, the operations of HEIs in Poland were severely limited by government order, and thus institutions of higher education faced the difficult task of ensuring education continuity, which

Ryszard Ćwiertniak, College of Economics and Computer Science in Cracow (WSEI), Poland, https://orcid.org/0000-0001-9295-5549

Przemysław Stach, College of Economics and Computer Science in Cracow (WSEI), Poland, https://orcid.org/0000-0001-8393-0892

Katarzyna Kowalska-Jarnot, College of Economics and Computer Science in Cracow (WSEI), Poland, https://orcid.org/0000-0003-2829-8841

Karolina Worytkiewicz-Raś, College of Economics and Computer Science in Cracow (WSEI), Poland, https://orcid.org/0000-0002-6169-7652

Barbara Wachułka-Kościuszko, College of Economics and Computer Science in Cracow (WSEI), Poland, https://orcid.org/0000-0003-3246-0418

conveniently could be attained by the use of Internet-based, distance learning solutions[1].

Distance learning and e-learning are well-known tools supporting the teaching process at universities and colleges, however, before the outbreak of the pandemic, they were not widely used (Zbarache-wicz, 2020). According to the study "E-learning in European Higher Education Institutions", almost all higher education institutions offered digital learning. In Germany, Spain, Switzerland the United Kingdom, and Poland, more than 50% of students are involved in distance learning, whereas in Italy, France, and Turkey these activities are least popular (Gaebel et al., 2014). The same study also addressed students' motivation to engage in online learning. It was found that the most popular motive among students was the opportunity to combine work and study (69% of respondents).

A few months after the pandemic pushed many HEIs into launching virtual classes, many intuitions began to evaluate the students' online experience. A major Polish university specializing in training educators based in Cracow conducted a survey in May and June 2020 ($n = 1927$) to assess students' satisfaction among certain other issues (Długosz & Foryś, 2020). The researchers report that 40% of students evaluated the experience as good or very good, and 35% evaluated it as average. Only 25% of students described the experience as negative. However, when requested to compare the experience with traditional campus-based learning, only one in five students said that remote learning was better. The reason for this interesting discrepancy may lie in the survey students' replies regarding the pros and cons of remote learning. Predictably, the advantages included savings in time and money, and the safety and comfort of their homes. The disadvantages, however, include overload of study material and assignments, lack of motivational stimuli, and lack of direct contact with peers and professors. These findings illustrate clearly that online learning is not just about moving classes into cyberspace.

The authors' institution, the College of Economics and Computer Science (WSEI), just like other similar HEI in Poland and around the world, had to face the challenge of transferring their operations into cyberspace. Although the WSEI leadership had been planning to increase its digitalization even before the pandemic, the move online was earlier than anticipated. Nevertheless, the college was able to start providing most of the classes online in just three days. To support the seamless move into cyberspace, many training sessions for students and processors were offered just before the launch, as well as throughout the semester. Student support initiatives were also introduced, including psychological support and social engagement.

Although it is too early to attempt a meta-analysis of the remote learning experience forced upon students due to COVID-19, some already published research suggests that many students found the experience generally satisfying and that potential drawbacks of online learning can be effectively countered by substantial benefits (Fatani, 2020; Sharma et al., 2020; Surahman & Sulthoni, 2020; Zeng & Wang, 2021). The research proves that the introduction of distance and e-learning as the basic channel of the didactic process at a higher education institution is indeed a complex process. Understandably, the emergency launch of remote learning forced institutions to focus on the priorities they were able to deal with at short notice, resulting in varied evaluations of online learning. However, a college or a university wishing to fully capitalize on the benefits and possibilities of distance learning needs to realize early during the venture that it requires a profound digital transformation of organizational, managerial, didactic, and scholarly systems, with the aim to adapt to the environment and its changes and the needs of all stakeholders (Mazurek, 2019; Seres et al., 2018), as well as to improve, expand, and provide new functions or redesign the products or services already offered (Sandkuhl & Lehmann, 2017).

Conceptual framework

The transition of higher education institutions to remote teaching and, in many cases, their digital transformation forced upon them by the pandemic constitutes a significant organizational change that results from the need to adapt. Although the change is unprecedented, the contemporary HEIs had been, at least to some extent, prepared by the widespread use of the Internet and many examples of successful distance and e-learning initiatives (e.g., edX, Coursera, many universities globally already offering online degree programs). During just one generation, the Internet has become a resource supporting multidirectional communication, research, transactions, and co-creation of value (Goliński, 2011). The potential benefits of using digital technologies mean that a rethink is needed of HEI stakeholders' needs and that the value higher education has to offer needs to be redefined.

To sum up the considerations on the scope of distance learning and referring to the current situation caused by the pandemic, this kind of learning is not limited to an unconventional educational (training) service based on Internet technology. The discussion around the definition of distance learning touches on many aspects. Online learning is by definition a beneficial change in various areas of a university's activity (schools, training centers), established at the HEI or outside it, being a response to the needs of students

---

[1] The discussion surrounding distance learning and e-learning covers many aspects. The subject of the analysis may be technology, technology sources and features, the way technology is adapted and used, and people implementing them at the HEI. There is also a problem with distinguishing between synchronous, asynchronous and hybrid rates.

(course participants) or a crisis. It is an evolutionary improvement of study programs and adaptation of them to new market requirements (student needs). Thus, the scope of distance learning in this approach concerns numerous elements (educational service, internet solutions, the process of managing study programs, incremental improvement), which should follow from the values adopted at the university and the quality standards of distance learning.

Perceived value

The concept of customer perceived value in higher education has not gained sufficient attention in scholarly literature so far, even though it offers great theoretical and practical potential (for example, see Stach & Bąk, 2009). The concept was introduced to management studies by Peter Drucker in 1954. He pointed out that price is not an indicator of the value of a product or a service, but it is merely one of the multiple factors that the customer considers when assessing a marketing offer (Drucker, 1998). Zeithaml's research suggests four ways to understand value: value as low price, value as what one expects from a product, value as what one gets in return for what one pays, and what one receives in return for what one provides (Zeithaml, 1988). The key role of the concept of value has been fully appreciated in marketing. Kotler and Armstrong (2008) propose that the purpose of marketing is to create value for customers and to capture this value from customers in return. To Grönroos (2006), marketing refers to a customer focus that permeates organizational functions and processes and is geared towards making promises through value propositions enabling the fulfillment of individual expectations.

Expanding further our understanding of the value concept, it is useful to account for both the perspectives of the value-creator and value-receiver.

Thus from the HEI perspective, value may be perceived in at least two ways:

- as a basis for marketing orientation, i.e. a perspective that helps to understand the market and students' needs and to create an educational offer in such a way that it can become the potential source of competitive advantage,
- as a general experience of a student-consumer, who partly co-creates and affects their satisfaction and perception of the HEI.

Likewise, from the perspective of a student-consumer, value can be understood in many ways, including a sufficiently low price, quality obtained at the price paid, a benefit-cost ratio, or the sum of all customer expectations (see Tab. 1).

The benefit-cost ratio-based operationalization of customer value can be useful from the managerial viewpoint and has been successfully employed in Osterwalder's Value Proposition Canvas (Osterwalder et al., 2014) because it focuses the value providers' attention on identifying those features of the item offered which are perceived by their customer as either value-enhancing or value-diminishing. This realization becomes an opportunity to actively improve the item offered to highlight the first type and alleviate the second. Inspired by the benefit-cost ratio approach to value, one can come up with a list of value enhancers (or benefits) and value diminishers (or costs) for the HEI (see Tab. 2).

It is, however, important to stress that in some instances, value diminishers may become value-enhancing if a different meaning is attached to them. An obvious example may be the tuition fee, where in some cases the higher the tuition students are expected to pay for a given program, the higher the perceived value, because the tuition cost may be strongly associated with selectivity, and exceptional quality. Yet again, the list of potential costs and benefits will change over time due to advances in technology and social trends, and is strongly context-related. It can be argued that the transition to remote teaching caused by the COVID-19 pandemic has modified the sets of costs and benefits because there has been a profound change in experience and expectations. The unpublished research conducted in the authors' institution provides an insight into what students might nowadays perceive as value enhancers or cost (i.e., value diminishers) (see Tab. 3).

Table 1

Selected ways in which value may be understood and defined

Understanding of value	Example of a definition
Value understood as a quality obtained at the price paid	Value is defined as a quality-price ratio (Lichtenstein et al., 1990).
Value understood as an attractive price	Value is the ratio of the hypothetical price of a supplier's offer that allows the customer to cross the break-even point – to the best alternative available to the customer for the realisation of same set of functions (Oliva, 2000).
Value understood as the total of all customer expectations	Value refers to the total benefits a customer believes they will obtain if they accept the market price (Hunt & Morgan, 1995).
Value understood as a benefit-cost ratio	Value constitutes a comprehensive assessment of a product and its acquisition and usage, which is performed by a customer by comparing the received benefits and the incurred costs (Näslund et al., 2006).

Source: Współtworzenie wartości w marketingu. Przykład szkolnictwa wyższego (pp. 22–26). K. Dziewanowska, 2018, Wydawnictwo C. H. Beck.

Table 2

A list of common value enhancers and diminishers in education products offered by a HEI

Potential value enhancers	Practical effects	• Acquisition of knowledge, practical skills, understanding of market and business
	Social effects	• Making social connections, contacts, learning about diverse cultures
	Strategic effects	• Education/diploma/master's or bachelor's degree
Potential value diminishers	Material costs of studying	• Study fees, textbook costs, equipment costs (laptop), accommodation expenses, travel expenses
	Psychological costs of studying	• Stress related to classes and examinations, missing family, students' and their families' expectations
	Sacrificed benefits	• Free time, time spent with family, comfort, mobility (flexibility), traveling, entertainment

Source: authors' work based on "Making sense of higher education: students as a consumer and the value of the university experience", T. Woodall, A. Hiller, & S. Resnick, 2014, *Studies in Higher Education*, *39*(1), 48–67. (https://doi.org/10.1080/03075079.2011.648373).

Table 3

Post-pandemic changes in perceived benefits and costs related to the transition to remote teaching

Value-adding components	• More free time (it is not necessary to leave home, travel to the college). • Saving money (no rent or travel expenses)*. • Higher mobility (the possibility to participate in classes from any location). • Comfort. • Higher quality of lectures (silence, better concentration). • Reduced amount of stress during examinations, classes, and presentation of thesis.
Cost-related components	• Lower quality of classes due to technical issues (lack of equipment, poor-quality equipment, slow Internet connection or no connection at all). • Weaker social interactions with other students. Difficulties in developing new contacts. • A lack or a limited possibility to enjoy the sports, cultural and social events offered by the city. • Weaker ties in project teams. • Lower quality of some practical classes.

Note. * Concerning students who live outside of Cracow.

Source: students' satisfaction after transferring to remote study (2021).

Virtual university concept

Indeed, the recent experience, literature review, and research results have led the authors to conceptualize a framework that might be referred to as a Virtual University Concept (VUC) of the new normal. To begin, the authors listed five fundamental areas of focus that need to be addressed before attempting to model the VUC (see Fig. 1).

They include the technical and technological capacity of a HEI, faculty development, cost management, innovation, and students' and employers' value perceptions. Thus the institution of higher education

Figure 1

The Virtual University system model – proposal
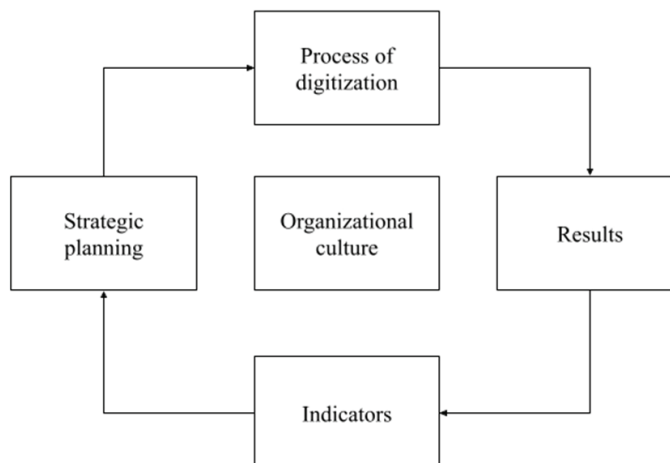
Source: authors' own work.

needs to have adequate technical and technological capacity and competent faculty and administrators digitally literate and able and willing to innovate. All this must be done with the goal of providing value to key stakeholders at a reasonable cost.

Digitization and virtualization of learning and teaching need to be fully compatible with the mission and vision of a HEI. Once the strategic decisions are made, the focus needs to be on delivering new products (study programs, courses, etc.), improving processes, and delivering new business models (Trias de Bes & Kotler, 2011). Reducing the uncertainty of the process of digitization through its long-term evaluation is vital for the learning process in an organization (Hubbard, 2014). The control system confirms that all conditions (i.e. the necessary resources, process, and values proposition) are effectively applied in practice. These perspectives, taken together in the context of active capabilities, provide the conceptual parameters for the VUC which can be depicted using the business logic triangle proposed by Osterwalder and Pigneur (2002) (see Fig. 2).

The dynamic capabilities perspective offers an exploratory view of the concept of the VUC and allows the authors to argue that the operationalization of the VUC depends on an HEI's capabilities (Teece, 2018).

The digitalization process underlies the value creation capabilities of an HEI and is strongly influenced by the digitalization of an HEI's environment. That is why it is crucial to adjust an HEI's processes and structures to support value creation (Rachinger et al., 2019). Summed up, this is the use of digital technologies to change an education model and provide new value opportunities; it is the process of switching to a digital mode of education. This paper provides such a framework, organized around key priorities that will be useful for any university's executive team. These areas are remote access; engaging students; accelerating agility and efficiency; reducing operational costs.

Methodology

Academic literature recognizes the multidimensional nature of value, as well as challenges with the operationalization of the concept (Stach, 2009). One way to measure the perceived value in higher education is to use various single or multidimensional scales to examine functional, perceived, emotional or social value as well as different combinations of value types (Dziewanowska, 2018).

In their study, the authors focused on a selected number of core measures implemented in their institution in response to COVID-19 that are associated with e-learning and remote study. The package of remote study solutions that addressed the students' immediate needs included web-based classes, online consultations, extracurricular webinars and training sessions, and online assessments and examinations. The students were offered online services of the Dean's Office, which dealt with all issues concerning the academic progression toward graduation. To

Figure 2

Conceptual settings – dynamic capabilities perspective
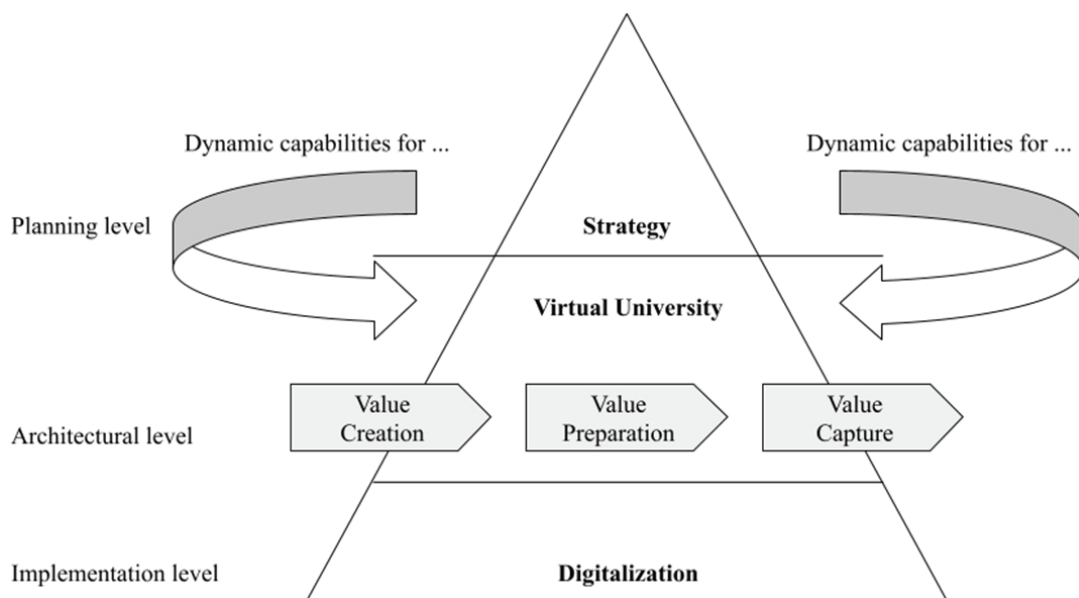
Source: authors' own work based on an eBusiness model ontology for modeling eBusiness. *15th Bled Electronic Commerce Conference eReality: Constructing the eEconomy* (pp. 75–91), A, Osterwalder, & Y. Pigneur, 2002, http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.557.8131&rep=rep1&type=pdf; "Business models and dynamic capabilities", D. J. Teece, *Long Range Planning*, *51*(1), 40–49 (https://doi.org/10.1016/j.lrp.2017.06.007); "Digitalization and its influence on business model innovation", M. Rachinger, R. Rauter, C. Müller, W. Vorraber, & E. Schirgi, 2019, *Journal of Manufacturing Technology Management, 30(*8), 1143–1160 (https://doi.org/10.1108/JMTM-01-2018-0020).

support the learning and studying effort, an online platform (Office 365 and Moodle.org) was made compulsory for all classes which migrated online. Online library services were publicized, although they had been partially in place before. The authors decided to add a "limited presence on campus" measure, although this is a consequence of the safety measures introduced due to the pandemic. Nevertheless, it can be perceived as a total offering component of the educational package and would potentially be valued by students on some occasions. The recent COVID-19 experience and the literature review have led the authors to hypothesize as follows:

- The selected core measures implemented in response to COVID-19 are perceived by students as adding value to their educational experience with the HEI.
- Part-time students perceive the core measures as adding value more often than full-time students.
- Working students perceive the core measures as adding value more often than students who did not have a job.
- First-year students perceive core measures as adding value less often than more senior students.
- The core measures are positively correlated with students' expectations toward the HEI.

To test the listed hypotheses, the authors conducted in June and July 2021 a census-type study by sending an online survey to all undergraduate students currently enrolled in the College of Economics and Computer Science (WSEI) in Cracow, Poland. 957 students returned completed questionnaires, which were checked for errors and inconsistencies and entered into a statistical analysis package (open source PSPP software).

An ordinal level scale was designed to measure the perceived value of the virtual university components as well as students' expectations.

Students' perceived value was measured using a seven-point fully labeled and balanced ordinal scale (used originally in Polish): how was the value of studying at WSEI affected by the following (list of items)? (1) significantly reduced value; (2) reduced value; (3) somewhat reduced value; (4) had no impact; (5) somewhat added value; (6) added value; (7) significantly added value.

Students' expectations were measured using an unbalanced fully labeled six-point ordinal scale: to what extent your expectations were met: (1) not met at all; (2) met to a small extent; (3) met at 50%; (4) mostly met; (5) met completely; (6) were exceeded.

The data analysis was conducted using parametric tests following the common practice among researchers, supported by empirical findings that confirm their robustness for ordinal scales (Norman, 2010; Sullivan & Artino, 2013; de Winter & Dodou, 2010).

Findings and discussion

Sample

The obtained sample covered 71% of male students, with 82.3% of the students between the ages of 19 and 25. 68.7% of students majored in Computer Science. 58% of the sample were first-year students. Almost half of the surveyed students currently live in Cracow, the city where the college is located. The surveyed students follow one of the available modes of study. There were 35.2% of full-time (traditional, campus-based) students and 64.8% part-time students (attend classes on campus on weekends) among the respondents. 31.8% of full-time students and 89.4% of part-time students had a job when taking part in the survey (Tab. 4).

The perceived value of the core measures

Based on the literature review and the authors' first-hand observations in the last academic year, they hypothesize that the core measures implemented by WSEI are perceived by students as adding value to their educational experience.

The average scores for all the questionnaire items referring to the core measures were between 4.6 and 6.07 on a seven-point scale, suggesting that on

Table 4
Characteristics of the obtained sample

Overall academic program			
Year of study	Year 1 = 58.2%	Year 2 = 26.6%	Year 3 or 4 = 15.2%
Academic program	Computer Science and Econometrics = 68.7%	Business Administration = 19.0%	Finance and Accounting = 12.3%
Sample characteristics			
Gender	Female = 28.7%		Male = 71.3%
Age	19–25 = 82.3%	26–35 = 15.5%	36–45 = 1.7%	>45 = 0.5%
Place of residence	Cracow = 47.9%	Other city > 100,000 = 5.3%	City < 100,000 = 16.2%	Rural area = 30.6%
Study mode & jobs	Full-time = 35.2%		Part-time = 64.8%	
	with a job = 31.8%	no job = 68.2%	with a job = 89.4%	no job = 10.6%

Source: authors' analysis using the open-source statistical analysis package PSPP GNU pspp 1.2.0-g0fb4db.

Table 5

Perceived value of core measures introduced in response to COVID-19

No.	Items	N	Mean (Std. Deviation)	Decreases perceived value (%)	Changes perceived value (%)	Increases perceived value (%)
1.	Online classes	957	5.36 (1.923)	20.0	9.4	70.6
2.	Online Dean's Office / Registrar	957	6.14 (1.266)	3.4	9.8	86.7
3.	Online consultations	957	5.71 (1.454)	4.1	24.2	71.7
4.	Online training & webinars	957	5.66 (1.385)	4.1	22.2	73.8
5.	Online assessments & examinations	957	6.07 (1.406)	7.1	7.1	85.8
6.	Limited presence on campus	957	4.93 (2.142)	26.3	16.2	57.5
7.	Online platform	957	6.01 (1.286)	4.5	8.4	87.1
8.	Online library	957	4.62 (1.304)	4.2	65.0	30.8

Source: The authors' analysis using the open-source statistical analysis package PSPP GNU pspp 1.2.0-g0fb4db.

average the respondents found all the items on the value-adding side of the measurement scale. The surveyed students found all but one evaluated measure as adding value to their college experience. It is interesting to note that three measures were considered especially value-adding. They include the Dean's Office online services, online assessments and examinations, and the online platform. These were found by respondents to enhance their value experience (86.7%, 85.8%, and 87.1% respectively). Also, online classes and a limited campus presence are among those least valued measures. They also display a much more distributed opinion range, with a significant percentage of respondents finding them to be value-diminishing. 20% of respondents perceived online classes and 26.3% of respondents perceived limited campus presence to be value-diminishing.

The only measure in the core measures package perceived as not adding value was online library services. 65% of respondents stated that the library services did not change the value experience from them. The presented empirical observations seem to support the hypothesis with the somewhat unclear exception of the online library component (for more see Tab. 5).

Part-time students and students with jobs

Unlike traditional, campus-based full-time students, part-time students attend classes on weekends (usually every second weekend). They tend to be older than the traditional college age, with careers and families. However, not only part-time students have jobs. With financial pressures and job market opportunities, many full-time students find jobs very early in their college life.

The remote mode of study seems especially convenient to those students who have jobs and need to find a balance between study and work obligations. By studying remotely, they are not expected to show up on campus and they can attend classes online and submit their assignments and take examinations via distance learning platforms. By eliminating the need to travel, in many cases, they can save a substantial

amount of time and gain a degree of flexibility in planning their work, college, and home activities. Therefore, the authors have hypothesized that both part-time students and those currently having jobs will perceive virtual university components as adding value to their college experience more often than full-time students and students who do not have jobs.

Again, the hypothesis can be supported by the obtained empirical data. Part-time students and those students with jobs consistently rate higher the value-adding property of each of the core measures. All the mean differences for the measured items are statistically significant (see Tab. 6 and 7).

First-year students

The first-year students are students that came to college during the COVID-19 pandemic, which started in the last semester of their high school education. At some point in the spring semester of 2020, their schools switched to an online mode of instruction. Their experience with distance learning had largely been improvised and was often far from optimal. This unfortunately may have reinforced a rather negative social attitude toward the value of online studies. Moreover, freshmen usually look forward to campus life and, since the higher education experience is something new and foreign for them, they will probably feel safer in the in-person setting, where they have more traditional contact with professors and college administrators. Thus, the authors have hypothesized that first-year students will perceive the core measures introduced in response to COVID-19 as diminishing the value of their college experience.

However, the authors found that the obtained data did not support the hypothesis. The first-year students all rate the items referring to the core measures in the value-adding region of the scale. Moreover, they seem to perceive five out of eight components as value-adding more often than more senior students. They seem to value more online consultations with the faculty, online training and webinars, online examinations and assessments, and the online platform more than their more senior counterparts (Tab. 8).

Table 6

Mean differences in perceived value enrichment potential of selected virtual university tools between full-time and part-time students

No.	Items	N = FT/PT	Mean (std. Deviation)		Levene's Test for Equality of Variances (*p*-value)	Independent Samples t-test for Equality of Means (*p*-values) Equal variances (assumed / not assumed)		Statistically significant
			FT	PT				
1.	Online classes	337/620	4.59 (2.014)	5.78 (1.734)	.000	assumed	.000	✓
						not assumed	.000	✓
2.	Online Dean's Office / Registrar	337/620	5.85 (1.414)	6.30 (1.148)	.000	assumed	.000	✓
						not assumed	.000	✓
3.	Online consultations	337/620	5.27 (1.493)	5.94 (1.377)	.001	assumed	.000	✓
						not assumed	.000	✓
4.	Online training & webinars	337/620	5.44 (1.328)	5.78 (1.401)	.017	assumed	.000	✓
						not assumed	.000	✓
5.	Online assessments & examinations	337/620	5.71 (1.552)	6.27 (1.278)	.000	assumed	.000	✓
						not assumed	.000	✓
6.	Limited presence on campus	337/620	4.10 (2.180)	5.38 (1.984)	.089	assumed	.000	✓
						not assumed	.000	✓
7.	Online platform	337/620	5.82 (1.282)	6.12 (1.277)	.402	assumed	.001	✓
						not assumed	.001	✓
8.	Online library	337/620	4.41 (1.197)	4.74 (1.345)	.000	assumed	.000	✓
						not assumed	.000	✓

Note. FT – full-time; PT = part-time.

Source: authors' analysis using the open-source statistical analysis package PSPP GNU pspp 1.2.0-g0fb4db

Table 7

Mean differences in perceived value enrichment potential of selected virtual university tools between full-time and part-time students

No.	Items	N = J/NJ	Mean (std. Deviation)		Levene's Test for Equality of Variances (*p*-value)	Independent Samples t-test for Equality of Means (*p*-values) Equal variances (assumed / not assumed)		Statistically significant
			J	NJ				
1.	Online classes	661/296	5.59 (1.860)	4.86 (1.970)	.036	assumed	.000	✓
						not assumed	.000	✓
2.	Online Dean's Office / Registrar	661/296	6.20 (1.254)	6.00 (1.285)	.616	assumed	.019	✓
						not assumed	.020	✓
3.	Online consultations	661/296	5.85 (1.429)	5.39 (1.462)	.131	assumed	.000	✓
						not assumed	.000	✓
4.	Online training & webinars	661/296	5.72 (1.412)	5.53 (1.317)	.065	assumed	.056	✗
						not assumed	.050	✗
5.	Online assessments & examinations	661/296	6.21 (1.327)	5.78 (1.529)	.000	assumed	.000	✓
						not assumed	.000	✓
6.	Limited presence on campus	661/296	5.20 (2.091)	4.32 (2.135)	.849	assumed	.000	✓
						not assumed	.000	✓
7.	Online platform	661/296	6.05 (1.278)	5.92 (1.302)	.644	assumed	.141	✗
						not assumed	.144	✗
8.	Online library	661/296	4.71 (1.318)	4.44 (1.255)	.000	assumed	.003	✓
						not assumed	.002	✓

Note. J = has a job; NJ = does not have a job.

Source: authors' analysis using the open-source statistical analysis package PSPP GNU pspp 1.2.0-g0fb4db

Table 8

Mean differences in perceived value enrichment potential of selected virtual university tools between first-year students and more senior students

No.	Items	N = FY/SY	Mean (std. Deviation)		Levene's Test for Equality of Variances (*p*-value)	Independent Samples t-test for Equality of Means (*p*-values) Equal variances (assumed / not assumed)		Statistically significant
			FY	SY				
1.	Online classes	557/400	5.46 (1.869)	5.23 (1.991)	.071	assumed	.074	✗
						not assumed	.077	✗
2.	Online Dean's Office / Registrar	557/400	6.3 (1.049)	5.87 (1.477)	.000	assumed	.000	✓
						not assumed	.000	✓
3.	Online consultations	557/400	5.80 (1.370)	5.58 (1.556)	.001	assumed	.018	✓
						not assumed	.020	✓
4.	Online training & webinars	557/400	5.78 (1.327)	5.50 (1.449)	.015	assumed	.003	✓
						not assumed	.003	✓
5.	Online assessments & examinations	557/400	6.20 (1.290)	5.90 (1.538)	.000	assumed	.001	✓
						not assumed	.002	✓
6.	Limited presence on campus	557/400	4.95 (2.107)	4.89 (2.193)	.192	assumed	.674	✗
						not assumed	.676	✗
7.	Online platform	557/400	6.22 (1.051)	5.72 (1.510)	.000	assumed	.000	✓
						not assumed	.000	✓
8.	Online library	557/400	4.69 (1.259)	4.53 (1.361)	.966	assumed	.063	✗
						not assumed	.067	✗

Note. FY = first-year students; SY = senior students, incl. 2nd, 3rd, and 4th years.

Source: authors' analysis using the open-source statistical analysis package PSPP GNU pspp 1.2.0-g0fb4db

The core measures and the students' expectations

Contemporary students are often called *digital natives* (Prensky, 2001; Stolzer, 2007) because they grew up with access to computers, mobile devices, and the Internet. Even though the use of digital tools, multimedia, and digital student grade books are common within the K12 education in Poland, the pre-university school experience is still rather traditional. Online socializing outside school and extracurricular education are far more common. Teenagers nowa-

Table 9

The correlation of the core measures and students' expectations

Core measures	To what extent your expectations were met
Online classes	0.282
Online Dean's Office / Registrar	0.252
Online consultations	0.284
Online training & webinars	0.250
Online assessments & examinations	0.190
Limited presence on campus	0.207
Online platform	0.310
Online library	0.258

Source: authors' analysis using open-source statistical analysis package PSPP GNU pspp 1.2.0-g0fb4db.

days also have extensive and successful experience with online shopping and are very quick to adopt all web-based innovations. Given the broad experience of contemporary teenagers and their Internet and computer literacy, the authors have hypothesized that by the time they enter college or university, the core measures introduced in response to COVID-19 and associated with online learning/studying will positively correlate with students' perception of their expectations toward college/university being met. This hypothesis also seems to be supported by empirical evidence. All questionnaire items referring to the core measures are positively, yet only slightly correlated with the students' expectations scale. All (Pearson's) correlations are statistically significant (at $p < 0.01$) (see Tab. 9). The multiple regression model suggests that all the core measures together account for 15% of the overall students' expectations met.

Conclusions and implications

Even though online programs have been widely available for many years, there appears to be disagreement regarding their value in formal higher education, even among students themselves. With the COVID-19 pandemic, many HEIs were forced to implement distance learning methods and virtual university measures on a massive scale, regardless of their attitudes towards virtualization of the education process and

prior experience with online education services. This led to the exposure of enormous numbers of students to the experience of online learning and virtual university, with all its advantages and drawbacks. Just as the remote work experience has already changed the working environment and employees' expectations, it is commonly believed that the online education experience of the COVID-19 crisis will change the practices and expectations of the higher education sector, and the value equation perceptions among current and future students.

The authors took advantage of the opportunity presented by COVID-19 and the remote learning/studying measures implemented at the authors' institution to measure the students' perceived value of online studying. The authors assessed the extent to which the remote study/learning measures correlate with students' expectations towards their college. The hypotheses have largely been supported by the data. In general, the online studying/learning measures have been found to be value-adding, and even more so by part-time students and students with jobs. Contrary to the authors' expectations, the first-year students were not less enthusiastic toward online studying, in fact, they found the online studying/learning measures even more value-adding than their senior peers. As expected, all implemented remote study measures correlate positively, although only slightly, with students' expectations with their college.

It is important to remember that the empirical findings need to be judged considering the study limitations. The sample structure does not seem to be significantly different from a sample one may obtain from other HEIs in Poland, yet there is no way to assess its representativeness for the student population in general. The authors have studied only a small subset of online studying/learning measures that are being or can be introduced at a HEI willing to embark on a virtual university project. Despite the limitations, the research findings provide a platform on which future research and conceptual work can be continued.

The COVID-19 pandemic turned the traditional system of education upside down for institutions at all levels, making the unbelievable normal. The return to *business as usual* may prove to be impossible. The post-pandemic education industry is likely to undergo a complex process of adjusting to the reality of the newly obtained experience, novel expectations, and freshly acquired capabilities. The challenge is to find a value proposition with sufficient appeal to all stakeholders to lead the transformation of HEI into the new normal.

It can be argued that many of the online studying measures introduced during COVID-19 will be retained to some extent, probably to be expanded or redesigned when the key stakeholders of HEIs are ready. COVID-19 sped up the digital transformation of many industries around the world, including higher education. Digital transformation is a change driver in the world of science because it offers new technologies based on the Internet with profound implications

for society (Unruh & Kiron, 2017). Even traditional universities, which until now have not looked at digitization and virtualization as a key process, began considering these trends in their new development strategies, because they have proven their value, and they possess enormous potential to redesign higher education to meet the needs and expectations of the new normal – the post-covid world.

To put the presented framework in the context of the authors' research findings, one needs to understand how students' value perceptions fit into the VU concept outlined above. The value offered by the HEI is dependent on the how (technology), who (faculty, administrators), what (innovative programs), at what cost (tuition, sacrifices, pains), and to what end (how it enables achievement of one's goals). Technology, faculty, and administrators are value enablers that are as good as the value creation, preparation, and capture processes allow them to be. It is, however, the digitization process that underlies the value chain that is the game-changer. It can effectively address the issue of the "what" and "at what cost", to allow "the who" to offer the "to what end".

References

Długosz, P. & Foryś, G. (2020). *Zdalne nauczanie na Uniwersytecie Pedagogicznym im. Komisji Edukacji Narodowej w Krakowie z perspektywy studentów i wykładowców*. Wydawnictwo Naukowe Uniwersytetu Pedagogicznego. https://rep.up.krakow.pl/xmlui/handle/11716/10085

Drucker, P. (1998). *Praktyka zarządzania*. Wydawnictwo Czytelnik.

Dziewanowska, K. (2018). *Współtworzenie wartości w marketingu. Przykład szkolnictwa wyższego*. Wydawnictwo C. H. Beck.

Fatani, T. H. (2020). Student satisfaction with videoconferencing teaching quality during the COVID-19 pandemic. *BMC Medical Education*, *20*(396). https://doi.org/10.1186/s12909-020-02310-2

Gaebel, M., Kupriyanova, V., Morais, R., & Colucci, E. (2014, November 17). *E-learning in European Higher Education Institutions. Report*. European University Association. https://eua.eu/resources/publications/368:e-learning-in-european-higher-education-institutions.html

Goliński, M. (2011). *Społeczeństwo informacyjne – geneza koncepcji i problematyka pomiaru*. Oficyna Wydawnicza SGH.

Grönroos, Ch. (2006). On defining marketing: finding a new roadmap for marketing. *Marketing Theory*, *6*(4), 395–417. https://doi.org/10.1177/1470593106069930

Hubbard, D. W. (2014). *How to measure anything: finding the value of in business*. Wiley.

Hunt, S. D., & Morgan, R. M. (1995). The comparative advantage theory of competition. *Journal of Marketing, 59*(2), 1–15. https://doi.org/10.1177/002224299505900201

Kotler, P., & Armstrong, G. (2008). *Principles of marketing* (12th ed.). Pearson Prentice Hall.

Lichtenstein, D. R., Netemeyer, R. G., & Burton, S. (1990). Distinguishing coupon proneness from value consciousness: An acquisition-transaction utility theory perspective. *Journal of Marketing, 54*(3), 54–67. https://doi.org/10.2307/1251816

Mazurek, G. (2019). Transformacja cyfrowa – perspektywa instytucji szkolnictwa wyższego. In J. Woźnicki (Ed.), *Transformacja Akademickiego Szkolnictwa Wyższego w Polsce w okresie 30-lecia 1989–2019* (pp. 313–332). KRASP.

Näslund, D., Olsson, A., & Karlsson, S. (2006). Operationalizing the concept of value – an action research-based model. *Learning Organization, 13*(3), 300–332. https://doi.org/10.1108/09696470610661135

Norman, G. (2010). Likert scales, levels of measurement and the "laws" of statistics. *Advances in Health Sciences Education, 15*, 625–632. https://doi.org/10.1007/s10459-010-9222-y

Oliva, R. A. (2000). Brainstorm your e-business. *Marketing Management, 9*(1), 55–57.

Osterwalder, A., & Pigneur, Y. (2002). An eBusiness model ontology for modeling eBusiness. *15th Bled Electronic Commerce Conference eReality: Constructing the eEconomy* (pp. 75–91). http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.557.8131&rep=rep1&type=pdf

Osterwalder, A., Pigneur, Y., Bernarda, G., & Smith, A. (2014). *Value proposition design: how to create products and services customers want*. John Wiley & Sons.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon, 9*(5), 1–6. https://doi.org/10.1108/10748120110424816

Rachinger, M., Rauter, R., Müller, C., Vorraber, W., & Schirgi, E. (2019). Digitalization and its influence on business model innovation. *Journal of Manufacturing Technology Management, 30(*8), 1143–1160. https://doi.org/10.1108/JMTM-01-2018-0020

Sandkuhl, K. & Lehmann, H. (2017). Digital transformation in higher education — the role of enterprise architectures and portals. In A. Rossmann, & A. Zimmermann (Eds.), *Digital Enterprise Computing* (pp. 49–60). Gesellschaft für Informatik e.V. https://dl.gi.de/bitstream/handle/20.500.12116/483/lni-p-272-komplett.pdf?sequence=1

Seres, L., Pavlicevic, V., & Tumbas, P. (2018). Digital transformation of higher education: competing on analytics. In *Proceedings of INTED2018 Conference* (pp. 9491–9497). https://doi.org/10.21125/inted.2018.2348

Sharma, K., Deo, G., Timalsina, S., Joshi, A., Shrestha, N., & Neupane, H. C. (2020). Online learning in the face of COVID-19 pandemic: Assessment of students' satisfaction at Chitwan Medical College of Nepal. *Kathmandu University Medical Journal, 18*(2), 40–47. https://doi.org/10.3126/kumj.v18i2.32943

Stach, P. (2009). Problemy konceptualizacji i operacjonalizacji wartości dla klienta. *Przegląd Organizacji, 6*, 43–45. https://przegladorganizacji.pl/artykul/2009/10.33141po.2009.06.11

Stach P., & Bąk, J. (2009). Na ścieżkach zadowolenia i lojalności-poszukiwanie modelu w kontekście uczelni. *Marketing i Rynek, 6*, 20–25.

Stolzer, J. M. (2007). The ADHD epidemic in America. *Ethical Human Psychology and Psychiatry, 9*(2), 109–116. https://doi.org/10.1891/152315007782021204

Students' satisfaction after transferring to remote studying. (2021). Survey report. College of Economics and Computer Science (WSEI) (unpublished).

Sullivan, G. M., Artino, A. R. Jr. (2013). Analyzing and interpreting data from Likert-type scales. *Journal of Graduate Medical Education, 5*(4), 541–542. https://doi.org/10.4300/JGME-5-4-18

Surahman, E., & Sulthoni. (2020). Student satisfaction toward quality of online learning in Indonesian Higher Education during the COVID-19 pandemic. *6th International Conference on Education and Technology (ICET)* (pp.120–125). IEEE. https://doi.org/10.1109/ICET51153.2020.9276630

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning, 51*(1), 40–49. https://doi.org/10.1016/j.lrp.2017.06.007

Trias de Bes, F., & Kotler P. (2011). *Winning at innovation: The A-to-F model*. Palgrave Macmillan.

UNESCO. (n.d.). *COVID-19 impact on education*. Retrieved August 9, 2021 from https://en.unesco.org/covid19/educationresponse

Unruh, G., & Kiron, D. (2017, November 6). Digital transformation on purpose. *MIT Sloan Management Review*. https://sloanreview.mit.edu/article/digital-transformation-on-purpose

Winter, J. C. F., de, & Dodou, D. (2010). Five-Point Likert Items: t-test versus Mann-Whitney-Wilcoxon. *Practical Assessment, Research and Evaluation, 15*(11). https://doi.org/10.7275/bj1p-ts64

Woodall, T., Hiller, A., & Resnick, S. (2014) Making sense of higher education: students as a consumer and the value of the university experience. *Studies in Higher Education, 39*(1), 48–67. https://doi.org/10.1080/03075079.2011.648373

World Health Organization. (2020, March 11). *WHO Director-General's opening remarks at the media briefing on COVID-19*. https://bit.ly/3xM0LEa

Zbarachewicz, B. (2020). Uczelnie w czasie koronawirusa – problemy transformacji cyfrowej i postulaty na przyszłość. *Wiedza Obronna, 272*(3), 75–99. https://doi.org/10.34752/vs7h-g944

Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing, 52*(3), 2–22. https://doi.org/10.2307/1251446

Zeng, X., & Wang, T. (2021). College student satisfaction with online learning during COVID-19: A review and implications. *International Journal of Multidisciplinary Perspectives in Higher Education, 6*(1), 182–195.

Ryszard Ćwiertniak, Ph.D. Eng. holds a Ph.D. Social Sciences in the field of Management and Quality Sciences (Cracow University of Economics), an M.A. in Management Studies (Faculty of Management, University of Warsaw) and an engineering degree in Electronics. He is an Agile Design Methods and Design Thinking expert. He draws fully on design thinking in his training sessions for businesses, public administration, education, and the non-governmental sector. He has conducted several dozen workshops in the field of training planning, operational planning, and crisis response. He is involved in supporting organizations in their search for improvement. He currently conducts training courses for companies preparing teams to implement the Design Thinking methodology in the area of advanced production systems – Industry 4.0.

Przemysław Stach, Ph.D. holds a Ph.D. in Economics in the field of Management Science (Cracow University of Economics), and an M.A. in American Studies (American Studies Center, University of Warsaw). An academician with over twenty years of experience in teaching and scholarly research. He has worked for many institutions of higher education in Poland and abroad, and lectured in Germany, Denmark, and the UAE. His current teaching responsibilities include mainly Principles of Management, Strategic Planning in Digital Marketing, Marketing Research, Change Management, and Performance Management. Outside academia, he has been an active management consultant with Factor Consulting, where he specializes in change and performance management, sales and marketing organization, decision support, and market research. He has carried out projects in the IT, chemical, medical, pharmaceutical, HoReCa, R&D, and automotive industries.

Katarzyna Kowalska-Jarnot, Ph.D. holds a Ph.D. in Management gathered and specializes in marketing. Her current teaching responsibilities include Marketing Research, Marketing, and Digital Marketing. Before starting her academic career, she worked for many organizations as a Training Specialist, Marketing Specialist, and PR Consultant. She was the Head of the Marketing Department for WSEI. She is active outside academia, consulting and conducting training courses for companies.

Korolina Worytkiewicz-Raś, M.A. holds a B.A and an M.A. in Economy, and specializes in management, especially family businesses. Her current teaching responsibilities include management and entrepreneurship. She is the Head of the Competence Development Center at WSEI, and also works in a family business as financial specialist.

Barbara Wachułka-Kościuszko, M.A. has a B.A. degree in English Philology and an M.A. in Human Resource Management and Practical Psychology of Management and Negotiations. She is a soft skill trainer, recruiter, and educator with fourteen years of experience. She has worked as a corporate training coordinator and recruiter for medium-sized and large enterprises. She has authored many training programs, and currently works as a freelance trainer with training companies and corporations. Her current teaching responsibilities include mainly Human Resources Management. At WSEI, she also serves as an HR Generalist and an international projects coordinator.

WE RECOMMEND
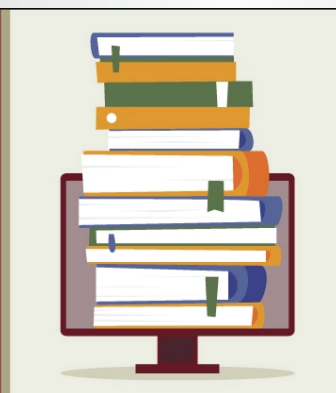
**2022 EDUCAUSE Horizon Report |
Teaching and Learning Edition**

Two years into the COVID-19 pandemic, much still feels the same, though in some important ways our thinking and behaviors may be shifting in anticipation of longer-term changes in the ways we structure our lives and our shared places and spaces. In higher education, these shifts may reflect an evolution from short-term "emergency" or "reactive" modes of offering education during extraordinary circumstances to making strategic and sustainable investments in a future that will be very much unlike our past. As this year's teaching and Learning Horizon panelists gathered to reflect on current trends and the future of higher education, many of their discussions and nominations suggest that change may be here to stay and that there will be no return to "normal" for many institutions. This report summarizes the results of those discussions and nominations and serves as one vantage point on where our future may be headed. This project was grounded in a modified Delphi methodology that seeks to elevate the collective perspectives and knowledge of a diverse group of experts, and the panelists' activities were facilitated using tools adapted from the Institute for the Future.

Source: **https://library.educause.edu/resources/2022/4/2022-educause-horizon-report-teaching-and-learning-edition**

Monika Sońta

Boosting students' creativity through visual *bricolage* of experiences – how visual collage boards help students in expressing their knowledge during online classes

Abstract

The objective of this study is to present various practical applications of collage-based methods (visual *bricolage*) as a way of boosting creative discussions with students and helping them to express their knowledge and experience using visual representation.

This viewpoint paper is based on the experience of twenty classes conducted with the MA program and postgraduate students at Kozminski University between March 2019 and December 2021, when online whiteboards and visual metaphors were used. The method used was participative observation, as the author also acted as the workshop facilitator. To observe the user's action, the contribution tracking tool that is available on the mural whiteboard (Mural, n.d.) was activated.

The explorations during the workshops revealed two elements of online classes: Conceptualization vs Illustration, to determine whether photos and pictures serve as an instrumental illustration in the background of the story, or they are important elements that convey the sense of the students' statements.

Moreover, the paper contains various practical findings that help to facilitate creative educational workshops remotely.

Keywords: online teaching, creativity, creative explorations, creation, visual metaphors

Introduction

"The ability to see is one of the truly remarkable characteristics of living beings. It enables them to perceive and assimilate in a very short time an incredible amount of knowledge about the world around them" (Netravali, 1995, p. 1). This quotation explains why on the road to finding innovative teaching methods we should reach for visual projective techniques that create spaces for the application of metaphors and enable social learning opportunities (Bandura, 1977).

The purpose of this viewpoint paper is to share the experiences with the practical applications of visual collage-based methods such as vision boards, concept posters, mood boards, and more structured forms such as 'streams of photos' for academic teaching, and explain how to incorporate them into the teaching practices in the area of Management.

The structure of this paper is as follows: firstly, a theoretical explanation of the collage techniques will be given, then the technical and practical recommendations about the workshop design will be shared to combine the viewpoint paper with ready-to-implement teaching practice in the virtual environment.

Setting the scene – context for the introduction of online creative methods

In March 2020, a series of national lockdowns meant that academic courses suddenly needed to be conducted remotely. This required a rapid transition to online tools,

Monika Sońta, Kozminski University, Poland, https://orcid.org/0000-0003-1948-8176

while not failing to observe the university quality paradigm to maintain a high level of engagement for students that attend classes through interactivity and design a space for social collaboration (Kazerounian & Foley, 2007).

In the context of creating a good learning experience for students, we had the perception that we wished to break computer-mediated anonymity and technological dominance of learning software such as MS Teams or Zoom. According to the Social Construction of Technology theory (Bijker et al., 2012), we can mediate the space that was in this case unexpectedly overwhelmed by technical instruments of communication. The approach to this study also supports the attitude that human actions shape technology and formulate new meanings in the system. Embedding tools such as visual collages are in line with social constructionism theories.

Also, apart from the social construction of reality discourse in view of new teaching tools, the aim was to introduce abstract visual forms into lectures to form a space for creation for students (Sońta & Magala, 2020) and let them experience the playful environment of experimentation (Gaunteltt, 2007), and feeling of 'creating things', as making is connecting, even in the virtual environment (Gauntlett, 2018).

In this paper, through the application of the participatory observations of the group dynamic during the creative activities in traditional classes, practical conclusions have been drawn. The participant observation (PO) is related to the role of the facilitator. When facilitating, this person is responsible for not only framing and streamlining the online discussion (Denzin & Lincoln, 2011) but also it is expected to intervene when the conversational frame is not transparent to the participants. The observations were collected between March 2019 and December 2021 during courses in Innovation Management, Business Plan, Sustainability, Cross-Cultural Management, and Communication in the Age of AI at Kozminski University. All classes were conducted in English via the MS Teams platform. The findings derived from observations are supported by the additional interpretations of the patterns of interaction and individual contributions of the students on the Miro and Mural online whiteboard.

The emphasis of reflections in this paper is on the visual representation and responses of the students when telling their stories and working on metaphors. This means that students express their thoughts on abstract topics such as Sustainability in Business through the description of their experiences as they construct metaphors and share their stories about their experiences in the topic, combining it with the knowledge around theoretical concepts they gained in the class. Drawing on this approach, to gain reflexive insights, the students need to combine their theoretical knowledge and individual experiences and let themselves imagine and get creative in interpretations to tell their stories.

Key terms: visual metaphors, *bricolage*, and metaphor-based storytelling

Metaphors: The human ability to see through metaphors

The ability to interpret makes us human. A machine cannot see, it rather 'views' particular information, and this is not out of curiosity, but because a human gave it an order to 'view' a certain space (Pasternak, 2007). The output is with data, however, it is a human who finds analogies and interprets data, and adds a story to explain the patterns that are visible in the data set and have been viewed and recognized by the machine. Machines do not understand this interpretation. What is more, when we 'see', we search for our memories and recall our human experiences, and this, combined with human curiosity, helps us to find a solution to a challenge and complete business tasks.

Before the pandemic, the innovative didactic classroom equipment such as traditional whiteboards and physical post-its/ sticky notes were used to make the classroom experience more interactive and participative for students. There were aimed at involving students in taking part in the discussion to express their stories in a different than text-oriented way. Storytelling was applied at rather an instrumental level, usually during the final presentations, and even then presenting a narrative was optional, as an element of being proficient in making presentations.

The visual *bricolage* introduces a more abstract way of expressing students' opinions and creates a space where the interpretation is created entirely by them, and not the teacher. More interestingly, reflexive storytelling appears much more often, as the workshop participants need to bridge their experience and knowledge and the tangible insights that are expected to be shared with the rest of the course participants. The flow of the discussion in the class is in line with the scheme presented in Figure 1.

To name the parts of the process explicitly, this process can be translated to expose the stages:
1. Random reflections on the topics (Reflection).
2. Attaching various pictures to thoughts (Image generation).
3. Selecting the metaphors (Selection).
4. Building stories (Storytelling).
5. Sharing stories framed adequately for the context of a formal education workshop (Contextual adaptation & Presentation).
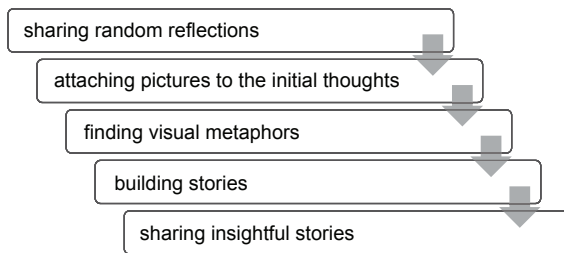
Both creating a metaphor based on visual inspiration and sharing the final story are necessary components, as "[b]oth narrative and metaphor provide mechanisms for making sense of the world. While metaphors elaborate and articulate particular points in a narrative, the narrative provides meaningful connections between sometimes unrelated metaphors, suggesting a symbiotic relationship between the two" (Farquhar & Fitzpatrick, 2019, p. 3).

The concept of metaphor as the 'assumptive frameworks' or 'systems of associated commonplaces'

Figure 1
Creating a visual metaphor-based story scheme

sharing random reflections
attaching pictures to the initial thoughts
finding visual metaphors
building stories
sharing insightful stories

Source: author's own work.

was introduced by Max Black (1955, 1977). His research emphasized the role of intuition or intuitive thinking when ascribing new meaning to a secondary object. The meaning that is attached to the object - in this case to an image or a collage.

Firstly, the given element triggers the recipient's memories and experiences about the object itself. Secondly, they build associations with the theme of discussion in the process of re-capturing and re-constructing the primary meanings, and then, referring their stories to the subject of discussion. Finally, the students sense their experiences through their personal stories, and this may create a feeling of collective sharing and belongingness in the learning community (Lambert, 2013). In the moment of presenting (sharing the stories), the whole group is focused on the speaker who is in the center of attention and as the cameras are on, and this is how the online presence is demonstrated.

During vision-board workshops, we operate with images as objects that stimulate the creation of associations. In the next steps, these are transferred to express the story that is related to the topic of the workshop. The quality of the output of this exercise depends on the level of the introductory knowledge and experiences. If the discussion is on Sustainability in general, students probably have access to broad information about the topic, so the associations will be created faster. If we target a more precise term, for example Gender Equality, or name any other goal on the list of the UN's Sustainable Development Goals, the scope of knowledge and experience they can build on will be narrower, and not so universal as in the first case.

Importantly, interpretations are stronger when the lived experience is stronger, so crafting the questions at the right level while balancing between abstraction and precision is also needed. The practical implications are linked to the mindful design of the creative workshop, as the expected quality of content and abstraction of questions should be matched with the initial level of knowledge in the discussed topics.

The fluency in using metaphors ensures taking a further step and developing a story that is about covering the essence of metaphors inspired by images with a 'narrative' that is understandable to the audience. Drawing on this and adding the concept that our experience is simply what we do, which is an

inevitable assumption in Dewey's theory of experience (Dewey, 1938), into the picture, the quality of insights taken from the student's story is situational, depending on the perception of place (if students focus on their metaphors or they treat this workshop as a social collaboration space). Alternatively, they see it as a task that requires igniting a sense of collective intelligence. This impacts the climate of this experience, as most of the traditional didactic formulas encourage adding individual findings to the discussion, while here the tempo of activity demands instant building on the situation. Out of the mosaic of individual stories that are being "explored concurrently" (Farquhar & Fitzpatrick, 2019, p. 5), the new interpretations emerge.

Imagining: illustrative vs conceptualizing metaphors

Imagination is understood as "the ability to produce and simulate novel objects, sensations, and ideas in the mind without any immediate input of the senses" (Byrne, 2007, p. 38). The process of imagining aims at the formation of "images" in the mind that is shaped through the re-creation of experiences that are evoked in response to a given stimulus. When the vision board technique is applied, a facilitator names the trigger, for thinking about associations about a certain topic. According to media theorists (Perdue, 2003), imagination is about "thinking through images", as seen in the etymology of the word 'imagination', which comes from the Latin verb *imaginary* which means "to picture oneself". In the process of imagining, the necessary focus is on self-reflexivity, as each person needs to create an image in their head, then overthink the sense of this image (this dynamic stage is about fantasizing around the interpretation) and form the image that is ready to be expressed.

Thanks to the ability to imagine, we can integrate experience and the learning process, as words evoke experiences, and memories are used to form the associations which are then expressed through pictures and photos used on the online boards. As time pressure is embedded in the task, students need not only to boost their imagination in real time to create almost instant associations with the visual triggers, but also to react and make decisions quickly and 'think on their feet', as besides thinking about their metaphors, they also need to be oriented in what is going on in their group. The time pressure adds the feeling of not being able to control the environment and not being in the comfort zone as time pressure is high. There is no time to rethink the selection of photos, metaphors, and stories. There is one more lesson learned from this experience, and this is acceptance of the ambiguity and complexity of the situation.

Students are provided with a framework for creatively making sense of life experiences. If students have vivid memories of the topic of the conversation, they will extract the images from their knowledge (when the concept was acquired as theoretical) or experience (if students have experience in the topic). The level of their orientation in the topic will be seen in the precision

of the words they use and the precision seen in the style and tone in which they construct metaphors: the less familiar they are with the topic, the more abstract their metaphors are. The stories will be focused on the content of the picture or photo itself, instead of serving just as an illustration when presenting the point.

To summarize the role of visual inspiration in crafting the story around the findings in visual board imagining:

- Conceptualization – the pictures provide inspiration and trigger the way in which imagining takes place. The pictures are picked first as something that may be useful, and only then do the story and the statement emerge and is the interpretation provided. Sometimes, the essence of the story appears unexpectedly as an attachment to the vision.
- Illustration – the pictures are instrumental illustrations of the statement or term. The photo is a visual representation of the story, just like a picture in the background of the presentation. The process of sharing starts with having a precise point to be illustrated. This is an example of using vision boards in a tool-oriented role.

Table 1

The difference between using an image as a conceptualizer or illustration

Process of imagining in general	Create	Fantasy	Form	Manifest
Imagining during the creation of online vision boards: Conceptualization (forming a concept)	Making associations in the mind	Trying to re-interpret them to match the picture/photo	Forming a conclusion	Presenting it, expressing it using the picture as something that delivers the core content; the metaphor itself is a story
Imagining during the creation of online vision boards: Illustration (illustrating the concept)	Finding an exact photo that expresses your point	Thinking about the story that combines your point with a picture	Making it even more precise to ensure that the point is visible	Presenting it, expressing it in a way in which a picture is just an illustration in the background

Source: author's own work.

Figure 2

An example of using visual metaphors as an illustration – Metaphors of Employee Engagement in SDG goals

Note. The picture was taken in December 2021 at a workshop for post-graduate students.
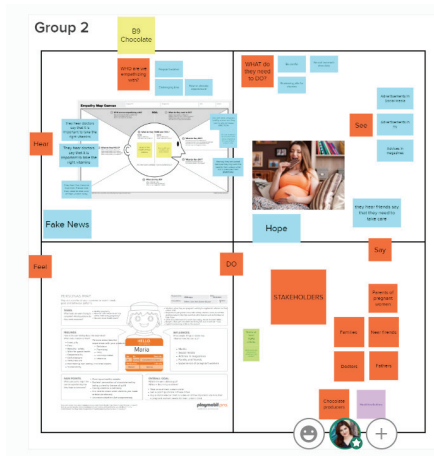
Source: author's own work.

Figure 3

Using visual metaphors as a conceptualization

Note. The picture was taken during "Cross-cultural management" in November 2021.

Source: author's own work.

Figure 4

Using visual metaphors as a conceptualization of a marketing persona

Note. The picture was taken during "Business Plan" classes in November 2021.

Source: author's own work.

Meaning and interpretations: extracting meaning from a picture

Vision boards are interesting due to the element of presentation, as students are aware from the very beginning that the story attached to their visual metaphor will be presented to others. This requires the self-reflexivity process to be streamlined into a story that is understandable for the audience, so the abstract metaphoric associations should be translated into graspable pieces of the story.

Real-Time Imagining in the context of this article is about crafting new meanings, and can be sensed through the notion of letting our students experience "mental *bricolage*" (Rogers, 2012). The term *bricolage* was introduced by anthropologist Lévi-Strauss (1966). The essence of this term is linked to the activity when we combine various elements of to create new objects with totally different functionalities than those that were used separately. It usually refers to home repairs and DIY activities.

Farquhar and Fitzpatrick (2019) explained the concept in this way: "*Bricoleur* was originally a term used to describe craftspeople who work creatively with materials leftover from various other projects, and who use "the tools at hand" to create something new" (p. 7).

It has been proven that high emotional states such as excitement are computer-mediated in this case, however the students work in a way that is unexpected of them – they usually work with text, not pictures. Now they can (or they are even instructed to) move from the rational and linear ways of reasoning to the more symbolic and lateral way of interpreting things (de Bono, 2015). This requires a higher level of abstraction, generalization, and dynamic selectivity with a decision pivoting in interpreting pictures and photos.

The powerful role of images can be deduced from the extended definition of the process of visual communication taken from the Visual Communication book (Huck et al., 1997), which explains that even in the online environment, images bring the experience of non-linearity to the workshop. An image (printed or digital) is a subject of reconstruction "intended to produce a continuous representation of the discrete output of the image-gathering device (either with or without digital processing)" (Huck et al., 1997, p. 6), which means that the technological medium also impacts the meaning transmitted through this photo. The practical implications of this statement show the importance of choosing digital tools such as whiteboards. This adds additional positive dynamics to the process of Real-Time Imagining.

To summarize the concept of Real-Time Imagining, only humans have the ability to generalize concepts and formulate conclusions based on abstract assumptions to finally imagine new things (Groth & Nitzberg, 2018).

Findings: The key moments when working with the visual metaphors in the class

Exploration of insights: initial thoughts and streamlining the choices

The first practice was about the introduction of collage-based boards. Students were asked to choose pictures they associated with the topic and upload them to the whiteboard.

The students needed to combine their reflections and inspiration from various sources: around the course

- theoretical concepts introduced in the class,
- in-class readings and pre-readings, or e-learning,
- their experiences in the area or the projection of those experiences to create an environment of serendipity understood as "a possibility to appear". The level of serendipity increases with each reflective piece of topic-related knowledge, in other words the more students knew before about the subject, the most probable it was that they would make an association and transfer their couplings to meaningful topics. The pool of terms, experiences, and reflections they could reach would be wider.

The second step was to make a decision on which elements from this melting pot of associations and visualizations will be presented in front of the classmates. At this moment, students became selective, as they were carefully attaching the meaning and stories to what was going to be presented in the plenum. They were choosing words carefully to be sure that this story was a demonstration of their knowledge of the topic.

We aimed to trigger a discussion about course-related terms reflexively and engagingly through the explorations of insights that emerged in the group discussion. It was the role of the facilitator to craft a question that can be general: "What is Sustainability?" or more precise "What are the standards of sustainability reporting?". The questions were to be adapted to the types of thematic collages.

Additionally, the collective opinion was to be expressed, which also required negotiating the individual versus collective space and finding a mechanism not only to express the moods of each individual but also to craft a collective narrative around the story.

Introducing rounds – building on someone else's knowledge

In both practices, the collage/vision boards or a stream of photos, it was highly recommended to design a creative class to enable at least two rounds of sharing in a group. This was an opportunity to activate social learning. Apart from the experience of Real-Time Imaging, there is an element of building on ideas of other people. This has been achieved thanks to:

- the experience of sharing the same space: working at the same time and working on the same task,
- the experience of group work as we build on other people's stories,
- experience in contributing to the group work with their ideas and perspectives. Furthermore, there is transparency in the contribution, as software such as Miro or Mural has a function for tracking the contribution of each workshop participant.

Framing anonymity

When we talked about contribution, the frame for anonymity (whether we accept an anonymous contribution or we choose not to track the contribution path of each user) was vital, as this was an element of negotiating expected visibility and activeness in the online classroom. This is aligned with the methods aimed at boosting engagement (Chester & Gwynne, 1998). As it was urgent to transform the classes into a fully remote workspace, I lost a sense of control over the traditional (physical) environment at the university. As the university physical infrastructure could not be used, new ways of working: new culture, etiquette, norms, and rules for online meetings, had to be formulated. Apart from negotiating participation and visibility, we could also experiment playfully with the level of anonymity in participation.

- In computer-mediated anonymity, we needed to reset the rules, stating how anonymous you are when you join the meeting (for example by using your name or a nickname) or are active on the whiteboard and let the machine track your actions and then assign the activities to the student's name.
- The recommendation during the presentation of their Vision Boards was to have the faces of all the team members visible with the camera on.

Presenting a collective interpretation

In business practices, we call this moment a *debrief*, in Language Studies, the term *demetaphoring* will be more suitable. In both cases, it suggests the moment at which from the engaging process of imagining the meanings we gain insights that are related directly to the topic of conversation (English, 1998).

Presentation is the most important thing when we treat vision boards as a way to conceptualize things. When we talk about illustration, we are floating at the surface of meanings, and even within tight time frames we can create a story of a descriptive character, as the picture is just a direct visual representation and does not need to be interpreted reflectively. Even a literal interpretation is sufficient.

Again, students asked to flow into real-time imagining can become too distant from the desired learning output. Through the facilitation and observation of the group dynamics, we should not let the findings stray from the target, which is to introduce new management-related terms reflexively and engagingly. Similarly, when we talked about 'serious play', we were not talking about the radically spontaneous, frivolous play for the sake of playing; we were talking

about a process that is oriented to share business stories and introduce more reflexive learning through the creative methods we use, as explorations of the topic go beyond the rational point of verbal or written manifestation of the findings.

When we talked about business education, the process of imagining should have been just one of the stages, and then the debrief session, while attributing the meaning of the story about the management term discussed, should have been completed. We as teachers had three main tools to design this experience:

Figure 5

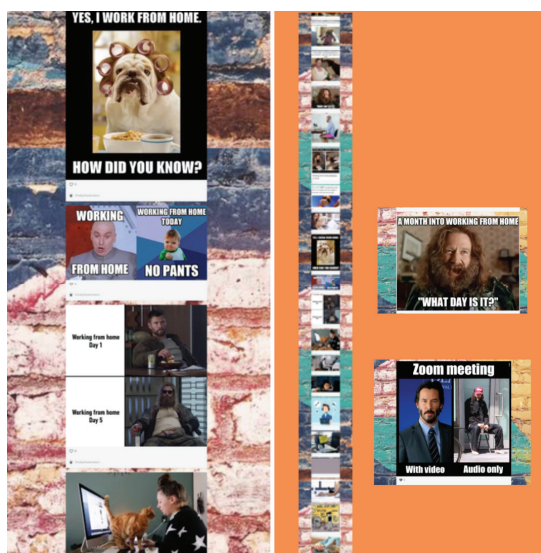*Online Concept Board titled: "What is Innovation?"*
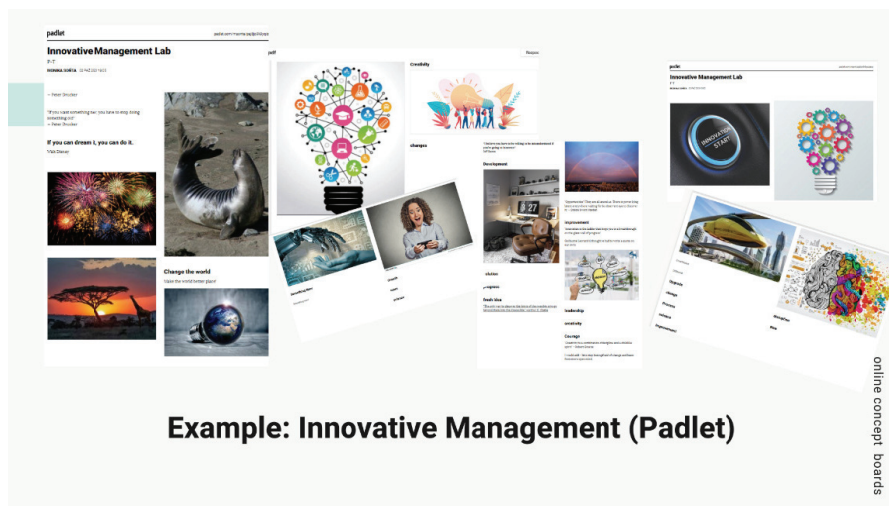
Example: Innovative Management (Padlet)

Note. The picture was taken in the Fall semester of 2020/21 during the Innovative Management course.

Source: author's work.

Figure 6

Online Creative Explorations illustrating "Working From Home culture".

Note. The picture was taken in the Fall semester of 2020/21 during the Introduction to Innovation Management course.

Source: author's own work.

- Time pressure (setting the time limitations, tracking the time, and reacting to the dynamics and needs of the students in the classroom regarding the time slot for the particular module).
- Accenting the importance of the final group presentation to retain the experience of collective work and contribution of each team member.
- Taking over the explanation of the term in the right discussion and facilitating the interventions that are needed to ensure that the insights and key findings are named and clearly communicated.

According to Jung (1963, p. 3) "everything in the unconscious seeks outward manifestation". Also in this case, when we trigger the process of imagining and we disrupt the calmness of linear processes with a dynamic time-pressured lateral thinking triggering event, we need to take responsibility for concluding the process in the right way. As the moment of manifestation of ideas, the presentation is crucial to hear out loud the findings and "hear outside what was said inside". The inner group discussion must be brief enough to have the experience of not having enough time to complete the process of thinking (Xavier & Lhullier, 2020).

The feeling that accompanied the group when they started presenting is that they were 'unprepared'. This opens the way for improvising, so the final presentations may be only part of what they agreed on as a group in the discussion. The overwhelming feeling of incomplete discussion was needed to understand that it was just the beginning of the conversation about the topic, and sense that this discussion was not final.

Moreover, the facilitator(s) are accountable for taking over the process of explaining the term with greater precision from the very first moment they see the opportunity to build on the student's findings from the vision boards. For example, the students elaborated on the criteria of diversity, and our role was to recognize their effort and offer complimentary sources to read about the topic. To give another example, if we noticed that some topics were popular in the group, we could include them in the course. In this way, vision boards can be also treated as expectation mapping, as the topic of interest is provided by the students themselves.

Once all of the groups have presented their materials, our role is to transfer the metaphorical associations into the structured findings and find interconnected topics, more precisely name connectors. The role of the facilitator was to find a common space and encapsulate the topics that were interesting to the students. The discussion had gone in multiple directions and our task was to extend the meaning of this experience beyond one session. We could refer to the statements that were presented in the collages to ensure a sense of well-designed structure.

Moreover, the acceptance of flexibility in the interpretations and general openness to telling the stories more as a framework than an instruction-driven (fixed) way supported the process of learning among students whose style of learning is more kinaesthetic and auditory than visual. One of the facilitator's responsibilities was to empathize with the students whose preferred form of experience was not visuals-driven.

The other experience related to the application of the flexible framework of this method was that work is never final and accepting incomplete outputs. The iterative nature and continuous references to the interpretations that had been created by students is a crucial benefit of this technique, as it opens the door to a narrative over the whole course.

Engines of engagement in the collage-based techniques: co-creation and collaboration

The two main engines of engagement for students are connection through collaboration and the experience of creation.

Experience of creation: we = the creators

If no interpretation was provided, the collages were just a set of meaningless pictures combined randomly. This was a group that explained its vision to the audience. They created it from scratch, and shaped the meaning behind such a construct. Creativity for the sake of creation is powerful itself, and combining it with collective actions and poking the comfort zone with time pressure bring it to a different level of experience. This experience is based on the collective intelligence of a collaborative characteristic (Gloor, 2006).

Connection through collaboration – social learning

Apart from Bandura's concept of social learning, Resnick's (2017) Lifelong Kindergarten approach can be useful. According to this concept, to ignite an engaging learning spiral, four elements (4Ps) are necessary:
- Peers
  A good experience depends on the activation of peer-to-peer social learning. This is generated when workshop participants contribute to the common solution and work together in a way in which they can share their ideas, receive

feedback, and build on the experiences of other people. In this way, they reflect on their initial ideas.

When enabling social sharing space with the whiteboard, the students were invited to collaborate and communicate with each other.
- Project
  The task should be clearly defined with the expected outcomes transparently communicated. Moreover, the presentation was an unavoidable element that frames the discussion into the visible point of ending this exercise and continuation with more traditional ways of teaching. After the creative part, the phase of debriefing and time for reflection was given by offering less creative and more literal explanations of the discussed concepts.
- Passion
  This situation was framed as part of formal classes, so the energy at the start of the project should have modulated the actions. For some people, the feeling of creating something or working in a different way than usual was enough to evoke high emotions in comparison to the engagement used in the standard, less active forms of the introduction of theoretical concepts.
- Play
  Working with visuals offered a playful experience as the students were flexible with the image choices and then they were improvising with their stories. The visuals were the opener of the conversation, and being able to associate the verbal story with a photo or a picture generated a highly playful discussion, especially with amusing associations with the pictures. This was also a moment of experimenting and "playing" with interpretations that were going to be selected to be presented in the end.

Working with visual metaphors fulfilled all the requirements of the definition of engaging experience.

Practical implications for business education

When future opportunities to apply image-based *bricolage* techniques are considered, three concepts should be mentioned:
- creativity as a competence of the future,
- learning reinforcement,
- teaching in a hybrid environment.

Creative thinking as a competence of the future

First of all, when we scan through the list of most desired competencies in 2012 created by the World Economic Forum (https://www.weforum.org/focus/skills-for-your-future), it is clearly stated that the ability to create, communicate and critically interpret is highly valued. What is more, this is what distinguishes us from machine thinking and learning.

Secondly, in remote classrooms, it is challenging to create a common space where everyone is involved. By dividing students into groups, we as teachers facilitate participation and frame contribution, setting the rules of presence and being active. Usually, this is one of a few moments in the online session when social competencies are put into action. Moreover, do students have a sense of belonging to the student group? We facilitate social discussions and design moments of presence and visibility when the collages are presented. That empowers us, as educators, to perform the role of facilitation. In remote study, we are the ones who enable and design the creative workspace and then set the rules of participation and set expectations with regard to visibility (Sale, 2020). This is because this is the starting point to gain trust to launch the creative contribution that is in line with the concept of self-directed learning.

Learning reinforcement

The main driver of engagement is about designing a memorable experience during the workshop itself, and also to complete the cycle of learning we need to keep recalling this experience, and build on it in the rest of our course through constant visible references to the creative workshops and students' findings around the given topic.

Make the collage 'real'

Virtual activities may not replace the real experience. Fortunately, visual *bricolage* is engaging in both realities. As creative activities that involve our hands boost kinaesthetic learning through practicing muscle memory (Lam, 2020), it is recommended to use all the opportunities to embed a tangible dimension of hands-on methods even in the online workshop. The students can be asked to prepare a collage in their own homes, and then present the results before the camera or upload a photo of the collage to the chat.

In this application, the vital role of students' description of the key insights is important, as the collages are not self-explanatory. Secondly, the students should be encouraged to use keywords and write down the key terms directly on their collage.

Final word – level up the understanding

At a level of creative content: Thanks to incorporating visual *bricolage*, letting our students construct metaphors, and offering them contextual permission to Real-Time Imagining, we introduce a realistic vision of the business world that is uncontrollable, ambiguous, and unpredictable. Similarly, in Paul Ricoeur's findings (1991) – a successful metaphor shatters and increases our sense of reality. The experience of tolerance of ambiguity creates a space for more open expression of thoughts.

At a level of collaborative context: Each mechanism of engagement during the workshop helps to sense the real climate of management in turbulent times through Real-Time Storytelling. Furthermore, draw-ing on John Steiner's concept, the process of crafting realities needs to be combined with "the dynamics of emotional and intellectual connectedness and partnerships with other team members" (2000, p. 184).

At all levels, it is about the co-creation of meanings to take an understanding of the reality around us to a higher level: "When we engage in the narrative, we are not portraying a pre-existing world as it is; we are interpreting phenomena to create that world" (Farquhar & Fitzpatrick, 2019, p. 6).

Finally, one of the most engaging ways is to express this reality in a non-self-explanatory visual way to unleash curiosity about the meaningful interpretation. The explanation can be delivered only through narrative stories told in direct human-to-human interactions, so much needed in the digital learning experience.

References

Bandura, A. (1977). *Social learning theory*. Prentice Hall.

Bijker, W., Hughes, T. P., & Pinch, T. (Eds.). (2012). *The social construction of technological systems: new directions in the sociology and history of technology*. The MIT Press.

Black, M. (1977). More about metaphor. *Dialectica*, *31*(3–4), 431–457. https://doi.org/10.1111/j.1746-8361.1977.tb01296.x

Black, M. (1955). Metaphor. *Proceedings of the Aristotelian Society*, *55*(1), 273–294. https://doi.org/10.1093/aristotelian/55.1.273

Bono, E., de. (2015). *The mechanism of mind: understand how your mind works to maximize memory and creative potential.* Vermil.

Byrne, R. (2007). *The rational imagination: How people create alternatives to reality*. MIT Press.

Chester, A., & Gwynne, G. (1998). Online teaching: Encouraging collaboration through anonymity. *Journal of Computer-Mediated Communication*, *4*(2), JCMC424. https://doi.org/10.1111/j.1083-6101.1998.tb00096.x

Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research* (4th ed.). Sage.

Dewey, J. (1938). *Experience and education.* Touchstone.

English, K. (1998). Understanding science: when metaphors become terms. *ASp*, *19–22*, 151–163. https://doi.org/10.4000/asp.2800

Farquhar, S., & Fitzpatrick, E. (Eds.). (2019). *Innovations in narrative and metaphor. Methodologies and practices.* Springer Singapore.

Gauntlett, D. (2007) *Creative explorations: New approaches to identities and audiences*. Routledge.

Gauntlett, D. (2018). *Making is connecting: The social power of creativity, from craft and knitting to digital everything* (2nd ed.). Polity.

Gloor, P. A. (2006). *Swarm creativity: Competitive advantage through collaborative innovation networks*. Oxford University Press.

Groth, O. & Nitzberg, M. (2018). *Solomon's code*. Pegasus Books.

Huck, F. O., Fales, C., & Rahman, Z. (1997). *Visual communication. An information theory approach*. Springer Science+Business Media, LLC. https://doi.org/10.1007/978-1-4757-2568-1

John-Steiner, V. (2000). *Creative collaborations*. Oxford University Press.

Jung, C. G. (1963). *Memories, dreams, reflections*. Crown Publishing Group/Random House.

Kazerounian, K., & Foley, S. (2007). Barriers to creativity in engineering education: A study of instructors and students perceptions. *Journal of Mechanical Design*, *129*(7), 761–768. https://doi.org/10.1115/1.2739569

Lam, M. (2020). The physicality of music production: Investigating the roles of mindful practice and kinesthetic learning. *Music Educators Journal*, *106*(3), 23–28. https://doi.org/10.1177/0027432119895553

Lambert, J. (2013). *Digital storytelling. Capturing lives, creating community* (4th ed.). Routledge.

Lévi-Strauss, C. (1966). *The savage mind* (2nd ed.). University of Chicago Press, Weidenfeld and Nicholson.

Mural. (n.d.). *Using the Activity Log and recovering content*. Retrieved December 29, 2011 from https://support.mural.co/en/articles/2113839-using-the-activity-log-and-recovering-content

Netravali, A. N., & Haskell, B. G. (1995). *Digital pictures: Representation, compression and standards* (Applications of Communications Theory) (2nd ed.). Plenum Press.

Pasternak, Ch. (Ed.). (2007). *What makes us human?* Oneworld Publications.

Perdue, K. (2003). Imagination. https://bit.ly/3aR5mvs

Resnick, M. (2017). *Lifelong Kindergarten: Cultivating creativity through projects, passion, peers, and play*. The MIT Press.

Ricoeur, P. (1991). Word, polysemy, metaphor: Creativity in language. In J. Mario, & Valdés (Eds.), *A Ricoeur reader: Reflection and imagination* (pp. 64–85). Harvester Wheatsheaf.

Rogers, M. (2012). Contextualizing theories and practices of Bricolage research. *Qualitative Report*, *17*(48), 1–17. https://doi.org/10.46743/2160-3715/2012.1704

Sale, D. (2020). *Creative teachers: Self-directed learners*. Springer (Cognitive Science and Technology). https://doi.org/10.1007/978-981-15-3469-0

Sońta, M., & Magala, S. (2020). What you create is what you learn. *International Journal of Management and Applied Research*, *7*(3), 293–307. https://doi.org/10.18646/2056.73.20-021

Xavier, M., & Lhullier, C. (2020). The unconscious in social psychology and psychology: A metaphor for their crises. *Athenea Digital, 20*(1), e2279. https://doi.org/10.5565/rev/athenea.2279

Monika Sońta, Ph.D. is an Assistant Professor at Kozminski University in the MINDS Department (Management in Networked and Digital Societies Department). Her areas of expertise are Organizational Creativity, Internal Communication, and Diversity and Inclusion. In her didactic work, she applies creative projective techniques such as LEGO® SERIOUS PLAY®, visual thinking, and Playmobil.pro, especially in the flagship academic courses such as: "Communication in the Age of AI" and "Organizational Creativity Lab".

WE RECOMMEND
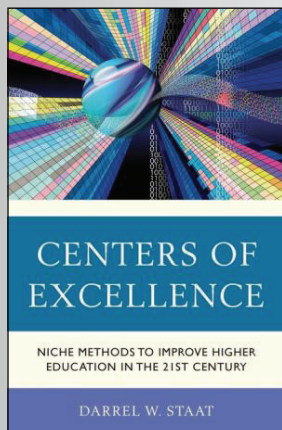
Darrel W. Staat (Editor)
Centers of Excellence: Niche Methods to Improve Higher Education in the 21st Century

There are many Centers of Excellence (COE) in community colleges and universities in the United States. Presently, a number of these provide approximately an extra year beyond various existing degrees. Most of these COEs deal with a variety of training and educational needs and work directly with the appropriate business communities. They provide students with additional training and expertise beyond the normal degree programs. This gives graduates specific educational training on the latest developments in their area of expertise, which makes them more employable and sought out for by businesses. Centers of Excellence: Niche Methods to Improve Higher Education in the 21st Century informs institutions of higher education about COEs that currently exist so interested administrators may initiate Centers of Excellence that are needed in their service areas. Furthermore, the information in this book will assist community colleges and universities in learning how a Center is activated, funded, and supported. The Centers are valuable to students, higher education institutions, and the business community.

e-mentor

FOR THE AUTHORS

"E-mentor" is the academic journal included in the current Ministry of Education and Science journal list. The authors of scientific peer-reviewed paper published in "e-mentor" gain 40 points.

"E-MENTOR" JOURNAL – WWW.E-MENTOR.EDU.PL

The journal is being published since 2003 in electronic (online and pdf) and printed form. All the scientific articles undergo the peer-review process by the experts in the corresponding areas of knowledge. We publish the list of the reviewers once a year, usually in the last volume. Resulting from our internationalization efforts, since 2017 two out of five issues every year are published in English.

PUBLISHING POLICIES

"E-mentor" journal is registered in the Crossref database, and every article published gets an individual DOI. Our journal is also indexed in the ESCI Web of Science database, as well as CEJSH, EBSCO, BazEkon, CEEOL, and EuroPub. It is included on POL-index and Index Copernicus Journals Master List. Since the first issue of "e-mentor," we apply the open access policy. Publishing in "e-mentor" is free of charge. Every submitted article undergoes a double-blind peer-review procedure. Such practices as plagiarism, ghostwriting, and guest writing are unacceptable. Every scientific paper must be the original, not previously published work. It cannot infringe the third parties' copyright and may not be the subject of the editorial procedure elsewhere at the same time.

ARTICLES' PROFILE AND SCOPE

We accept original scientific papers (which must successfully pass the review process), book reviews, conference reports, and feuilletons. The thematic scope of the journal covers new teaching methods and programs in all forms of education throughout the lifespan and the latest trends in management. We also publish papers concerning the use of new technologies in education and business and the role of those technologies as the change factor.

AUTHOR GUIDELINES

The manuscript submitted for publishing in "e-mentor" should not exceed 35–40 thousand characters, including spaces, conform to the APA style for references and in-text citations. For the English volumes, the author(s) should submit the paper written in American English followed by the abstract and at least five keywords. For Polish issues along with the manuscript, the abstracts in Polish and English should be provided. Upon acceptance, please supply figures/graphics/images in at least 300 dpi. Please remember that indicating the source of the graphics or data is compulsory.

Detailed instructions for authors and the article template are available at:

http://www.e-mentor.edu.pl/for_authors.php

SGH
Warsaw School of Economics

SGH shapes leaders

We offer full-time studies in English

First-cycle programmes:

- Global Business, Finance and Governance
- International Economics
- Management
- Quantitative Methods in Economics and Information Systems

Second-cycle programmes:

- Advanced Analytics – Big Data
- Finance and Accounting with ACCA Qualification
- Global Business, Finance and Governance
- International Business

www.sgh.waw.pl/admission