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Table of Contents

MANAGEMENT, ECONOMICS, BUSINESS AND MARKETING

Behavior of Generation Z	10 - 16
Mario DADIĆ and Eva JERČIĆ and Vanja DADIĆ	
Non-profit Coopetitive Alliances: Manifestation, Formalisation and Fund Development	17 - 27
Bella GULSHAN and Muhammad Mohsen LIAQAT	
Problems of Modern Global Economy in Conditions of Cardinal Changes in the World Financial Sphere and Geopolitical Situation	28 - 36
Sergazin Eldar BUKAROVICH	
Determinants of Microfinance Interest Rates	37 - 42
Shakil QUAYES	
Effective Negotiations and Constructive Disagreements: The Importance of Avoiding Destructive Disputes	43 - 48
Hershey H. FRIEDMAN, Deborah S. KLEINER	
Towards Coherent Structures of Motivating Employees: A Non-Monetary Reward Framework	49 - 53
Elad HARISON	
Statistics as Science and Art: The Importance of NNT (Number Needed to Treat) and the Danger of Overreliance on Statistical Significance	54 - 58
Simcha POLLACK, Hershey H. FRIEDMAN, Taiwo AMOO	
Communication as an Effective Factor for Achieving the Organization's Objectives (Case Study Municipality of Peja)	59 - 62
Egzon KASTRATI, Rexhep KURTBOGAJ, Avni GASHI, Jeton ABAZAJ	

Development of a Model for the Maturity-Based De-termination of Operational Excellence's Degree Horst J. LECHNER	63 - 74
Demand Forecasting in Automotive Sector Ceyda Erturun, Mehtap DURSUN	75 - 79
Why do Academics Need Standards? Ivana MIJATOVIĆ, Biljana TOŠIĆ, Ana KIĆANOVIĆ, Jelena RUSO	80 - 87
Digital Euro - Advantages and Disadvantages Luboš FLEISCHMANN	88
Behavior Innovativeness. Does it Have Impact on Technoparks Companies' Performance? Joanna RUDAWSKA	89
Measuring Efficiency and Effectiveness of Municipal Projects Arik SADEH	90
Literature Review of Marketing Logistics Strategy Eszter SÓS	91 - 98
Financing Growth in a Digital Economy: A Critical Review of Crowdfunding and Initial Coin Offerings Željka ASANOVIĆ	99 - 104
<u>GLOBAL EDUCATION, TEACHING AND LEARNING</u>	
Cognitive and Metacognitive Formative Assessment Tools for Teaching Chemistry Mária GANAJOVÁ, Ivana SOTÁKOVÁ	106 - 114

Selected Factors Affecting Student Performance	115 - 121
Mária ZAHATŇANSKÁ, Janka PORÁČOVÁ, Mária KONEČNÁ	
Comparison of Fulltime and Distance Education in the Subject of Biology at the 2nd Level of Elementary School	122 - 128
Janka PORÁČOVÁ, Mária ZAHATŇANSKÁ, Mária KONEČNÁ, Marta MYDLÁROVÁ BLAŠČÁKOVÁ, Vincent SEDLÁK, Melinda NAGY, Gabriela HARVANOVÁ	
The Discourse of Diversity and Inclusion within Police Recruit Teaching Materials	129 - 139
James MOIR	
Questionnaire Item Response Times and Claiming Impossible Knowledge: An Analysis Using the Overclaiming Technique	140 - 144
Hana VONKOVA, Ondrej PAPAJOANU, Angie MOORE, Martin BOSKO	
Exploring Student-Reported Socioeconomic Status and English as a Foreign Language Family Activities	145 - 151
Hana VONKOVA, Ondrej PAPAJOANU, Angie MOORE, Martin BOSKO	
Determinants of Global Business Literacy of Slovak University Students	152 - 158
Aneta BOBENIČ HINTOŠOVÁ	
The Current Status of Technical Education at the 2nd Stage of Primary Schools in the South Bohemia Region	159 - 164
Tomáš SOSNA, Pavla WEGENKITTLOVA, Pavel ČERNÝ, Pavel KRÍŽ, Vladimír VOCHOZKA, David BEUTL, Pavel BICAN	
Effectiveness of Teacher Training, Challenges and Perspectives	165 - 169
Klodiana LEKA	
Building and Rebuilding Knowledge Management in a Virtual Repository Databank: Best Practices for Virtual Learning	170
Bob BARRETT	

“Case Study or Case Report in Educational Research?” (Key Differences in the Two Formats Illustrated with an Example of Duchenne Muscular Dystrophy) 171 - 175

Jan CHRASTINA

Post-pandemic Educational Efforts and Strategies in the New Normal Era 176 - 179

Fethi KAYALAR

TRANSPORT, LOGISTICS, TOURISM AND SPORT SCIENCE

The Challenges for Investment in Sport & Sports Infrastructure - Make it a Business? 181 - 186

Ivan ANASTASOVSKI

Determining Factor of the Tourist Recovery Speed after the Covid 19 Border Opening 187

Yasuhiro WATANABE

The Effectiveness of Problem-Based Learning in Hospitality and Tourism Education: An Experiential Study 188

Pearl M.C. LIN, Clare FUNG

**Management, Economics, Business and Marketing
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Behavior of Generation Z

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Abstract

Using the available literature, the paper describes the behavior and characteristics of Generation Z. Generation behavior differs according to many characteristics and factors that influence their behavior. Generation Z has marked their lives with technology as an integral part of their lives. Young Generation Z can boast of the many abilities and benefits of living in modern technological life. It is clear that young people, using the Internet, especially social media, are used to "loving" different things, commenting on reality, assessing what they buy and use, where they spend time, etc.

Keywords: consumer behavior, generation Z, technology

1. INTRODUCTION

Living a life under economic and historical conditions, exposed to the same events and under the influence of the same technology, can significantly affect people's lives and behavior by making decisions, thinking and behaving in the same or similar way. Through observing the environment in which members of the generation grow up, we can see that their behavior is influenced by various events such as the economic crisis, wars, social events, economic upswings and other factors. The actions and behavior of members of a generation are the result of the behavior of the environment in which they live. The paper describes the behavior of Generation Z, which includes the group born in the mid - 1990s until 2010.

1.1. Characteristics of generation z

Generation Z - was born and raised in completely different circumstances than other, older generations. Although Generation Z representatives have just joined the labor market, there are already opinions and characteristics about them. Generation Z is the youngest, ethnically most diverse and largest generation in history. They live in a world of "continuous updating" and process information faster than other generations. Generation Z is the demographic cohort that follows the millennials (Stillman, Stillman,2017).

No previous generation has as many names as Generation Z, for example: postmillennials, iGeneration, founders, plurals, silent generation, homeland generation, Gen Tech, Online Generation, Facebook generation, Switchers, "always clicking". A generation that is said to have started (learned) using a mouse rather than a spoon. Generation Z is also known as (Dolot,2018):

- C generation - this term comes from: "connected" (Eng. Connecting), because its members are "connected to the internet" (eng. Connected to the internet); "Computerized" (eng. Computerized); . communicating); "Content-centric"; "community-oriented", "changing" - this generation is said to love change
- R generation - the term comes from the Responsibility generation

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The years attributed to Generation Z range from the mid-1990s until 2010. The exact years vary depending on the sources. Generation Z's parents are mostly members of Generation X. Generation Z, over two billion people, is the most populous generation group. In their lifetime, they have seen more change than their predecessors. They do not represent the future, but create it. They make up 18% of the world's population and are thought to lead the world in two decades. Some of the oldest have graduated from college and are entering the workforce and earning their own income. The main feature of this group is that it grew during the Great Recession, in the crisis period of terrorism and climate change. We can describe it as global, technological, visual, and social. They are the most educated, connected and sophisticated generation ever. They believe in diversity, equality and non-discrimination, not only in society but also in the media. This generation is quite optimistic and driven by their personal ambitions. For Generation Z, the priority is self-actualization, as well as fulfilling work and a good work atmosphere (Vidak, 2014).

Generation Z can be said to be the "generation of aging" because they are growing faster than their predecessors. Members of Generation Z can boast of many abilities and benefits of living in the modern technological age. They have the ability to multitask, i.e. perform multiple tasks at the same time - with effective results. They receive and process information quickly, but at the same time require easier access to information. The life of Generation Z young people takes place in a world of hyper production, networking and virtuality. He strives for material, quick earnings, satisfaction and a consumerist way of life. They live in a networked world that allows them to exchange messages and communicate with the whole world with just one click. The incredible development of technology has opened a window to the whole world for them (White, 2017). There is almost nothing more that they cannot find out and discover. Meeting new people, customs, habits, different cultures, attitudes and values, different opinions, travels and insights - for that information is much more accessible to them, and the world is in the palm of your hand. By discovering the abilities and strengths of this generation, we can assume that they are more tolerant, more solidary, more open, and more willing to accept differences unlike their predecessors. Getting the internet is a good foundation for developing awareness of others, understanding a multicultural society (open society) and spreading perspectives.

Ivan Brkljačić, psychologist and research associate at the Ivo Pilar Institute of Social Sciences in Zagreb, lists three basic characteristics of Generation Z (Petrić, D.):

1. Above-average information search and scanning skills - when Generation Z members open a website, they just "fly" through the screen, scanning images, symbols and captions, allowing them to instantly decide where to click with the mouse.
2. Simultaneous performance of several tasks - members of this generation without special reduction concentrations manage to write homework, chat and listen to music at the same time.
3. Discontinuous and nonlinear learning - a linear way of learning goes from general to specific, and a nonlinear method based on finding answers to specific and precise questions is typical of the new generation.

1.2. Global orientation

This is the first generation to be considered truly global. Generation Z uses social media to connect with people around the world. They connect online with friends in other cities and states, and such connections between cultures have proven to be very strong. To a small extent, friends can share videos, photos, and messages over social media to make large groups aware of situations, good or bad, that are happening around the world. In a broader sense, this connection has led young people to come together and address global issues. Not only are music, movies and celebrities as global for them as they were in previous generations, but through technology, globalization and our culturally diverse times, fashion, food, online entertainment, social trends, communications, and even those who must watch youtube videos are global like never before.

Today's young people are not only connected globally via the internet, but are more likely to travel the world through exchange and holiday programs on long journeys. Therefore, today's social clusters are not constrained by geographical constraints. Peer groups are formed globally and identified with the same interests. The reason why YouTube is the most popular platform for Generation Z is not just because they can easily create and be easily known, but because they are connected to the world, peers with similar interests and abilities.

1.3. The influence of generation Z

The influence of generation exceeds their size. Due to the daily exposure of various brands - advertisements on mobile applications, suggested posts on social media, etc. - Generation Z has become a group of demanding consumers. If they have a good or bad experience with a company, brand or brand, they will not keep it to themselves, but will tell everyone. They will share their thoughts and views via cell phones and social media. Perhaps they have

an even more significant impact on their parents. Children are more likely than ever to influence family shopping decisions. Given the power and influence that Generation Z has, it would be frivolous for companies to ignore them.

1.4. Traditional values, conservative attitudes and less socially sensitive

Generation Z is highly competitive. Several other Generation Z values also differ from previous generation values (Reić, A,2015):

1. Privacy: they know that “the Internet is always watching” and as a result they are more careful in sharing their information. The challenge for employers is to promote an open culture by first gaining their trust.

2. Multi-tasking: Generation Z kids take multiple tasks to the art form level. If millennials prefer two screens at once, Generation Z kids need five. This, unfortunately, affects their range of attention outside the screen.

3. Technology: Generation Z is, of course, even more dependent on technology than other generations. Employers may need to watch out for excessive use of social media if not enough work is done.

4. Hyper-consciousness: a symptom of the above points, Generation Z minds bounce in multiple dimensions at once. They tidy the room and tap on your cell phone while talking to you at the same time. This hyperactivity can be a good thing for employers when this trait is combined with person-centered and exploited into productivity and innovative thinking.

Generation Z young people, unlike their predecessors (parents), are more conservative in their attitudes. They increasingly turn to traditional values, are less tolerant and willing to accept differences, turn to nationalism and patriotism, and identify and identify mostly through their place of birth. They mostly care about their own interest. It can be said that they are also less sensitive and are not so close to the topics of equality and equality, which may not have been expected of them. The disadvantage of this generation, despite the large number of followers on social networks, is that they are more individual, more introverted and less inclined to be part of a collective. Also, they are less socially engaged and more uninterested in the socio - political scene.

1.5. Religiosity

Religion means nothing to most of them. Generation Z is the least religious generation. They are more likely to identify as atheistic or agnostic, and most feel the presence of the church is irrelevant. No religiosity does not mean they are an atheist. Some young people maintain a nominal, often cultural affiliation with a religion (e.g., Jews or Catholics who enjoy celebrating holidays but do not believe or do not go to church). Some are eclectic and create their own spirituality from elements of different religious or spiritual traditions: yoga, angels, or even secular culture like Harry Potter. Far more young people are simply indifferent to religion. They never think or talk about religion unless it is a topic in school. Today, more than any other generation, young people have access to information about alternative views. All you ever wanted to know about a religion is just one click away. Too often young people see organized religion associated with intolerance and abuse. They live in a culture of choice, self-actualization and freedom of expression. Young people today, as never before, freely express their sexual orientation and gender identity. Significantly, many in Generation Z reject traditionally available elections.

1.6. They turn to the past

Behavior is influenced by one of the factors that significantly influences and that is insecurity. If the country in which they live has labor market instability and job insecurity, then insecurity in people is to be expected. There is no guarantee that a diploma will bring a job after graduation. There is no certainty that this acquired job will bring the money needed for a normal life, a secure existence. Consequently, security does not exist in other areas either. Without a guaranteed normal life, worthy of every human being, it is not easy to plan coexistence with a partner, create a family, realize your own dreams, ambitions and desires. Values such as honesty, diligence and work that united previous generations have been lost in a world of corruption and nepotism and have been replaced by others; materialistic and consumerist lifestyle. In such an environment or in such a context it is possible to understand why Generation Z goes back to the past, why it turns to old values, to what from the present perspective looks like something that is valuable, good and safe. However, no security must not become an excuse for selfishness, passivity and intolerance. Because if there is no guarantee of happiness, success or existence, if society is on shaky feet, interpersonal relationships are full of misunderstanding, rejection and condemnation then what is left for us except to lock ourselves in our world and not try to get out of that vortex. Although they grow up more protected than other generations, they feel lonely. Maybe it's because of the growing online communication and life on social media, often

far from reality. Because of this, they are more depressed and more inclined to open up about their fears. This may be the last generation to hold newspapers, print media.

1.7. Travels

As technology and the Internet progressed, the younger generations began to develop inspiration in a seriously different way. Members of this generation go on average 2.8 free trips a year - which is not far behind the Millennials, who are further in their careers and travel in their free time on average 3 times a year (Lippe-McGraw, 2019). While previous generations had the priority of spending quality time with friends and family, Generation Z travelers travel based on activities such as hiking or going to a special event like a concert. It is not surprising that members of Generation Z find their travel inspiration on social media such as Facebook, Instagram, Twitter and other networks. Instagram, in particular, is a visual-focused platform with millions of photos from the far reaches of the country. Also when looking for travel destinations, they are driven by a desire to visit places where scenes of their favorite series and movies have been filmed.

Since this generation has just entered the workforce, I still can't afford a more luxurious vacation. But their wit with the internet, combined with the flexibility of the schedule, makes it easier than ever to find affordable travel deals. Although they dream, their actual travel patterns are currently more inclined to what is most cost-effective. Generation Z re-examines the relationship between the value of diplomas versus practical life skills. Skills are acquired through travel and experiences that are outside the confines of classrooms and offices. They want to do good, and they want to include travel volunteering in their experience. They feel it is important to do good for their environment and on their travels

Generation Z members think about the planet when planning trips. Most of them believe that the impact on the environment is an important factor to focus on when planning trips. When looking for a place to travel, they look for destinations where their presence will pollute the space less. In terms of transportation, they will use hybrid / electric cars because it is more environmentally friendly. Travel savings are a top priority and long-term goal of this generation. As they grow in their careers and end up with higher salaries, one-time dream trips can become a reality. They will probably be willing to spend big bucks to check out all the items on the list. But all those years spent looking for competitive prices and cheap flights will equip them well to spot offers and maximize miles as they explore the world.

1.8. Music

It is interesting to see how today's lyrics differ from previous ones. Songs nowadays have a more joyful and optimistic vocabulary. The word "love" is used more and more compared to previous years. Generation Z is happier and focused on love, and the songs include more words. The word "sex" is declining in terms of the popularity of topics in music. The connection between words in songs is growing, so the word "beauty" has gained its popularity in the vocabulary of musicians. The great influence of social networks and celebrities has encouraged musicians to include healthy eating and exercise in their vocabulary - "health" and "body" have flourished in songs. From the verses of the songs we can see that members of Generation Z are growing up with access to globally known brands. Also like the previously mentioned words, the word "brand" is mentioned more and more.

1.9. Food

Young people, like people of all ages, enjoy burgers, pizzas, chicken, sandwiches, salads and fruit. And the younger they are, the more they like it. They are changing trends in the hospitality industry and imposing a really strict view on the menus of restaurants all around them. Generation Z is at the forefront of many trends in the hospitality industry and is forcing restaurants to seriously compile their menus. When it comes to what Generation Z wants on the menus we can list the following:

- Street food - this has to do with the popularity of food trucks because Generation Z grew up with it.
- Chicken - chicken is chosen the most for dinner. As the negative connotation of beef continues to increase, this more socially conscious generation probably looked to chicken to fulfill their meat cravings.
- Plant foods - currently the most popular menu item. Young people are increasingly turning to "healthy food" and a healthy lifestyle
- Fermented foods- although attributed to millennials, Generation Z followed their love of fermented menus.
- Snacks - prefer to eat snacks for appetizers or snacks. There are more and more obese children, but also adults, precisely because they eat too many snacks.

• Pizza- some things never change. Like every generation in the last few decades, Generation Z likes to eat good pizza. Despite the fact that a cheese meal full of carbon is not health-conscious, organic or "in trend", Generation Z cannot deny that pizza is a timeless classic.

Generation Z never goes to a restaurant without their cell phones. This means that their dependence on technology is stronger than previous generations. Many Generation Z members will decide whether to eat at a restaurant solely based on their social media accounts. An active account with nice, Instagram-worthy dishes will take them to the restaurant. The active presence of social media is crucial for attracting this generation. They will rather go to a restaurant that has a multitude of photos of food on social media decorated with attractive decorations. Most Generation Z are looking for foods that fit their values. Generation Z attracts restaurants that use organic, sustainable and local products in their menu. On top of all that, Generation Z also likes to know exactly what they are consuming. Despite their love of snacks and street food, they are also looking for true gastronomic experiences. They want to try new foods and try to get drunk on bizarre, out-of-the-box food trends. They are looking for restaurants that offer a more modern selection of food alongside traditional menus. Online ordering has become a Generation Z best friend and it looks like that won't change anytime soon.

1.10. Learning environment

In an age of information overload, messages are becoming more image-based, and signs, logos, and brands communicate across language barriers with color and image rather than words and expressions. While in the past the teacher was a source of knowledge, today's approach to technology means that students have access to any information in a few clicks - so the role of the teacher from the traditional teacher model has changed. The focus has shifted from content (what) to process (how) and from closed book exams to the open world of books. With online learning and flexible delivery, student focus (where teaching and learning is designed to meet student needs) is crucial. Traditional classrooms are built so as not to distract attention, hold students and hold them opposite the teacher. However, 21st century classrooms are being reconfigured to adapt to new students, new technologies, and new learning styles. It is known that spaces, instead of classrooms being a place where curricula are taught, are in themselves an implicit curriculum and are a key support to the educational journey. Traditionally, learning took place in the classroom, and practice and application took place through homework. However, in the 21st century, content can be accessed anywhere, and often in very visual, engaging forms. Discussion and application of the content is crucial, and it requires a professional teacher. Thus, a redirection of education where learning takes place outside the classroom, but basic engagement and practice are still carried out in school. Contrary to what many believe, it is not that today's students are failing in the education system, but that the education system is failing under today's students. An important factor is the way information is transmitted. At several core levels, schools are often not associated with students and their approaches to receiving knowledge. One aspect is the way many teachers communicate. In the eyes of our children, there are teachers who speak an outdated language or teach using 20th century techniques. If students do not understand the way teachers speak, then it makes sense for teachers to adapt and speak in a way that today's students can understand.

1.11. Education

Generation Z is highly educated. Unlike their predecessors, Generation Z has the highest percentage of people with a college degree. Generation Z is also proficient in web-based research and often educates themselves through online sources such as YouTube and Pinterest. They can learn complex things like upgrading their computer operating system in the same way they can bake a vegan apple pie. Online education is becoming increasingly popular. Generation Z, unlike its predecessor, is interested in art and science. The average young person spends more years in formal education than ever before, and the percentage of tertiary education is growing similarly. Not only have students changed, but their schools have also shifted from teacher-centered to adaptable student, from engagement-focused content and from formal delivery to a more interactive environment. Flexibility is the latest word in employment today. Generation Z is likely to be the most enterprising to date. The flexibility of their high school years allows them to start their own businesses at a younger age. Smartphones and similar portable technologies enable this young generation to build applications and other ventures in making money. Today's learners are a multi-modal generation and therefore require communication styles that involve multiple learning channels. They write more (e-mails) and send more (text) messages, only in different ways compared to previous generations.

Education is obviously a key point that Generation Z cares about. According to Generation Z, the integration of sports in schools is key to a great education.

1.12. Communication

Young people have adapted their written communication to modern technology. A spoken word is traditionally a more relaxed version of a structured written word. Today, young people adopt the “casual” style of spoken word in much of their written communication, while the formalities of written communication are often overlooked. To speed up communication, correct spelling and grammar rules do not apply to them in their daily use of SMS and chat. Words are shortened and sentences are supplemented with emoticons. Young people use emoticons to convey emotion or emphasis. Instead of starting a conversation with "Dear Ivan", they start with more casual greetings like "Hi", "Hey", "Hello". As for checking out, it's no longer "Sincerely", but "See you", "Hi", "Ciao" and more. Although chat and SMS are textual forms of communication like handwriting, they are used to talk in almost real time.. Generation Z could be called Generation “cut and paste,” and throughout the conversations they use phrases they picked up from movies, viral YouTube clips, and other media they use.

1.13. Family

Less traditional family backgrounds, more single, same-sex parents and mixed families. The average family we once knew - mother, father and 2.5 children - has been replaced by a diverse collection of single parents, single / cohabiting and restored families. Parents in single-parent or dual-income households have less time. They have no choice but to rely on their children for when it comes to household decisions and shopping. Given that children and teens have 24/7 access to information thanks to social media and a natural penchant for learning and research, most parents are happy to delegate researching products on their offspring, who are at the current junction mostly all members of Generation Z. This means that key people are ready for further success as family roles and communication styles become more open and democratic. Moms are not the only ones who buy groceries and household items. Dads are not the only ones buying cars and electronics. Generation Z understands the value of money, and as their parents see this understanding in practice, these young people will take even greater responsibility. Matthews cites growing up in families with fewer members in which both parents work with one parent. Growing up in such families actually means that it is a matter of children raising themselves literally because they are all day without the presence of parents who make up for their lack of time spent with children by buying toys and new technologies to fill the void they have created.

2. SOCIAL NETWORKS

Social networks allow you to create contact / friendships with new people, to share certain information, experiences, share content and communicate for free. Social media is used to inform and maintain connections. The use of social media has become integrated into the daily lives of members of Generation Z. Social networks are the simplest way to communicate with each other. Young people spend hours corresponding with friends, exchanging information and photos, posting statuses. The everyday life of members of Generation Z is increasingly shaped by social networks. They spend most of the day online. Their world is digitally "downloaded". They live in a world of “tagga” (tagging), like (liking), share (sharing) and so they communicate. Since they have profiles on various social networks, their communication has changed. Facebook messenger has replaced SMS and email, Skype has replaced their phone, and live chats are dwindling. The key to communicating with them is non-intrusive content. They use social media to follow get recommendations and share the experience with their friends. They like to use social networks and post their own activities on them because it creates a feeling of comfort as when consuming a favorite food, reading a favorite book, watching a favorite movie. They are connected 24/7 - via smartphones, email, messages, via social networks. Facebook, Instagram and Snapchat have become a part of life.

3. CONCLUSION

Young people have become an increasing influence on people of all ages and incomes. Due to increasing global connectivity, generational shifts play an important role in setting behavior. Considering that Generation Z has a huge daily flow of information, it is not surprising that they pay attention to everything around them. They have to be picky to get valuable information. The ability to move quickly through large amounts of information allows Generation Z representatives to develop valuable knowledge. The development of communication technologies is linked to the lifestyles and habits of Generation Z and thus significant changes in their social life. Generation Z can function in both the real and virtual worlds. They consider these two worlds complementary to each other. They use various communication devices as well as social media to process communication. Generation Z uses a variety of devices,

commenting on reality, the environment and the environment in which they live. They express their opinions and views using their profiles on social networks and share photos and videos on them. They get inspiration from friendships, supporting others, expecting a review of their accomplishments. They are already socially engaged given their youthful age which can allow them to live and judge more independently and capable.

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Non-profit Coopetitive Alliances: Manifestation, Formalisation and Fund Development

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Abstract

Although literature addresses collaborations in the form of nonprofit alliances and partnerships to generate financial resources, offered there is a little understanding of the dynamics of simultaneous cooperation and competition. Building on the competition literature, this paper uncovers how resource scarcity creates a coopetition context that manifests inter-organisational relationships that do not easily fall under the mere collaborations in the non-profit literature. Therefore, non-profits deliberately leverage contextual dynamics to manifest coopetitive relationships for a consistent flow of funds. As soon as the collaborative efforts of the non-profits are successful, it immediately gave a realisation that formalisation strategic relationships are paramount in obtaining complementary resources. Further, formal non-profit coopetitive alliances have a more extraordinary ability to commit and mobilise resources based on a shared belief that significantly contributes to fund development.

Keywords: Coopetition, NPO, Coopetitive Alliance, Manifestation, Fund Development

1. INTRODUCTION

The non-profit sector is centrally concerned with mission-driven needs, necessary goods, and services and strives to improve the quality of life at the local, state, national, and international levels. For non-profit organisations (NPOs), The most critical and challenging function is generating consistent funds because it is the lifeline for sustainability (Hung & Hager, 2019). Conventionally, NPOs pursue enduring funds by fundraising, recruiting experts, writing expensive grant solicitations, and donor relationships (Yildirim, 2013). The exclusive reliance of non-profits on typical funding sources can limit the finances when the funding priorities change.

The limited number of revenue sources reduces flexibility and makes them vulnerable. So, a financially healthy non-profit must be adequately equipped with equity, necessary administrative grants, sufficient allocations for operations, and diversification of revenue sources because it gives flexibility during the financial drop-off (Tuckman & Chang, 1991). Therefore, effective financial management is paramount to ensuring sound financial capacity. Further, financially capable NPOs are more likely to survive and successfully achieve their missions.

The enduring NPOs depend on the "ability to acquire and maintain resources" (Pfeffer & Salancik, 1978, p. 2), so they are subject to the environment instead of making financial decisions independently. The stability and financial condition depend on effectively reducing revenue volatility and increasing in equity. Therefore, diversification of revenue structure potentially leads to longevity and sustainability (Jagers, 1997). Moreover, scholars and practitioners have digested the logic of diversified revenue sources to hedge against uncertainties. For instance, the NPO sector is rapidly transforming traditional fundraising methods to opt for strategic fund development that "brings together a particular cause and donors and prospects who are willing to invest in the cause" (Joyaux, 2011, p.17). It is to note that strategy or strategic relationship, in this paper, refers to options for non-profits in a particular context where the payoff depends on their action and the actions of others."

Abundant literature addresses NPO collaborations in the form of alliances and partnerships to generate financial resources (e.g., Benton & Austin, 2010; Shumate, Fu, & Cooper, 2018; Bocquet, Cotterlax-Rannard, & Ferrary, 2020). However, the challenging contexts have transformed mere collaborations or competition into coopetition

relationships (see Mariani, 2007; Faloye, 2013; Lorgnier & Su, 2014; Kirchner & Ford, 2017; Wemmer, Emrich, & Koenigstorfer, 2016; Chim-Miki & Batista-Canino, 2017). Coopetition is "a relationship that emerges when two firms that cooperate in some activities, such as a strategic alliance, and at the same time compete with each other in other activities" (Bengtsson & Kock, 2000, p. 412). It helps create value and effectively leverage complementary resources (Bengtsson, Kock, Lundgren-Henriksson, & Nasholm, 2016).

Until recently, the fundraising practices of many NPOs shaped internally considering the cost per donor raised, growth rate, donor retention, and scalability of the mission (Body & Breeze, 2016). The external relationships among NPOs were adversarial; however, coopetitive alliances establish strategic relationships among competitors. For instance, the Free and Fair Election Network (FAFEN) in Pakistan is a coopetitive alliance comprising regionally dispersed NPOs from subsectors of health, education, human rights, and the environment. FAFEN has successfully generated funds from large projects (listed on their official website) (FAFEN, 2022). It indicates how successful is coopetition for fund development. Moreover, it also explains the role of NPOs context that stimulate the competitors to create a bigger pie and then compete for a large slice. Similarly, the external environment triggered the formation of the coopetitive consortium of the Italian opera houses—the Tuscany Regional Council imposed the cooperation on these opera houses that led to the emergence of coopetitive strategic behaviour (Mariani, 2007).

Although research on strategically managing resources has produced essential insights (Suykens, De Rynck, & Verschuere, 2019), our theoretical understanding remains sorely limited. That is, though the predominant account is grounded in the strategies that have highlighted the antecedents that push NPOs to cooperate and perform (Austin & Seitanidi, 2012; Kim & Peng, 2018; Nederhand, 2021), it emphasises diverse views contrasting 'the necessity for NPO' and 'opportunity for NPO' that pull into strategic relationships. For instance, the proposed taxonomy of six coopetition strategies for NPO nautical sports clubs for value co-creation (Lorgnier et al., 2014) was the opportunity for NPOs while the government imposed inter-competitor cooperation among the three Italian opera houses of Livorno, Lucca, and Pisa was the necessity for NPOs (Mariani, 2018). Therefore, the critical distinctions among NPO coopetitive relationships, the context in which they operate, the manifestation and formalisation of coopetition, and fund development remained away from attention.

This paper advance coopetition theory by explaining how subsector non-profits manifest and formalise coopetitive relationships for fund development. Our attention focuses on how resource scarcity creates a coopetition context that allows NPOs from subsectors (e.g., education, health, child labour, women's rights, or democratic rights) to identify mutual opportunities. NPOs deliberately leverage contextual dynamics to manifest coopetitive relationships to enable a consistent flow of funds, though historically, they often engage in hostile relationships. Given the differences in their mission and orientations, how do they assess the feasibility of formal coopetitive alliances? Further, how the formalisation of strategic relationships effectively contributes to consistent fund development.

We make contributions to the literature. First, the non-profit coopetition strategy establishes a boundary condition to fulfil the fund development needs. We explicitly address the formation of NPO coopetitive alliances in response to fulfilling the financial needs and complement the past research examining resource scarcity. The work invites scholars to rethink the source of simultaneous cooperation and competition solely based on financial needs. This paper provides novel insights into the context that manifest the coopetition. We posit that NPOs with similar financial needs will engage in a coopetitive relationship process—despite the differences in organisations' subsectors, missions, and locations. Thereby, it set the stage for future studies on the formation of NPO coopetitive alliances for fund development despite the diversity of members in terms of their subsector, geography, and size.

2. MANIFESTATION OF NON-PROFIT COOPETITION

The context and coopetition dynamics have gained limited attention in the NPO strategy literature. The research has largely emphasised on NPO cooperation overlooking the competition. It also lacks the essence and substance of the coopetition strategy in NPOs (Mariani, 2007). However, few studies have investigated the significance of context in influencing the nature and management of coopetition. For instance, the studies are on the art sector NPOs (Kirchner, 2007), NPOs nautical sports clubs and sports tourism networks (Lorgnier et al., 2014; Wemmer et al., 2016), and Opera houses and the creative art and heritage sector (Mariani, 2007), tourism and leisure suppliers (Schnitzer, Seidle, Schlemmer, & Peters, 2018), humanitarian supply chains (Fathalikhani, Hafezalkotob, & Soltani, 2020), cross-sector social partnerships (Stadtler, 2018), and competition among social enterprises (Arenas et al., 2021).

The contextual factors that stimulate the coopetitive relations vary depending on mission, firm size, geography, government regulations, and strategy. Several antecedents drive NPOs to compete and cooperate simultaneously, i.e., thrust for innovation and open innovation (Wemmer et al., 2016), value creation (Dagnino & Padula, 2002), resource scarcity (Thornton, 2006), financial and personnel capacity (Iqbal, 2006; Wicker & Breuer, 2011), fundraising (Kirchner & Ford, 2011; Nagurney, Flores, & Soyulu, 2016), government controls, limited donor

support, fierce competition (Iqbal, 2006), and availability of international donors (Harrison & Thornton, 2021). Although literature implicitly examines the cooptation on the assumption that organisations choose to select the competitor they will collaborate with (Le Roy & Czakon, 2016). However, it may not necessarily be the case—especially time-pressured and temporary operations push NPOs to quickly collaborate with competitors (Schiffling, Hannibal, Fan, & Tickle, 2020). Therefore, cooptation may be a valuable strategy for NPOs for indirect competitors.

The Italian consortium of theatres, the Livorno-Lucca-Pisa (LLP), is a unique example of NPOs cooptation as Tuscany regional council imposed the collaborations under two projects (Mariani, 2007). The Italian consortium of theatres generated interesting artistic results, artistic quality, the value of money, best managerial practices, and financial resources (Mariani, 2007). The imposed cooperation created the cooptation context because all the opera houses collaborated on scenery sets and singers while competing for chorus musical production. The institutional environment triggers cooptation; later, strategic learning helps them embrace the formalisation of cooptation (Chen & Lee, 2020). Similarly, the motives of cooptation in tourism and leisure suppliers were to increase the number of visitors, better competitive position, and economic reasons (Schnitzer, Seidl, Schlemmer, & Peters, 2018). Also, the cooptation based open innovation in non-profit sports clubs is induced by the intentions to improve the performance of organisations in the face of competition (Wemmer et al., 2016). Therefore, the specific context lays the basis for cooptation among NPOs.

Likewise, the Free and Fair Election Network (FAFEN), a strategic alliance, manifested in 2006 in Pakistan. The network has contributed significantly to democratic education and accountabilities, good governance, a transparent electoral process, and parliamentary observation (FAFEN, 2022). For the first two years, FAFEN worked as an informal collaboration and successfully observed the general election of 2008 in Pakistan by utilising the geographic outreach of members, sharing resources, and allocating donor funding (FAFEN, 2022). Further, the network effectively participated in the electoral process, reforms, and sustainability of the member organisations (FAFEN, 2009). The strategic learning, during those years, guided the formalisation of FAFEN as a competitive alliance for fund development in 2008 (FAFEN, 2022a). It is to note that member organisations belong to subsectors, e.g., education, health, women's rights, child labour, or environment; they are also dispersed across the country with varied sizes. Notably, the projects that FAFEN has been securing not only serve the FAFEN mission but it is also helping member organisations to sustain their missions. Therefore, the examples of imposed or deliberate cooptation indicate the importance of context in the manifestation of competitive relationships.

Proposition 1a: *The context drives non-profits from subsectors to simultaneously cooperate and compete, which manifests the competitive alliances.*

2.1 Resource scarcity

Resource scarcity is a prime underlying cause that induces collaborations (Proven, 1984), and it has several dimensions. For example, one of the forms of resource scarcity is financial deprivation, which is "an unpleasant psychological state in which one feels financially inferior or worse off relative to a salient comparison standard" (Sharma & Alter, 2012, p. 546). Moreover, resource scarcity is a perception of a lack of resources to grow and maintain operations and a mindset that implicates having less (Shah, Mullainathan, & Shafir, 2019). Similarly, the resource scarcity mindset refers to the "subjective sense of having more needs than resources" (Mullainathan & Shafir, 2013, p. 86).

The resource scarcity in the operating environment affects NPOs and puts leaders under pressure to make tough decisions. Literature provides contrasting views on how resource scarcity impacts non-profit behaviour. Meyer & Leitner (2018) suggested that abundant resources offer opportunities to innovate and reduce the efforts to survive. However, resource scarcity limits the operations to necessities, restricts growth, and push organisations to downsize and become less effective (Shaheen, Azdegan, & Davis, 2022)—thus, it results in less social change. On the other hand, studies also indicate that resource scarcity prompts innovation (Meyer et al., 2018; Bhatt Dembek, Hota, & Qureshi, 2021), sometimes without incentives. Therefore, the leaders of resource-scarce NPOs with a mighty mindset can be game-changer.

Traditionally, organisations' turbulent and resource environment conditions drive the managerial response to form collaborative relationships (Pfeffer & Salancik, 1978; Bouek, 2018; Collins & Gerlach, 2019). The collaborations among NPOs reduce the uncertainty and support the acquisition of critical resources (Zeimers, Anagnostopoulos, Zintz, & Willem, 2019)—though there are associated costs of those relationships. For instance, the loss of operating autonomy is the most significant cost of cooperative activities (Provan, 1984; Gazley, 2010; Reiter, Tzafir, & Laor, 2018). Similarly, besides great control over critical resources, formal collaborations involve a high cost in managerial autonomy (Zuckerman & D'Aunno, 1990; Uster, Beerli, & Vashdi, 2019). The management of collaborative relationships challenging because of the balance of resource dependency and

organisational autonomy. The formal collaborations may threaten the existence of small NPOs since they completely give up their independence for gaining critical resources.

The current practices indicate that NPOs have been successfully integrating cooperative and competitive strategies to gain a cooperative advantage (Dagnino et al., 2002; Laurett & Ferreria et al., 2018), managerial autonomy (Mariani, 2007; Lorgnier et al., 2014; Besana, 2018), and acquire critical resources (Pfeffer & Salancik, 2003; Arenas et al., 2020; Schiffling et al., 2020). Coopetition is a win-win strategy—for instance, the formation of Free and Fair Election Network (FAFEN) specifies how the resource-scarce operating environment determines the emergence of coopetition relationships. It comprises small and medium-sized NPOs from across Pakistan and has generated significant funds from international donors (FAFEN, 2022). Otherwise, the member NPOs may not manage to bear the cost of solicitation with a lack of infrastructure (e.g., outreach). Similarly, donor organisations are more comfortable working with formal cooperative alliances for a better likelihood of transparency, accountability, and outreach (FAFEN, 2022).

Lack of resources can limit the efforts of organisations to innovate, reduce choices, and bound experimentation (Farooq, Hao, Liu, Xiao, & Hao, 2020). On the other hand, the financial resource enriched environments provide opportunities for innovation (Topaloglu, McDonald, & Hunt, 2018). Mainly, small NPOs and social startups are the riskiest—for instance, the restrictions on earning profits and distributing profits (in the case of social enterprises) limit their access to capital markets (Austin, Stevenson, & Wei-Skillern, 2006). However, resource scarcity presses leaders to think more creatively to find innovative ways to generate funds (Kach, Busse, Azadegan, & Wagner, 2016). For example, a positive relationship between resource scarcity and innovativeness, especially in resource-scarce environments (Katila & Shane, 2005). Therefore, the lack of resources motivates non-profits to adopt innovative strategies (Cunha & Benneworth, 2020).

It is to note that cooperative relationships are “more likely to be found among larger firms in concentrated industries than among smaller firms in fragmented industries” (Walley, 2007, p. 24). Contradictorily, more powerful firms avoid the cooperative relationships through mergers, acquisitions, or divestiture (Wallay, 2007). However, small firms in fragmented industries are prone to cooperative relationships because lack of financial resources and may also build trust, commitment, and achievement of the mutual objectives. Therefore, the motives and outcomes of formalisation of inter-firm relations in small non-profits organise coopetition. It is evident how financial resource scarcity drives small NPOs to form and manage those alliances (e.g., FAFEN and The Italian consortium of theatres).

Coopetition has a positive relationship with financial performance (Gnyawali & Park, 2011; Mantena & Saha, 2012), sharing of knowledge (Bouncken & Fredrich, 2016), growth and efficiency (Peng & Bourne, 2009), and management of risk and uncertainty (Bengtsson & Kock, 2000). Coopetition is a successful strategy in resource-scarce environments, not only by choice but sometimes imposed by the government. For instance, the government enforced coopetition among farmers in Taiwan to collectively create a competitive advantage (Chien, 2016). Similarly, Taiwan's government-imposed coopetition between taxi passenger transport and car rental industries (Chen et al., 2020).

Herbst (2019) suggested that deep collaboration among social enterprises to harness sustainable development sometimes form alliances with competitors. Moreover, the empirical evidence indicated that non-profit coopetition leads to competitive advantage (Zhu et al., 2021). The imposed or voluntary coopetition impacts organisational performance because knowledge sharing and agreements help improve the operations and resources of members, which were not possible at the individual level (Besana, 2018; Kirchner et al., 2018). For example, non-profit supports clubs from Germany engaged in coopetition and exploited external knowledge to significantly improve organisational performance (Wemmer et al., 2016).

Literature suggests that simultaneous cooperation and competition among NPOs emerge from resource scarcity (Curley et al., 2021). It pushes organisations to identify potential collaborators with unique resources to achieve mutual objectives. Therefore, resource scarcity is a pervasive, starvation cycle of thinking (Eckhart-Queenan, 2018; Berrett, 2020) that most likely motivates NPOs to develop cooperative alliances.

Proposition 1b: *Resource scarcity (lack of funds) drives non-profits to cooperate and compete simultaneously, that cause manifestation of cooperative alliances.*

Proposition 1c: *The financial difficulties of small in size non-profits positively relate to successful formation or become the part of the cooperative alliances.*

3. FORMALISATION OF NON-PROFIT COOPETITION

The simplest possible way NPO coopetition materialises is when two or more organisations consider each other competitors and acknowledge the need to cooperate (Raza-Ullah, Bengtsson, & Kock, 2014). The role of the institutional environment (Powell, 1988; Mariani, 2007) in which NPOs operate is vital in inducing cooperative behaviour. Therefore, the ability to work with competitors can overcome internal weaknesses (Babiak, 2007) and

formalise partnerships (Barnes, Cousens, & MacLean, 2007). Coopetition management shapes inter-firm relationships (Dana, Granata, Lasch, & Carnaby, 2013) and subsequently forms strong relations networks.

NPOs form relationships to overcome financial difficulties (Lorgnier, 2012). The financial resource scarcity triggered the NPOs from several subsectors to create Free and Fair Election Network (FAFEN) for fund development by utilising their strengths such as geographic outreach, volunteers, and experience. As soon as the collaborative efforts of the NPOs for getting projects were successful, it immediately gave a realisation that formalisation of these strategic relationships is paramount in obtaining complementary resources. Contrary to the government-imposed coopetition, FAFEN sought to formalise when potential members opportunistically use circumstances to create synergy and increase the chance of growth. However, the formalisation of the alliances in both cases depends on the member organisation's strategic learning. Thus, the formation of the coopetition is emergent (unintended), though its formalisation is deliberate. For instance, the Livorno, Lucca, and Pisa consortium of theatres was unintended and imposed (Mariani, 2007) or government-enforced coopetition among farmers in Taiwan (Chien, 2016). However, the formalisation of the alliance made it deliberate for partners because they independently handle their operations, generate resources from joint programs, and extend relationships with stakeholders.

The formalisation of coopetition increases the capability of partner organisations and the alliance. It notes that cooperative relationships increase the capacity of non-profits (individual level), network level, and ability to influence the external institute. Similarly, it may have an impact on a people level, functional level, and structural level. They share expertise and heterogeneity/homogeneity in the knowledge that ensures stability, legitimacy, and alliance efficiency. For instance, developing a relationship between local government and sports clubs in the UK facilitated goal achievement (Nichols et al., 2005).

Moreover, a coopetition-based innovation in non-profit sports clubs and performance indicated a change in the portfolio of a club since they added a new sport (Wemmeret et al., 2016). Similarly, the increased capability of non-profit partners allows them to target new communities, i.e., those not targeted before. Coopetition alliances are powerful and can influence policies or particular constitutional changes and donor preferences. Trust for Democratic Education and Accountability (TDEA) has been working to strengthen public accountability with a network of non-profits, i.e., FAFEN. The alliance has changed people's perception of democratic rights for almost two decades, informing donors about potential funding areas. The alliance's outreach mobilized more volunteers and created a positive public perception.

Further, it helps the alliance to establish a partnership with two government institutes, i.e., the Election Commission of Pakistan (ECP) and the National Database and Registration Authority (NADA). FAFEN has been part of the electoral system, voter registration process, constitutional amendments, and other legal forms. Therefore, non-profit cooperative alliances significantly influence the policies on the particular mission and sometimes modify the existing procedures to ensure sustainable resources.

Strategic learning guided the formalisation of FAFEN as a cooperative alliance (TDEA, 2022). The institutionalisation of the network took more than a year since member organisations engaged in exhaustive discussions to decide the determinants of partnership (TDEA, 2020). Moreover, members unanimously agreed on the governance structure based on statutory requirements, participatory decision-making, inclusiveness, and collective action (FAFEN, 2022). Therefore, the informal interpersonal interactions aligned the collective interests by information and knowledge exchange (Granata, Lasch, Le Roy, & Dana 2018).

The case of FAFEN illustrates how cooperation, once a strategic constraint, turned into a strategic goal—it endorses the findings of Mariani (2007) that also suggested coopetition in NPOs originates gradually and successively becomes a deliberate strategy. The formalisation of coopetition is an adaptive process preceded by manifestation where NPOs create value by taking less care of technical requirements. Subsequently, a formal cooperative relationship promotes stability and structural persistence. Also, the institutional theory stated that the history of the relationship and the adaptive evolution led to conscious design and intervention (Selzick, 1996).

Further, formalisation happens over time, promoting stability and structural persistence (Feilhauer & Hahn, 2021). The coordination mechanisms can establish clear communication channels that align organisational goals, desires, expectations, and mutual adjustments that align with competitors (Dyer & Singh, 1998). The coordination function is significant for formalising coopetition, continuity of tasks, and smooth decision making (Mariani, 2016). Moreover, the formalised structures ensure the quality of operations and maintain respect for collective practices. Further, by setting formal rules and regulations, the alliance exercises the power to approve new members' entry and evaluate the existing members. For example, FAFEN has a performance evaluation system to assess the member organisations—that impact the chances of particular organisations to compete for projects inside the alliance. Moreover, rigorous evaluation criteria are defined to determine potential membership applications (FAFEN, 2022). Therefore, formalised collective structures maintain the collective momentum at the alliance level (Granata et al., 2018). Though, the members are free to pursue and showcase their organisational missions within the coopetition context (FAFEN, 2022)

Despite the popular intentional managerial decisions to form the coopetition, the emergent strategy that develops gradually and unintended over time (guided by internal and external forces) is equally successful (Kylanen & Rusko, 2011; Rusko, 2014; Mariani, 2018). Most coopetitive relationships remain informal in the early years; even micro-firms manage strategy informally (Dana et al., 2013). One of the reasons may be that small organisations are more direct and informal contacts between owners, managers, and employees (Nadin & Cassell, 2007). However, extraordinary environmental factors can push the organisations to formalise the coopetition as non-profits may not have enough resources to write a grant proposal for a global donor or lack the volunteers and have the least outreach. The success of the informal relationships with competitors can also attract the competitors to formalise.

Further, the absence of potential conflict between the individual organisation's mission and the alliance mission brings harmony that allows coherent coordination (Granata et al., 2018). It is to note that each NPO works for its organisational mission and participates in the collective mission of the alliance. Therefore, if an NPO is flexible and agile, it is more likely to become part of a coopetitive alliance. Moreover, if an NPO cares about its mission and is technically and operationally sound, it will be more likely to become part of formal coopetition.

Proposition 2: *The successful manifestation of non-profit coopetition positively relates to the formalisation of coopetitive alliances.*

4. NON-PROFIT COOPETITIVE ALLIANCES AND FUND DEVELOPMENT

Fundraising is crucial for NPOs; however, these organisations' strategic priority is to raise funds in considerably diverse ways (Jung, 2015). Fundraising is directly contingent on the context and activities of the organisation—for instance, non-profit subsectors is a significant determinant in prioritising the fundraising strategy (Lee & Shon, 2018). Health service organisations get small private contributions in their total revenue, while religious NPOs primarily rely on private giving (Iqbal, 2006). Moreover, the strategic implications, charitable share, economic conditions, and availability of donors considerably impact fundraising decisions. The emerging media ecosystems provide possibilities for digital representation—specifically, the use of virtual reality (VR) to influence donation intentions (Yoo & Drumwright, 2018) use of social media (Di Lauro, Tursunbayeva, & Antonelli, 2019; Okada, Ishida, & Yamauchi, 2018), and mobile donations (Zheng, 2020). However, the nature of the organisation, the context in which it functions, and the fundraising priorities significantly impact its fundraising strategy. For example, NPOs from technologically advanced locations can opt virtual reality for fundraising, but organisations from resource-deprived backgrounds may have more traditional fundraising methods.

Coopetition has been emerging as an effective strategy for generating resources (Herbst, 2019). The evolution of NPOs, donors' preferences and philanthropic motives has transformed the fundraising activity of mere collection of funds into a long-term strategic plan. Broadly, it is a process to create and enhance relationships with potential donors, government institutions, and businesses seeking voluntary financial contributions (Ashley & Faulk, 2010; Fathalikhani et al., 2020). We consider fund development a strategic process, long-term plan, and generate synergy and operationalised as grants and donations from governments and national and international development agencies. However, there can be many types of fundraising, e.g., capital campaigns, gifts, event-based fundraising, and sustainable operations fundraising (Hager, Rooney, & Pollak, 2002). The choices are critical in determining how much to spend; the increasing fund development intensity and donor solicitation are likely to generate extra funds but a parallel cost increase. Harrison & Laincz (2008) suggested that a one-dollar increase in fundraising expenditures produces well above one additional dollar in donations. Yet, many cannot afford the cost of grant writing, retaining permanent specialists for grant writing, and hiring consultants.

The unique heterogeneous resources can explain the inter-dependent relationships for fund development. The NPOs having distinctive characteristics and resources set new preconditions for competition; however, the heterogeneity can lead to coopetitive relationships (Huang, Chen, & Liang, 2018). The common practice in the NPO sector for investing to generate funds and the increased competition is leading to higher expenditures and decreased fundraising (Thornton, 2006; Ashley et al., 2021). On the contrary, non-profits cooperate to access the funds, i.e., making short-term or project-based inter-organisational relationships (Hommerova & Severová, 2019). However, coopetitive relationships offer an opportunity to overcome aggressive competition and inconsistent cooperation through resource pooling, knowledge sharing, and the use of heterogeneous resources (Schiffling, Hannibal, Fan, & Tickle, 2020; Ai, Cat-Turner, Horning, & Paarlberg, 2021). Also, it effectively copes with scarce funds and capacity development (Selsky & Parker, 2005). Further, it improves the public image of NPOs by effectively meeting the expectations (Jones, Edwards, Bocarro, Bunds, & Smith, 2017), accountability, and transparency—which encourage donors to provide more funds.

The formal coopetitive alliances better commit and mobilise resources based on a shared belief and become significant for the donor community. For instance, the legalisation of FAFEN considerably improved power, credibility, and well-grounded implementation structures that enhance multiple donor partnerships (FAFEN, 2022).

It conducted 21 projects in 2009-2019—most of the projects in this period were one and two years, one project lasted for eight years, and three long-term projects are still (TDEA, 2020). The strategic learning in the cooperative alliance improved the network capacity, financial and human capability, and improved infrastructure that paid in the form of large projects (TDEA, 2022; FAFEN, 2022). Therefore, formal non-profit cooperative alliances ensure sustainable fund development.

Proposition 3a: *Fund development at the non-profit cooperative alliances is more likely to be high when alliances are formalised.*

Literature indicates mixed evidence on the relationship between formalisation and inter-organisational performance. The role of context, nature of the relationship, and the performance measures may also impact the analyses (Sobrero & Roberts, 2002) that produce miscellaneous results. The cases of FAFEN and Italian opera houses suggest that inter-organisational performance is contingent on the gradual development of the relationships (Jap & Ganesan, 2000) since partners establish affiliations for a couple of years before formalising the cooperation. Moreover, the type of relationship (Oxley, 1997) and the cooperation context significantly impact the NPO leaders to formalise the relationship.

The theoretical perspectives on formalisation highlighted the two categories—First, it is a coordination mechanism, and second, it is a means to control. Nevertheless, the formalised relationships combine the mechanism of coordination and control (Gulati & Singh, 1998). For instance, the formalisation of FAFEN as an NPO cooperative alliance with a democratic representation of each organisation in the board and executive council (FAFEN, 2022). Further, formalisation incorporates appropriate governance structures that create synergy by combining assets, knowledge, and the capabilities of organisations to achieve performance (Dyer et al., 1998; FAFEN, 2022). Therefore, it brings partners together to complete the set of goals, limit conflicts (Avadikyan, Llerena, Matt, Rozan, & Wolff, 2001), and align the motivate n and interests to address the control problems (Gulati, Puranam, & Tushman, 2012).

The success of FAFEN is evident after the formalisation of the alliance since the network partner with fifteen donor organisations around the world, enabling the mission. For instance, some partners are USAID, UN Women, the Royal Netherlands Embassy, EU, DFID, the British Council, NADRA Pakistan, and Asian Network for Free Elections (TDEA, 2020). FAFEN is a perfect case of an effective cooperation strategy that has generated enormous value, outreach, sustainability, and reforms. The cooperation model of participating NPOs established a new identity by still holding their identities which do not give rise to chaos, rigidity, or loss of creativeness (Mintzberg, 1994). The formalisation raises the ability of NPOs in terms of outreach, human resources, volunteer base, credibility, and financial resources that facilitate the opportunity development and grow long-term donor partnerships (FAFEN, 2020). It also provides roots for donor partnership based on transparent disclosure of information (Weisbrod & Dominguez, 1986; Honig & Weaver, 2019), a level of provided relief (Fathalikhani et al., 2018), program implementation capacity (Cairns, Harris, & Young, 2005), improved level of commitment to the priorities (Reinhardt, 2009), governance and accountability (Antlöv, Ibrahim, & van Tuijl, 2012), and transparent communication channels (Kim & Ferguson, 2014). Therefore, the formal NPO cooperative alliances can effectively serve donors to deliver sustainable impact.

Proposition 3b: *The formalised non-profit cooperative alliances are more likely to create long-term donor partnerships that ensure sustainable fund development.*

5. CONCLUSIONS

This paper implies the need for NPOs to learn about the context that can help identify who they are and how their resources lead to forming a cooperation strategy. The manifestation of NPO cooperation paves the way for the formalisation of cooperative alliances. However, it depends on the trusted gradual relationship development, a significant achievement of the objectives, trust, and governance mechanisms. Moreover, maintaining a balance between the personal identities (mission) and the collective identity is the essence of cooperative advantage.

It emphasises the crucial role of the context (prevailing resource scarcity) in triggering cooperation, strategic learning, and the deliberate emergence of a non-profit cooperative alliance. Contrary to the imposed collaboration on Italian opera houses that transformed into deliberate cooperation, we argue the institutional environment can induce cooperation from NPO subsectors, manifest cooperation, and formalise the alliances. Moreover, the context stimulates the needs, i.e., fund development—NPOs with similar conditions may form relationships for collective action to achieve particular objectives.

Although, there are some apparent connections between processes of NPO resource mobilisation and the institutional view in cooperation strategy. The context and respective dimensions are imperative by which leaders identify themselves and seek legitimacy for the organisation in inter-organisational relationships. We believe that,

for strategy researchers, a focus on the context and the specific needs of the NPOs can help develop additional links to the co-competition strategy. Moreover, contemplate that the empirical studies must investigate the relationship between the formalisation of NPO co-competition alliances and their impact on fund development. This paper contributes to the conceptual elaboration of co-competition strategy and fund development, illustrating examples of NPO co-competition by focusing on the processes that have created it. It responds to researchers' calls by attending the formalisation process of NPO co-competition as an incremental one, and the context induces it followed by an emergent co-competition strategy.

Further, the ideas presented here may apply to all NPOs regardless of subsector and geography because the formalisation process to gain legitimacy is prevalent and not unique in specific industries or sectors. Whereas institutional theorists frequently discussed legalisation as the end to the organisation, we emphasise that NPOs can maintain a personal identity while establishing a collective identity in co-competitive relationships. Therefore, it complements and extends efforts to gain and sustain the co-competitive advantage.

It is imperative to explore in-depth the process of co-competition formation in subsector NPOs; the detailed studies at the early stages of cooperation are salient to understand why some become part of the formalisation and what detached others. An ethnographic approach can help understand how individual organisations interpret the co-competitive behaviour and acquire critical resources. In early stages, collaboration with competitors may be necessary to secure resources, but those relationships are more reflective and interdependent when publicly recognised.

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Problems of Modern Global Economy in Conditions of Cardinal Changes in the World Financial Sphere and Geopolitical Situation

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Abstract

This scientific work studies the impact of the world economy of the largest economies, which are the European Union, the United States, as well as the aggressor state, which has a large reserve of natural gas, Russia, on the predicted stagnation and their interdependence. The scientific article is based on statistical indicators and financial results of cooperation, which clearly show the current situation. The advantages and disadvantages of the globalized economy are analyzed and methods for solving the current situation are proposed so as not to repeat them in the future.

Keywords: economy, globalization, stagnation

1. INTRODUCTION

Modern society is in constant tension caused by the difficult situation in the world in the social and economic spheres. Humanity is increasingly wondering about the current situation, namely how the economy affects the lives of entrepreneurs and consumers, which ultimately changes our whole life.

The relevance of this scientific work is confirmed by serious changes in the modern economy, as well as its cause. One of the main reasons is the globalization of the economy, which implies the interdependence of different states and allied organizations. Historically, it was globalization that helped humanity reach a new level of development, but as the events of 2022 show, excessively close interdependence leads the world economy to chaos and financial crisis.

The practical significance of the work is explained by the urgent need for economists to take a fresh look at the world economy and the problems it faces.

1.1 A brief history

One of the main reasons for the development of the human race was globalization and the economic growth that followed it. Historically, globalization began in the 12th-13th centuries. in the relations of Western Europe, which was characterized by the rapid growth of trade and the formation of new markets and the relationship of countries in trade and money relations. After this, a new milestone in development was the period of the 16th-17th centuries. the cause of which was the emergence of a more developed navigation and new geographical discoveries.

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In the 19th and 20th centuries, a stage of mass industrialization took place in developed countries, which had the strongest impact on the possibility of development. An important factor that contributed to this is globalization, which, by allowing trade in the necessary resources between countries, has led to progressive consequences. During this period, there were problems caused by political and economic crises that humanity went through, but without drawing conclusions, continued to make similar mistakes.

1.2. Advantages and disadvantages of globalizing the housekeeper

Globalization in a general sense is a process of growing interconnection, interdependence and mutual influence of countries and their peoples in all places, surrounding the political and economic sphere and ending with the spiritual and social spheres. In addition, we are talking about the merger of the economies of various countries within the framework of a single international trade. The global economy is based on two basic components - unification and integration.

In the first case, we are talking about bringing to a single standard, and in the second - about establishing relationships between individual objects of the world economy.

The main causes of globalization processes in the economy are:

1. The growth of international trade relations, as a result of which individual economies became dependent;
2. Weakened traditions and customs of the past;
3. Development and distribution of high-speed transport;
4. Introduction to the societies of individual countries of unified improved means of communication;
5. The emergence of a single information space;
6. The need to unite the efforts of the world community in the face of global problems.

Globalization, like many other processes, has its benefits and results.

Advantages of the global economy. Proponents of growth believe that it allows developing countries to catch up with industrialized countries by increasing production, diversifying growth, the economy and living standards.

Outsourcing, brings emerging jobs and technologies that allow them to develop their benefits. Trade initiatives increase cross-border trade by restricting supply and trade.

Globalization has advanced social justice also on an international scale, and its advocates report that it has focused attention on human rights around the world that might otherwise be ignored on a large scale.

Disadvantages of economic globalization. One obvious outcome of globalization is that an economic downturn in one country can cause a domino effect through its trading partners. For example, the financial crisis of 2008 seriously affected European countries, primarily Portugal, Ireland, Greece and Spain. All of these countries were members of the European Union, which had to intervene to bail out the debt-laden countries that were later known by the acronym PIGS [1].

Opponents of globalization argue that it has created a concentration of wealth and power in the hands of a small corporate elite that can gobble up smaller competitors around the world.

Globalization has become a polarizing issue in developed countries, with entire industries moving to new locations abroad. This is seen as the main factor in the economic pressure on the middle class.

1.3. Economic stagnation

The next important term of this scientific work is the stagnation of the economy.

Stagnation is a state of the economy characterized by the stagnation of production and trade over a long period of time. It is accompanied by an increase in unemployment, a decrease in wages and the standard of living of the population.

The economy develops according to certain laws. One of them is continuity of development. If this process "freezes" for some reason, it means that the state of the economy will inevitably worsen in the near future. There is a causal relationship: stagnation and degradation of the economy.

External manifestations of stagnation:

1. Unplanned rise in inflation;
2. Decline in the standard of living of the population (fall in purchasing power);
3. Minimal or zero growth of economic indicators;
4. Decline in GDP (gross domestic product);
5. Lack of introduction of achievements of science and technology into production.

One of the clearest examples of stagnation in the economy, which many people know and remember, is the period of perestroika in the USSR. As a result of a number of economic and social reforms carried out in the USSR since the early 1980s, the basic mechanisms of the functioning of the economy were violated. This led to the disruption of

supply chains, a decline in production and the closure of enterprises. And finally, a few years later, to the collapse of the USSR. This is a clear example of transient stagnation [2].

Another well-known example of stagnation is the US economy in the 1920s, the years leading up to the Great Depression of 1929-1933. At that time (the period of "prohibition") the US economy and market was heavily monopolized by large companies, they simply removed private and medium-sized businesses from the market. These actions led to the worst crisis in the US economy in history. This stagnation can be characterized as monopolistic. Prohibition itself also affected the economy, which led to an increase in the amount of domestic alcohol and, as a result, to unemployment, mortality and other negative consequences [3].

To analyze the negative consequences of globalization, namely the global stagnation of the world economy, it is necessary to analyze the problems in the main economic centers: the USA, Europe and Asia separately.

In the first place in the ranking of world powers with the strongest economy is the United States.

In terms of its production, scientific, technical and financial potential, the United States of America is significantly superior to similar areas of management of its closest competitors. The volume of sales of goods and non-financial services by foreign affiliates and controlled companies corresponded to about 2/5 of the turnover of parent companies and brings about one third of the profit. The total sales of enterprises and firms in the American economy corresponds to 32% of US GDP. The backbone of this economy is formed by foreign industrial firms, whose purchases are 80% supplied by parent corporations.

In the context of this situation, it becomes clear that if serious negative changes occur in the American economy, this can lead to serious problems not only in the United States, but also in Europe, Asia and other countries.

1.4. The impact of the US economy on the European Union

At the moment, many experts are talking about a recession in the US. A recession means a slowdown in economic growth. According to one of the most common definitions, a recession is a decline in real GDP for six months or more based on quarterly measurements. At the same time, due to the influence of inflation, nominal GDP may even continue to increase, but real GDP growth will remain near zero.

Analyzing the possibilities and consequences of a recession in the US, analysts predict it for the near future.

The main indicator of a recession in the economy is GDP. The classic definition of a recession is when GDP declines, i.e. has negative growth rates for more than two consecutive quarters. In Figure 1, you can see the growth and decline in US GDP for 2021-2022.



Fig. 1. US GDP 2018-2022 [4].

According to the results of the 1st and 2nd quarters of 2022, we see a negative trend, that is, a reduction in US GDP by more than 1.5%. This is the first signal: if there is also negative GDP growth in the third quarter, then formally it will be possible to state a recession in the US economy.

Since the US economy has a special place in the world system, the decline in GDP has a negative impact on the economies of Europe and Asia, which can be seen from the GDP growth rates in these countries.

Analyzing Figure 2, which shows GDP growth rates in the EU countries, one can see a negative situation and almost duplication of indicators of the same period in the United States. On the positive side, the EU average remains above 0, but is projected to drop to 0.6% in 2023.

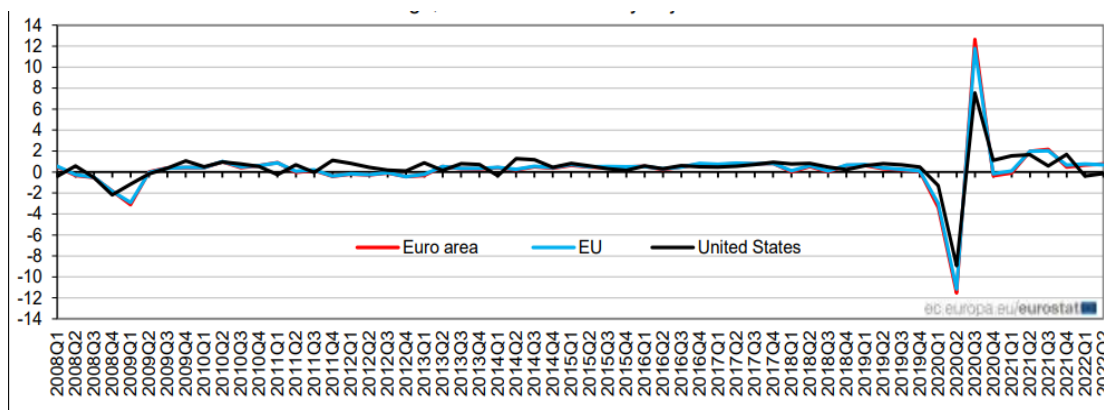


Fig. 2. EU GDP 2008-2022 [5].

Thus, through excessively close cooperation between Europe and the United States, the countries of the union are very sensitive to changes in the US economy, which leads to a weakening and deterioration of the situation.

The next indicator is inflation. Inflation is an increase in the general price level of goods and services. With inflation, the price of identical goods increases over time: the same amount of money, after some time, will buy less goods and services than before. In fact, the purchasing power of money decreases, money depreciates. Figure 3 shows the rate of inflation in the US.

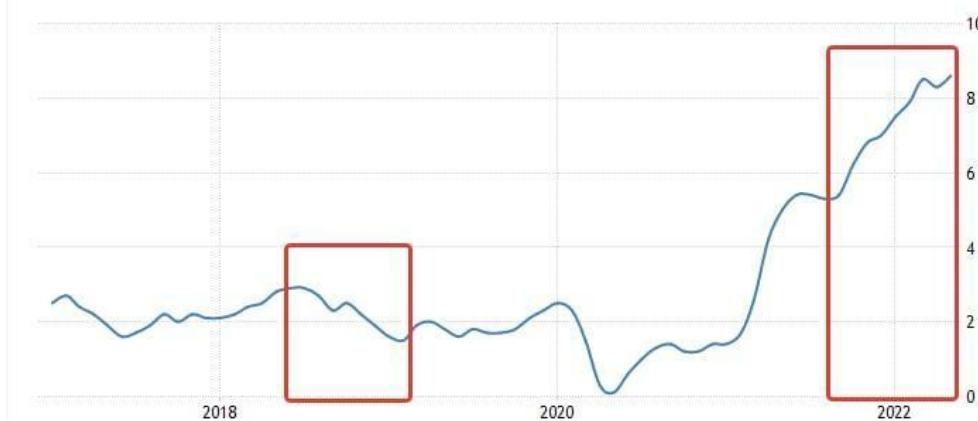


Fig. 3. Inflation rates in the United States for 2018-2022 [6].

In 2018, the correction in the stock market took place against the backdrop of absolutely normal inflation levels, and inflation did not grow. Now we have record levels of price pressure in the US over the past 40 years.

One of the factors behind the correction that developed in 2018 was the tightening of monetary policy - an increase in the rate and the curtailment of the QE program. For the stock market, this is always negative, since such actions mean that liquidity becomes more expensive and it becomes less.

Now high inflation is further spurring the Fed to raise interest rates more aggressively and reduce its balance sheet more aggressively. This is an additional factor of pressure on the markets in the current situation.

Since the maintenance of the leading positions of the United States in the world economy is facilitated by the international role of the dollar, which remains the main reserve and settlement tool in the world monetary and financial system.

The foreign exchange reserves of the central banks of other countries consist of 64% dollars, almost 2/3 of settlements in world trade are carried out in dollars; the dollar serves as a measure of the value of many important goods (for example, oil) in the world market; 3/4 of international bank lending is produced in dollars.

The United States receives large incomes from the issuance of banknotes. The dollar money supply reaches an enormous value of 560 billion dollars, more than 2/3 of this mass revolves outside the American economy. It means the actual loan to the US Treasury.

Changes in the exchange rate of the dollar have profound implications for the United States and for other countries. An increase in its exchange rate relatively reduces the amount of export earnings in dollars, often entails a more significant drop in world prices than a change in the exchange rate, especially for raw materials. On the contrary, the depreciation of the dollar serves as a powerful tool for boosting US exports and ousting US competitors in foreign markets.

Thus, the indicators are also reflected in the indicators of other countries. The inflation rate in the Eurozone can be seen in Figure 4.

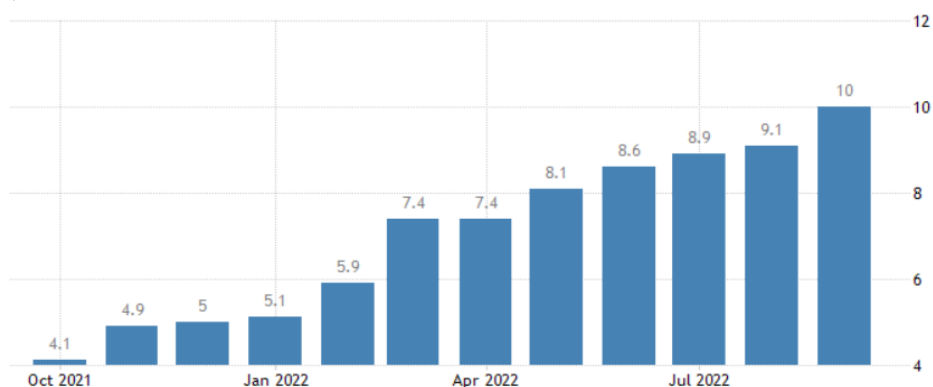


Fig. 4. Inflation rates in the EU for 2021-2022 [7].

Initially, it is important to note that inflation growth throughout the world, including Europe, was affected by the conflict caused by Russia's attack on Ukraine, which increased energy prices, but even in this situation, we can see interesting indicators. The annual inflation rate in the eurozone, like in the US, jumped to 10% in September 2022 from 9.1% in August, reaching double digits for the first time, preliminary estimates showed. This is the fifth consecutive month of rising inflation, with prices showing no signs of peaking at a time when pressure is already spreading from energy to other items. Faster growth was observed for food, alcohol and tobacco (1.8% vs. 10.6% in August), energy (40.8% vs. 38.6%), non-energy manufactured goods (5.6% vs. 5.1 %) and services (4.3% vs. 3.8%).

Thus, it can be seen that the economic recession and a sharp increase in inflation rates have led to a similar situation all over the world, as well as in the countries of the European Union.

1.5. The consequences of Europe's economic sanctions against Russia

The year 2022 has become a turning point in world history in all respects. Russia's invasion of the territory of the sovereign state of Ukraine was also a factor that pushed the two sides of power in the face of Western countries and Russia. On the side of Europe is a wide range of production, as well as financial and economic relations, without which the Russian economy has largely weakened. On the side of Russia were large natural reserves of gas and oil, without which it is also difficult to maintain high rates of economic growth.

In the context of this situation, the countries of Western China are developed. In addition, serious sanctions were imposed, which once again made a decision about the high level of globalization and dependence of all three parties to the conflict.

The consequences for the Russian economy after autumn can be seen in the case of failure: the country's GDP and

On March 11, 2022, Bloomberg estimated the fall in Russia's GDP in the first two weeks of the war at 2% (\$30 billion).

By April 5, Western countries had frozen 350 billion dollars of Russia's foreign exchange reserves (more than 60%).

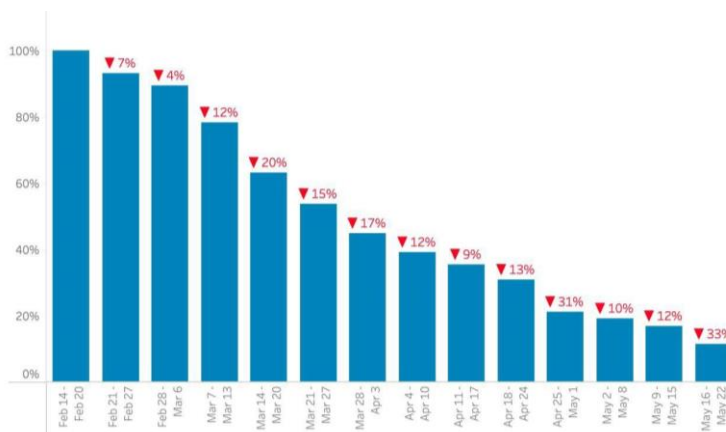


Fig. 5. Dynamics of imports to Russia in 2022 [8].

As can be seen in Figure 5, imports of goods to Russia decreased by more than 50% after the imposition of sanctions. This is a serious blow to the state, because before that a lot of important high-tech products were imported.

Initially, many experts believed that Chinese companies would compensate for the reduced imports from other countries, but as you can see in Figure 5, Russia has not found substitutes for the supply of important goods. The reason for the reluctance of many Chinese companies to work with Russia was the risk of falling under secondary sanctions for cooperation with the aggressor.

The same picture is observed with other trading partners of Russia, the fall in imports from countries that have not imposed sanctions against Russia is not much different from the fall in imports from countries that have imposed sanctions - imports from the first category of states decreased by 40%, and from the second - by 60%.

As a result, despite all the statements of the Russian leadership about import substitution, inflation increased due to the reduction in imports (moreover, the sectors most dependent on international supply chains suffered from inflation exceeding ~ 40-60%), and in almost all sectors of the Russian industrial complex there is a decline in production - gross domestic value added in Russia in the 1st quarter of 2022 fell sharply across all sectors, while in some key sectors, such as construction and agriculture, value added fell in the first quarter of 2022 by more than 50% compared to with the previous quarter.

With reduced supply, rising prices and difficulty finding products, and deteriorating consumer sentiment, consumer spending and retail sales plummeted in the months following the invasion. Of all the effects of Western sanctions on the average Russian, it is these problems in the domestic economy that will remain the most visible reminder of the consequences of the Russian invasion.

According to a survey by the Russian Gaidar Institute for Economic Policy, 81% of manufacturers said they could not find any Russian counterparts for the imported products they needed, and more than half were "extremely dissatisfied" with the quality of domestic products, even in cases where they could get domestic substitutes.

The sanctions also hit the IT industry. Sanctions have limited Russia's access to a number of technologies, and IT giants have stopped serving new clients from Russia. According to the International Data Corporation, sanctions could reduce spending on IT goods in Russia in 2022 by 39% compared to the previous year. Leading Russian IT companies expect a shortage of equipment and difficulties associated with the replacement of Western software with Russian counterparts.

The European Bank for Reconstruction and Development predicts a fall in Russian GDP by 10% by the end of 2022. The main consequences of the sanctions, the aggressor will begin to feel in 2023, when they come into full force.

Thus, Western countries are putting serious pressure on the Russian economy, which did not stop the hostilities, but has a serious impact on the country's population, which should think about the leader of their country, who is pushing the country into the abyss of problems.

Analyzing the situation in Europe, understanding the fundamentals of the global economy, one can also see the reverse influence of Russia on the countries of the European Union. As noted earlier, due to the start of Russia's military actions against Ukraine, the collective West, using financial superiority, began to try to stop the aggressor by economic measures. Like any war, financial war is also very costly.

1.6. Russia's negative impact on the European economy

The countries of Europe do not depend on technology or any other goods from Russia, but since the existence of the Soviet Union, a large amount of energy resources has been supplied to the countries of the European Union. The schedule of gas suppliers to Europe for 2015-2018 can be seen in Figure 6.

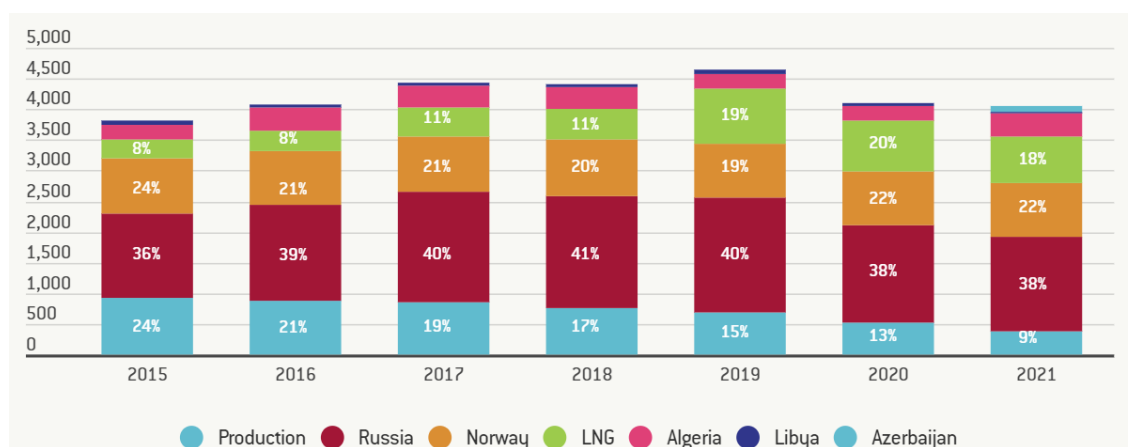


Fig. 6. Gas suppliers to Europe in 2015-2021 [9].

As you can see in Figure 6, the average figures stay at the level of 38-39% for gas supplies from Russia, Norway takes the second place. The gap between competitors is quite large, since supplies from Russia until 2022 were 2 times more than supplies from Norway, which shows the serious dependence of the European Union countries on Russian gas.

After the annexation of the Crimean peninsula in 2014, attempts were made to reduce dependence on Russia, but the situation could not be radically changed. Significantly, the situation in this direction began to beckon after the events of February 24, 2022, but due to abrupt changes, the consequences for the European economy are also not encouraging.

Due to the imposition of sanctions against Russia and the policy of abandoning Russian fuel, Western countries are faced with rising energy prices and a surge in inflation. The rise in the price of fuel, primarily gas, has largely deprived the European industry of competitive advantages. This, in turn, affected other sectors of the economy.

Energy prices are a major factor behind this, with industrial commodity prices up nearly 15% year-on-year.

The industry of the European Union (EU) is forced to reduce its production volumes due to the reduction in Russian gas supplies.

Representatives of a number of industries (from the chemical industry to factories producing fertilizers) warned that due to the crisis, a reduction in production is predicted.

Some industrial giants recognize that Russian gas is not only one of the main sources of electricity generation, but is also used as a raw material for the manufacture of finished products in a number of industries.

In numerical terms, the decline in output in Europe after the withdrawal of gas from Russia was already 10% in the steel industry, 50% in aluminum, 27% in the manufacture of silicon alloys and ferroalloys, and fertilizer production decreased by 70%.

All this leads not only to serious losses, but also damages the factory equipment.

The consequences of reduced gas availability are most felt by factories in Austria, Germany, Italy, Poland, Slovakia, Slovenia, Finland, the Czech Republic and Sweden. In this regard, some of them began to look for opportunities to transfer their production abroad, to those regions where energy prices are not as high as in the EU.

To a greater extent, Germany depends on Russian gas. For example, the metallurgical industry accounts for a significant amount of energy consumption in Germany and a decent number of employees. In 2021, steel production jumped by 12.3%, to 40.1 million tons, in the first half of 2022, volumes decreased by 5.5%, to 19.6 million tons.

In addition to chemistry and metallurgy, mechanical engineering and electrical engineering, which lost Russian supplies due to sanctions, will be among the victims. And, of course, there will be serious problems for the food industry - it may face a shortage of carbon dioxide produced as a by-product from nitrogen fertilizer factories and used to preserve meat.

Thus, we can conclude that the dependence of the European economies largely depends on Russian gas supplies. In this period of time, when Russia is led by an authoritarian leader who does not prioritize common sense, but acts in pursuit of his own goals, dependence on this country has a detrimental effect on the whole world, including Europe.

1.7. Methods of reducing the impact of global crises

In order to rectify the situation or at least reduce the risk of such threats in the future, countries need to change their policies..

In today's world full of uncertainty and being in a state of limbo, the leaders and populations of countries should place even greater emphasis on developing their own production and thereby strengthening the economy, which will lead to strengthening the economy and increasing its independence.

It is independence that makes it possible to find one's own path of development, as well as economic growth and the standard of living of the population.

Relative independence can be obtained in the financial, industrial environment and in many other areas, but there are also goods that cannot be produced on their territory, so there is a need to interact. A striking example is the crisis caused by a sharp increase in the cost of gas, which called into question the possibility of developing at the same pace and increased the likelihood of a recession in the economy.

Figure 7 shows the change in gas prices in 2022.

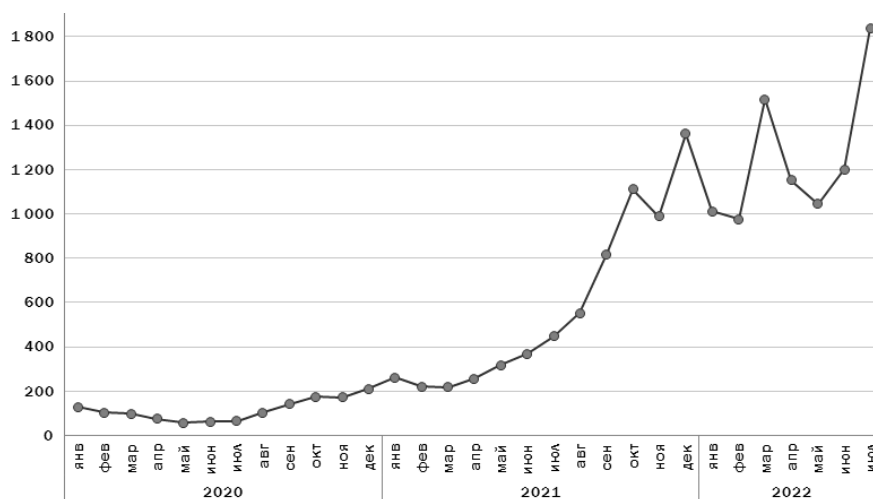


Fig. 7. Average monthly natural gas prices in Europe for 2020-2022 [10].

Analyzing the figures in Figure 7, one can see a serious increase in prices, especially in February and May, the prices rose especially sharply, the root cause of which was the military invasion of Russia and, at the same time, the high proportion of European countries' dependence on Russian gas.

A possible solution to this issue could be the diversification and purchase of energy resources in at least equal shares of supplier countries. Especially after the events of 2014 and the seizure of the territory of Crimea also by Russia, this should have been the main agenda for discussions, but due to the benefits in the short term, politicians and economists did not take the necessary measures to diversify at the right time.

Diversification has the following benefits:

1. Resilience to a crisis or increased competition.
2. Efficient resource allocation.
3. Competitive advantages in the form of new products or directions.
4. A flexible long-term strategy that can be adapted to any changes and trends.
5. Support for some areas at the expense of others.
6. Attractiveness of the company in the eyes of investors and partners.
7. Access to loans with favorable conditions, including on the international market.

Realizing that it is impossible to return to the past, we must place special emphasis on similar moments in the future. A striking example is China and the great ambitions pursued by this state.

2. CONCLUSION

The largest economies of the world have a huge influence and interacting can ensure not only growth, but also decline. It is important to understand the problems to find the most optimal and profitable solution. As problems that can potentially cause negative consequences from globalization processes in all countries, we can name:

1. Uneven distribution of the benefits from globalization in the context of individual sectors of the national economy.
2. The possibility of transferring control over the economies of individual countries from sovereign governments to other hands, including stronger states and international organizations.
3. Possible destabilization of the financial sector, potential regional or global instability due to the interdependence of national economies at the global level. Local economic fluctuations or crises in one country can have regional or even global consequences

But it is important to note that states should not set themselves the goal of separating from economic unions and foreign trade, because it is close interaction that makes it possible to constantly develop. But, the issue of interaction needs to be approached more deliberately. Only by competently diversifying your market for goods that cannot be obtained on your territory and developing your own economy, thereby strengthening financial markets from external threats, is it possible to achieve a positive result.

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Determinants of Microfinance Interest Rates

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Abstract

Microfinance loans have long been associated with relatively high rate of interest. There is also a wide dispersion of interest rates charged by microfinance institutions (MFIs) across countries, whereas interest rates across MFIs within the same country do not exhibit large variation. This would indicate that the source of interest rate variation across countries can be attributed to the dispersion in lending rates prevailing in the formal financial sector across countries. I use nominal yield on gross loan portfolio of an MFI as a proxy for the average interest rate on its loans, and use the average lending rate for commercial loans to represent the interest rate in the formal financial sector. This study attempts to analyze the dispersion of interest rates on microfinance loans by showing its association with the prevailing lending rates. Using a large panel of MFIs from 92 countries, I show statistically significant positive correlation between the commercial lending rate and the interest rates charged by the MFIs.

Keywords: Commercial Lending Rates, Interest Rate, Microfinance Institution

1. INTRODUCTION

MFIs allocate small loans to poor households charging interest rates that are certainly lower than interest rates charged by usurious moneylenders but substantially higher than interest rates charged by commercial banks. The seemingly exorbitant rate of interest has persisted in the industry despite the tremendous improvement in efficiency and increased profitability of both nonprofit and for profit MFIs. Hence, there is some contention about the ethical aspect of MFIs in continuing to charge such high rates of interest, even when most of the MFIs are poised to make profits. The optimal interest rate, taking all relevant factors into account. This should also be incentive compatible for all the economic agents that are affected by the interest rate. First, the interest rate has to be low enough for the borrower, such that the net return from the loan is at least as much as the other alternatives for the borrower. These alternatives can either be the opportunity cost of wages foregone by the prospective borrower, or the net return by borrowing from an alternative source. Second, the interest rate has to be greater than the cost of funds for the MFIs, such that lending is a viable option. Third, the interest rate has to be high enough, in order to discourage possible borrowers who have access to credit from formal financial institutions. While this is not a necessary condition, it will allow MFIs to make credit available for the deserving poor borrowers. Finally, it has to be higher than the opportunity cost of funds for moneylenders. This is to avoid a situation when moneylenders or other middlemen can borrow from the MFIs and then lend to people who may not be able to

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borrow even from MFIs. An interest rate that meets the aforementioned criteria does not present any ethical dilemma, even if it appears to be high.

The variation of interest rates charged by MFIs should be partly explained by the prevailing commercial lending charged by formal financial institutions and the interest rates charged by the usurious money lenders. Higher interest rates in a country would raise the microfinance interest rates. While commercial interest rates charged by commercial banks in a country do not exhibit great variation and accurate data on average commercial rates is available, neither applies for money lender interest rates. The current study is an empirical exercise of showing an association commercial interest rates and comparing the interest rates charged by MFIs.

2. LITERATURE REVIEW

Using yield as a measure of interest rate for microfinance loans, Conning (1999) found that microfinance institutions distributing smaller loans charge higher interest rates on average. Using data on 72 MFIs, he showed that MFIs that have greater outreach (provide relatively smaller loans) and serve the poorest households, charge almost three times the interest rates charged to borrowers with the largest loans sizes, and the borrowers receiving midsize loans were charged approximately twice as high as the largest size loans. The underlying reasoning is that smaller loans result in greater administrative costs per dollar, and higher interest rates are charged to cover higher costs associated with smaller loans. Di Bella (2011) analyzed the factors affecting interest rates in an empirical study, and showed that interest rate on loans allocated by MFI's are positively associated with their own borrowing rates (cost of funds) and inversely related to the average loan balance, which implies that they are positively associated with the level of outreach.

While there may be some cost savings by disbursing small loans by utilizing boiler plate loan contracts, smaller sized loans may still result in higher operating cost, as per economic argument. In serving the goal of outreach to the poor borrowers, MFIs bear higher costs and most of these loans disbursed without any collateral require greater monitoring costs. And since, most of the female borrowers are generally poor, they are often part of group-lending techniques that imply less efficiency (Hermes, Lensink, and Meesters 2011). Empirical analyses by Conning (1999); Paxton (2003); Cull, Demirgüç-Kunt, and Morduch (2007); Hermes, Lensink, and Meesters (2011), present evidence that social outreach comes at lower efficiency. Since greater outreach is associated with higher costs, MFIs charge higher interest rates to recover these costs.

Microfinance interest rates are a function of expenses, such cost of funds, capitalization rate, provisioning and operating expenses, are important determinants of interest rates (CGAP 2012). Since financial expenses accrue interest payments to the source of funds, they are exogenous to outreach to the poor and to women (Dominici 2012). However, provisioning expenses can be related to measures of outreach, as Abdullah and Quayes (2016) show that female borrowers exhibit better repayment rates and that may result in requiring less provisioning. This would imply that a larger share of female borrowers could be related to lower interest rates charged. As such, the effect of female borrowers could be ambiguous, as the share of female clients is linked to higher operating expenses which might offset the lower provisioning effect.

Empirical findings by Conning (1999) and Di Bella (2011) confirm that MFIs providing smaller average loans charge higher interest rates. Meyer (2019) shows that that institutions charge female clients and smaller loans higher interest rates. This may result in further displacing the poorest unbanked borrowers from the credit market. While charging poorer clients higher interest rates may seem like an accounting necessity to cover higher costs and potential default, such a practice is inconsistent with the social goals of microfinance institutions. In view of the above discussion, we have the following two hypotheses:

Hypothesis 1A: Interest rates have a negative relationship with average loan balance.

Hypothesis 1B: Interest rate have a positive relationship with larger fraction of female borrowers.

Similar to any financial Institution, microfinance institutions would charge higher interest rates if the cost of funds is higher. If we use commercial lending rate to represent the average cost of funds in the country, then it should have a positive causal effect on interest rates charged by MFIs. As such, the first hypothesis of the study is described below.

Hypothesis 2: Interest rates have a positive relationship with commercial lending interest rates.

3. DESCRIPTION OF DATA AND VARIABLES

The study utilizes an unbalanced panel of 1627 MFIs spanning from 2003 to 2018, with 7,393 observations. Commercial bank lending rate data for each of the 92 countries in the sample were collected from World Bank Data catalog on macroeconomic variables. All of the financial variables, outreach variables, and regional information used in the study were collected from MIX Market data, publicly available from the World Bank Data Catalogue. The MIX Market maintains an extensive database of financial and outreach information for most of the microfinance institutions in the world. All monetary variables used in this study are denominated in US dollars. Finally, based on the location of the MFI, MIX divides the MFIs into seven different regions – (i) Africa (other than northern African countries), (ii) East Asia and the Pacific, (iii) Eastern Europe and Central Asia, (iv) Latin America and the Caribbean, (v) Middle East and Northern Africa, (vi) North America, and (vii) South Asia.

The focus of this study is to show that the interest rate on microfinance loans is affected by the outreach of an MFI and the prevailing commercial lending rate in the country. I use nominal yield as a proxy for average interest rate charged by microfinance institutions. While, yield may also capture the negative impact of portfolio at risk and provision for losses in general, it still remains an excellent proxy for interest rate.

The prevailing commercial lending interest rate in the country is used as a proxy to capture the average cost funds. An increase in cost of funds can be expected to result in an increase in interest rate on loans. As such, I expected commercial interest rate to have a positive association with interest rate charged on microfinance loans.

Table 1 Descriptive Statistics

Variable	Average	Standard Deviation	Minimum	Maximum
Nominal Yield	0.3413	0.1899	0	2.9850
Lending Rate	0.1403	0.0819	0.0259	0.6772
Gross Loan Portfolio	48,958,928	180,326,315	562	5,773,396,452
Equity	12,664,358	46,509,537	313	1,345,951,964
PAR30	0.0646	0.1066	0	1
Women Borrowers	0.6453	0.2705	0	1
Average Loan Balance	1,661	7,301	1	306,601
Africa	0.1039	--	--	--
East Asia	0.0980	--	--	--
Latin America	0.3351	--	--	--
Middle East	0.0379	--	--	--
South Asia	0.2044	--	--	--

Sample size equals to 7,939 for all variables listed above

If repayment rate is higher, the incidence of default will be lower. This would lower the percentage of portfolio that is at risk of default, measured by percentage of gross loan portfolio that is at risk. To capture the effect of loan loss provision, I use portfolio at risk for 30 days or more (PAR30). An increase in the rate of portfolio risk will negatively affect yield.

Size of the firm, measured by gross loan portfolio (GLP) expressed in US dollars, can be expected to have a positive association with yield if there are economies of scale but the relation would be negative if there are diseconomies of scale. Core, Holthausen, and Larcker (1999), Core, Guay, and Rusticus (2006), Quayes (2012, 2015), Quayes and Hasan (2014) suggest that firm size is an important determinant of firm performance. The impact of a larger level of equity (TEQ) may reduce the cost of funds and result in lower interest rates, while larger equity can be leveraged to obtain funds from more sources some of which may be more costly. As such, it can be argued that greater equity may have an ambiguous effect on yield.

The average loan balance per borrower represents the size of loans allocated by an MFI; it is the size of the loan when originated. A smaller average loan balance implies disbursement of smaller loans indicating better depth of outreach. Since the sample includes data from a large number of countries, average loan balance per borrower divided by the gross national income per capita (ALB) of the respective country is used instead of average loan balance, to normalize for the variation in income across countries. On one hand, smaller loans result in a higher cost per dollar of loans disbursed and

may have a positive impact on interest rates. Since most of the female borrowers are relatively poor, increased number of women borrowers would also have a positive impact on interest rates. However, Abdullah and Quayes (2016) showed that women borrowers have better repayment rates and may actually lower interest rates by reducing loan loss provisions. Therefore, while we expect average loan size to have a negative effect on interest rate, increase in female borrowers may not have a positive effect on interest rate.

As per table 1 above, the average lending rate prevailing in the 92 countries in the sample, is fourteen percent, and the average nominal yield across the 1,627 MFIs in these 92 countries is thirty four percent. This indicates the microfinance loans charge an interest rate that is approximately twenty percent higher on an average, then commercial lending rates. The average rate of portfolio at risk for 30 days or more, is a little over six percent. This indicates that MFIs enjoy a reasonably high rate of repayment. The average fraction of women borrowers across all the MFIs in the sample is slightly less than sixty five percent. The mean of average loan balance across the MFIs is \$1,661. About one third of all MFIs in the sample are located in Latin America, and about twenty percent are located in South Asia.

4. MODEL AND EMPIRICAL RESULTS

To test Hypotheses 1A, 1B, and 2, we use the following function defined in Equation 1 to estimate a fixed effects model, a random effects model, and a Hausman-Taylor model:

$$YIELD = \alpha_i + \beta_1 GLP_{it} + \beta_2 TEQ_{it} + \beta_3 LRAT_{it} + \beta_4 PAR30_{it} + \beta_5 WBR_{it} + \beta_6 ALB_{it} + \beta_7 AFR + \beta_8 EAS_{it} + \beta_9 LAT_{it} + \beta_{10} MNA_{it} + \beta_{11} SAS_{it} + \varepsilon_{it} \quad (1)$$

where,

YIELD = Nominal Yield on Gross Loan Portfolio

GLP = Log of gross loan portfolio

TEQ = Log of Total Equity

LRAT = Average commercial lending rate in the country

PAR30 = Portfolio at risk for 30 days or more

WBR = Fraction of women borrowers

ALB = Log of average loan balance per borrower divided by per capital GNI

AFR = 1 if MFI operates in Africa (other than North Africa) and 0 otherwise

EAS = 1 if MFI operates in East Asia and 0 otherwise

LAT = 1 if MFI operates in Latin America or Caribbean and 0 otherwise

MNA = 1 if MFI operates in Middle or North Africa and 0 otherwise

SAS= 1 if MFI operates in South Asia and 0 otherwise

Equation 1 above was first estimated using both fixed effects and random effects panel regression models. While the Hausman test rejects the null hypothesis that the random effects estimates are consistent, and indicates that we should use the estimated coefficients from the fixed effects model for the purpose of making inferences, we choose to also focus on the results from the random effects model since it can incorporate the regional dummy variables.

Table 2. Nominal Yield Rates of Microfinance Institutions

Variable	Fixed Effects	Random Effects	Hausman Taylor
Gross Loan Portfolio	-0.0170*	-0.0172*	-0.0181*
	-8.51	-9.34	-9.72
Equity	0.0062*	0.0083*	0.0076*
	3.16	4.56	4.20
Lending Rate	0.2158*	0.2411*	0.2162*
	5.65	7.80	6.62
Portfolio at Risk 30 Days	-0.1449*	-0.1403*	-0.1421*

	-12.35	-12.42	-12.80
Women Borrowers	0.0571*	0.0616*	0.0565*
	5.47	6.66	5.62
Average Loan Balance	-0.0347*	-0.04238*	-0.0347*
	-12.29	-19.00	-12.75
Africa	--	0.0791*	0.0828*
		5.72	4.63
East Asia	--	-0.0271***	-0.0071
		-1.88	-0.36
Latin America	--	0.0730*	0.0764*
		5.73	4.65
Middle East North Africa	--	-0.0501**	-0.0407
		-2.07	-1.30
South Asia	--	-0.1203*	-0.1058*
		-8.61	-5.87
Constant	0.4158*	0.3631*	0.3964*
	16.84	16.77	16.11
Observations	7,939	7,939	7,939
Number of MFIs	1,627	1,627	1,627
Overall R^2 / Wald χ^2	0.1696	0.3075	792.77

t statistic in parentheses below coefficient estimates

*, **, *** indicates statistically significant at the one percent, five percent, and ten percent respectively

The regional dummy variables are used to capture the variation in the unobserved factors, including but not limited to money lending interest rates and other unobservable regional differences. Finally, to address the possible endogeneity in the model between yield and outreach variables – outreach to women and depth of outreach, I estimate a Hausman-Taylor panel regression model. The results of these three models are presented in Table 2.

In all these models, size measured by gross loan portfolio has a small negative effect on interest rates, indicating an economy of scale. This indicates that a one percent increase in gross loan portfolio would lower the interest rate by only about 0.02%. Higher level of equity can be leveraged for borrowing from more sources of funds (including costlier ones) and as such equity seems to have a small but statistically significant effect on interest rates.

Commercial lending rate has a positive effect on yield and the estimates are statistically significant at the one percent level. According to the fixed effects model and the Hausman-Taylor model, yield would rise by 0.22% for a one percentage point increase in commercial interest rate. This indicates that while, commercial interest rate affects the yield on microfinance loans, there are other factors which play a role in the determination of yield. This also provides strong empirical evidence for hypothesis 2, which is statistically significant at the one percent level. As expected, provision for losses measured by portfolio at risk for 30 days, diminishes the yield.

Lower average loan balance indicates a greater depth of outreach. Since average loan balance association with yield, this implies that greater depth of outreach (lower loan balance) raises the yield of rate of interest. The estimated coefficient is statistically significant at the one percent level for each of the models used in this study. From an ethical standpoint, it means that poorer the household, higher the rate of interest they face when borrowing. Not only do microfinance borrower pay a about twenty percentage points higher rate of interest than borrowers from commercial banks, the poorest among the microfinance borrowers pay an even higher rate of interest than their less poor counterparts.

To exacerbate the above mentioned ethical problem, women borrowers end paying a higher rate of interest than male borrowers. Although, this higher yield could be a reflection of better repayment rate by women, it may still be an

indication of women borrowers who are poorer in general, pay a slightly higher rate of interest on their loans. The estimated coefficient is statistically significant at the one percent level for all three models.

While the regional dummy variables embody other unobserved variations including money lender interest rates, the results shows that interest rates charged by MFIs operating in Africa and Latin America are approximately eight percentages points greater than interest rates in eastern Europe and Central Asia; while the interest rates charged by MFIs operating in South Asia are approximated ten percentage points lower than interest rates in eastern Europe and Central Asia. These results are statistically significant at the one percent level. It would seem that either money lending interest rates are substantially higher in Africa and Latin America in comparison to South Asia, or there are other institutional factors that contribute to the lower interest rates in South Asia.

5. CONCLUSION

This study the dispersion of interest rates on microfinance loans by analyzing the factors that determine this interest rate. Using a large panel of MFIs from 92 countries, the study showed that both depth of outreach and outreach to women, contribute to an increase in the interest rate charged on microfinance loans. This poses an ethical problem since the poorest borrowers are charged the highest interest rates. This study also finds the expected result that commercial lending rate is positively associated with the microfinance interest rate. It has also been shown that this interest rate is higher in Africa and Latin America in comparison to the interest rate in other regions, while interest rates are lowest in South Asia. The estimated coefficients are statistically significant for both fixed effects model and random effects model that also hold true when controlled for endogeneity.

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Effective Negotiations and Constructive Disagreements: The Importance of Avoiding Destructive Disputes

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Abstract

Any organization which finds a way to allow people to disagree constructively will thrive. Unfortunately, often disagreements become destructive and hostile, and disputes get out of hand. The following are some principles that should be followed in all relationships: Avoid blaming the other party; Respect one's debating partner; Possess humility and patience; Understand the viewpoint of one's debating partner; Knowing that truth is what matters, not winning the argument; Eliminate the need-to-win strategy; Be aware of cognitive biases.

Keywords: Management, Debate, Negotiation, Argument Techniques, Constructive Argumentation

1. INTRODUCTION

Conflict often results when people disagree or have different opinions on some subject and can be constructive or destructive. This is why knowing how to disagree constructively, in a way that does not result in lasting wounds and grievances, is vital in many areas of life, including business. Effective negotiations require the ability to debate fruitfully. Diversity of opinion is necessary if a team is going to function well. Racial, gender, and ethnic diversity do not guarantee constructive, progressive debates if everyone has the same point of view. Imagine a Supreme Court consisting of nine Clarence Thomases (Paul, 2022). The goal is to get people to express diverse opinions and then engage in constructive discussions. However, it is easy for people with different views to engage in ugly battles. Destructive conflict makes it virtually impossible for workplace teams to function effectively.

The importance of knowing how to have productive disagreements Many colleges and universities offer courses and programs in conflict resolution and negotiations because this is a valuable skill in the workplace and life. This is especially important in the volatile post-factual age we live in today. According to Harari, the problem of choosing between truth and power can result in conflict because facts can lead to disunity. Sometimes it is falsehoods that keep people united.

Truth and power can travel together only so far. Sooner or later they go their separate paths. If you want power, at some point you will have to spread fictions. If you want to know the truth about the world, at some point you will have to renounce power. You will have to admit things — for example, about the sources of your own power — that will anger allies, dishearten followers, or undermine social harmony (Harari, 2018, para. 22).

Productive arguing requires specific soft skills that include critical thinking, communication, listening, and

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interpersonal skills that most employers believe new college graduates lack. About 73% of employers assert that they have difficulty finding students with these necessary soft skills (Wilkie, 2019). Some people suffer from need-to-win personalities and will use any strategy or approach to ensure they are the victor in disagreements. This temperament is a disaster when trying to reach a compromise or settlement and turns minor disputes into ugly altercations.

Many wars could have been avoided if the parties had used constructive arguing to negotiate; civil wars are the most prevalent types of wars we see today (Kriesberg, 2015). Certainly, WWI could have been averted if the parties had understood the value of healthy disagreements. Many scholars believe that toxic polarization and hyper-bipartisanship threaten American democracy and might result in a civil war (Marche, 2022; Walter, 2022). This is ironic, given that the United States was founded on compromise (Friedman and Kleiner, 2022; Walter, 2022).

Gunther (2017) describes ten need-to-win fighting strategies. They are "The Silent Treatment; Invalidation; Escalation; Piling on Other Issues; Character Assassination; Arguing from a Distance; Hitting Below the Belt; Martyrdom; Intimidation; and Feigned Indifference to Outcome." What they all have in common is that disagreements are handled with a lack of mutual trust and respect.

Several of the above strategies are used when the need-to-win partner desperately wants a victory and does not care about the consequences. This individual might bring up irrelevant issues from the past to deflect attention from the current concern ("Piling on Other Issues"). Some individuals with a need-to-win will use ad hominem personal attacks or even attribute false statements to their partners, allowing them to mock or gaslight them.

Gunther asserts that the proper way to disagree is to carefully listen to what the other party has to say and understand it. If it is clear that one of the parties has fallen into the need-to-win trap, end the debate, or it will result in a severe conflict. Gunther opines that need-to-win approaches to debating are frequently unconscious behaviors. People can and should train themselves to avoid using this fighting style.

Disputes and arguments do not have to be acerbic; it is essential to understand the other party's viewpoint and use positive terms in stating one's position; it is also helpful to recognize areas of agreement (Gino, 2020). Constructive fighting may bolster a relationship. John Gottman, an expert on relationships, uses the "Four Horsemen of the Apocalypse" metaphor to describe the communication styles that can predict the demise of a marriage. These "horsemen" are criticism, contempt, defensiveness, and stonewalling (Lisitsa, 2013).

Couples who stonewall, which means totally avoiding arguing, or who, when they do disagree, are contemptuous of each other by being caustic, sarcastic, condescending, and making it apparent that they have no respect for what their companion is saying are fighting destructively. Being defensive or blaming as a way of dealing with criticism also makes it clear that one party refuses to accept responsibility and appreciate the other party's viewpoint. Destructive arguing is unproductive and does not bode well for the couple's future.

It has been proposed that constructive arguing, coined by some scholars as "commitment through contestation," fosters a healthier and more engaged work environment (Price and Whiteley, 2014). Employees are encouraged to constructively debate workplace values and decisions, thereby enhancing their commitment to the corporate culture. Schormair and Gilbert (2021) identify a five-prong procedural framework toward what they term "discursive justification." The goal of this process is to discourage stakeholder value dissensus and encourage stakeholder value consensus.

2. COGNITIVE BIASES

Ariely (2008) uses the latest research to demonstrate that people are predictably irrational; they use heuristics or rules of thumb to make decisions. Heuristics may be seen as "cognitive shortcuts" that humans utilize when there is much-required information to collect to make a correct decision, but time and/or money are limited. Using rules of thumb may help a person make quick decisions but might lead to a systematic and predictable bias. Many of these biases interfere with constructive negotiations (Caputo, 2013). To have productive discussions, one must be aware of the various cognitive biases that interfere with rational decision-making. The following are just a few examples of relevant cognitive biases.

2.1, *Certainty Bias/Overconfidence Bias*

Kolbert (2017) highlights that "People believe that they know way more than they actually do." This overestimation of the knowledge we possess is known as the overconfidence effect. Slovic & Fernbach (2017) also speak of the "knowledge illusion"; we do not understand how little we actually know. With certain kinds of questions, answers that people think are "99% certain to be correct" turn out to be incorrect 40% of the time (Kasanoff, 2017).

Burton (2008a, 2008b), a neurologist, believes that human beings cannot avoid certainty bias — a "potentially dangerous mental flaw" — but can moderate its effect by realizing that feelings of certainty are not based on logic

and reasoning. These feelings result from "involuntary brain mechanisms" that have little to do with the correctness of a belief. This is why intuitions, hunches, premonitions, and gut feelings must be empirically tested. Critchley (2014) relates the concept of uncertainty to a tolerance of others and attributes the existence of Auschwitz to certainty bias. Lloyd (2017) also feels that moral certainty is dangerous and a threat to humankind. It should not be surprising that expert predictions usually turn out wrong (Kahneman 2011, pp. 218-219, Tetlock, 2005).

2.2, Confirmation Bias

Once people form an opinion, they tend to only listen to information supporting their preconceptions and reject information not in conformity (Heshmat, 2015). People may have the ability to see flaws in their opponent's arguments, not their own opinions. Given the enormous amount of research available to scholars, it is not difficult for a researcher to cherry-pick the literature and only reference studies supporting a particular opinion (confirmation bias) and exclude others. Even if individual studies are done correctly, this does not guarantee that a researcher writing a state-of-the-art review paper will write an accurate, undistorted synthesis of the literature. Indeed, Celia Mulrow demonstrated that many review articles were biased (Goldacre, 2011).

2.3, Fundamental Attribution Error

The fundamental attribution error refers to the tendency of a person observing another person's behavior to attribute it to internal factors or personality and to underestimate the effect of situational causes (i.e., external influences). Their own behavior, however, is attributed to external situational factors. In other words, we believe others do what they do because of their internal disposition. Thus, if you see someone fighting with another person, you will probably attribute it to the fact that the person has a violent temper, not that he is being mugged.

2.4, Loss Aversion

The pain of losing something we own outweighs the joy of winning by as much as two to one. Thus, for example, the pain of losing \$1000 that you currently have is about double the intensity of the joy you would experience getting \$1000. Thus, individuals are more willing to engage in risky behaviors or even act dishonestly to avoid a loss than to make a gain (Schindler and Pfattheicher, 2017).

2.5, Status Quo Bias

Status quo bias is a cognitive bias that occurs when people favor the familiar and prefer that things remain the same rather than opting for change. It also manifests itself when inertia results in people continuing with a previously-made decision rather than trying something new; inaction is easier than making decisions. People are more upset by the negative consequences of a new decision than by the effects of not making any decision (Kahneman and Tversky, 1982).

Taylor (2013) highlights several ways to reduce these biases, which can result in poor decision-making. First, one must be aware of the different types of biases, and by studying and understanding them, one can reduce their impact. Second, he asserts that collaboration is probably the most powerful tool for minimizing cognitive biases. Kahneman speaks of "adversarial collaboration," which means bringing together two researchers who disagree and having them conduct an experiment jointly as a way to reduce confirmation bias (Matzke *et al.*, 2013; Kahneman, 2012). This is why it is crucial to have diverse groups (groupthink is also a bias) to work together to make a decision.

3. BATTLES BETWEEN THE ACADEMIES OF HILLEL AND SHAMMAI

Hillel the Elder, who lived during the last century BCE and the early first century CE, was appointed Nasi (President of the Sanhedrin) in about 30 BCE. Hillel and his descendants served as heads of the Sanhedrin for the next fifteen generations. Hillel's school, known as Beit Hillel (literally the house of Hillel), disputed the views of the School of Shammai, whose opinions were usually much more textually rigid and harsh than those of the Hillelites, who were more flexible. The Talmud records more than three hundred Jewish legal, philosophical, and theological disputes between the two academies.

Hillel's influence may have been much broader than initially thought because he and his followers influenced more than just Jewish thinking. Falk (1985) asserts that Jesus followed the views of Hillel and that his criticism of the Pharisees was directed at the School of Shammai. Falk (1985, p. 124) states that the Shammaites took control of the

religion between 20 BCE and 10 BCE. There seems to have been a theological war between the two schools that resulted in the physical confrontation of the Hillelites by the Shammaites (Jerusalem Talmud, Shabbat 1:4; Lau, 2007, pp. 223-224). There was to be a vote on many crucial laws, some concerning ritual purity, and many other laws, due to their concerns over the possible destruction of the temple and the continuity of the Jewish people. In order for the Shammaites to ensure that they were in the majority when these laws would come to a vote, they prevented the Hillelites from joining the voting quorum. There is an argument about whether they just used threats (see *ibid*: Korban HaEdah and Pnai Moshe) to prevent attendance or killed Hillelites. (The Shammaites, using swords, succeeded in preventing many Hillelites from voting, thereby becoming the majority, and passed eighteen stringent measures (sometimes referred to as the "18 ordinances" or "18 decrees"). These measures erected a ritualistic barrier between Gentile and Jew, making it difficult for the two groups to socialize (Schmidt, 2001, pp. 140-141). The Babylonian Talmud (Shabbat 17a), referring to when the Shammaites controlled the religion, notes: "that day was as bad for Israel as the day on which the Golden Calf was made." On the day the Golden Calf was made, there was a civil war, and brother killed brother (Exodus 32: 27).

The early Christian Jews would have been unhappy with a religion controlled by the Shammaites. Saul of Tarsus (Paul) clearly stated (Acts 22:3) that he was a disciple of Rabbi Gamliel, a leader of the Sanhedrin and grandson of Hillel (Herford, 1962, p. 35). Hillel advocated loving peace and loving all people, not only Jews (Avot 1:12). Paul would certainly have felt extremely comfortable with this philosophy. Thus, Hillel was responsible for spreading values such as ethical monotheism throughout the Western world. Not only Jews but many Christians recognize that they are Hillelites. The following sayings of Hillel demonstrate his great compassion and love of humanity.

"Be among the disciples of Aaron, loving peace and pursuing peace, loving people..." – Hillel (Avot 1:12).

"'What is hateful to you, do not do to your fellow-man,' that is the whole Torah, the rest is commentary."
– Hillel (Babylonian Talmud, Shabbos 31a)

"If I am not for myself, who will be for me? But If I care only for myself, what am I? If not now, when?"
– Hillel (Avot 1:14)

"Do not judge your fellow human being until you have been in his place." – Hillel (Avot 2:4)

The Talmud explains why the law follows the School of Hillel and not the School of Shammai. Interestingly, it required divine intervention to establish the law. Typically (as the famous Oven of Akhnai story demonstrates; see Babylonian Talmud, Baba Metzia 59b), the Sages ruled that 'It [the Torah] is not in Heaven' (Deuteronomy 30:12), which means that since the Torah was already given at Sinai, we therefore pay no attention to Heavenly voices. It is apparent that the Talmud establishes a paradigm for constructive arguing using the following narrative, and they felt that in this case, it was necessary to heed the Heavenly voice. This would especially be true if the followers of Shammai resorted to violence to win the debates.

For three years the School of Shammai and the School of Hillel debated each other. These said the *halacha* is in agreement with our view, and these said the *halacha* is in agreement with our view. Then, a heavenly voice (*bath kol*) went forth and announced: both opinions are the words of the living God, but the *halacha* is in agreement with the School of Hillel... What did the School of Hillel do to merit that the *halacha* is according to their view? Because they were kindly and modest and studied their own opinion and those of the School of Shammai. And not only that, but they would mention the opinion of the School of Shammai before their own (Babylonian Talmud, Eruvin 13b).

The Talmud concludes that the School of Hillel had humility, and whoever searches for greatness, it flees from him. One who humbles himself, the Lord lifts up. The way to debate properly is to value the opinions of one's opponent. By listening to the other side's view and appreciating it, one learns from it. The ability to compromise is also crucial in constructive arguing. That is the secret of Talmudic debate: respecting the opinion of others and emphasizing truth, not winning arguments.

The Babylonian Talmud (Berachot 28b) describes a prayer instituted upon entering the study hall. Its purpose was to ensure that the scholars understood that legal debates are not about winning but discovering the truth. One

prays to God that the correct decision is made. Moreover, the prayer is also about not causing colleagues to sin (and be divinely punished) for rejoicing over a blunder made by an associate. If it is only about winning, it is easy to fall into the trap of being ecstatic when someone makes a blunder. No one rejoices over another party's error if everyone works together to seek the truth.

4. CONCLUSION

Any organization which finds a way to allow people to disagree constructively will thrive. Unfortunately, we often see the opposite, and disputes get out of hand. The following are some principles that should be followed in all relationships: Avoid blaming the other party; Respect one's debating partner; Possess humility and patience; Understand the viewpoint of one's debating partner; Knowing that truth is what matters, not winning the argument; Eliminate the need-to-win strategy; Be aware of cognitive biases.

The bottom line is that if you want your relationships or organizations to flourish, you must learn to avoid destructive disagreements.

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Towards Coherent Structures of Motivating Employees: A Non-Monetary Reward Framework

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Abstract

The labour market of high technology professionals and skilled employees had suffered significant labour shortages even prior to COVID-19. The combination of remote work and government stimuli during and throughout the outbreak of the pandemic created major shifts in the labour markets, particularly in high technology, software development, IT services and engineering resulting in multiple phenomena, including lower degrees of employee loyalty, transition from employed workers to freelancers and increasing wages, as well as increasingly diversified and expensive employee benefits. Due to the reported labour shortages and changes in employee loyalty, performance and churn, the paper reviews the various means of non-monetary compensation and their impact on these dimensions associated with employee achievements in high technology employees and their effectiveness in addressing the shortcomings and challenges of the Post-COVID work market.

Keywords: non-monetary compensation, employees, performance, productivity, loyalty

1. INTRODUCTION

Studies on the monetary and non-monetary properties on the performance of employees were largely influenced by Herzberg that defined job satisfaction as recognition, responsibility and the opportunity to promote motivational factors of employees in organizations (Chiat and Panatik, 2019). According to his theory, job satisfaction and dissatisfaction are the two opposite ends of a single pole, but rather are separate entities that are influenced by various factors. The factors that affect the employee are divided into two categories:

1. External hygienic factors include salary, job security, working conditions and other external rewards that may cause or prevent dissatisfaction. When these factors are lacking, from the employee's perspective, he or she would feel dissatisfaction and resentment towards their workplace. However, when these factors are satisfying, they would not necessarily result in employee satisfaction, as their positive degree is essential but not sufficient to motivate employees. Thereby, any attempt made to bring about a change in the behaviour of employees through these factors alone, is likely to yield short-living results, after which the employees are likely to return to their previous behaviour.
2. Internal motivating factors include interest in the job, responsibility, professional development, among other internal rewards, and are perceived as motivational factors or as direct causes to prevent dissatisfaction. These factors are derived by workers from their inner world of values, motives and aspirations that materialize to an extent by performing work and through the relations between employees and the work

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that they perform. When these factors are fulfilled, the feeling of satisfaction follows, motivating the employee to perform his work on a better scale. When these factors are exhausted, employees do not feel job satisfaction, though this scenario does not necessarily lead to dissatisfaction. Changes in these factors usually encourage long-term changes in the behaviour of employees (Demirhan et al., 2020).

Thereupon, employees use the hygienic benefits in their work as "action items" that support them towards completion of their tasks, but not necessarily motivate them. However, the use of internal motivating factors is perceived as more efficient, elevating the satisfaction level of employees, increasing and improving their involvement in work and, in the long-run, improving the amount and the quality of their outputs (Alshmemri et al., 2017).

A different approach was proposed by Skinner (Gordan and Amutan, 2014) who perceived the human employee as an "organism" whose behaviour is determined by environmental conditions. In this approach, humans are provided with "inputs" from their work environment and react to them via behavioural "outputs", and the causal link between inputs and outputs, rather than the internal human mechanizations should be studied. Further, the approach calls for a deterministic analysis of employee behaviour, including the types of compensation that affect it in a positive or in a negative manner, as human behaviour is perceived not as a product of free will nor of randomness. The pool of human behaviours is acquired through hereditary and environmental conditions that create predictable behavioural effects. Nonetheless, each person is unique as no other person (except an identical twin) has the same hereditary background and the same personal history that affect behaviour. Given the notions that the environment determines every aspect of human behaviour, that people react to their environment more than acting with initiative within it and that a person can change given the correct reinforcements to do so, this approach suggests that if HR professionals manage to "decipher" the attributes of each employee, they can produce a desirable outcome for the organization in terms of productivity, loyal and efficiency, among others.

The psychoanalytical approaches are based on the assumption that different processes occur within the mind and the behaviours are solely an external expression of them. The behaviourist approach focuses on these symptoms, on the observed behaviour, and claims that it is not possible to hypothesize and assume so much about internal structures and processes of the employee's mind and therefore the underlying motives are hypothetical structures, while personality should be treated as the accumulation of external activities, i.e. behaviours.

2. SOURCES OF MOTIVATION: INTERNAL AND EXTERNAL FACTORS

Organizational motivation causes employees to persevere and perform their work tasks in accordance with the requirements of the organization in which they work. Higher quality, productivity and efficiency may result from it, while the means to achieve it are salary increases, bonuses and evaluation by managers (Pang and Lu, 2018).

When addressing employee motivation, either through the lens of the behavioural approach or via other prisms, one should bear in mind that this is a major influencing factor in moving people into action and leading to significant improvements in each individual's work, teamwork and organizational performance. The conventional definitions of motivation suggest that it combines multiple internal and external factors that operate within each individual producing internal forces towards achieving personal and organizational goals (Nabi et al., 2017).

The self-determination theory or self-direction theory (SDT) studies human motivation based on the physiological needs that motivate persons to act upon them. The fundamental principle of the theory is based on the fact that motivation stems from the experiences of individuals and the way they interpret and classify them in terms of stimuli and responses. Understanding these relationships between stimuli and responses dominates the foundations of motivating employees. Further, individuals who were internally motivated found their work interesting, challenging and fun (Baljoon et al., 2018).

SDT classifies various factors of motivation that regulate the direct behaviour of employees and play some role in their direction of the behaviour, as well as different motivational factors related to different qualitative results. Studies following this theory assessed how employees interpret a stimulus, either internal or external, where internal motivation moves persons into action due to their inherent interest in this activity, stimulation and feeling of satisfaction generated by them. In internal motivation, individuals are not focused on succeeding in an activity or performing it in the best way, but they engage in it due to the pleasure that it causes to them. External motivation is linked to an external goal, where individuals engage in an activity to achieve a particular outcome, i.e. to obtain a reward or to avoid punishment. Thereby, the assumption that each individual interprets stimuli in a different way assists in understanding how a single motivational factor can affect several individuals in different ways (Olafsen et al., 2017).

Research distinguishes between four types of external motives in the ways in which individual experience different degrees of autonomy. First, the regulation of external behaviour defines the level of lack of autonomy, while referring

to the motivation arising from engaging in an activity to be rewarded or to avoid punishment. Individual who regulate their behaviour in this way are defined as having a relatively high external locus of control.

The regulation of introverted behaviour originates from the desire of individuals to feel proud for accomplishing a task or to avoid the feeling of guilt for not doing that. This type aims demonstrating capabilities of individuals and by doing so maintaining their positive self-esteem.

Identified regulation refers to the ways in which each person understands the value and relevance of their actions through the conscious judgment of values that the individual perceives as important. This is type of behaviour is based on a high degree of autonomy.

Integrative regulation defines how the individuals perceive consistent activity or behaviour and address them through their values and beliefs internalized in them. This behaviour is based on a high degree of autonomy.

While these internal and external sources of motivation signify the effect of different factors and their motivational impact on individuals, they do not necessary reflect the larger scope of feelings that emerge through their appearance and the choice of employees to engage in activities and tasks. The next section elaborates the feelings that motivation, as well as accomplishments, involve.

3. HAPPINESS AND MOTIVATION

Happiness refers to the ability of a person to feel a range of positive emotions, such as optimism and gratitude and to choose to incorporate these emotions into his or her life. Happiness is divided into three separate axes: the "pleasant life" axis, where happiness is defined as a feeling of hope, fulfillment and sensory stimulation. In the work sphere, employees often indicate higher levels of happiness after receiving a higher income, in particular employees whose wages are very low and wage increase is significant in improving their standard of living.

The "living through action" axis signifies the ability to find an inner "compass" that directs the individuals to their goals by using abilities, skills and strengths unique to them in ways that advance them towards accomplishing their goals. This axis affects organizational behaviour as envisioned in happier employees that are less likely to experience burnout or exhaustion, are not frequently absent from work or choose to leave it. Despite the positive feelings of those employees, when they are not satisfied with their work, they more often assess the possibility of quitting their work and looking for a new workplace compared to their less happy colleagues (Dhamija et al., 2019). Therefore, when employees are happy, this axis brings positive emotions, including career success.

The third axis – "meaningful life" - concerns the individual's desire to be part of something larger, to belong and to contribute to an institution that has a purpose and a vision. Employees who are more satisfied with their work tend to be stable, productive and directed towards these organizational goals. This dimension is measured according to the extent to which employees feel positive and full of meaning in their work environment and from the performance of their work (Peluso et al., 2017). Research also indicates that a strong connection exists between happiness and career success and productivity. Happy people are not only more satisfied with their jobs compared to their less happy counterparts, but they also exhibit superior job performance, commitment to the job and the organization, and a pro-social attitude within the workplace.

Happiness in the workplace does not prevent the appearance of negative emotions or stress, but provides employees with strength to expand their perspective on their work sphere and to deal with negative emotions that appear at any stage of their career. Similarly, employees who were randomly and experimentally assigned to positive emotions, rather than neutral or negative emotions, negotiated in a more cooperative manner, set higher goals, persisted in their tasks and performed them better, while evaluating themselves and their colleagues in more positive and pro-social ways in a variety of situations and contexts. These employees were found to be more original, flexible, creative, playful and curious than others (Walsh et al., 2018).

Each of the three axis - pleasure, action and meaning - are important for creating happier employees and, therefore, managers should consider and integrate them into the various levels of activities that the organization carries out. Additionally, the degree of happiness and well-being of employees largely depends on their level of motivation and the personal sources of happiness in their lives, at work and within the organization (Baljoon et al., 2018), hence investing in the happiness of employees is both worthwhile and important, since happier employees increase the organization's profitability and its likelihood to grow. Happier individuals are more likely to find a job, be satisfied with their work, acquire a higher status in their organization, succeed, be productive, receive support from managers and peers, be positively evaluated and receive a higher income, while improving the profitability of organizations by 147% on average (Walsh et al., 2018).

4. AFFECTING EMPLOYEE MOTIVATION AND PERFORMANCE

Organizations virtually in every sector identified the relation between employee motivation (both internal and external) and employee performance, resulting in increased productivity, the consequent increase in revenues, fulfilling business goals and higher levels of employee commitment to the organization (Baljoon et al., 2018).

The correlation between satisfied employees and the growth of the organization is thereby evident. Organizations understand that happier employees are more productive and, in order to maintain this situation over time, they have to create an organizational climate that encourages productivity and transforms the workplace into a strengthening and enriching social environment that fosters feelings of loyalty and belonging to the organization. In particular, talents prefer to work for organizations with social values that match their own, strengthening the employee's sense of attachment to the organization (Cassar and Meier, 2018). To support the creation of such an organizational environment, organizations must transfer the workplace of the employees into an attractive environment and fill the office with accessories that reduce stress at work (Olusadum and Anulika, 2018).

Further, the work environment that is perceived by employees as social and empowering is characterized by treating them as a partners of the organization. This partnership principle refers to strengthening the comradeship between employees and their involvement in decision-making processes. Managers have an important role in achieving this goal, thereby it is important to create a domain where the manager listens to the employee's opinions and asks open questions that allow employees to express their personal and professional opinions while demonstrating their abilities. The manager must provide the employee with a rationale for performing the tasks and explain the importance of them in order to increase the employee's commitment to the goals of the organization, since persons who understand and believe in what they are doing, perform the tasks in a better way. In addition, managers should grasp the perspectives raised by employees, while encouraging them to make independent decisions. These steps are likely to strengthen employee motivation, feeling as an integral part of the organization and contributing to its success (Olafsen et al., 2017).

When examining relationships at work, such as the contact with the direct manager, contacts with colleagues and job security, the connection employee-employer is a strong factor in motivating employees to improve their performance, alongside the need for job security and continuity within the organization. Hence, positive and good interpersonal relationships between managers and employees are pivotal for motivation. The contrary dynamics is exemplified by a study that found that 75% of employees leave their workplace because they are not satisfied with their relations with their direct managers, regardless of their feelings about the workplace itself (Nabi et al., 2017). In addition, motivation has positive effects on the performance teams, both at the individual's and group levels. It helps reducing inefficiency in organizations, as well as employee absences in productivity inefficiencies (Olusadum and Anulika, 2018).

5. CONCLUSIONS

The paper reviews the multiple intrinsic motives that underly employee motivation in a broad variety of organizations. Happiness, self-fulfillment and importance of tasks, as well as other internal and external factors, largely affect the motivation of individuals and consequently their commitment to their organization and work. On the meso level of the workplace, the motivation of the employees affects (either in a positive or a negative direction) their performance, their productivity and output, the quality of the tasks carried out by them and their relations with managers and peers, in particularly in an environment that is characterized by teamwork and therefore is more sensitive to the impact of members on other individuals. On the macro level of the organization, happier, satisfied and thereby more motivated employees positively affect the work environment and the performance of the organization to an extent that total productivity, revenues and intra- and inter-relations are improved and enjoy stability that is sustained in the long-run.

The paper also brings recommendations for creating an environment in which employees can feel more motivated and thrive. Creation of a manager-employee domain or a "meeting point" to discuss the employee's ideas and inputs, greater involvement of employees in decision-making processes in the organization and a work environment that fosters creativity and social network creation can further both employee motivation and its positive consequent effects, in terms of productivity, creativity, commitment and loyalty to the organization.

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Statistics as Science and Art: The Importance of NNT (Number Needed to Treat) and the Danger of Overreliance on Statistical Significance

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Abstract

This paper demonstrates how the concept of statistical significance should not be the gold standard of research and results in too many false positives. The replication crisis affecting science and other disciplines is due to the overreliance on statistical significance. The correct way to use p-values is to examine effect sizes and confidence intervals. This is why a discussion of healthcare measures such as NNT (Number Needed to Treat) and NNH (Number Needed to Harm) should be used in teaching statistics to enhance critical thinking and demonstrate the proper way to evaluate the effectiveness of drugs and medical procedures. Patients deciding whether to take a prescription drug or undergo surgery or a medical test should understand essential evaluation criteria and not rely on brochures and advertisements focusing on misleading information such as RRR (Relative Risk Reduction) or statistical significance.

Keywords: Misuse of statistics, the danger of relying solely on p-values, medical errors, healthcare statistics, ARR, RRR, NNT, NNH

1. INTRODUCTION

The ubiquity of statistical reasoning is making quantitative skills essential. Virtually all higher education institutions are offering degrees and courses in areas such as Data Science and Business analytics. Unsurprisingly, employers seek to hire employees with quantitative skills (Gerstein & Friedman, 2016). Quantitative skills only work well in combination with critical thinking skills because statistics is as much an art as a science. The purpose of this paper is to demonstrate how such concepts as statistical significance and NNT should be taught to demonstrate the value of statistics and, at the same time, sharpen critical thinking skills.

The primary cause of accidental death is medical error. Indeed, deaths by medical error surpass the number of deaths from all other unintentional causes. As many people die from medical errors as from COVID-19, even before vaccines became available. Almost everyone knows that heart disease and cancer are the major causes of death in the United States, yet few people realize that medical errors are the third major cause of death (Saks and Landsman, 2021). People who understand the statistical concepts discussed in this paper will hopefully know when to undertake a procedure, especially one that might require hospitalization. Many decisions about whether or not to undergo a procedure or even take medications could and should be seen as simple probability problems.

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2. THE DANGER OF OVERRELIANCE ON P-VALUES

Ziliak and McCloskey (2009) were among the first to underscore the issue of confusing statistical significance (i.e., p-values) with scientific importance. They assert that William Sealy Gosset (aka "Student") was correct and Ronald A. Fisher was wrong about this question. Examining statistical significance at the .05 level (or even .01 level or better) does not necessarily prove that one has discovered a breakthrough in science or economics. They noted that almost 90% of leading science journals in science, economics, and medicine confused the two concepts. The result of this error "produces unchecked a large net loss for science and society. Its arbitrary, mechanical illogic, though currently sanctioned by science and its bureaucracies of reproduction, is causing a loss of jobs, justice, profit, and even life." (Ziliak and McCloskey, 2009, p. 2302)

Saleh (2022) also underscored that p-values used alone often yield false positives and say nothing about the importance of one's findings. Saleh concludes that "the false positive rate associated with a P value of .05 is usually around 30% but can be much higher." Two serious problems with p-values are that they do not necessarily reflect effect sizes. It is possible to demonstrate a very low p-value (especially with substantial sample sizes) where the magnitude of the effect is trivial. This is why it is crucial to examine the confidence intervals as well as the p-value. Moreover, it is not difficult for researchers to churn the data or use large sample sizes to effect necessary p-values. An unscrupulous researcher might massage the data to yield a p-value less than 0.05 if that is what it takes to get published.

Ignoring effect sizes has resulted in so many false positives that numerous studies have found that it is challenging to replicate findings in multiple disciplines, especially psychology (Saleh, 2022). Researchers have been talking about a replication crisis. There is a severe problem in reproducing the results of numerous major studies, which is why many scientists and physicians are skeptical of a significant percentage of published findings. "More than 70% of researchers have tried and failed to reproduce another scientist's experiments, and more than half have failed to reproduce their own experiments. Those are some of the telling figures that emerged from *Nature's* survey of 1,576 researchers who took a brief online questionnaire on reproducibility in research." (Baker, 2016, para. 1)

Approximately 60% of 100 experimental studies in psychology could not be replicated. The percentage of failed replications in experimental economics was also surprising, 40%. One economist noted that it is unlikely that findings will be reproducible if only a 5% significance level is used (Bohannon, 2016).

Ioannidis (2015) demonstrated that many medical research studies were proven to be false. This is especially true for non-randomized studies, where 80% are later found incorrect (Gutting, 2013). This is because it is difficult and costly to conduct randomized controlled experiments. Therefore, most research is based on correlational data. Furthermore, data mining software enables one to dredge the data and perform hundreds of statistical tests until something appears significant at the $p < .05$ level (Ioannidis, 2005).

Kahneman (2011, pp. 222-233) is also unimpressed with "expert" research and believes that algorithms often do a better job at predicting than so-called authorities. He describes several situations in which one should rely on a simple checklist consisting of six relevant characteristics rather than relying on an expert. Kahneman discusses a simple algorithm developed by Dr. Virginia Apgar in 1953 (Apgar's algorithm is still in use and has saved many lives) to determine whether a newborn infant was in distress. Her method is superior to the expert judgment of obstetricians since it focuses on several cues.

Kahneman (2011, p. 226) cites the work of Dawes (1979) and claims that a simple formula that uses predictors (i.e., independent variables) with equal weights is often superior to multiple regression models that use complex statistics to assign different weights to each of the predictor variables. This is because multiple regression models are often affected by "accidents of sampling." Of course, some common sense is needed to select the independent variables most likely to predict the dependent variable accurately.

3. THE COSTS AND BENEFITS OF MEDICAL TESTING

A discussion of Type I and Type II errors (false positive and false positive findings, respectively) can be connected with problems associated with false positives in medicine. Indeed, people may mistakenly believe that the more medical tests done the better. They may also think someone who wants to live a long life should see doctors monthly for a check-up. They do not understand that the dangers of conducting too many medical procedures may be greater than that of performing too few.

Developments in medical technology have provided doctors with tests that can probe for various conditions, and the sensitivity of such tests has only increased with time. This allows doctors to discover maladies earlier and more likely than ever before. Technology has also allowed for cheaper medical tests that can be performed more frequently. This does not mean, however, that increased testing is a pure good. The more tests a doctor performs, the greater the likelihood of finding genuine problems, but, at the same time, performing more tests can create increased costs, which go beyond the monetary costs of performing the test.

One such cost comes from the danger of over diagnosis (Welch, Schwartz, and Woloshin, 2011). As our capability to see more of what is happening inside the body via high-resolution scans increases, so does the likelihood of an over diagnosis. Welch, Schwartz, and Woloshin (2012, p. 36) report that in people with no gallbladder disease symptoms, approximately 10% will exhibit gallstones in ultrasound scans; 40% of people without any symptoms will show damaged knee cartilage (meniscal tear) with MRI scans; MRI scans will show bulging lumbar discs in more than 50% of people with no back pain. In a study consisting of a sample of 1,000 people with no symptoms willing to undergo a total-body CT screen, 3,000 abnormalities were found; 86% of subjects had at least one. The danger of overdiagnosis means a diminishing return to performing additional tests. As more tests are completed, the greater the likelihood of finding actual problems and the greater the chance of finding spurious ones. This has serious implications on an individual as well as on a societal level.

Another problem is that such tests can cause much suffering. In addition, many tests, such as mammograms and prostate exams, can be frightening and uncomfortable; many can also have harmful side effects that last a lifetime. The (sometimes unnecessary) results of those tests, for example, a radical prostatectomy, can suffer from harmful side effects, including incontinence and impotence (Blum and Scholz, 2010). It is not clear, then, whether the increased probability of finding a genuine instance of disease is worth the harm caused to multiple patients. Bach (2012), for example, notes that "with routine mammography, you'd have to screen more than 1,000 women in their 40's to prevent just one breast cancer death." The guidelines for prostate exams and surgery were changed when it became known that more than 80% of radical prostatectomies performed in the United States are unnecessary. Only one out of 48 men have their lives extended by this type of surgery (Blum and Scholz, 2010). Many more have a diminished quality of life.

4. NNT / NNH

How, then, to measure the value of additional testing against its costs? One possible way of measuring the value of an additional test is to estimate the amount by which it increases the patient's lifespan. However, if not correctly calculated, this statistic can be misleading. Suppose people with a particular disease live to age 65 on average. If the condition is discovered when people are 60, then we can say that the average person with the illness lives for five years or that the survival time is five years. Suppose with better technology, we can discover the disease earlier, say when the typical patient is 50. Even if patients continue to have the same lifespan, living to the age of 65, it will appear that the survival time has increased to 15 years. Thus, early detection gives the false impression of increasing lifespan because the survival time is calculated from when the disease is discovered. Generally, early diagnosis may not result in a longer life but merely increase the time the disease is found until death. Thus, while it is "true that patients diagnosed early have better survival statistics than those diagnosed late," this does not mean that early diagnosis actually helps (Welch, Schwartz, and Woloshin, 2011: 187).

Another statistic that can be used to measure the effectiveness of a procedure, test, or drug is the difference in occurrence in a treated group and occurrence in a control group. However, such statistics can be manipulated to mislead as well. Suppose an experiment is performed and a large sample of people are randomly assigned to two groups; one group takes a placebo, and the other group takes an experimental drug for, say, five years. If, at the end of the study, 3 out of every 100 people in the placebo group had strokes while 2 out of every 100 people in the experimental group had strokes. Would it be correct to say that the drug reduced the number of strokes by one-third (from 3 to 2)? This makes the drug sound quite effective but is arguably misleading. Only one person out of 100 benefitted from taking the drug; 99 out of 100 got nothing out of taking the drug. This example is not fictitious. This is what Pfizer did in promoting its statin, Lipitor (Heisel, 2010). Pfizer ran a campaign targeted to consumers that declared: "Lipitor reduces the risk of heart attack by 36%... in patients with multiple risk factors for heart disease."

More generally, such studies often suffer from a misunderstanding about the meaning of statistical significance. Statistical significance is about statistics – how sure are we that the observed difference is real, not just the result of some random deviation in the sample or luck? The difference between the two populations may be statistically significant yet completely "insignificant" in a practical or clinical sense. I may be 100% certain that I have a penny in my pocket, but that does not make its value worthwhile. Similarly, it may be true that a drug has decreased the incidence of stroke from 3 in 100 to 2 in 100, but that does not mean that this decrease is of sufficient consequence to warrant the risks involved in taking it. No one would take a daily drug (with known side effects) if it only reduced their blood pressure by one point.

An additional statistic used to measure the effectiveness of a procedure, test, or drug is the Number Needed to Treat (NNT). Heisel (2010) defines NNT as "the number of patients that would need to undergo a particular treatment over a specific time period in order to see their health improve beyond what would have happened had they done nothing or had they undergone a different treatment." Suppose only one in 100 patients who take a drug are cured. Then, for every patient who receives a benefit from taking the drug, there would be 99 who received no advantage or

were adversely affected. In this case, since 100 patients must take the drug for one patient to be positively affected, the NNT is 100. The NNT is the reciprocal of the absolute risk reduction – the difference between the proportion of events in the active treatment intervention group and the proportion of events in the control group. A related statistic, which focuses on the potential harm caused by a treatment or test, is the number needed to harm, or NNH. When evaluating a course of treatment, it is crucial to consider both numbers.

NNT can help clarify the difference in populations. Consider the test above, where a drug reduced the incidence of stroke from 3 in 100 to 2 in 100. In this case, only one person out of 100 benefitted from taking the medication; the NNT is 100. When stated this way, the potential ineffectiveness of the drug is more apparent. There is evidence that the NNT for low-risk patients using statins for five years is 250 (Carey, 2008). If the NNT were made available to the public, it might result in reduced medical costs and better health. Incidentally, medical experts say one should not take a drug with an NNT over 50 (Carey, 2008). This, of course, assumes that the NNH is not a problem. If it is, then even if NNT is low, the concurrent likelihood of being harmed by the course of treatment might militate against taking it.

As another example, consider sinusitis. It is a quite common condition, with 20 million cases a year. It is usually the result of a virus, in which case antibiotics are ineffective. Despite this, many physicians will prescribe antibiotics anyway; 20% of all antibiotic prescriptions in the United States are for sinusitis. Analyzing the statistics for the use of antibiotics in treating sinusitis shows that the NNT is 15, while the NNH is 8. (<http://www.thennt.com/nnt/antibiotics-for-radiologically-diagnosed-sinusitis/>). This means that only one out of every 15 people with sinusitis was helped by taking antibiotics, while one out of 8 were harmed (vomiting, rash, and/or diarrhea from the medication). There are likely a number of patients who, presented with this knowledge, would choose not to take the drug.

The following example further illustrates the different ways of presenting data from the same study and how they can be used to mislead: “You read that a study found that an osteoporosis drug cuts the risk of having a hip fracture in the next three years by 50%. Specifically, 10% of the untreated people had a hip fracture at three years, compared with 5% of the people who took the osteoporosis drug every day for three years. Thus 5% (10% minus 5%) less people would suffer a hip fracture if they take the drug for 3 years. In other words, 20 patients need to take the osteoporosis drug over 3 years for an additional patient to avoid a hip fracture. ‘Cuts the risk of fracture by 50%’ represents a relative risk reduction. ‘Five percent less would suffer a fracture’ represents an absolute risk reduction. ‘Twenty patients need to take the osteoporosis drug over 3 years for an additional patient to avoid a hip fracture’ represents a number needed to treat” (Napoli, 2011).

The ARR (absolute risk reduction) is 5%, RRR (relative risk reduction) is 50%, and NNT is 20. Advertisements and brochures would stress the 50% RRR, creating a false sense of effectiveness. This practice may help explain why we spend too much on health care and have little to show for it. Patients may fall into the trap of choosing treatments with high relative risk reduction but with large NNTs, resulting in few patients being helped. “Treating the many to benefit the few” is an apt description of health care in the United States (O’Dowd, 2001).

5. DISCUSSION

With the abundance of medical information thrown at a patient, it is vital to give them some basic numbers that they can use to form their decisions. We have seen several ways to present this information, some of which can be misleading. In particular, we have seen that advertisements sometimes tout a sizeable relative reduction in the likelihood of incidence of a disease, while the absolute reduction may be quite small. We have discussed the NNT and NNH and have seen that those statistics may be more helpful in evaluating treatment. We have also seen that p-values may allow one to get published in a major journal, yet the findings have no real-world benefits. In fact, the results might even be impossible to replicate.

This does not mean that NNT and NNH are without flaws. In particular, while these statistics indicate the likelihood of being helped or harmed by a drug, they do not indicate the magnitude of various benefits or harms. For example, we noted that an NNT of 15 and NNH of 8 might mitigate against treatment for sinusitis. Suppose instead that a treatment for terminal cancer had the same numbers – one out of every 15 patients was totally cured, while one out of every eight patients treated was not cured but developed a rash. Would the evaluation of the treatment still be negative? This is why decision-making using statistics is as much an art as a science.

6. CONCLUSION

This paper demonstrates how a discussion of healthcare measures such as NNT and NNH may be used in an introductory statistics course to make it innovative and exciting. In addition, it can be used to enhance students' critical thinking. Students will see with real-world data why statistical significance is insufficient, and a practical importance measure such as NNT is also needed before a drug is prescribed.

This paper can also teach how statistical data can be used in an unethical way to prescribe harmful drugs, i.e., recommending medications when the NNT measure is high. NNT and NNH can also be used as part of a discussion involving the different types of errors in research. Students need to see that statistics is not a dry course with meaningless formulas. On the contrary, understanding how statistical data can be used and misused in healthcare may save someone's life.

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Communication as an Effective Factor for Achieving the Organization's Objectives (Case Study Municipality of Peja)

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Abstract

Communication is a common and well-known part of our life that we often do not pay attention to the importance. Moreover, we often participate in the communication process only as senders and recipients of information without being aware that we are dealing with a complex process, which itself contains many interconnected steps to one another. Human society is built and exists precisely thanks to the human ability for communication. There are many tools that serve to communicate between people: gestures, screams, different signals, but the main tool is speaking. Knowing how to communicate with other people is very important, but on the other hand having the ability to be understandable about what you mean to say, this is a circumstance that facilitates relationships with them, thus avoiding misunderstandings, disagreements or even conflicts. On a few occasions in our daily life we have noticed that the cause of the great, sometimes insoluble, conflicts may have been a mistaken word, not in the right place, as well as badly understood or heard. Indeed, the whole human relationship displayed as the relationship of one another, man with nature or man to himself, is in fact in essence an infinite number of communications. Therefore, we find communication treatments in the most ancient thinkers, and therefore there is also a set of communication definitions. This paper aims to help business leaders and managers understand the importance of communication in organizations, the changes they bring to their organizations, and the factors that influence the successful realization of this process.

Keywords: communication, human relationships, knowledge

1. INTRODUCTION

Communication is not only an integral part of our daily life, but also an important element for any form of coexistence between people. Communication involves everyone, it appears in all interpersonal situations. Based on this, it is not at all surprising why there are so many communication theories and why the definition of the notion of "communication" is not at all easy, but a very complicated matter.

There are many different definitions of the communication process. Communication is defined as the transfer of information from the giver to the recipient, provided that the recipient understands it, while in an organization or institution, it is a tool that connects people to achieve a common goal. It means that communication means sending, receiving and interpreting and understanding information.

Communication is routine everyday work. All of us have the right and need to know about everything around us, and about everything related to us. Without communication, all that we have learned and what we think will not

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exist, while each future generation will be poorer and poorer in terms of experience and knowledge. Neither organizations, nor leadership, nor management will remain without communication.

Communication in the organization is seen as an integral part of the treatment of phenomena related to employee engagement. This starting with its definition but also with the results of studies related to the ways and channels of communication in the organization as well as with other elements that can to connect with it.

The study of communication which does not appear only in recent years but is encountered in different treatments in areas not only related to organizations, but arouses more and more interest in the connections and influencing force in the field of business and not only relating to the ways of communication of the leaders or the speeches of the leaders of the world of business and politics, but also with the structures and communication of the culture of the organization, etc., reaching the designation of organizations as communicative entities.ⁱ Communication in the organization appears in the earliest works as "a central force which allows the coordination of employees and creates the conditions for an organizational behavior".ⁱ In order to establish itself in this communication framework, the organization has gone through a series of developments and meanwhile, even today, it continues to evolve. However, there are still discussions about the definitions of communication in the organization, since studies on the individual in the new century have raised many questions and new needs for analysis of behavioral factors in organizations and outside them. In other words, the behaviors that occur in an organization are important elements in the organization's communication process.ⁱⁱ According to Van Riel: "Communication in the organization is a management tool, according to which all conscious forms of internal or external communication are harmonized in the most effective way possible by creating a good basis for relations with the groups with which the company there is interdependence."ⁱⁱⁱ According to Chester Barnard, communication can be accepted as authority only in these cases:

- When he can understand orders,
- When you believe that the order is in harmony with the goals of the organization,
- When he believes that the order is in harmony with his and the general interest,
- When he can and has the physical and mental ability to perform activities arising from the content of the orde.^{iv}

Managers should be well aware of the barriers that hinder communication and some of the main communication barriers are:

- Lack and deficiency of planning. Often individuals talk or write to each other without thinking much, without planning or clearly specifying the purpose of the message. In reality, in practice you rarely find that there is a good communication without keeping in mind the above issues and leaving everything to chance. Therefore, choosing the most appropriate communication channel, as well as determining the time when the message should be transmitted, are important moments of work planning where the most effective communication is connected.^v

2. STATISTICAL DATA AND RESULTS

Table 1. Definition coefficient of independent and dependent variables

Model Summary

Model	R	R Square	Adjusted R Square
1	.946 ^a	.873	.858

In this table is presented the coefficient of determination, $R = 0.87$, while $R_{square} = 0.87$, or the adjusted coefficient $0.85 \times 100 = 85\%$, which means the independent variables explain the dependent variable for 85%.

Table 2. significance expressed through anova the explanation F test

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	40.137	4	10.034	158.720	.000 ^b
	Residual	18.650	295	.063		
	Total	58.787	299			

Dependent Variable: a. effective communication in organizations
 b. communication strategy, communication channels, vertical and horizontal communication, organizational culture
 b. Predictors: (Constant),

Here is presented the model of Anova, where the level of significance is 0.000, which shows that the model has relevant links.

Table 3. Regression analysis expressing the impact of independent variables on dependent variable

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.116	.066		2.755	.010
communication strategy	.183	.074	.238	5.487	.000
organizational culture	.590	.048	1.097	12.297	.000
communication channels	.862	.076	.483	11.410	.000
vertical and horizontal communication	.179	.050	.373	4.607	.000

a. Dependent Variable: Effective communication in organizations

In this table is presented the regression analysis, which shows how many independent variables have an impact on the dependent variable, which is explained through the OSL equation,

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + U_i$$

In the table 1 are presented coefficients and their significance for the Municipal transparency, the analyses done for effective communication in municipality of Peja Table shows that independent variables that communication strategy, communication channels, vertical and horizontal communication, organizational culture have impact on dependent Effective communication in organizations. Based in research question - **Strategy of communication has a impact in Effective communication in organizations.**

3. CONCLUSION AND RECOMMENDATIONS

Effective communication refers to the achievement of understanding and trust between people. The basic components of the communication process are the giver, the signal or transmitter and the receiver. Any weakening of each of these components causes damage or distortion of the messages we give and receive with each other. There is a significant number of communication channels through which we convey what we want to say to others at work and outside of it. Therefore, good communication is the fruit of knowledge, patience and understanding of the rules in a certain environment, this helps you avoid and prevent unpleasant situations in it. Knowing yourself and everyone's communication skills leads to the choice of a model, which suits the objectives as well as special situations. There is no general rule for all individuals, in terms of how they cope with different situations, but it varies from person to person, the important thing is actually to achieve balance, energy and inner harmony as far as it's about what you want to say, and saying it in the best way. Success within an organization is often made possible through effective communication at all its levels, starting from ordinary employees up to the ranks of managers.

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Development of a Model for the Maturity-Based Determination of Operational Excellence's Degree

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Abstract

Operational Excellence (OE) means the development of innovative sustainable production science and technologies that cover the entire live cycle of products but also of services. The Food Packaging Industry (FPI) examined in this paper so far lacks a comprehensive yet consensual framework that encompasses all aspects of the sustainability of OE-initiative. Additionally, the FPI lacks support for quantifiable measurements and thus the ability to objectively evaluate and identify areas for improvement. The FPI under study additionally needs appropriate tools to effectively plan and assess the maturity of a sustainable production perspective in the short, medium, and long term. To support sustainable OE-strategies in FPI, only few suitable Maturity Models (MMs) can be found in the literature. The value of an adapted MM is based on a consistent set of quantifiable performance indicators. This paper discusses the concepts and efforts to develop the CPC-MM, for a sustainable OE, containing five maturity levels and four dimensions, namely the Internal/External Context-, Process- and Content-perspective. The five applied maturity levels are: initial (ad hoc), repeatable, defined, managed and optimized. By an audit an investigation was conducted to examine the relationships between the dimensions themselves and the strategic benefits. The main purpose of the CPC-MM is to provide an evolutionary capability, a managerial tool, to help Food Packaging Companies (FPC) to integrate sustainability in OE.

Keywords: Operational excellence, maturity model, sustainable operations, sustainability, and food packaging industry

1. INTRODUCTION

Maturity models (MMs) are helpful instruments for determining the company's performance. The MMs describe an anticipated, desired or typical development path of an object, such as an organization or a process, in successive, discrete rank levels. An MM formulates which characteristics must be assessed by means of which measurement rules in order to determine the actual situation of an object and assign it a defined quality or maturity. At a given point in time, observations are collected and validated in order to obtain a status record of the object under consideration. Based on the determined actual situation, suggestions for improvement and recommendations for action can be derived [1].

2. BACKGROUND

An initial analysis of the author revealed literature wise a lack of suitable constructs of Maturity Models (MM) for sustainable OE research. The paper deals with the development of a conceptual model which should allow to identify the maturity level of a company in the FPI and to derive recommendations accordingly. Thus, the developed MM should provide an effective tool for companies in the FPI with OE-implementation ([2], [3]). A systematic

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application of MM enables both improved communication and comprehensible decision making for process and result improvement [1]. A goal-oriented and structured development approach is thus guaranteed. In addition, MMs capture knowledge and practices on a topic area in a compact way and offer flexible expandability and adaptability. MMs in turn are reference models in that they can be adapted to the requirements of individual model users ([4], [5]).

3. MATURITY MODEL (MM) DEVELOPMENT

3.1. Maturity Models comparison

The weaknesses of already existing MMs (Table 6) and a lack of transferability are identified [6]. For this purpose, an intensive literature search in databases and Google Scholar was conducted. In addition, a pure Google search [7] was considered to be extremely useful, as the problem identification already showed that there is still relatively little methodologically sound literature available on the topic of digitisation in the FPI [8]. So far, the topic has been dealt with mainly in a practical way. In addition, a reverse search is being carried out. This includes a review of citations of articles already marked as relevant ([9], [10]).

3.2. Maturity Model development

Before the actual development of the MM, the development strategy has been defined. [1] and [11] distinguish here the following four possibilities:

- 1st possibility: Development of a completely new MM,
- 2nd possibility: Extension of an existing MM,
- 3rd possibility: Merging several models into a new MM,
- 4th possibility: Transfer of structures/contents of existing MM into a new field of application.

The third option was chosen by the author for the development of the MM. A new MM is developed based on the previously identified MMs. For this purpose, the design dimensions of the existing maturity level models are combined and grouped [12]. Since the holistic transformation of the Food Packaging Company (FPC) under investigation is achieved by systematically addressing the levels of strategy, organization and processes, systems and culture, exactly these aspects are defined as levels for the MM. The design dimensions of the existing MMs will then be assigned to these four levels. The dimensions were adapted and complemented by supplementary literature. [13] and [14], studies and best practices and maturity levels were defined for each dimension. This resulted in one description per maturity level for each dimension [15]. Criticism of other maturity models shows that the high levels of maturity cannot be achieved ([16], [17]).

3.3. Maturity Model evaluation

With the evaluation of the MM, [18] summarize the three steps of conception of transfer and evaluation, implementation of transfer media and the actual evaluation. The evaluation enables a practical reflection of the MM, technological as well as quality-oriented processes ([19], [20]). By checking the levels and dimensions for completeness as well as the consistency of the MM levels, the quality of the MM is illuminated. Since the MM level should fulfil the purpose of a self-assessment, its usefulness and applicability are also examined ([16], [21], [22]).

The evaluation is carried out iteratively in two steps.

- 1st step: Experts from the field are consulted to verify the quality of the MM. These experts will validate the MM based on a ready-made questionnaire. Questions regarding the completeness, logic and comprehensibility of the levels, dimensions and MM levels will be answered. In order to enable the most comprehensive and flexible feedback possible, the questions will be designed openly. The inputs of the subject expert are checked, and the developed MM level is adjusted.
- 2nd step: This is followed by the second iteration step, the evaluation of usefulness. After completion of the MM, a user-friendly tool for self-assessments will be developed. The evaluation of this tool was planned in detail after the MM was created.

Due to the large number of existing MMs, the first step was to examine to what extent the known MMs could be used to gain insights for the design of digital transformation activities. Many of the selected MM looked at the five dimensions employees, technology, strategy, products and services as well as organization and processes, which are explained in more detail below. Based on the three dimensions presented here, the FPCs were then assigned five levels as shown hereafter in Figure 2.

3.4. Maturity Model preselection

One reason for the reduction of the MMs to be analysed is to be justified by the nature of the model. This excludes roadmap models, of strategy implementation planning, or other contributions that attempt to convey different results using the term MM. The appendix-table illustrates the different types of MMs. The respective authors of the MMs are mostly assigned to the fields of science and research, business associations or consulting firms. The MMs differ, among other things, in the number and type of dimensions, the forms of visualization chosen and the target industries.

3.5. Maturity Models analysis-process

The procedure used to analyse MMs can be structured as described below. Firstly, an overview of the MMs was created. The next step was to document the relevant information, dimensions and characteristics of the MM. This included information about the source, the publication date and the model with the number of dimensions and possible maturity levels. Subsequently, the dimensions and features of the model were analysed and documented. An analysis form was used to collect the information. This was followed by the calculation of the MM-score. For this purpose, the individual MMs are evaluated with regard to their

- Applicability,
- Expressiveness and
- Survey-effort.

The category applicability is divided into the sub-categories

- Target group-oriented dimensions,
- All stages of development suitability and
- Recommendations for action.

The expressiveness category is divided into

- Comprehensibility,
- Presentation of the results and
- Level of detail.

The final step is an analysis of whether the MMs are suitable for OE-initiatives.

3.6. Maturity Model iterative search-process

Existing MMs alone are not sufficient to provide guidance for the development of new models. The question therefore arises as to how MMs can be developed on a scientifically sound basis. However, this question has not yet been sufficiently investigated ([23], [24]). [25] counter this deficiency with a generic development process for MM development. This process is the result of the author's generalization of their respective projects for the development of MMs for companies in the FPI. The generic development process comprises the six phases *Scope, Design, Populates, Test, Deploy* and *Maintain*, which are interdependent in their sequence [24]. Parts of the development process were explicitly iterative, since after a test or evaluation a rethinking of previously made decisions might be necessary. Accordingly, the development of a MM can be seen as an iterative search process. In order to enable a scientific discourse on the MM that has emerged during such a development process, the development decisions and evaluation steps taken in the phases must be adequately documented [26].

3.7. Maturity Model design

For the MM to be designed, dimensions are created from the described requirements, which should enable an assessment to be made [27]:

- 1st dimension: Horizontal integration-creation: Special attention of this dimension is paid to the observed FPC as it calls for horizontal integration. An essential criterion has emerged from the requirements. Automated and continuous flow of information along the horizontal level of the company and additionally the elimination of this process at the border of the company for the creation of cross-company value added networks. This means that the application systems require interoperability at the data level. This requires continuous and consistent data.
- 2nd dimension: Vertical integration-creation: Special attention of this dimension is paid to the connection of the lowest level, where different things, e.g., products and machines, exchange different information with the levels above. The most important criterion here is that this exchange takes place in both directions.
- 3rd dimension: Digital product-creation: It is particularly important for the digital continuity of engineering that each process step is digitally represented. For this purpose, at least one application system must be integrated into the process for each step and the results from each step must be able to be forwarded to the previous or next step.
- 4th dimension: Cross-section technology-criteria: Special attention of this dimension will be used to assess the extent to which technologies are used across all characteristics. The following areas result from the requirements: Service-oriented architecture, big data and their security. In addition, the degree to which information systems are supported by these technologies is to be assessed.

3.8. Maturity Model user-friendliness & -utility

The proof enables a practical reflection of the MM. The validation of the MM takes place in two iterative steps. The author checked the levels and dimensions for completeness and carried out a consistency check of the MM levels. Subsequently, the MM was adapted based on this feedback and a self-assessment tool was developed. This tool is now to be examined for usefulness and user-friendliness in a further validation step. For this purpose, a real situation will be simulated by representatives of a FPC conducting a self-assessment. Subsequently, they evaluate the usefulness and user-friendliness of the tool by answering a questionnaire. First, the representatives within the FPC are to be determined. The main selection criteria are the competencies and roles of the employees. Care is also taken to ensure that the most important departments and areas are considered. The selection of the representatives must guarantee an operative as well as strategic view. Seven experts out of the FPC were selected on the basis of these criteria: These experts were first asked to conduct the self-assessment based on an excel-tool. They were then sent a questionnaire to assess the usefulness and user-friendliness of the tool. Care was taken to ensure that the questionnaire was not too extensive in order to generate the highest possible response rate. The questionnaire therefore contains only five questions. A distinction is made between three multiple choice questions and two open questions. The two open questions are important in order to get broad feedback from the users. The multiple-choice questions are based on a 4-point scale. This allows the tendency towards the middle to be avoided.

3.9. Maturity Model validation

Of the seven experts contacted, all gave feedback. This corresponds to a response rate of 100%. However, one of the respondents only carried out the self-assessment and gave feedback by e-mail. For the multiple-choice questions, therefore, only the answers of six experts could be considered [28]. The user-friendliness was determined on the basis of the first three questions. The first question was whether the application or performance of the self-assessment was easy. Four of the respondents answered that they were correct and two that they were more correct. Thus, none of the experts found the application too difficult or complicated. From this it can be concluded that the excel tool was designed to be user-friendly in principle. Overall, the MM was rated as valid. In particular, the excel-tool developed was suitable for conducting a self-assessment. Through small further adjustments and the optimization of a few points, the model could gain even more in quality and acceptance [29].

4. MOTIVATION AND APPROACH

In order to do justice to the above-mentioned objective, a common understanding of the theoretical foundations is first created on the basis of relevant literature. After classification and definition, possible fields of application in eight European FPCs are outlined. Subsequently, studies are summarized for the benefit of the project. In developing the MM for the FPCs to be examined, a step-by-step approach is chosen. An overview of already existing MMs is given in the appendix, which are analysed both conceptually and in terms of content. Based on this, the own MM is developed with additional literature. Then the MM and its iterative adjustments are described in detail. This also includes the validation of the structure and content of the model by external experts [1]. The results are processed and critically discussed in order to finally point out limitations and derive recommendations for practice and theory. Although the subject area of continuously changing and improving organizational forms is understood as strategic change, empirical studies and theoretical concepts, on the other hand, lack sufficient differentiation of the classical core elements of strategic change, as is the case in other social science disciplines. The, according to [30], core elements are *Context*, *Process* and *Content* (CPC) of a change. Examples of such observations can be found in the Strategic Management [31], Organizational Development [32] and Change Management [33].

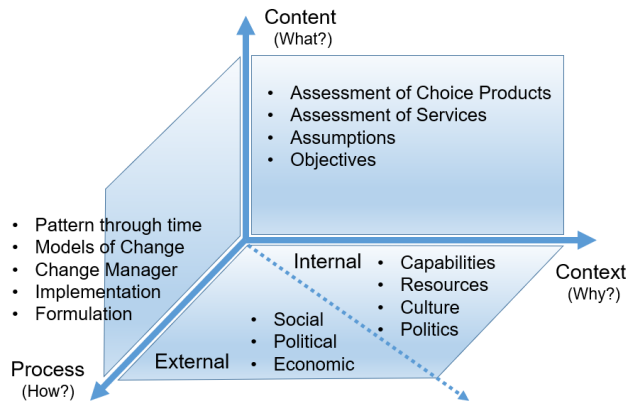


Figure 1. Three dimensions of strategic change, (adapted from [30]).

Although most change processes and methods have their own circumstances, certain commonalities can be identified on an overarching level. Experience in practice has shown that the three dimensions of strategy, structure and culture must always be considered in change processes, like Pettigrew’s 3 Dimension of Change. The definitions and understanding of *Content*, *Process* and *Context* used within this paper are based on the descriptions of [30].

4.1. Problem identification

The first step includes the specification of the research problem and its relevance for science and practice. The identification of the problem has already been done in the introduction and with the theoretical background. It was possible to show the importance of the MM for FPCs and thus the legitimacy of the model was created. The results are mainly based on a broad literature research and an intensive examination of the topic of OE-initiatives in the FPI. The MM is an established tool for the gradual and systematic development of skills, processes and structures of an organisation [34]. It consists of a logical sequence of different maturity levels (Figure 2) and describes the expected, typical and desired development path towards the target state of the organisation ([1], [11], [25]). For each maturity level, an appropriate designation and a description of the state must be defined. Furthermore, dimensions are defined in the MM [35]. These represent specific areas of ability for grouping and assessing the subject area and in turn each belong to one level [8].

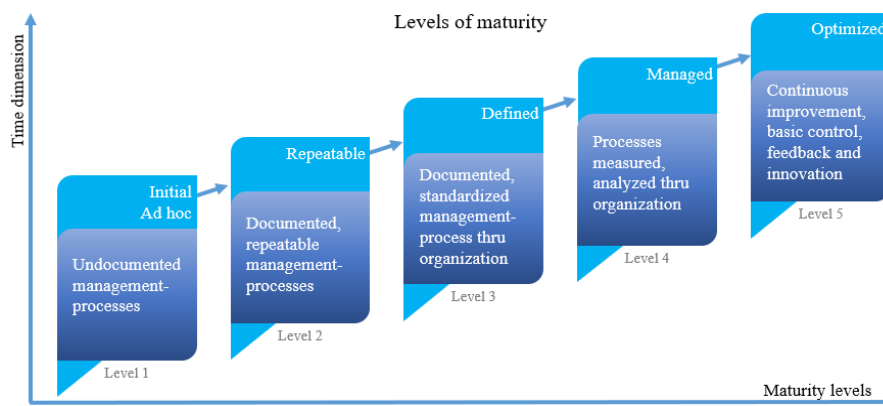


Figure 1. Level Maturity Model (adapted from [37])

The five maturity levels, shown above in Fig. 2, illustrate the evolving and improving processes from practice and experience. In the analysed FPC, this should lead to excellence in OE-implementation, with a focus on innovation and continuous improvement, and thus to long-term profit. The following analysis, using radar graphs, shows, that there are areas and processes within the FPC that are in different stages of development. Thus, for the future of the FPC, the goal should be to promote strategic alignment of processes so that the company will achieve a higher standard in OE.

4.2. Context elements

The *Context*-elements, relate to research activities dealing with contextual factors. These investigations focus on the forces and conditions that act through the external and internal environment of a research object. Results can be statements about the trigger or the barriers of changes as well as about the framework and conditions. [36], for example, regards political and economic influences as well as technological developments as *External Context*-factors (Table 1) for Strategic Change Management. *Internal Context* factors (Table 2) typically involve factors such as an organization's capabilities, resources, stakeholders and culture. *Context*-factors of OE-initiatives are internal and external conditions, forces, dynamics, stakeholder groups or events, which are based on the influence the effectiveness and sustainability of an initiative. They could be barriers or triggers of change. These are forces which cannot be influenced in the short and medium term. Every FPC should have a certain uniqueness of these factors. *Contextual*-factors can be integrated into external and internal institutional factors.

Table 1. External context-elements of CPC-MM.

External Context-elements	Description
Rivalry among competitors	Relocation to low-cost countries, Declining market growth in Europe, High R&D-expenditure and innovation-crisis, Low industry concentration and increasing number of Mergers & Acquisitions,
Threat of new competitors	Growing importance of the price-based plastic market, Market price erosions by plastic, glas and cardboard suppliers, Growing risk of brand entry by plastic suppliers from low-cost countries, High market entry barriers for new, research-oriented foot-companies.
Customers' bargaining power	Partnership as the most important selection factor, Lower market concentration among packaging vendors, Development of foot-market in low-cost countries,
Suppliers' bargaining power	Increasing demand for availability and proof of added value, Increasing forms of customer concentration compared to foot-companies.
Danger of substitution	Potential hazard from plastic, glas and cardboard for packaging.

Table 2. Internal context-elements of CPC-MM.

Internal Context-elements	Description
Plant staff	Existing knowledge and lived understanding of the core aspects of OE-programme.
Plant culture	All values, assumptions, patterns of thought and behaviour shared by the plant staff and & their managers, which are responsible for social cohesion, organisational change and the development of the company as a whole.
Plant mgmt. roles	How to support site management to promote OE-introduction.
Organization's resources	Integration of the OE-organization into the existing plant-organization.
Organization's adaptability	Ability of the plant as a whole to make far-reaching changes from within.
Headoffice support	Type and scope of the objectives and support provided by Headoffice to the plants.

4.3. Process elements

The *Process*-elements, provide information on how a change should be managed and which measures should be taken to implement it. They align changes with implementation, integration, adoption and acceptance. *Process*-elements (Table 3) are the flanking measures for the faster and broader introduction of *Content* under the orientation and influence of the *Internal* and *External Context*. The competence for change is based in particular on the mobilisation and management of resources in order to act or react to a specific, changed situation such as the implementation of a competitive strategy or the change in social trends. In these activities to mobilize and manage resources it can be practices and methods similar to the *Content*-elements. These are not the primary content of the initiative, but rather serve a more effective and sustainable implementation of the practices and methods of the *Content*. [27] distinguish, for example, in their investigations abilities to implement projects with the ability to coordinate between projects.

Table 3. Process-elements of CPC-MM

Prozess-elements	Description
Programme- mgmt.- initiative	The professional way in which project-, programme-management is carried out at a location.
Programme-integration	Activities and structures to which the OE-programme must develop links.

4.4. Content-elements

Content-elements, according to [27], focus on the actual substance of change. Research activities in this category typically attempt to define factors that distinguish successful from less successful changes. The focus is on how these factors have contributed to the change in overall organisational effectiveness. *Content*-elements (Table 4) of OE-initiatives are selected and purpose-oriented practices and methods, by which an improvement in the quality, productivity, flexibility and service level of the overall organisation should be achieved. These will be achieved in a certain context and through a process permanently implemented as routine practices or methods. The evaluation of the *Content* will consider the extent to which these practices or methods are applied in everyday business life [36].

Table 4. Content-elements of CPC-MM

Content-elements	Description
Standardisation	Standardisation and documentation of change processes with the help of a central document and project management system.
Technology deployment	Introduction and development support of modern process control technology. In particular, this aims to automate process control to a greater extent and is based on the understanding of the TQM-approach.
Employee commitment & continuous improvement	Standardisation and introduction of methods and techniques for workplace optimisation and problem solving. The aim is to understand change and improvement as typical. Especially based on the understanding of LP to demand even small changes at all levels. Within Headoffice this was introduced as the Level 1-method.
Process- & management-control	Elimination of process deviations and reduction of process variability, approach and methods are primarily derived from the Six Sigma- and TQM-concept. Within Headoffice this was referred to as the Level 2- and Level 3-methods.
Organisational learning	Documentation and exchange of best practices and experiences using modern information and communication technology to support implementation. For this purpose two knowledge management systems. On the one hand, so-called <i>Community-of-Practices</i> and on the other hand an IT-based project database have been created. While the first is based more on the personal face-to-face exchange, the project database system is based on the formalised documentation of all larger projects.
Flow principle & Kanban control	Alignment of production to the flow principle and introduction of <i>Kanban Control</i> to reduce throughput times. This is based on the principles from LP, waste to and make problems visible. Within Headoffice this was introduced as the Level 4-method.

The descriptive analysis of the constructs makes it possible to identify the current level of the executed OE-initiatives in the FPCs studied and the improvements that could be made by the companies in relation to the four CPC-dimensions. Table 5 shows an example of how the construct-mean values are presented in conjunction with the respective dimensions. The construct-mean represents the mean of the items that make up the constructs.

Table 5. Dimensions of CPC-MM

Dimensions	Abbr.	Constructs	Mean
Internal Context-elements	ICE.1	Plant staff	2.96
	ICE.2	Plant culture	2.86
	ICE.3	Head office support	3.45
	ICE.4	Plant management roles	2.95
	ICE.5	Organisational resources	3.55
	ICE.6	Organisational adaptability	2.22
External Context-elements	ECE.1	Danger of substitution	3.33
	ECE.2	Threat of new competitors	3.33
	ECE.3	Rivalry among competitors	3.46
	ECE.4	Suppliers' bargaining power	3.33
	ECE.5	Customers' bargaining power	2.23
Content-elements	CE.1	Standardisation	3.33
	CE.2	Organisational learning	2.96
	CE.3	Technology deployment	3.66
	CE.4	Flow principle & Kanban-control	3.21
	CE.5	Process- & management-control	3.15
	CE.6	Employee commitment & continuous improvement	2.33
Process-elements	PE.1	Programme-integration	2.13
	PE.2	Programme-management-initiative	2.85

The validation of the model was carried out by the author by means of an internal company audit in the FPCs which belong to the same group. Sample results for the three perspectives (Context, Process, Content) are shown from Figure 3 to Figure 5. Whereby, the Process- and Context-elements have been combined, due to the small number of only two Process-elements.

4.5. CPC-radar charts

The three CPC-radar charts (3 to 5) below show in detail that for most of the FPC’s dimensions is in a maturity level of three. Figure 6 gives an overview of all 4 dimensions. Thus, it is possible to identify their strength and weaknesses. Obvious is, that there is still bigger demand for improvement especially in the CE.6, PE.1, ECE.5 and ICE.6 constructs.

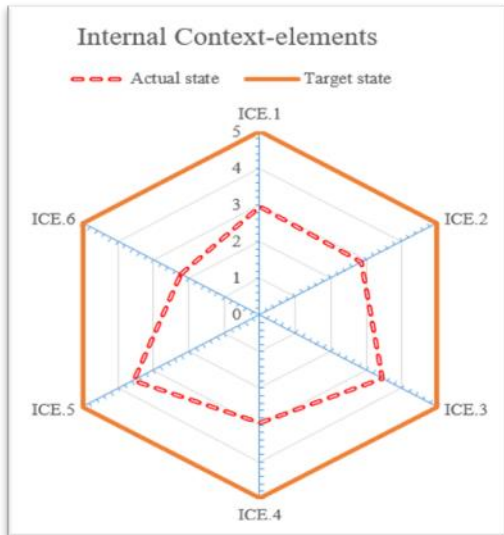


Figure 2. Internal Context-elements (by author, 2022)

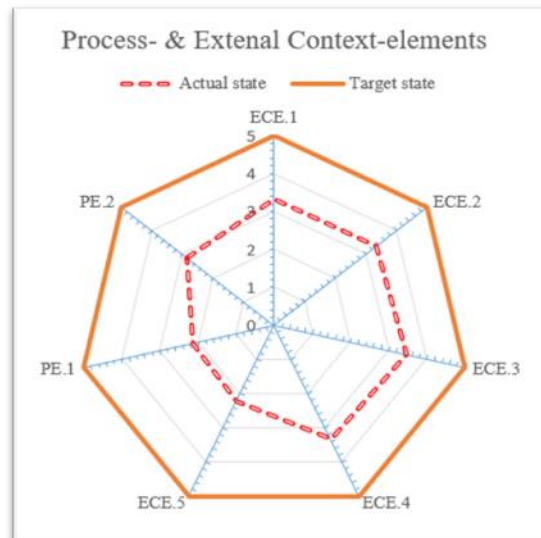


Figure 3. Process- & Ext. Context-elements (by author, 2022)

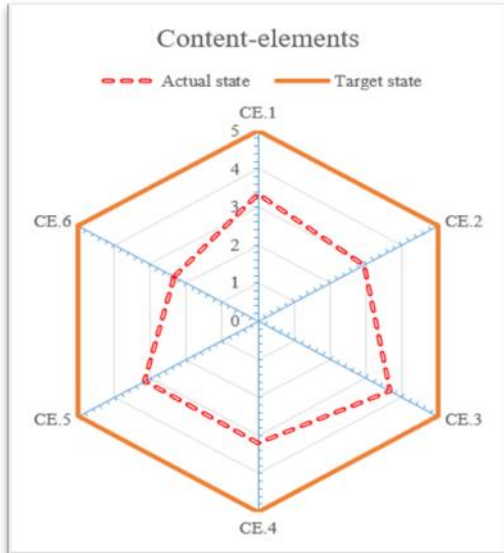


Figure 4. Content-elements

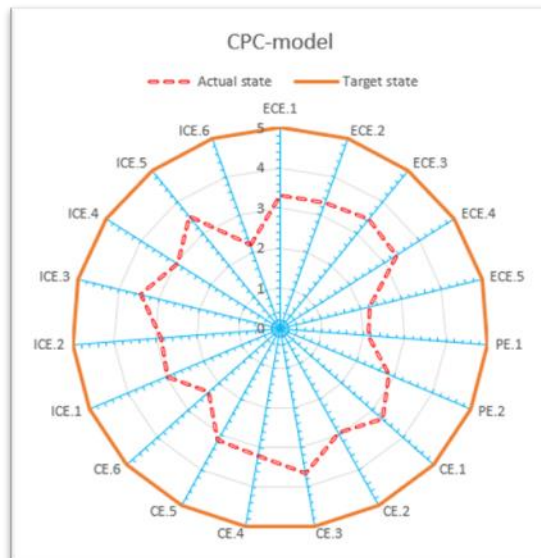


Figure 5. Overview of all 4 CPC-dimensions

The CPC-MM also shows which milestones the company should achieve in each case. The CPC-MM-specific results must be evaluated and communicated in each case in order to assess the extent to which the goals the company has set itself, such as greater innovative strength, improved reputation, or productivity gains, have been achieved. The cycle can then be repeated until the targeted maturity level is reached.

5. CONCLUSION

5.1. Summary and contribution

Due to a structured literature review the findings indicated that existing MMs only partially address the exploratory identified requirements. This research has proposed a generic methodology for the development of MMs in the area of OE. It was the author's aim to produce a consumable result. Thus, the value in the chosen methodology lies in the ability to develop a MM that is highly applicable. The value to OE applying such a MM lies in the ability to assess and measure plant's capabilities at a given point in time. This provides a plant with a better understanding of existing capabilities, enables benchmarking against a range of competitors, enables greater efficiency in the utilization of resources in improving plant's capabilities. It presents an opportunity for improved success.

5.2. Limitations and future research

This work is limited to the analysis processes in a plant in the FPI and the determination of the FPI maturity level with the developed MM. The MM was only used in plants of the same food-packaging organization. The MM presents an important step in understanding the extent to which the observed OE-MM struggle with its implementation and how proprietary plant applications relate. In a next step it would be very useful to apply this MM in other FPCs of the group as well. By means of benchmarking, the group-organisation could then better classify the results in comparison with their competitors. Future research could extend the MM to cover all areas of the company and thus provide a comprehensive overview of the implementation status of FPI.

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Appendix A - Table 6. Preceding Maturity Models (author’s work).

Acronym	Title of Maturity Model (MM)	Source
ACMM	Analysis Capability MM	Covey & Hixon, 2005
AMM	Agile MM	Anderson, 2003
biMM	Business Intelligence MM	Philippi et al., 2006
BPIF	Business Process Interoperability Maturity	AGIMO, 2007
BPMM	Business Process MM	Lee & Sungwon, 2007
BPMM	Business Process MM	Weber, Curtis & Gardiner, 2008
BPMM	Business Process Management Maturity	Rosemann, de Bruin & Power, 2007
BPMM	Business Process MM	Fisher, 2004
BSMM	Business Sustainability MM	Cagnin, Loveridge & Butler, 2005
CMM	Capability MM	Berg 2002
CMMI	Capability MM Integration	Chirissis & Kulpa, 2003
CMMI-ACQ	Capability Maturity Model Integration for Acquisition	2010
CMMM	Configuration Management MM	ADSE, 2005
COBIT	Control Objectives for Information & related Technology MM	ISACA, 1993
CobIT	CobIT MMs	IT Governance Institute, 2007
CpMM	Change Proficiency MM	Dove, Hartman & Benson, 1996
DPMM	Documentation Process MM	Cook & Visconti, 2000
EAMM	Enterprise Architecture MM	NASCIO, 2003
eMM	E-Learning MM	Marshall & Mitchell, 2002
eSCM-CL	eSourcing Capability Model for Client Organizations	ITSqc, 2003
EVM3	Earned Value Management MM	Stratton, 2006
FEMM	Further Education MM	Boehm, Jasper & Thomas 2013
GPM	Geschäfts Process Management	Schmelzer & Sesselmann, 2020
IC/ICT CMF	IS/ICT Capability Maturity Framework	Renken, 2004
IPMM	Information Process MM	Hackos, 2004
IQMM	International Quality MM	Qimpro, 2002
KMCA	Knowledge Management Capability Assessment	Freeze & Kulkarni, 2005
KMMM	Knowledge Management MM	Ehms & Langen, 2002
MITO	MM for IT Operations	Scheuing, Frühauf & Schwarz, 2000
MM-PMS	MM for Performance Measurmenet Systems	Küng & Wettstein, 2003
OMM	Outsourcing Management MM	Fairchild, 2004
OSMM	Open Source MM	Golden, 2005
P3M3	Portfolio, Programme & Project Management MM	OGC, 2008
P-CMM	People Capability MM	Curtis, Hefley & Miller, 2001
PEEM	Performance Engineering MM	Schmietendorf & Scholz, 2000
PEMM	Process & Enterprise MM	Hammer, 2007
PM2	Project Management Process MM	Kwak & Ibbs, 2002
QMMG	Quality Management Maturity Grid	Crosby, 2000
SA-CMM	Software Acquisition Capability MM	Cooper & Fisher, 2002
SCPM3	Supply Chain Process Management MM	de Oliveira, Ladeira & McCormark, 2011
SCOR	Green Supply Chain Operations Reference MM	supply chain council, 1996
SMM	Sustainability MM	Ecomaters, 2013
SMMM	Sustainability Managment MM	Mani, Lyons & Sriram, 2010
SOAMM	Service-Oriented Architecture MM	Sonic Software, 2006
SPICE	Software Process Improvement & Capability Determination	Kneuper, 2006
SSECMM	Systems Security Engineering Capability MM	SSE-CMM Project Team, 2003
TMM	Testing MM	Burnstein et al., 2008
UMM	Usability MM	Earthy, 1998
WSMM	Web Services MM	Sprott, 2003

include a subheading within the Appendix if you wish.

Demand Forecasting in Automotive Sector

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Abstract

In order to improve customer satisfaction and supply chain efficiency, supply chain management strategies began to shift toward to the first step of supply chain; which is demand planning. The automotive industry in the twenty-first century has created significant opportunities while also placing pressure on manufacturers to improve quality, improve styling, increase organizational efficiencies, and include innovative features in their products in order to attract customers and expand into new markets, thanks in large part to globalization. Because of these obstacles, car manufacturers must be adaptable and sensitive to client needs if they are to prosper. Therefore, this study focuses on demand forecasting. Demands in automotive sector in United Kingdom Market is forecasted employing multiple linear regression method.

Keywords: Automotive Market, Forecasting, Supply chain management

1. INTRODUCTION

Today's globally changed world, especially after Covid-19 Pandemic, supply chain systems gained even more importance than ever before. With the competitive market, customer demand needs to be immediately satisfied; "how" is irrelevant. Businesses must increase the efficiency of their supply chains now more than ever in order to preserve a competitive advantage. The lean manufacturing and just-in-time (JIT) inventory control concepts that propelled companies like Toyota, Dell, and Walmart to the top of their respective sectors are still valid. Moreover, leading businesses are using advanced analytics and new technologies to make their supply chains more responsive to client demand. Customers have become more demanding with growing preferences as a result of severe competition, fluctuating market demand, and expanding customer expectations. This is due to market changes such as shorter product life cycles, more competitive product releases, and demand volatility, all of which make life-cycle demand more uncertain and difficult to forecast [1].

In order to improve customer satisfaction and supply chain efficiency, supply chain management (SCM) strategies began to shift toward to the first step of supply chain; which is demand planning. JIT, supplier base rationalization, virtual inventory, outsourcing, tailored and worldwide networks, material, capacity, and time buffer reduction, and a reduction in the number of distribution facilities have all improved supply chain performance, notably in terms of cost reduction. However, the demand planning gained more and more importance especially after the modern humanity experienced a pandemic.

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Demand planning is realized by forecasting. Forecasting is a technique which predicts the future trends based on historical data [2]. They are used for marketing, purchasing, manpower, financial planning, production. Long term strategic decisions are influenced by forecasts. Companies use objective and subjective factors while forecasting, usually human insight/input is needed to take some action. Customer's past behavior can tell a lot for the firms and companies must have a balance with these historical data, factors that may affect the future trends and finalize their predictions as forecasts. Therefore, market knowledge is essential to forecasting. There are also other factors that may affect forecasting:

- Past demand
- Lead times
- Marketing promotions
- Planned advertises
- Price discounts
- Economic conditions in the country
- Competitors

The automotive industry in the twenty-first century has created significant opportunities while also placing pressure on manufacturers to improve quality, improve styling, increase organizational efficiencies, and include innovative features in their products in order to attract customers and expand into new markets, thanks in large part to globalization. Because of these obstacles, car manufacturers must be adaptable and sensitive to client needs if they are to prosper. Therefore, this study focuses on supply chain management, especially demand forecasting. Demands in automotive sector in United Kingdom (UK) Market is forecasted employing multiple linear regression method.

2. CASE STUDY

Automotive sector is famous for adopting mass production since the beginning of the sector's emerging. While Henry Ford benefited from economy of scale with use of mass production, the sector had come a long way and adopted mass customization method. In this method, usually the hybrid model of pull-push strategies are used for car production. With Toyota's groundbreaking supply chain strategies, many companies in this sector embraced their supply chain improving policies.

Based on the forecasts, material parts ordering is realized. Usually, the parts are country specific and cannot be substituted for one another, thus, material ordering is extremely significant as the production may not cover the demand unless the right amount of materials are supplied. On the other hand, factory does not prefer the cautious material stocking policy due to excess material risk. Supply chain strategies such as Just In Time, supplier park and so on are not available; which makes forecasts even more significant. Gross materials such as engine are usually imported and have relatively long lead times; around 50 days. There is no possibility of air freight for these gross materials, production of these cars would be postponed in any case of material constraint.

Forecasts are used for all European countries. There are distributors throughout Europe and they are expected to conduct their own forecast calculations. However, distributors depend on dealers and in some cases, they have no expertise in supply chain and demand planning. For these situations, the factory is responsible for forecasting.

In this study, UK is selected for forecasting practices. In order to do forecasting accurately, factors that affect forecasting are identified as

- Order history
- Sales
- Stock levels
- Market situation
- Competitors
- Promotions

B SUV hybrid model launched in UK market just before the Covid19 pandemic hit, which made forecasting harder than before. Model and the market are fairly new, market is unsaturated and hungry. UK has an increasing trend in orders. They made conservative order inputs at the start but as progressed in time, total of orders increased as shown in Table 1.

Table 1. Order history of UK market

Order	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Year1						160	170	190	210	220	220	220
Year2	240	250	280	310	310	320	340	350	360	360	370	400
Year3	410	420	420	430	500	530	550					

When we look at the sales, given in Table 2, it is similar to orders but more balanced. Sales don't have big fluctuations despite of the pandemic.

Table 2. Sales history of UK market

Sales	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Year1						190	190	180	270	230	230	240
Year2	260	240	200	250	250	230	280	280	240	250	290	350
Year3	240	220	250	330	260	260	240					

With pandemic, many supply constraints hit the market, which ultimately decreased the number of available cars in the market. Thus, the customer focus shifted to the cars manufactured, they started to purchase what was offered. In that incident, stock levels affected the customer because they preferred brands which could produce cars.

When the sales hit rock bottom in the pandemic, brands adjusted their marketing strategies and started to do promotions. The distributor was one of them, especially right after the effects of the pandemic started to fade; they made promotions which attracted the customer attention.

Discount refers to the price reductions between the factory and the distributor. Distributors have the right to negotiate their own purchase prices, and with the pandemic, they started to bargain more than ever. Discounts were applied to support the wellbeing of the distributor.

Some of the plants' production volumes declined with the pandemic, shut downs happened, backorder levels inflated. After the production resumed, the extra hours needed to deplete the backorders. UK was one of the preferred distributors, their backorder levels declined through time.

Multiple regression is applied for UK forecasts. The factors that affect the forecasts are stock level, sales, promotion, discount and backorder level. Sales figures are reflected, stock levels are categorized as high, medium, low, very low; promotion and discount are reflected based on their presence, backorder levels are reflected as very high, high, medium, low, very low. When we look at the sales, it is similar to orders but more balanced. Sales don't have big fluctuations despite of the pandemic. The data is provided in Table 3.

Table 3. Data of UK market

Time	Demand	Stock Level	Sales	Promotion	Discount	Backorder Level
1	160	2	190	1	0	5
2	170	3	190	1	0	5
3	190	2	180	1	0	4
4	210	1	270	1	0	4
5	220	3	230	1	0	3
6	220	2	230	1	0	3
7	220	3	240	1	0	3
8	240	1	260	1	0	3
9	250	2	240	0	1	3
10	280	2	200	0	1	3
11	310	0	250	0	1	2
12	310	0	250	0	1	2
13	320	2	230	0	1	2
14	340	1	280	0	1	2
15	350	0	280	0	0	1
16	360	2	240	0	0	1
17	360	3	250	0	0	1
18	370	0	290	0	0	1
19	400	0	350	0	0	1
20	410	2	240	0	0	1
21	420	3	220	0	0	1
22	420	1	250	0	0	1
23	430	3	330	0	1	1
24	500	2	260	0	1	1
25	530	3	260	1	1	1
26	550	3	240	1	1	1

Based on the regression analysis, predicted demand chart is shown in Figure 1.

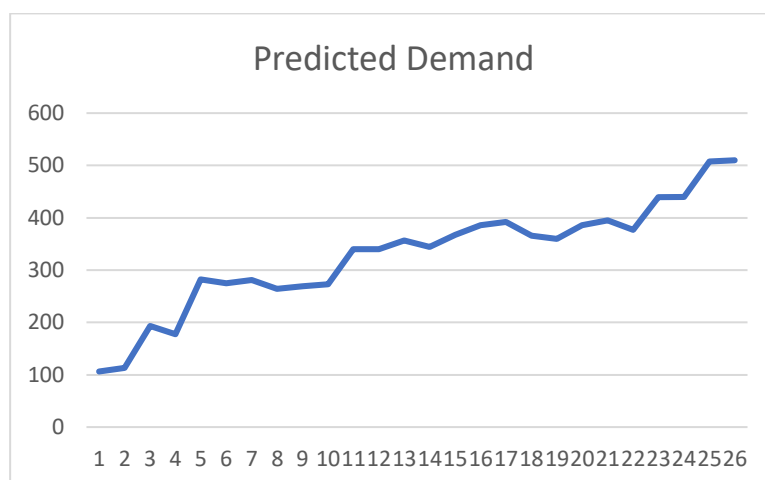


Figure 1. Predicted forecasts of UK market

3. CONCLUSIONS

To manage customer demand, appropriate demand planning is essential in efficient supply chain management systems. Statistical forecasting approaches are very effective, particularly when the historical data sets are available. This study aimed to forecast automotive demand for UK Market. Multiple linear regression method, which is appropriate for a growing and expanding market, is employed. Future researches will focus on applying different forecasting to different markets.

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Why do Academics Need Standards?

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Abstract

Standardisation is an activity of development standards and standards might be defined as an agreed way of doing something. Without standards, wide use of modern technologies would not be possible. Many organisations provide frameworks or environments for experts with specific knowledge to join their effort in developing standards. Through standards, research results have been changing lives for hundreds of years. The world of standardisation is dynamic and needs academics, the same as academics need standards. This study focuses on a one-way connection: Why do academics need standardisation and its results standards? Academics may benefit from using standards and participating in standards development in many ways. This study aims at systematising the main reasons for that. There is a significant gap between the academic and the standardisation community on using standardisation and the standards it leads to as a tool for commercialisation, especially compared to the other channels (such as the IPR). This study aims at contributing to closing this gap. It does so mostly by drawing upon the current literature on why do academics need standards, the motives to use standards and the motives to participate in standards development.

Keywords: standards, standardisation, motives, benefits, academics

1. INTRODUCTION

Standardisation and its results standards have been acknowledged as a tool that academics may use for the valorisation, commercialisation, and subsequent use of their research results. However, academics do not use standards and participate in standards development to a sufficient extent. One of the reasons for that might be that they rarely have the opportunity to learn more about standardisation through higher education and their academic practice. Following the same reasoning, the European Commission (EC) has recently initiated a scoping study aimed at determining elements of good practice for academics dealing with standards and standardization, especially considering research projects funded by Horizon 2020 (the European Union R&I framework program for 2013–2020) [1]. Some of the key findings confirmed that standardisation is still not widely accepted as a tool to commercialise research results and is not even mentioned in several recent studies exploring the other commercialisation channels [1]. There is a significant gap between the academic and the standardisation community on using standardisation and its results standards as a tool for commercialisation, especially compared to the other channels (such as IPR). This study aims at contributing to closing this gap. It does so mostly by drawing upon the current literature on why do academics need standards, the motives to use standards and the motives to participate in standards development.

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2. LITERATURE REVIEW

Standardisation is an activity of development standards and standards might be defined as an agreed way of doing something. Without standards, wide use of modern technologies would not be possible. Many organisations provide frameworks or environments for experts with specific knowledge to join their effort in developing standards. Standards are developed by a joint effort of experts with specific knowledge. Even if a few groups of experts develop them, voluntary consensus-based standards may be used by all. Through standards, research results have been changing lives for hundreds of years. Scientific discoveries, such as the telegram, the railway, the telephone, electricity, mobile telephony, and the internet eventually became available to everyone because manufacturers and industries have developed and used standards. Standards offer solutions for a broad range of problems. The world of standardisation is dynamic and needs academics, the same as academics need standards. This study focuses on a one-way connection: Why do academics need standards and standardisation? Academics may benefit from using standards and participating in standards development. The main reasons for that are systematised in the following paragraphs.

2.1. *Enhancing the quality and interoperability of research processes and research data*

Academics may use standardisation and its results standards to ensure the quality and interoperability of research processes [2]. Standards manage efforts between academics in different locations and enhance academics' work by ensuring ways to acquire, share, and communicate data from multiple sources [2]. For example, euroCRIS promotes the interoperability of research data through the CERIF standard [3]. Following the same reasoning, ORCID allows research organisations to easily access and manage information about researchers and their results. The ORCID iD is an https URI with a 16-digit number that is compatible with ISO 27729, also known as the International Standard Name Identifier (ISNI) [4]. The use of standards seem to be crucial for research data to be findable, accessible, interoperable, and reusable [5], and the role of public policy is to ensure compatible and interoperable solutions [6].

2.2. *Ensuring the safety of research results*

Academics may use standards to ensure the safety and efficacy of research results [2]. New technologies, such as genomics, proteomics, and metabolomics, are accepted in the markets because of the use of existing safety standards [2]. Safety standards are crucial "when risky nanotechnology products are introduced to the market" [7]. It is also necessary to address the requirements in time "to avoid frictions and problems of the market introduction phase" [7]. Quality, health, and safety standards are crucial for market introduction, especially by overcoming barriers and reducing the risks of these technologies [6]. Academics may use standards to establish and enforce the organisational framework to develop new technologies & establish safety procedures to do so in a controlled manner [8].

2.3. *Ensuring common best-practice solutions*

Standardisation and its results standards are used to ensure common best-practice solutions within a specific area of competence and expertise. There are plenty of examples of formal and informal standards used by academics in different fields to ensure common best-practice solutions within a specific area of their competence and expertise. One of the reasons to do so is to prevent academics from "reinventing the wheel" or "plowing the same field twice". When deciding to use or develop standards, academics shall avoid "starting from a blank slate". Rather, they shall use standards as a starting point to develop a solution to an existing or potential problem(s). By using standards, academics may avoid the duplication of efforts, solve today's problems, and even develop tomorrow's advances [9].

This might be explained through the International Nursing Association for Clinical Simulation and Learning (INACSL) which aims at developing evidence-based Standards of Best Practice (SoBP) for clinical methodologies [10]. By standardizing clinical simulation methodologies through SoBPs, INACSL ensures "an effective framework to enhance communication and optimize consistency in education, clinical practice, research, publications, and simulation-related activities" [10]. Similarly, the International Stem Cell Forum (ISCF) aims at creating a common best-practice protocol for culturing/characterizing cells [2] and the European Association for Forensic Entomology (EAFE) aims at developing a best-practice protocol for forensic entomology [11]. Together with the terminological database, the best-practice protocol contains an overview of the equipment used and methods applied to collect

entomological evidence by a wide variety of professionals, such as pathologists, entomologists, and police officers [11].

As a part of the METabolomics standaRds Initiative in Toxicology (MERIT), there are several efforts aimed at ensuring common best-practice solutions within the metabolomics community [12]. There are plenty of standards developed in the field of transcriptomics, RNA sequencing, and proteomics (e.g. Proteomics Standards Initiative), as well as standards developed by the MERIT project, that are meant to be used as common best-practice solutions [12]. Also, the OECD Extended Advisory Group on Molecular Screening and Toxicogenomics (EAGMST) has established an initiative to develop Omics Reporting Frameworks (ORFs) specifically for regulatory toxicology [12]. These metabolomics guidelines within the MERIT are currently being developed with the OECD expert groups developing both the OECD Transcriptomics Reporting Framework and the Metabolomics Reporting Framework [12].

Another example of promoting common best-practice solutions of software systems in the digital era may be the standard EN IEC 62853:2018 "Open systems dependability" as it ensures digital infrastructure that powers our environment [13]. The standard EN IEC focuses on open systems dependability as "the ability of a product to do its job when required and for the duration desired without encountering problems" [13]. Open systems must be seen as dependable solutions, especially to complex situations that no single actor involved may completely understand [13]. Some typical examples are autonomous systems that seem to be "much more exposed to attacks by malware" [13].

2.4. Ensuring the achievement of joint agreements leading to interoperability, compatibility, and terminology

Academics may use standards as a tool to achieve joint agreements leading to interoperability, compatibility, terminology, etc. [7]. In this context, standards "serve as a handshake between various components of systems" [14]. Within ICTs, standards are mostly developed to achieve interoperability [15]. For example, over 251 technical interoperability standards are implemented in laptops [16]. Another example is the IEEE Standard for Intercloud Interoperability and Federation (SIIF) which aims at solving cloud interoperability (and portability) issues [17]. Initially, Semantic Web Technologies established by W3C such as the Resource Description Framework (RDF), SPARQL, and Web Ontology Language (OWL) have been used to achieve interoperability across heterogeneous environments in many different areas, including IoT [18]. To date, several standards bodies, consortia, and alliances have developed standards to solve interoperability issues between IoT devices, networks, services, and data formats, such as Open Interconnect Consortium (OIC) (IoTivity20), AllSeen Alliance (AllJoyn), oneM2M21, OMA LWM2M22, ETSI M2M23 [18]. By offering rules, protocols, guidelines, and suggestions (that may or may not be approved by a recognised body), standards that support interoperability are crucial to overcoming barriers to IoT [19].

Within the Agricultural Model Intercomparison & Improvement Project (AgMIP), interoperability across crop models may be achieved by using "a standardized data exchange mechanism with variables defined by international standards" [20]. The standard EN 16868:2019 "Ambient air – Sampling and analysis of airborne pollen grains and fungal spores for networks related to allergy - Volumetric Hirst method" sets rules that enable the interoperability of more than 400 pollen monitoring stations across 30 countries [13]. Additionally, the standard EN 16798-1:2019 "Energy performance of buildings - Ventilation for buildings - Part 1" gives criteria "to be used in standard energy calculations for indoor environments meant for human consumption". It does so not by specifying design methods – manufacturers may choose design methods on their own – "but it specifies parameters that need to be respected in the design of building heating, cooling, ventilation and lighting systems", thus making them more energy efficient [13].

Within digital medicine, structured data exchange is supported by international SDOs such as Health Level Seven International (HL7) and Integrating the Healthcare Enterprise (IHE), which set out IT standards and their use across systems [21]. For example, HL7 Fast Healthcare Interoperability Resources (FHIR) standard defines "around 140 common healthcare concepts, so-called resources, which can be accessed and exchanged using modern web technologies" [21]. Another example is the openEHR standard "which allows medical professionals and IT experts to define clinical content using so-called archetypes and specifications of clinical concepts based on an underlying reference model" [21]. Additionally, several terminology standards such as SNOMED CT, Logical Observation Identifiers Names and Codes (LOINC) for laboratory observations, the Identification of Medicinal Products (IDMP) for medicines, the nomenclature of the HUGO Gene Nomenclature Committee (HGNC) for genes, the Human

Phenotype Ontology (HPO) for phenotypic abnormalities aim at ensuring the data exchange within digital medicine [21].

2.5. Shaping practices that lead to innovation

Although it seems that standardisation "chokes" innovation, these are iterative stages of continuous improvement, codifying and spreading the state-of-the-art within numerous areas and bridging the gap between research and end-products/services. Standardisation may be seen as the basis for innovation which facilitates the introduction of innovative products by providing interoperability between new and existing products, services, and processes [22]. If innovative products and processes become successful, they shall be brought to a standardized format [23]. Accordingly, the accumulation of standardisation knowledge mediates the relationships between R&D novelty and administrative and technical innovation performances [24]. Standards can positively affect technological innovation in various sectors, such as the environmental industry [25], ICTs, photovoltaic's technology, public procurement, nanotechnology, pharmaceuticals, and the defense industry sector [26]. The standard EN 50342-6:2015/A1:2018 "Secondary cells and batteries" applies to so-called "starter batteries" with a nominal voltage of 12 V which are meant to be used mainly as the power source for starting the Internal Combustion Engines (ICE), lighting, as well as, the auxiliary equipment [13]. These batteries are mainly used within the Start-Stop vehicles: vehicles in which the ICE can be switched off during stopping or idling without the need to support the vehicle movement by the ICE [13]. If the system "allows an increase in energy efficiency, it requires special types of batteries, as they are stressed in a completely different way compared to classic starter batteries" [13]. Additionally, the standard EN 17351:2020 "Bio-based products - Determination of the oxygen content using an elemental analyzer" gives a direct method for "determining the total oxygen content in bio-based products, thus allowing the certification of bio-based products using standard methods for all relevant elements" [13]. The standard describes the test method to be used within manufacturers, suppliers and distributors of bio-based products, but may be used within authorities and regulators [13].

2.6. Enhancing scientific cooperation

Standardisation and its results standards allow academic community members to communicate with one another [2]. These links among academic community members (e.g. academics, researchers, and regulators) seem to be crucial to the regulatory process that determines whether new products can enter the market [2]. There are plenty of examples of omics-related standards that have been used to enhance scientific cooperation, such as standards for metagenomic publication records [27], data annotation [28], and data exchange formats and controlled vocabularies [29]. Accordingly, several data standards may be used to achieve digital cooperation, and organisations of all sizes (public, private, profit, or non-profit) shall use these standards to collect data via collaborative platforms to solve longstanding problems [14]. Similarly, technological standards enforce global cooperation and seem to be the most useful when "cooperation is difficult to enforce and requires some costly and lengthy domestic adjustments" [30]. For example, fuel efficiency and motor vehicle emission standards are necessary to enforce scientific cooperation and academics and policy-makers must participate in standards development to enforce the greenest technologies around the world [31]. These technological standards shall encourage scientific cooperation, thereby complementing International Environmental Agreements (IEA) [32]. Drawing upon artificial intelligence (AI), standards serve as a means of communication among labs around the world and might, eventually, lead to positive AI research results [8].

Participation in standards development strengthens the links with other academic community members and monitors the activities of their colleagues working within the same scientific field [7]. Academics are also concerned with scientific breakthroughs, high-quality scientific publications, and their reputation within the academic community [33]. So, evaluating research results solely based on scientific breakthroughs and high-quality scientific publications might cause constraints, especially if standardisation-related activities are not considered [33]. Despite the tremendous significance of standardisation-related activities for enhancing scientific cooperation among academic community members around the world, these activities have not been paid the attention they deserve [33].

2.7. Converting research results to innovative technologies, products, and services

Academics may use standardisation and its results standards to convert their research results to innovative technologies, products, and services [6]. Standards mediate and affect knowledge sharing [2], especially standards that are generated through a voluntary consensus-based process [6]. This is especially relevant for all actors involved in or responsible for standardisation, such as formal organisations for standardisation, professional and industry associations, business associations, consortia, fora, educational organisations, and the government [6]. Standardisation shall be seen as a knowledge-sharing and even a knowledge-creating process, as it gathers actors from different sectors and educational backgrounds to work around the same goal [6]. Standardisation codifies existing knowledge within standards and exchanges and creates new knowledge [6]. This knowledge is often tacit and linked to individual members of the academic community [7]. Standardisation may also be used to gain a technological advantage, especially compared to the ones that are not involved [7]. Successful standardisation and its result standards are based on academics' participation in the standardisation process and standards development [7].

2.8. Ensuring commercialisation of research results

Considering that the economic efficiency of publicly funded research programs is only realised if such publicly funded research results are commercialised via standards [6], academics may use standardisation and its results standards as a tool to commercialise research results and even ensure future funding by companies [7]. Originally, commercialisation mainly included patenting and licensing of research results, but it has recently shifted to participation in standards development and standards it leads to [15]. Compared to patents, standards are available to everyone at a low cost and are more likely to be used because a consensus has been reached on their requirements [6]. So, standards development shall be seen as a great opportunity to commercialise research results directly "by referencing one's patents in standards and indirectly by using standardisation as an opportunity to establish collaboration with companies as a starting point for raising funds for common research projects or contract research" [34]. This is especially true for emergent fields like nanotechnology in which standard technical committees and working groups anticipate the evolution of technology and support its expeditious development and market entrance [35]. Other examples are standards and technologies that will accelerate 5G commercialisation [36], standards developed to achieve interoperability [16], or standards relevant to the emerging biomedical field of microfluidics [37].

2.9. Ensuring the subsequent use of research results

Academics may choose to convert their research results to standards to ensure the subsequent use of these results and use the chance to explain to the academic community not only what the results are but also how to use them [38]. Although all results cannot be converted to standards, they can always offer valuable support to the new or existing set of standards (e.g. through the validation methods of test methods) [38]. For example, if, as the result of your research, you have developed a specific procedure or a common protocol to overcome some serious constraints, you may have set a basis for a standard. Contrary, if you are mainly using only existing procedures (e.g., to describe a new material), it seems unlikely that you have developed anything that may be a basis for a standard [38]. Although you have developed a specific procedure or a common protocol, it does not necessarily mean that such a standard does not already exist [38]. There is a significant gap between the academic and the standardisation community, so the first step might be to search for the existing standard relevant to the specific subject. If despite tremendous efforts, you still cannot find the relevant standard(s), the solution might be to develop them alone or in cooperation with other parties [38]. It may be challenging to create a comprehensive list of research results suitable for standardisation. So, if you have developed a specific procedure or a common protocol (e.g. for preparing, characterizing, identifying, manipulating, verifying, etc.), or if you have updated an existing procedure or a protocol to allow its use at a different length scale or under an extended set of conditions, it is likely that your research results could be used as the basis for a standard [38]. Contrary, results that are not suitable for standardisation are data to be used within one particular system (although it may be used for a case study to be included in the standard); methods, processes, and protocols that depend on the use of patented equipment or that you are currently aiming to patent, that have not yet been validated, or you there is no general interest in your results in the standardisation community [38].

2.10. Supporting the regulatory framework

Scientific activities are bound by the policy and regulatory frameworks that determine priorities, facilitate the allocation of resources, enforce the regulations about the research processes, and determine the parameters for the subsequent use of research results [2]. Innovative technologies (and the standards they are based upon) must ultimately engage the regulatory practices at the national level to ensure the quality and safety of new products and services, especially those evolving through omics sciences [2]. There are several examples of standards ultimately engaging the regulatory practices in omics science. For example, several meta-data standards capture the needs of those working in environmental omics, especially if these experiments are to be used in regulation and policy (e.g., chemicals management) [39]. Similarly, several reporting standards for metabolomic and metabonomic studies address the significance of these standards for scientific bodies, policy and regulatory offices, and funding agencies [40].

3. CONCLUSION

Academics may benefit from using standards and participating in standards development in many ways. This study aimed at systematising the main reasons for that. One of the main benefits might be preventing academics from "reinventing the wheel". Besides knowing that standards may prevent academics from "plowing the same field twice", academics shall use standards to commercialise research results. Compliance with standards is necessary for the commercialisation of research results and innovations and the use of safety standards or standards that define minimum quality and safety requirements of products, services, processes, or systems is a prerequisite to marketing any solution. Compliance with interoperability and compatibility standards open the potential for better market acceptance.

Existing standards cover a wide variety of subjects, from requirements for products, services, processes, or systems, symbols, organisational activities, terminology, and so many others. They can be developed at different levels – company, association, national, regional, and international. Many organisations develop standards mainly by providing an environment for experts to join their efforts in developing standards. Finding the proper standard or noticing that the market needs a new one can be challenging in such an environment. The majority of organisations that develop voluntary consensus-based standards, such as National Standardisation Bodies (NSBs), European organisations for standardisation (CEN, CENELEC, and ETSI), and international organisations for standardisation (ISO, IEC, and ITU) have offered support to academics to assist them to address standards in their fields of interest.

People tend to think that standards are too technical and focused on engineering. Most of them are. Many standards currently exist, as well as, the potential to develop new ones in some areas that are not predominantly engineering. Over 50 years ago, Verman stated that "technological standards help regulate society insofar as its technological needs are concerned in the same way as cultural standards serve to regulate society in the sociological sense" [41]. Nowadays, modern standards have been developed in many areas and the possibilities for participating in standards development are numerous. However, developing standards or related documents needs time and substantial effort. In many cases, standards are not fast solutions. To compensate for this problem, many organisations have developed fast-track procedures that might be suitable for academics and the dissemination of results of their research projects.

Developing a standard or a related document is a collective effort. It requires a consensus of a group of experts and other stakeholders who are interested in the subject matter. For academics, scientific cooperation through R&I projects is a primary source of creating and acquiring knowledge. Accordingly, the dissemination of research results through academic papers is still the dominant way. However, it is still focused mainly on the academic community. To reach the industry, standardisation (and the standards it leads to) might be a valuable tool for the valorisation, commercialisation, and subsequent use of research results. There is no better signal for industries that one solution is worthy of their attention (and use) than research results or solutions becoming a part of an existing standard or a related document. That comes with a price. The time required for developing a standard or a related document is often longer than the project's duration. Many projects do not have a budget for standardisation-related activities. Having that in mind, some calls for European projects have an immediate requirement related to standard activities, and academics and universities tend to increase their standardisation-related competences by contacting their NSBs or other standardisation organisations.

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Digital Euro - Advantages and Disadvantages

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Abstract

The ECB proposes to introduce digital euro, which would be similar to euro banknotes and have the same value, but would be in digital form. It would be e-money issued by the Eurosystem and available to all individuals and businesses. The paper examines the potential advantages and disadvantages associated with the introduction of the digital euro. One of the potential problems discussed is the restriction of deposits in commercial banks. Although the final introduction of the digital euro is far away, the ECB foresees that it will have to restrict deposits that use the digital euro.

Keywords: ECB, digital euro, Eurosystem, bank, banknotes

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Behavior Innovativeness. Does it Have Impact on Technoparks Companies' Performance?

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Abstract

Purpose - The innovation orientation (IO) is a multidimensional construct consisting of strategic, product, process, marketing, and behavioral dimensions (Ellonen, Blomqvist, Puumalainen 2008; Wang and Ahmed, 2004, Semerciöz et al., 2011). The Behavior Innovativeness Dimension (BID) of IO measures the willingness of employees, and managers to initiate innovation, and bring new ideas, and improvements to “daily light”. It also demonstrates the innovative culture of the company (Rubio, Argón, 2009). The goal of the research is to measure the level of the BDI of technoparks companies and check if BID has a positive impact on financial performance.

Design/methodology/approach - The study examines the construct of IO of companies in technology parks in Poland underlying BDI. Own research results are presented conducted on companies from technology parks in Poland.

The method used for performing empirical research Computer Assisted Telephone Interviewing. The sample included 151 companies located in 32 technology parks in Poland. The Wang and Ahmed (2004) 7-point Likert scale for OI was used. Structural Equation Modeling was implemented. The conceptual model's testing of the study hypothesis was based on the AMOS regression technique. The research was founded by the Jan Kochanowski University funds allocated to the project SUPB.RN.21.034.

Findings - The findings showed that there is no significant relationship between BDI and the company's financial performance in the structural model. More particularly, the financial performance of companies in technology parks in Poland is not impacted by the value of BDI.

Research limitations - The non-random selection method used - selection based on the availability of respondents means that the results should not be generalized to the entire population. Data consisted of polish technology parks firms and inference to other countries should be made with caution. National culture and tradition may influence innovation orientation dimensions, especially behavioral ones.

Keywords: behavioral innovativeness, innovation orientation, technology park

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Measuring Efficiency and Effectiveness of Municipal Projects

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Abstract

Most often, project management goals lead the project to an ideal quality, standing budget and schedule, and achieving customer satisfaction. Project management in municipal infrastructure deals with accompanying the developer (municipal authority), planning management, approving budgets with relevant regulators, viewing and removing bureaucratic barriers, coordinating stakeholders, and controlling the contractor until delivery of the project to the client. We examine the performance of municipal projects and the degree of stakeholder involvement. The analysis focused on 50 municipal infrastructure projects completed in the last two years and carried out in Israel. We used DEA Data Development Analysis to examine the relative efficiency of project implementation. The analysis is according to project characteristics and criteria such as stakeholder involvement, contribution to sustainability, environmental harm, residents' complaints, risks, and uncertainty at the beginning of the project. We indicate a budget and schedule deviations and general satisfaction with the project. Preliminary results indicate a high contribution of stakeholders and their degree of involvement in the relative efficiency of projects. Therefore, this ongoing research will contribute to the success of municipal infrastructure projects by establishing a policy of allocating resources to municipal infrastructure projects following the level of decision-makers and their impact.

Keywords: project management, analysis, DEA

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Literature Review of Marketing Logistics Strategy

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Abstract

Logistics and marketing are still treated separately by most companies today. It is only the members of management who have recognized that decisions on marketing and logistics need to be made with the combined involvement of both disciplines, that is, a marketing logistics strategy is needed to achieve customer satisfaction. In this article, I will conduct a literature review that analyses the publications on marketing logistics strategy in order to visualize the field and context in which marketing logistics strategy appears. Furthermore, I extend my research to cognitive biases related to marketing logistics strategy. On the one hand, I identify the cognitive biases that appear in logistics processes as a result of marketing, and I also then examine them in the literature review. The analysis conducted will highlight the areas that are associated with the development of a marketing logistics strategy.

Keywords: marketing logistics, strategy, cognitive bias

1. INTRODUCTION

The global scale of supply chains means that marketing logistics is becoming increasingly important. It is not enough to offer a product at a discounted price, the role of logistical location and time value [1] is also crucial as it must be available when and where the customer wants to buy it.

Coordinating the marketing strategy with the logistics strategy is important because the customer buys the product together with the associated logistics services [2]. In other words, customer satisfaction is reflected in the efficiency of logistics services [3]. It is, therefore, necessary to emphasize the importance of marketing logistics strategies and to inform company managers that it is no longer possible to talk about separate marketing and logistics in order to serve customers efficiently [4].

I begin with a theoretical background in marketing and logistics. I then describe the impact of the elements of the marketing mix [18] on individual logistics processes [19]. I then identify the cognitive biases [5] that may be present in logistics processes based on marketing decisions, as cognitive biases have a significant impact [6].

In this article, I examine the frequency of marketing logistics through the ScienceDirect and Web Of Science sites. This frequency analysis shows the context in which the term marketing logistics is used.

First, I perform a separate analysis on the two sides, the results of which I also display in a table, and then I create a visualization using the VOSViewer [23] software. In the keyword map, I show how the search for the given keywords showed the results for the topic of the publications.

Finally, I summarize the results obtained from the literature review.

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2. THE RELATIONSHIP BETWEEN MARKETING AND LOGISTICS AND THE ORIGIN OF MARKETING LOGISTICS

Consumer needs have changed in recent decades, and with them, the importance of marketing has increased [21]. The definition of marketing was first defined by Kotler: “Marketing is a social and managerial process by which individuals and groups obtain what they need and want through creating and exchanging products and value with others [7].” Originally, logistics was only used in the military, but later, around the time the definition of marketing was born, the United States began to deal with logistics related to goods. The American Council of Logistics Management has proposed a definition that is widespread in the USA: “The process of planning, implementing and controlling the efficient, effective flow and storage of goods, services, and related information from point of origin to the point of consumption for conforming to customer requirements [8].”

Although definitions of the disciplines have been established, marketing and logistics have long been treated as completely separate disciplines. Today, it is a well-known fact in most companies that marketing and logistics are linked through sales [20]. While the objective of marketing is to allocate resources between the elements of the marketing mix (price, product, promotion, sales) in a way that maximizes the long-term profitability of the company, the objective of logistics is to minimize the total cost of ownership while maintaining a defined level of service [9]. “Marketing logistics is a corporate governance approach and the scope of activities implemented on it, which permeates the entire corporate operation, integrates the results of both disciplines, and presupposes mutual knowledge of managers in related fields and aims at synergistic effects [10].”

The table below shows the impact of the main elements of the 7P marketing mix on logistics [11].

Table 1. The interaction of the elements of the marketing mix on logistics [11]

The marketing mix (7P)	Impact on logistics
Product	Product development is emphasized because the new product increases logistics costs (warehousing, shipping).
Price	The price change significantly impacts the demand for the product, thereby affecting the entire logistics system.
Promotion	As a result of marketing activity, turnover could increase, which generates an increase in logistics costs and an expansion of logistics services.
Place	The number of distribution channels has a significant impact on lead time and logistics costs.
People	The staff involved in customer service has a significant influence on the judgment of the company, and thus on all processes.
Process	Processes related to customer service: technology used, flexibility, lead time, inventory, etc.
Physical evidence	The environment of the product/service could determine the assessment of quality.

From the table showing the impact of 7P on logistics (Table 1), it is clear that all elements of the marketing mix have an impact on logistics processes.

3. COGNITIVE BIASES GENERATED BY MARKETING DECISIONS IN LOGISTICS PROCESSES

In both marketing and logistics decision-making, cognitive biases often appear, leading to subjective decisions [5]. In this case, I do not refer to the cognitive biases that marketing makes in order to increase sales [22], but to those that appear in the decision-making mechanisms of the disciplines. Cognitive biases are systematic deviations from rationality and logical thinking and behavior [12]. They appear when people have to make quick decisions [13].

In the case of marketing, we can talk about a quick decision, for example, when a decision related to a marketing campaign is taken by an expert without checking the availability of logistics services related to the product. Thus, marketing decision-makers often exhibit an overconfidence bias [14], neglecting to examine rational arguments, thereby overestimating their ability to predict the future of a given product, that is, an overprecision bias [6] A marketing campaign that does not take objective decisions can cause serious logistical problems. Consider the case of a customer who wants to buy a product and encounters its advertisement perhaps several times a day. As the product

suddenly gains popularity among the public as a result of the marketing campaign, it can cause a total stock shortage at retailers in a few days. Wholesale stocks are then also depleted, and this has an impact on production, as the product needs to be remanufactured to serve customers. In extreme cases, the demand for raw materials may also increase production. But it is not only stocks that are significantly affected, transportation tasks also increase as demand for products increases. Thus, a bad marketing decision can have an impact on the entire supply chain [11].

The COVID-19 outbreak has highlighted the vulnerability of supply chains. As a consequence of the planning fallacy [13], over-optimistic planning for a time was made, resulting in large quantities of parts and goods not arriving, causing major disruptions to both production and trade. Thus, the entire supply chain needs to be considered [4] when developing marketing strategies.

4. LITERATURE REVIEW OF MARKETING LOGISTICS STRATEGY

To analyze the literature, I carried out filters on ScienceDirect and Web Of Science. An analysis of the publications on these sites indicates the type of articles that are written on a selected topic.

The two keywords that were included in each of the screenings were "marketing logistics" and "strategy". I did not want to run a separate search for "marketing" and "logistics" because in this literature analysis I am looking at how many publications the topic of marketing logistics strategy appears in. To narrow down the results, I chose the keywords "importance", "experience", and "decision" as additional keywords and I examined the relationship between "marketing logistics" and "strategy" separately using the keyword "cognitive bias".

4.1. Review of ScienceDirect

As can be seen in Table 2, the keywords "marketing logistics" and "strategy" yielded 383 hits on ScienceDirect, but when narrowed down to "importance", "experience" and "decision", only 207 publications were found.

Table 2 Summaries of results for “marketing logistics” and “strategy” and selected keywords, based on ScienceDirect on the 10th of November 2022.

SEARCH NAME	KEYWORDS / RESULT SCIENCEDIRECT				TOTAL	
MLandSTR	marketing logistics	strategy			382	
MLandSTRandIMP			importance		304	
MLandSTRandIMPandEXP				experience		277
MLandSTRandIMPandEXPandDEC					decision	207
MLandSTRandEXP	marketing logistics	strategy	experience		275	
MLandSTRandDEC	marketing logistics	strategy	decision		333	
MLandSTRandCB	marketing logistics	strategy	cognitive bias		1	

Based on this narrowed-down list ("marketing logistics", "strategy", "importance", "experience" and "decision"), I created a visualization using VOSViewer (Figure 1).



Figure 1 Overlay Visualization by VOSViewer Note. The analysis was made by VOSViewer with basic settings based on a ScienceDirect search on the 10th of November 2022. Keywords: “marketing logistics” AND strategy AND importance AND experience AND decision. Minimum number of occurrences of a keyword: 2

In order to understand Figure 1, I will briefly describe what VOSViewer is looking at: „VOSViewer is a software tool for constructing and visualizing bibliometric networks. These networks may for instance include journals, researchers, or individual publications, and they can be constructed based on citation, bibliographic coupling, co-citation, or co-authorship relations. VOSviewer also offers text mining functionality that can be used to construct and visualize co-occurrence networks of important terms extracted from a body of scientific literature [23].” Hence, VOSviewer can assist in analyzing the relationships between keywords in publications, showing you the direction of articles on the topic you are looking for in recent years.

As can be seen in the VOSViewer graph, a search narrowed down to all keywords shows that supply chain management has been emphasized in publications since 2010, but the link with marketing is not represented, which means that not as much emphasis is placed on the link between marketing and logistics.

In the case where not all the pre-selected keywords are used in the search but examined one by one, the words "marketing logistics" and "strategy" are combined with the keyword "experience", ScienceDirect returns a total of 275 publications (Table 2). This combination proves to be the best narrowing down.

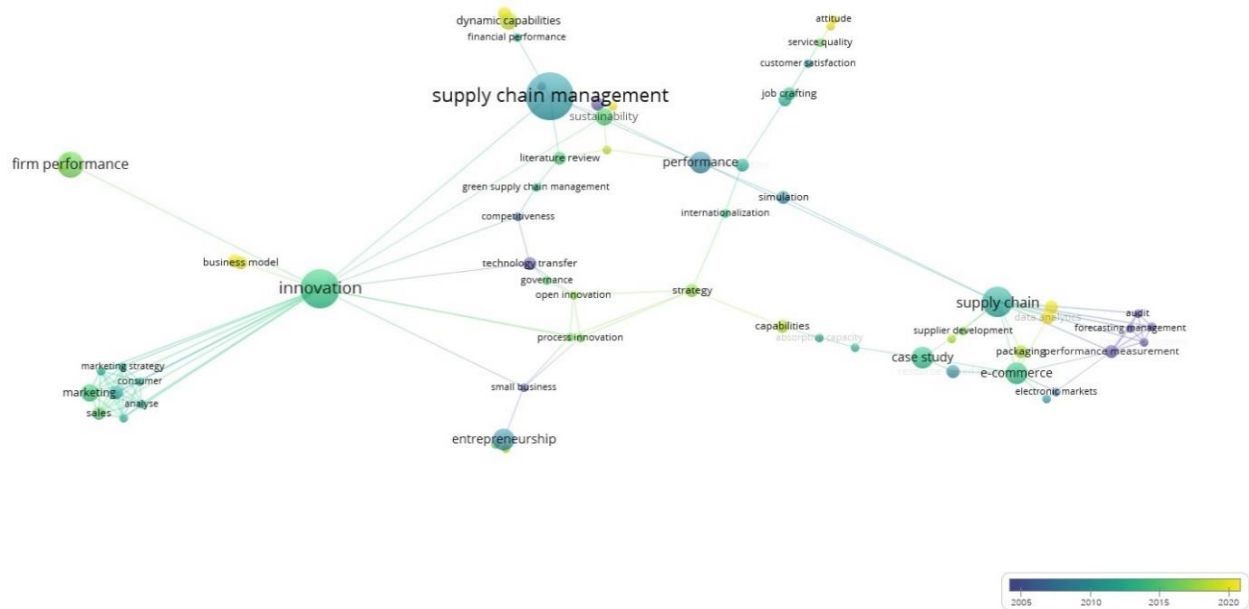


Figure 2 Overlay Visualization by VOSViewer Note. The analysis was made by VOSViewer with basic settings based on a ScienceDirect search on the 10th of November 2022. Keywords: “marketing logistics” AND strategy AND experience. Minimum number of occurrences of a keyword: 2

The 275 results of the search were displayed in Figure 2 using VOSViewer. Supply chain management also appears most prominently in this figure, but is now linked to the keywords marketing and marketing strategy through innovation. Furthermore, from 2018 onwards, company performance and customer satisfaction are also mentioned in the context of marketing logistics strategy. A search of the results found one relevant publication using the keywords "marketing logistics", "strategy" and "experience", which was about what action companies should take to promote marketing/logistics integration based on collaboration [15].

I definitely wanted to extend my investigation to cognitive biases. As I described before, the impact of cognitive biases generated by marketing in logistics is significant. I found only one journal for the keywords: "marketing logistics", "strategy" and "cognitive bias". In this paper, anchoring theory is used to investigate the impact of the retail environment on consumer responses to vanity garments [16]. So, it is somewhat related to the topics of marketing logistics strategy and cognitive bias, but it is not a truly relevant finding.

4.2. Review of Web Of Science

Using the same search method, I got significantly fewer results. As can be seen in Table 3, the keywords "marketing logistics" and "strategy" yielded a total of 14 results, and further narrowing down the search did not yield any significant results. Only one publication was found to be relevant by the search, which was obtained by narrowing down the keywords "marketing logistics", "strategy" and "decision". This article described the concept of food miles: it aims to ensure food quality and reduce losses and wastage by adopting a more efficient distribution and marketing logistics chain, through shorter distances between production and consumption [17]. So, in this publication, it is already emerging that marketing logistics is relevant.

SEARCH NAME	KEYWORDS / RESULT WEBOFSCIENCE				TOTAL	
MLandSTR	marketing logistics	strategy			14	
MLandSTRandIMP			importance		1	
MLandSTRandIMPandEXP				experience		0
MLandSTRandIMPandEXPandDEC					decision	0
MLandSTRandEXP	marketing logistics	strategy	experience		0	
MLandSTRandDEC	marketing logistics	strategy	decision		1	
MLandSTRandCB	marketing logistics	strategy	cognitive bias		0	

Table 3 Summaries of results for “marketing logistics” and “strategy” and selected keywords, based on Web Of Science on the 10th November of 2022.



Figure 3 Analysis of results based on categories of publications, (Web of Science's own categories) 14 Result on the 10th of November 2022, Keywords: “marketing logistics” AND strategy

The Web Of Science categorization of the results for the keywords "marketing logistics" and "strategy" is shown in Figure 3. Marketing logistics strategy has been addressed in the Management and Business fields, but it now also appears in the Engineering fields.

4.3. Review of ScienceDirect and Web Of Science

Finally, in order to illustrate how the publications found whilst searching for "marketing logistics strategy" currently appear together with the disciplines, I have created Figure 4 from the publications found in the search for "marketing logistics" and "strategy", which together illustrate the results of 382 hits from ScienceDirect and 14 hits from Web Of Science using VOSViewer.

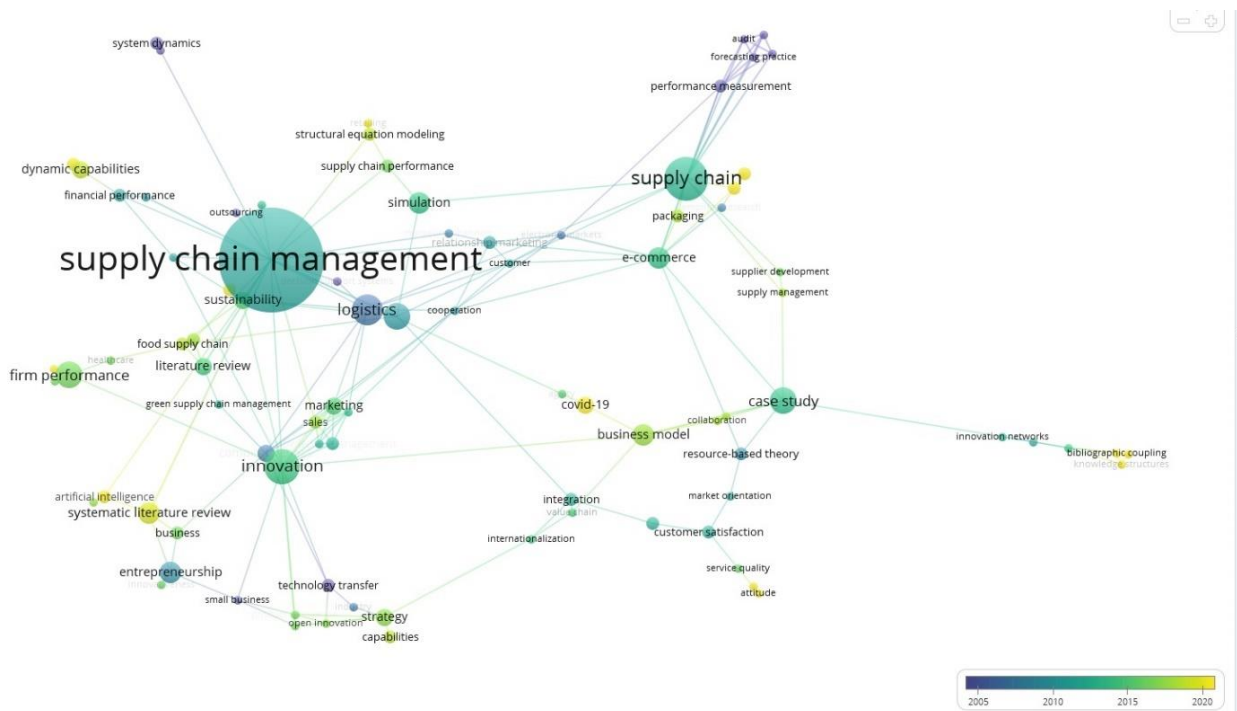


Figure 4 Overlay Visualization by VOSViewer Note. The analysis was made by VOSViewer with basic settings based on ScienceDirect and on Web Of Science search on the 10th of November 2022. Keywords: “marketing logistics” AND strategy. Minimum number of occurrences of a keyword: 2

As shown in Figure 4, supply chain management is also prominent here, showing a loose link with marketing through logistics. After 2010, performance appears in several contexts and based on this, I conclude that companies are beginning to realize that proper performance requires the joint work of different areas. In 2020, the appearance of COVID-19 indicates that the pandemic highlighted the supply chain's vulnerability. Furthermore, sustainability also appears in Figures 2 and 4, indicating that professionals have realized that sustainability requires harmony between logistics and the other company areas.

5. CONCLUSION

Marketing and logistics play an important role today. In the interest of customer service, it would be important to have a common strategy. In this article, I have examined the importance of marketing logistics strategy. First, I presented the origins of the definition of marketing and logistics. Then I described the effects of the marketing 7P on the logistics domain, and then I described the cognitive biases generated by marketing decisions in the logistics domain.

Regarding the marketing logistics strategy, I conducted a literature review in which I examined the results of the ScienceDirect and Web Of Science databases using different keyword combinations. I tabulated the results and created visualizations using the VOSViewer software, which adequately shows the type of publications currently being produced on this topic. I extended my investigation to search with cognitive bias.

In summary, I found that the concept of marketing logistics strategy appears in a few publications. This led me to the conclusion that marketing and logistics are still mostly treated separately, despite the growing recognition that a marketing logistics strategy is necessary to achieve customer satisfaction.

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Financing Growth in a Digital Economy: A Critical Review of Crowdfunding and Initial Coin Offerings

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Abstract

Technology in finance has been evolving rapidly, in particular after the 2008 financial crisis. Accordingly, the scope of fundraising opportunities for startups has been continually expanding, whereas crowdfunding and initial coin offerings (ICOs) have become the most popular novel ways of financing. Crowdfunding has already proved to be a reliable source of capital for micro, small, and medium-sized enterprises. Furthermore, crowdfunding promotes innovative company concepts and projects with a social impact, positively impacting the social inclusion of vulnerable categories. Recently, ICOs emerged as an innovative alternative to traditional business financing mechanisms. ICOs are less expensive and faster than traditional funding for startups, and they are one of the most efficient financing vehicles since they eliminate transaction costs and the need for traditional banks to act as intermediaries. The purpose of this paper is to provide a critical review of both crowdfunding and ICOs relating to their opportunities and challenges. It is expected that these innovative ways of financing will both become significant determinants of economic growth.

Keywords: digital economy, crowdfunding, initial coin offerings, blockchain, cryptocurrency

1. INTRODUCTION

The rapid expansion of innovative ways of fundraising happened due to several reasons. On the supply side, there are variables such as the recent surge of the fintech industry, internet and social media usage, and the long-term effects of the 2007-08 financial crisis, which resulted in a decline in bank lending and a low-interest rate environment. The key demand factors include the increased relevance of market externalities and the knowledge economy, as well as the competitive effects of startups on competitors (Block et al., 2018).

Fintech refers to “technology-enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on the provision of financial services” (Financial Stability Board, 2017, p. 7). Fintech includes various technologies that have a significant impact on the manner financial services are performed. Therefore, digital payments, crowdfunding, Robo-advisors, cryptocurrencies, and markets and services which are enabled by cryptocurrencies represent some of the aspects of fintech (Ma & Liu, 2017).

Schwienbacher & Larralde (2012) provided one of the first definitions of crowdfunding. They argue that crowdfunding is the financing of a venture by a group of individuals without the use of an intermediary between the entrepreneur and the investors, with interaction taking place mostly via the internet. Crowdfunding is an online funding

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mechanism that allows startups to raise funds by collecting relatively small amounts of money from a large number of investors (Paschen, 2017). As a result, crowdfunding is defined as "a general request for money via an open call" (Paschen, 2017; p. 2).

After the early introduction of cryptocurrencies enabled by blockchain technology, numerous enterprises have started to develop their own cryptocurrencies as a novel means of raising funds (Zhang et al., 2019). The potential benefits of these cryptocurrencies, which include security and anonymity, have motivated prospective investors to take part in ICOs. ICO is defined as "an operation through which companies, entrepreneurs, developers or other promoters raise capital for their projects in exchange for digital tokens (or coins), that they create" (Financial Stability Board, 2018, p. 17). Albeit still a relatively new phenomenon, ICOs have grown in popularity as a source of funding for blockchain technology companies (de Jong et al., 2018).

The author aims to summarize and evaluate both strengths and weaknesses of these innovative ways of financing. The remainder of the paper is structured as follows. Sections two and three present a brief overview of crowdfunding and initial coin offerings, respectively. A critical review of both crowdfunding and initial coin offerings is presented in section four, followed by concluding remarks.

2. CROWDFUNDING: OPPORTUNITIES AND RISKS

Due to its potential to enable early-stage ventures to reach out to thousands of prospective investors while being cost-efficient, crowdfunding has relatively quickly become popular. There are several key steps in a crowdfunding campaign. In general, the entrepreneurs/project developer reaches a crowdfunding platform and after approval by the platform, the project becomes available online (Onnée & Renault, 2015). When crowd members discover a worthwhile and engaging project, they make financial contributions, allowing the project creator to raise capital to launch a business. However, a project can only be considered successful if the funding target is met; conversely, a platform will commonly deny access to funds to a project developer if the amount raised falls short of the target.

A crowdfunding platform serves as a link between investors interested in investing in worthwhile initiatives and entrepreneurs in need of funds (Ferreira et al., 2022). As a result, a crowdfunding platform comprises two sides: those who prepare the fundraising campaign (mostly entrepreneurs) and those who give support to that campaign.

Establishing user confidence is one of the primary functions of a crowdfunding platform as an intermediary (Ferreira et al., 2022). Therefore, the campaign's organizers should have faith in their supporters that they won't benefit from the concept – for instance, by adopting it as their own, while supporters should have faith in campaign organizers that there won't be any information asymmetry to properly evaluate the project.

One of the most prominent classifications of crowdfunding is determined by the fact of whether the rewards are offered and if they are tangible or non-tangible (Paschen, 2017; NCFCA, 2012). Accordingly, we differentiate among the following crowdfunding models: donation-based crowdfunding, lending crowdfunding, and equity crowdfunding.

Entrepreneurs can collect money from the public using the donation-based crowdfunding model without having to provide anything in return (Paschen, 2017). This form of crowdfunding is considered suitable for initiatives with modest funding targets. In addition to classical donation-based crowdfunding, there is also the rewards-based donation model, where supporters receive rewards other than monetary, typically in the form of experiences, and sometimes even participate in the process of product creation.

There are several types of lending crowdfunding, however in general a traditional form of lending crowdfunding indicates that entrepreneurs will repay investors with an interest rate that is known in advance (Paschen, 2017). According to available statistics, lending crowdfunding provided the largest funding capital, whereas donation crowdfunding generated the second-most funding capital on a worldwide scale.

Finally, the equity crowdfunding approach indicates that an entrepreneur raises capital in exchange for a stake in the company's ownership, although instead of shares, investors can enter into revenue or profit-sharing agreements (Paschen, 2017). Moreover, this category of crowdfunding experienced fast growth, with funding targets that are usually relatively high.

Crowdfunding enables getting early feedback on a product before it is available for sale as well as proactive contributions to the project's development. Furthermore, presenting a project on a crowdfunding platform is a type of promotion (Onnée & Renault, 2015). Because of the internet and social media, it is now feasible to share information on crowdfunding campaigns all over the world in a timely, simple, and low-cost manner.

While there are various benefits that crowdfunding offers as compared to bank lending, it should not be neglected that there are also several disadvantages and risks related to it. The lack of regulation is a major issue that has to be addressed. Another risk related to crowdfunding is the possibility of copying the idea (Onnée & Renault, 2015). When an idea becomes available on a crowdfunding platform, someone may copy and implement it. Therefore, it is essential that entrepreneurs use legal methods to protect their ideas (patents, trademarks, and copyright).

3. FROM CROWDFUNDING TO ICOs

Both crowdfunding and ICOs are performed as online fundraising campaigns aimed at non-professional investors. Although there are several similarities between crowdfunding and ICOs, they differ substantially. According to Block et al. (2021), they represent "two distinct but important entrepreneurial finance market segments of the future" (Block et al., 2021).

The financial industry's outlook has been dramatically altered by blockchain technology (Boreiko & Sahdev, 2018). The combination of blockchain and crowdfunding has enabled the creation of ICOs (Fridgen et al., 2018). The use of ICOs by startups and SMEs to collect funds has been a major advance. Due to the elimination of intermediaries, the process through which SMEs obtain funding in their early stages has undergone a profound revolution. According to Zhang et al. (2019), "compared to Initial Public Offerings (IPOs) and conventional loans, Initial Coin Offerings (ICOs) are sales of promises of cryptocurrency appreciation".

Along with the emergence of cryptocurrencies, the possibility of using them to gather funds through ICOs emerged (Adhami et al., 2018). The first initial coin offering (ICO) was conducted by The MasterCoin in 2013 (Campino et al., 2021), while the DAO project launched one of the first ICOs, which successfully raised \$150 million (Adhami et al., 2018). ICOs typically involve the publication of a document ("white paper" or "token sale term") outlining IT protocols, public blockchain adoption, token supply, pricing, and distribution mechanisms.

The first cryptocurrency to be utilized in the process of ICOs was Ethereum. According to Karpenko et al. (2021), ICOs are blockchain-based smart contracts that are used to raise funds from outside sources by issuing digital financial assets (coins or tokens). Smart contracts are used to conduct the exchange. They are computer protocols that exchange values between an entrepreneur and investors, with the potential to create an ideal disintermediation that substantially lowers the expenses of financial market players.

The majority of ICO projects include the development of blockchain technology, the creation of cryptocurrencies, or other fintech-related services (Toma & Cerchiello, 2020). A large portion of ICO tokens (68.0%) give investors access to platform services, while 24.9% give investors governance rights, and 26.1% give investors profit rights (Toma & Cerchiello, 2020).

As of January 2021, 5728 ICO projects had raised more than \$27 billion. From the standpoint of an entrepreneur, ICOs are particularly appealing since they provide finance at all phases with nearly no transaction expenses, while investors might be interested since ICOs may provide quicker exits and higher rewards. Almost all ICOs now are taking place on the Ethereum platform: 4961 out of 5728 (Karpenko et al., 2021). Based on a sample of 630 ICOs, it is determined that to perform a successful ICO, disclosure of the information to investors is a crucial factor (de Jong et al., 2018). Moreover, expert ratings are a useful tool for addressing the information asymmetry issues related to token sales (de Jong et al., 2018).

Compared to traditional financing instruments, the main benefits of well-designed ICOs are more security, liquidity, and transparency (Hall & Lerner, 2009). Nevertheless, there are several issues related to ICOs, including asymmetric information, and a lack of both investor protection and regulation. The main legal issue surrounding ICO tokens is whether or not they qualify as securities, which would result in several regulatory requirements and restrictions for issuers.

Karpenko et al. (2021) provided a summary of the legal frameworks governing ICOs in various nations, categorized into three groups: the first category consists of countries with established legal standards and regulations for performing ICOs; the second group includes countries that are the "most friendly to ICOs"; and the third category of countries has a "wait-and-see attitude". The three key categories of ICO risks are financial, technical, and analytical. To reduce these risks, regulation should be improved particularly regarding the publication of a white paper, the KYC procedure, and the escrow agents.

4. A CRITICAL REVIEW OF INNOVATIVE WAYS OF FUNDRAISING

The global financial system experienced severe losses during the recent financial crisis as a result of taking excessive risks related to subprime mortgages (Boreiko & Sahdev, 2018). Accordingly, there have been frictions that have made it difficult for banks to offer enough loans to market participants, which has made the crisis worse and caused output to decrease by a far greater amount. Referred to as a credit crunch, this decrease in loan supply originated not from a decline in demand but rather from financial institutions' lack of ability or reluctance to lend to companies, particularly SMEs. This issue is one of the highest concerns to policymakers, economic agents, and the general public. Additionally, the amount of funds available for bank loans to finance SME and startup financing has decreased due to rising compliance expenses (Boreiko & Sahdev, 2018).

Therefore, new ways of financing emerged, enabled by technological innovations. In particular, crowdfunding and ICOs have both recorded extensive growth, although crowdfunding has already proved to be an established financing model while ICOs are still very recent. According to Schücker & Gutmann (2021), as the choice of fundraising options widens, it is crucial for the entrepreneur to comprehend the implications of each funding technique for the startup and to select among them wisely.

Before the development of crowdfunding, access to financing was concentrated in a limited number of areas, where both entrepreneurs and venture capitalists could be found. However, since crowdfunding happens via the internet now it enables the geographic dispersion of investors (Agrawal et al., 2011), although it is far away from being indeed global because of differences in national regulatory frameworks (Moeninghoff & Wieandt, 2013). It has to be emphasized that since most crowdfunding platforms run on top of conventional finance mechanisms (e. g. banks and payment service providers) crowdfunding is dependent on reliable third parties (Haas et al., 2014).

There is a possible hazard associated with the suggestions made by crowd members via a platform because it is uncertain whether they receive appropriate compensation when their recommendations are later adopted into the project. Furthermore, although there have been no major court cases arising from the failure to spend collected funds in line with the project, crowdfunding platforms should define their responsibilities when capital is raised in order to ensure that collected funds are appropriately spent (Onnée and Renault, 2016).

In general, due to information asymmetry between the parties involved, the process of crowdfunding is generally characterized by uncertainty which is thus its major disadvantage (Belavina et al., 2018). The main challenges for investors arise from not having all the information at hand which can affect their decision-making process. Moreover, a failure of a start-up or the delay of pre-sold products delay can happen. Also, it should not be neglected that crowdfunding platforms sometimes charge a relatively high fee (Belavina et al., 2018).

According to Belavina et al. (2018), it is of crucial importance to implement mitigation mechanisms for two major risks to which investors are being exposed. The first risk is the possible misuse of the funds raised, whereas the second risk involves giving customers incorrect information about the features of the product. While the first mitigation technique includes a responsibility to end the campaign as soon as the financing goal is met and to pay out any unfulfilled demand, the second mechanism suggests taking the excessed money beyond the goal as insurance for investors.

The ICO market is regarded as "being a digital, decentralized, disintermediated, global, and unregulated market, ICOs present novel challenges, but also some innovative solutions to these problems" (de Andrés et al., 2022, p. 1). Even though the ICO market is new, it already shows several of the issues that relate to conventional financial markets, and these issues were the underlying causes of the 2008 financial crisis (de Andrés et al., 2022).

From the economic perspective, the key issue relates to an ineffective allocation of resources as a result of significant information asymmetries between both issuers and investors (de Andrés et al., 2022). Moreover, ICOs show an absence of adequate standards, a lack of disclosure in the sale process, a consequent lack of proper accountability, and outright deception and fraud of unqualified investors from an ethical standpoint. It is commonly acknowledged by authorities and market players that fraud in ICOs is one of the major issues and concerns facing the blockchain community (de Andrés et al., 2022).

In a pump-and-dump scheme, investors purchase the asset, disclose information intended to drive up prices (the pump), and then sell the asset at a higher price (dump) (de Andrés et al., 2022). These types of market manipulation techniques can happen because of the unregulated status of the blockchain industry. There are other forms of market manipulation related to the ICOs besides pump-and-dump schemes, however, the manipulation is typically difficult to prove.

According to the results based on the sample of 1000 ICOs, Zetzsche et al. (2019) discovered that:

- In over half of ICOs, no personal or background information about the project organizer is provided
- In the majority of ICOs, the name on the white paper is different from the name of the ICO issuer
- In about two-thirds of ICOs, no information on the relevant legislation is provided.

All these considerations should normally cause a rational investor to be concerned, but the authors of the study find that few ICOs have fallen short to reach the required minimum level of subscriptions, indicating that investors are entirely ignoring the lack of crucial information needed to back any investment decision. Instead of a rational assessment of the business potential, the surge in ICO investments is primarily motivated by the fear of missing out (FOMO) (EY, 2017). In a survey of 517 investors conducted by Fisch et al. (2021) it was discovered that investor attitudes toward risk, views on regulation, and the relevance of the white paper vary considerably.

Given the risks associated with investing in an ICO, investors must first perform extensive due diligence (de Andrés et al., 2022). They confront fraud risk, significant cybersecurity concerns, and even legal hazards in addition to the higher commercial risk related to tech startups. Furthermore, issuers should treat legal and cybersecurity

concerns seriously (de Andrés et al., 2022). They should use the services of software auditors and testers to make sure their systems are secure against hacking attempts, even when employing well-known and trusted solutions for blockchains, smart contracts, or cryptocurrency exchanges.

Since hackers have been successful in exploiting numerous of blockchain's weaknesses, a number of its advantages might also be considered as downsides (de Andrés et al., 2022). Even though the blockchain's fundamental protocols are secure, the ecosystem as a whole has some weaknesses driven by inadequate security procedures, end users, and blockchain-based software. Therefore, wallets and exchanges are common targets of hackers. It is crucial to emphasize that these attacks occur in regions where there has typically been lax regulation of digital assets and blockchain. This implies that the best method to reduce such weaknesses may be through a "heavier" regulatory system.

Finally, regulators are responsible for addressing the majority of the current issues (de Andrés et al., 2022). It is obvious that merely issuing warnings and recommendations are no longer effective. Zetzsche et al. (2019) argue that emphasizing that the ICO market is not regulated could lead to an adverse effect, i.e. "undesirable promoters" might be attracted. In order to resolve issues related to the ICOs market, legislation that recognizes both the economic and technical peculiarities of a global digital market is required (Zetzsche et al., 2019).

5. CONCLUDING REMARKS

Innovative ways of financing growth in a digital economy will inevitably lead to significant changes in the global market. However, these novel ways of fundraising have already showed some of the issues similar to those of conventional financial markets, primarily an ineffective allocation of resources as a result of significant information asymmetry.

Now that numerous options are becoming available, startups should carefully evaluate the proper way of collecting funds, e.g. crowdfunding is an adequate method of financing when a startup is having difficulties in collecting funds due to a high-risk or low-profit project. On the other side, when choosing projects to invest in, particularly retail investors have to be aware of the potential risks. Finally, policymakers should provide support for innovation, however, at the same time, an adequate regulatory framework has to be established. Once this segment becomes adequately regulated, it will potentially lead to higher competition in the financial market, and thus result in the need for other market participants to adjust.

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**Global Education, Teaching and Learning
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Cognitive and Metacognitive Formative Assessment Tools for Teaching Chemistry

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Abstract

The paper informs about a new publication entitled “Formative Assessment and Its Implementation into Teaching Science, Mathematics, and Informatics” published by Wolters Kluwer in Slovakia in 2022. This publication is dedicated mainly to teachers working at all levels of education, teachers in training, pupils and students, and also their parents. It is available in common bookstores. The first part of the paper aims to explain the theory of formative assessment. It deals with the strategies and tools of formative assessment focused on the development of conceptual understanding as well as meta-cognitive strategies. It provides the demonstrations of strategies and formative assessment tools (FACTs) for the selected Science subject Chemistry whose didactic efficiency has been verified in practice. The second part of the paper provides the reader with an opportunity to learn how formative assessment is implemented in teaching and the types of digital platforms and tools that can make this process more efficient. The research team behind this publication has also gained valuable experience during formative assessment training courses, which they organised for primary and secondary school teachers. This team created and verified formative assessment tools in cooperation with teachers themselves and performed several research studies investigating the influence of formative assessment on the development of conceptual understanding and scientific skills.

Keywords: formative assessment, formative assessment tools, chemistry, implementation

1. INTRODUCTION

The publication entitled Formative Assessment and Its Implementation into Teaching Science, Mathematics, and Informatics [1] published by Wolters Kluwer in Slovakia in 2022 can be helpful in the implementation of formative assessment (FA). This paper presents selected knowledge from this publication. The first part explains formative assessment and its tools (also referred to as “formative assessment classroom techniques” or “FACTs”) focused on the development of conceptual understanding as well as the metacognitive tools. This part is complemented with selected chemistry FACTs demonstrations emphasizing their didactic efficiency in teaching the selected topics verified via teaching. The second part presents information on how the teacher should proceed in the implementation of formative assessment. Useful digital platforms and tools increasing the efficiency of FA implementation are also discussed.

2. FORMATIVE ASSESSMENT

There is no single officially valid and generally accepted definition of formative assessment. The OECD [2] has defined formative assessment in the broadest sense by emphasizing student progress: it helps to “identify learning needs and adjust teaching accordingly”. The more recent reviewed version defines formative assessment as a process,

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which is planned and continuous; students and teachers benefit from it in learning and teaching respectively. FA provides the teacher with information on their students' learning process including the progress in their understanding [3]. It also points out the importance of support provided by teachers, which helps students become independent individuals during the learning process.

The following key points can be drawn from the aforementioned characteristics:

1. Formative assessment takes place during classes.
2. It is not an examination or a test; it is a planned process integrating a number of diverse activities.
3. It is performed by both teachers and students.

FA provides an opportunity to identify the actual state of students' learning and allows for a response while it is still possible to provide feedback, which will help the student learn and improve [4]. The goal of feedback is to obtain information on students' learning, i.e. reveal, and diagnose shortcomings, mistakes, difficulties and their reasons. Based on this kind of analysis, learning can be made more effective. Feedback also helps determine the difference between the actual level of students' performance and the required standards. Feedback is usually provided by the teacher, but peer feedback is also very important.

FA informs the student about the quality of their own learning and it is rarely used for grading purposes [5]. It takes the form of mutual feedback between the teacher and students [6]. FA is used as appropriate, necessary, and feasible (daily, weekly, monthly). It can take an oral or written form before, during, or after classes [7]. It has been designed to promote students' self-regulation in learning [5]. Therefore, the major emphasis is put on active participation of students through the process of self-assessment, peer-assessment, and combining teacher and student assessment.

2.1. Cognitive formative assessment tools

The FA focused on cognitive processes allows for identification of how well the student understands new concepts and contexts, and thus helps to develop cognitive processes. Cognitive processes integrate problem-solving strategies such as analysis, synthesis, induction, deduction, analogy, specification, generalisation, etc. If the teacher plans to focus FA on cognitive processes and the development of conceptual understanding, they should choose appropriate FACTs corresponding with the goals set. There are different types of FACTs, which can stimulate students' cognitive processes. They can be categorised into groups as follows [1]:

- asking questions,
- prediction,
- enhancing the understanding concepts and relationships,
- inference and conclusion drawing,
- rubrics, analysis, and assessment of students' performance.

In the following part, selected FACTs will be characterised and demonstrations using topics in chemistry will be provided.

2.1.1. Prediction card

In terms of teaching strategies, prediction invites the student to activate and apply their existing knowledge and experience to formulate and subsequently verify their own predictions or hypotheses regarding the behaviour of a system (object, phenomenon, or process). Based on students' justifications (related to predictions or the discrepancy between predictions and findings), the teacher can identify students' preconcepts and misconceptions [1]. The creation of predictions and formulation of explanations can be performed using a prediction card, which takes the form of a table. The prediction card (see Tab. 1) contains a table with three columns; in the middle column, there are statements related to the topic students are about to learn. The left and right columns are blank and students are supposed to fill in information. In the first phase, students try to predict whether the given statements are true or false and write their opinions in the left column before they are acquainted with the topic. Later, in the knowledge transfer and recall phases of the lesson, they work with the right column.

Table 1. Prediction card: demonstration in chemistry (primary school, 8th grade)

Student's name:		Form:	Date:		
Before learning new content/topic		"Household acids, studying solution acidity"		After learning new content/topic	
True statement	False statement			True statement	False statement
T	F	Vinegar, vitamin C, and lemon juice taste sour.		T	F
T	F	Indicators are substances whose colour changes based on whether the solution is acidic, neutral, or alkaline.		T	F
T	F	The universal indicator paper turns green in acidic solutions.		T	F
T	F	The pH value of acidic solutions is greater than 7.		T	F
T	F	Black tea will not change its colour if lemon juice is added		T	F
T	F	The pH value of alkali solutions is 7.		T	F

2.1.2. Frayer model

The goal of the Frayer model [8] is to identify and define concepts. Students analyse a concept, formulate its definition and basic characteristics, and subsequently, they synthesize this information, and apply it by coming up with specific examples and non-examples. In teaching, this can be done in two ways [1]. If the concept is new and unfamiliar to the students, the teacher can use this model to activate their preliminary knowledge about the concept. In this case, the model created by students allows for the identification of possible misconceptions or incorrect knowledge/experience, which could potentially interfere with students' understanding of the concept presented. Based on in-class activities, students can modify and improve their model. This model can also be used to enhance the understanding of a familiar concept. Students are asked to analyse the concept (formulate its definition and characteristics) and provide specific examples and non-examples, which enhances their understanding by using a broader context (Tab. 2). This allows the teacher to obtain information about their current level of understanding.

Table 2. Frayer model: demonstration in chemistry (primary school, 8th grade)

Student's name:		Form:	Date:
Definition Acid solutions are water solutions of acids.		Characteristics/Properties There are H_3O^+ oxonium cations in acid solutions. The pH value of acid solutions is less than 7.	
Examples vinegar lemon juice vitamin C		Acid solutions	Non-examples soap baking soda washing powder

2.2. Metacognitive formative assessment tools

Průcha et al. [9] defines metacognition as one's ability to plan, monitor, and evaluate the processes through which they learn. This conscious activity allows one to realize how they proceed when they are learning about the world. Everyone has the ability to perform metacognition and its strategies; it improves as the person ages. An important factor in this process is education, since the performance of tasks and subsequent feedback significantly affects the development of metacognition in children when their schooling begins [10]. In terms of education, the term metacognition refers to the students' ability to analyse their own learning and control it efficiently [11].

The question is how metacognitive abilities can be developed via teaching. This paper presents some possibilities for using the selected FACTs for the purpose of metacognition development via specific topics in chemistry.

2.2.1. Self-assessment card

Self-assessment cards can take different forms based on the type of questions and answers to choose from. Questions can focus on self-assessment of the process or of the learning outcomes. Students' answers in the self-assessment cards provide the teacher with feedback based on which they can correct the previous teaching interventions and plan the next ones. The self-assessment card allows the students to analyse their own learning [1]. The main goal of this FACT is for the students to develop the competence to "learn how to learn" and promote their interest in life-long learning. The experience shows that it is often difficult for the students to evaluate their own performance verbally. However, the self-assessment card helps them determine their level of factual, conceptual, or procedural knowledge. The card formulates the criteria (Tab. 3), thus helping the students express their intuitive self-evaluation, which is easier for them than formulating full sentences.

Table 3. Evaluation of a self-assessment card after teaching the topic Investigation of acid solutions (primary school, 8th grade)

Student's name:	Form:		Date:	
	On my own	With the teacher's assistance	I don't understand it yet	
Level of understanding of the subject matter	number	number	number	
I can name three examples of acids, which are used in a household and/or a laboratory.	18	3	2	
I can write down chemical formulae of three different acids.	12	6	5	
I can describe the first aid needed if someone spills an acid on themselves.	19	3	1	
I can explain how acids are diluted with water.	18	3	2	
I can name the cations, which cause the acids to be acidic.	15	5	3	
I can write down the equation of hydrochloric acid ionization in water solution.	12	5	6	
I can explain what indicators are.	16	5	2	
I can provide some examples of indicators.	20	2	1	
I can identify the pH of a solution using a universal indicator paper.	17	4	2	

This card was filled in by 23 students in the 8th grade of a primary school in terms of laboratory work addressing the topic "Investigation of acid solutions". It helps them perform self-check and self-evaluation and provide evidence on their knowledge and skills in the context of this topic. The teacher focused on the desired goals in terms of knowledge and skills, which the students were supposed to learn and develop during three lessons (Household acids, Acid-base indicators/pH indicators, Properties of acids).

Upon evaluation, the self-assessment cards indicate what knowledge the students can tackle on their own and in which cases they need some help (Tab. 3). Most students stated they knew examples of acids used in households and/or laboratories and they could also identify a solution pH using a universal indicator paper. Some students were unsure about acid formulae and the equation about hydrochloric acid ionization in the water solution. Therefore, during the next lesson, the teacher revised the names and symbols of chemical elements, classification of acids into oxyacids and non-oxyacids, and the rules for creating formulae and names of acids using specific examples and didactic games. The teacher stated that using self-assessment cards in the evaluation stage motivated students to focus and try harder during the following lessons.

2.2.2. Exit card

The exit card is used at the end of the lesson or upon completion of a topic. Fisher and Frey [12] have claimed that this FACT allows the students to summarize the key elements of recently learned subject matter and realize what is important. Wormeli [13] has pointed out that students who summarize their knowledge achieve deeper understanding and remember it for longer. The students answer the teacher’s questions about the goal, course, or efficiency of the lesson(s). Besides informal diagnostics of the educational goals and their achievement, students’ answers also provide feedback on the course of lessons based on which the teacher can plan further pedagogical intervention. Some students’ answers can provide more objective information about the individual’s learning process or their knowledge. The questions should be formulated in a way that promotes critical thinking in students instead of repeating the notes they have taken. This FACT has several alternatives, e.g. 3-2-1 card, minute card, or short summary [1].

The following example of a filled-in Exit card (Tab. 4) shows the answers 22 students in the 2nd year of secondary school upon completion of the “Properties of plastics – burning plastics” topic. The topic was taught using an inquiry-based approach. In the “Burning plastics” activity, students performed an experiment to identify the flammability of the selected types of plastic and described the phenomena accompanying burning (flame colour, smell, smoke emission, nature of the fumes) using a universal indicator paper. It took the form of controlled inquiry.

Table 4. Selected student answers provided in the Exit cards upon completing the “Properties of plastics – burning plastics” topic (secondary school, 2nd year)

Student’s name:	Form:	Date:
Topic: Properties of plastics		
Today I learned...	About the properties of different plastics. About the types of plastics. How to ignite a burner. How different plastics burn. Which plastics smell and drip when they burn. What plastics are used for.	
The most interesting for me...	Was how plastics behave when they burn. Burning a table tennis ball. How many things are made of plastics. The colour of flame. The smell.	
I would still like to ask...	How can plastics harm us? How to prevent the generation of too much plastic waste? Why do plastics burn like this? Why don’t we learn this way more often? I have no questions.	

Students’ answers show what they learned about the types of plastics, their properties, burning behaviour, use, etc. (Tab. 4). As for things they found interesting, they specified the actual amount of plastics surrounding them and the way plastics burn. Sparking their interest resulted in further questions, e.g. How can plastics harm us? How to prevent

the generation of too much plastic waste? The teacher can address these questions during the next lesson. This topic is a part of broader environmental education and these ideas can be used in project work.

3. TRAINING TEACHERS TO IMPLEMENTATION FORMATIVE ASSESSMENT

Formative activity performed by teachers involves systematic planning of diverse activities for students, which allow for the identification on students’ performance and provision of efficient feedback, thus helping them to achieve the determined education goals [14-15]. Teachers identify students’ knowledge, their ways of thinking and responses, motivation, and even what it means for students to learn. Formative assessment helps teachers decide what should be taught next and how to do it.

In a class focused on formative assessment, the teacher plays the role of a coordinator. Moreover, they are supposed to prepare activities allowing students to apply the strategies, which can help them understand their own learning process. As a result, students grow more conscious of their own learning process and take more responsibility for it [16-19].

Clark [20] has specified five key principles of formative assessment, which need to be applied in practice:

1. Students must be able to comprehend what they are supposed to learn and what is expected from them.
2. Students need feedback on the quality of their work and what they can do to improve it.
3. In case of need, students must be given advice on how to proceed to improve.
4. Students must be fully involved in deciding about the next steps to be taken.
5. Students must realize there is someone to help them if they need.

Table 5 summarises what the teacher is supposed to realize in terms of formative assessment, and how it affects the next steps they take in teaching [1].

Table 5. What needs to be identified in terms of FA implementation and what steps should be taken by the teacher based on these findings

Teacher realizes that...	Teacher performs a teaching intervention in order to...
students learn more efficiently if they know and understand the educational objective	make their planning more precise communicate the educational objectives in a way comprehensible to the students determine precise criteria necessary for the students to meet to succeed
to facilitate success for all students, it is necessary to identify the point at which each of them is on the path towards the educational goal	constantly collect information about student learning, observe students and adapt teaching during the classes as appropriate
efficient feedback provides specific ideas on how to help students achieve the educational goals	provide focused and constructive feedback develop a set of feedback-provision strategies
one of the most important abilities that can be taught to students is to regulate their own learning	teach students how to assess themselves create rubrics, checklists, metacognitive tools, and other assessment tools as an integral part of students’ activities before, during, and after learning
meaningful learning requires communication and idea sharing during discussions in which students come up with their own efficient solution proposals	encourage students to learn from each other plan and ask thoughtful questions facilitating the collection of information about student learning

motivation is something that can be developed in students, however, the teacher has to support them

harmonise appropriate level of challenges and equal support for all students

purposefully create educational opportunities in which students can realize what they are doing well and what should be improved to maximise their success

Every formative assessment system requires the teacher to develop a clear idea of the goals to be achieved by their students and the teaching procedures improving student performance.

4. DIGITAL TOOLS USEFUL IN FORMATIVE ASSESSMENT

Digital tools allow for better understanding of student learning and in turn, predict and adapt the learning processes. It also promotes students’ choices to learn “anytime and anywhere” by providing them with self-assessment and peer-assessment opportunities, which helps students determine their own goals and learning strategies [21].

There are a number of digital tools useful in FA, which allow for the creation of questions and collection of student answers, e.g. Kahoot!, Socrative, Polleverywhere, Mentimeter, etc.

Kahoot! is a game-based digital tool. To create and manage the existing quizzes (kahoots), teachers need to register at <https://kahoot.com/>. Students login to <https://kahoot.it> or use the Kahoot! application installed on their tablets or smartphones.

Kahoot! can be used to implement the following FACTs:

- prediction card/before and after – students choose between true and false,
- voting questions, self-assessment card, rubric, checklist – students choose a single answer from the list.

An example of a self-assessment card on the topic of Neutralisation can be seen below. It was given to 8th grade primary school students at the end of a lesson.

The system generates an overview of student answers after each question (see Fig. 1). This overview is useful not only for students, but also for the teacher who can identify what students can already manage on their own and what needs more attention. The teacher can respond to this information immediately during the class discussion and modify further teaching accordingly.

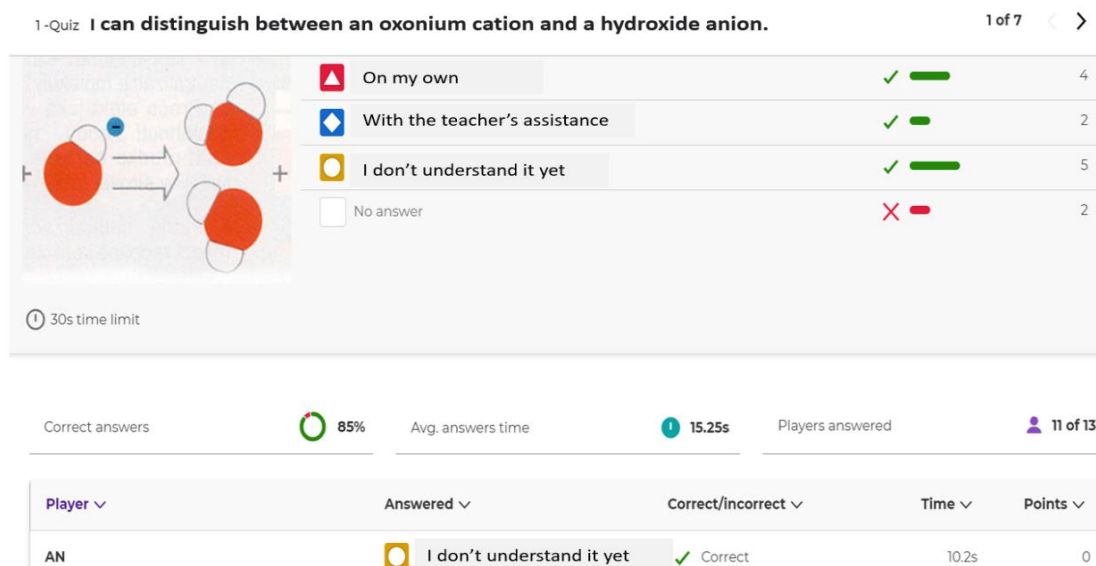


Fig. 1. Evaluation of a selected question from the self-assessment card on the topic of Neutralisation (primary school, 8th grade); Source: Own processing

A quiz is essentially a FACT. The system processes overall quiz results which can be found in the Reports tab. The teacher can also see how students answered individual questions or how a specific student fared in the quiz. All results can be downloaded as well-arranged spreadsheets.

5. CONCLUSION

Formative assessment in teaching and specifically self-assessment activities teach students how to perform self-assessment, peer-assessment, and assess their surroundings in general. Teaching this ability is one of the most important tasks of contemporary and future schools.

However, Slovakia is still waiting for systematic and careful implementation of formative assessment in teaching. To facilitate FA implementation in Slovak schools, a support system for teachers focused on FA and its classroom use need to be created. Such system must include methodological guidelines, digital libraries of formative assessment tools (for specific academic subjects) as well as good practice examples. The demonstrations of FACTs and their implementation in teaching chemistry were presented with this goal in mind.

The presented practical demonstrations of the selected FACTs show how students evaluate and describe their own knowledge and skills. The answers show that students realize their own learning process and indicate the things they are unsure about. It allows the teacher to identify what the students failed to comprehend and what needs to be revised, the things they find interesting, but also their misconceptions.

Digital assessment can also help students identify their own strong points and provide them with a more authentic experience with assessment. Digital FACTs provide a number of benefits for both teachers and students, e.g. instant feedback for the teacher based on student answers, faster and more comfortable digital data processing (e.g. automated generation of complex overviews, answer archivation).

Last but not least, for successful FA implementation into the everyday practice, teachers need appropriate support on the level of education policy (investments into professional teacher development and training of future teachers, mentoring, peer support, and formative assessment research).

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Selected Factors Affecting Student Performance

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Abstract

The article is devoted to the issue of the pupil's performance in teaching and selected factors that most often affect his progress in learning. In today's society, opinions on the problems associated with learning are very different, and the demands on the student's performance are also increasing and significantly affect his relationship to learning, to teachers, classmates, which can be reflected in his behavior, relationships at school and in the home environment. In the post, we focused mainly on factors such as motivation, communication, but also on some stressful situations. The contribution also includes selected research results that point to the current situation in the given area.

Keywords: motivation, stressful situations, stress, communication, pupil's relationship to learning

1. INTRODUCTION

In the educational process, the pupil is constantly evaluated, assessed, his performance, success or failure in his education is monitored. This daily process evokes different feelings in the pupil, which are related to his personality, emotions, self-esteem, experience and behaviour. Pupils have to cope with the pressures and demands of school much more often than in the past. The demands on the pupil's activities are constantly increasing, mainly due to society, the media, and the demands placed on the pupil by parents and teachers. A successful pupil is able to cope well with stressful situations if his/her performance at school matches the requirements set by the school.

A pupil is said to be unsuccessful if he or she cannot cope with stressful situations, if his or her performance and behaviour do not match the school's requirements in a given grade and subject.

The family environment in which the pupil grows up, is educated and spends his/her free time also has an influence on the creation of a stress situation. The family environment has a very strong influence on the pupil's personality development, achievement, behaviour, self-control, communication, self-esteem, etc. Nasri (2019), Mayer (2014), Pasternakova (2014) state that the functionality and relational framework of the family is very important. They also emphasize that the student's motivation to learn can also increase as a result of the loss of some of the family's functions (for example, the elimination of alcoholism in the family, etc.). Majerova (2014, p.87) states that evaluation - the assessment of the pupil's school performance by the teacher, parents, as well as the self-evaluation itself causes a burden for the pupil. Nowadays, education has dynamic conditions, it is influenced by various factors related to

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modernization and technological progress of society, especially the influence of information and communication technologies on people and society is significant (Hangoni, 2021).

1.1. Motivation

Motivation is an important factor that influences the quality of the educational process. It creates optimal conditions for the development of learning and the overall activity of the pupil. Vágnerová (2014) defines motivation as an internal psychological state that stimulates activity aimed at achieving good performance and maintaining it for a certain period of time. Motive can be seen as a learner's reason for learning, but also demonstrating what has been learned. If a pupil is not motivated to do school work, he or she is not working to the level of his or her ability, so it is important to know what the pupil thinks about school and learning and what interest he or she has.

Djuka (2003) states that motivation is a stable phenomenon that leads to the achievement of a goal. If someone is motivated to do something (a pupil is motivated to write homework, a teacher is motivated to prepare for class, etc.) we do not directly observe what constitutes this motivation, but we can form a fairly clear idea about it by these external manifestations:

- the person has a goal;
- strives to achieve it;
- certain signs of effort are observable.

Student motivation is the key to effective learning. Lehenova (2012) states that motivation is influenced by family influences, social circumstances, verbal expressions, the social environment of the classroom, positive relationships between people, pupils, school activities and positive school performance. We see the family as a significant factor influencing student motivation.

Petty (2013, p. 54) lists seven motivational factors that can increase a pupil's desire to learn. These factors act in the long or short term. These include:

- The things I learn are useful to me;
- the qualifications I get, by studying, are useful to me;
- I usually get good results in my learning and this success boosts my self-esteem;
- if I learn well, it will elicit a positive response, from my teacher or my classmates;
- if I don't learn, it will have unpleasant consequences;
- the things I learn are interesting and arouse my curiosity;
- I find that teaching is fun.

Motivation is an essential part of the educational process. A detailed analysis of the biographies of famous people shows that their common trait was great diligence, perseverance, great effort and a desire to achieve something. Often it was even fanaticism and preoccupation with some cause. Many of the famous needed to continue to develop themselves, they were not satisfied with the status quo. Motivation is closely linked to a person's emotion. Everyone's feelings are a driving force, a force for human motivation. They result in the value composition of the personality. Motivation consists of instincts, drives, interests, needs, goals, aspirations, values, ideals, philosophy of life (Zelina, 2011).

Turek (2014) states that the learner gains the most valuable knowledge through his own work and effort, by doing something. The pupil should be active and motivated during the lesson. Motivation is a complex of psychological processes that activate (induce), direct and maintain human behaviour in a certain direction. Motivation is the answer to the question of why a person does this particular activity.

Szököl and Nagy (2015) emphasize that students need to be informed during the learning process about the curriculum, why it is important to them, and how the acquired knowledge will help them in their personal and professional lives. It is good for pupils to solve examples and tasks that connect to everyday life. The tasks should have a realistic, applied, motivating function. The connection with life is highly motivational, as pupils will find that they need what they are learning for life.

Lorincova (2015) states that intrinsic motivation includes activities that are interesting for the pupil, cause him/her joy. Extrinsic motivation is something that the individual wants to achieve, a desired outcome. Intrinsic motivation is most often used when working, the pupil learns in his own interest, for his own satisfaction. Extrinsic motivation can be a reward or the threat of punishment. If a pupil learns on the basis of his own intrinsic motivation and is offered a

reward in addition, his intrinsic motivation decreases. A sense of extrinsic motivation is created. Based on this, intrinsic motivation decreases. Intrinsic motivation is considered more appropriate and valuable to the learning process than extrinsic motivation. Intrinsic motivation is important in learning because the learner himself wants to acquire new knowledge and insights and acquires them by his own efforts.

In motivation, it is important for the teacher to arouse the pupils' interest in the subject matter, but not every teacher can do this, so it is necessary for the teacher to know a variety of methods and ways that will help him/her in motivating the pupils. Teachers also need to deepen their skills and knowledge in the field of motivation. During the teaching process, the teacher should notice not only the stimuli from the pupil's external environment, but also the internal processes and states that mobilize the individual in the teaching process. If the teacher knows the motivation of the pupil, he will also understand his behaviour and actions. Teaching methods and strategies, which are chosen by the teacher at his or her discretion, are crucial to the pupil's success in school, his or her performance. If a pupil is to achieve an educational goal, it is recommended that this be achieved through the pupils' own learning work. In particular, activating methods and techniques are appropriate, which include discussion methods, discovery methods, cooperative learning, role-playing, didactic games, simulation methods, project methods, research methods, etc. The most effective methods for promoting a positive classroom climate include group work and cooperative teaching. A positive classroom climate and atmosphere contributes to better student success in school.

1.2. Interpersonal communication

The ability to communicate, which has become the foundation of human culture, is important for improving student performance in school. Communication includes not only conversation and the transmission of information, but also active listening, empathy, pro-social behaviour, assertive communication, control of negative emotions, expressing one's own emotions and understanding the emotions of others, empathy, smiling, etc. Nowadays, communication is mainly dominated by the transmission of information, with other components being used less. People learn to communicate all their lives; good communication prevents misunderstandings and miscommunication and strengthens relationships between people.

Mikuláščík (2010) states that the term communication means understanding each other. By this term we understand understanding, i.e. understanding or agreement of ideas. This implies the conditions of communication, which ensure that people understand each other, speak the same language, talk about the same thing and reach a coherence of thought. Communication is also understood as communicating, informing, giving knowledge, making one's feelings, attitudes, opinions, etc. known. Communication requires a communication partner - a person who is the addressee of the information. Communication is also understood as the exchange of information between people. One communicator sends information, the other receives it, then they exchange tasks, the other communicator sends the information and the first communicator receives it. This is so-called two-way communication. According to Albert Mehrabian's research (In Pease, 2004), the verbal component accounts for only 7% of the message content, the vocal component (tone of voice, modulation) accounts for 38% of the message content, and the remaining 55% is conveyed by non-verbal signals.

In the school environment, feedback is also an important component of the communication process. It is a reaction to certain information. Feedback is very important in communication because it provides information about how the message is received, processed and understood. The communication environment, the school environment during learning, is an integral part of the communication that takes place in it. In a school, the communication environment consists of the lighting, the arrangement of the rooms, the presence of different numbers of people, etc. The stimuli that act on and affect the communicator, the communicant, the communicé, cause communication noise and include, for example, distorted information, noise, sunlight, intrusive thoughts, lack of focus and fatigue. Gavora (2005) states that pedagogical communication occurs in the educational process, through the exchange of information between its participants. Its role is the fulfillment of educational goals. The exchange of information has not only a spatial dimension (it takes place mainly in the school classroom, but also in places where interest activities take place), but also a temporal dimension, which means the division of teaching into lessons. Pedagogical communication includes its specific rules, which are involved in determining the competences of the participants.

Nelesova (2005) states that pedagogical communication is a specific kind of social communication. Its specificity is determined by its function, the roles of communicants, the environment in which it takes place. Pedagogical communication is characterized by the fact that it takes place between the participants of the educational process, it is at the same time an exchange of information, which is conveyed by the use of verbal and non-verbal means, it also serves to achieve educational goals, it has its own space and time limit and is governed by established rules.

Pedagogical communication is limited and influenced by certain factors:

- time limitation;
- spatial constraints;
- the definition of the content and programme of communication;
- the definition of pedagogical communication by rules of conduct;
- the influence of the spatial distribution of pupils on pedagogical communication;
- the influence of teaching methods on pedagogical communication;
- is limited by the organizational form of teaching;
- the influence of asymmetry of social roles.

Limits that affect pedagogical communication need to be not only eliminated but also prevented in the classroom. It is up to the teacher how he/she approaches the pupils in the educational process, not only from a personal point of view, but also from a professional point of view. The way in which a teacher communicates with pupils has a significant impact on the development of the pupil's personality, so if a teacher wants his/her action to be effective, it is necessary for him/her to differentiate communication internally depending on the age of the target group he/she wants to influence and, at the same time, to choose the appropriate means of communication.

Hasajová, Porubčanová and Bilčík (2020), Barnová et al. (2018) state that social communication in a narrower sense is perceived as communication and exchange of information. In a broader sense, social communication is the mutual exchange of the contents of one's own consciousness, the exchange of one's own ideas in the course of socio-cultural and economic practice. If we communicate, it is always through and with the help of some sign system and with a particular goal in mind. By social communication we mean the reception and transmission of information in social intercourse. We divide it into three basic types:

1. oral - conversation, consultation, discussion, teaching, questioning, explaining, etc.;
2. written - letter, email, memorandum, memo, report, manual, minutes, etc;
3. visual - diagram, chart, table, slide, photograph, slide, video, film, model, powerpoint presentation, etc.

Pavlovská (2004) states that the rules of communication define what the society requires and expects from the participants of communication. Communication rules are formulated by the school, set by the general rules of behaviour in a given society, and the next part is the result of the communication process between the teacher and the students. Pedagogical communication in the classroom takes place as a stream of alternating utterances by the teacher and the pupils. This flow of communication is not random and arbitrary, but rather strictly organized. The nature of such communication is largely influenced by the fact that it takes place on the basis of rules which determine the powers of the teacher and pupil in the course of communication. The rules of communication in the school correct the behaviour of the teacher and pupils in different aspects of communication. The rules are important for the organisation of classroom work; it is necessary to guide pupils' activities and to ensure that classroom activities run smoothly in accordance with pupil-teacher co-operation.

1.3. Stress as a learning barrier

A pupil's performance at school is influenced both by the personal characteristics of the individual, but to a large extent the pupil's performance is also dependent on his or her environment. What a pupil experiences at school, in a group of friends, in leisure time and in extra-curricular activities often translates into his or her attitude to learning.

At school, pupils are confronted on a daily basis with experiences and problems that have a positive or negative impact on their personality. For some pupils, the very act of attending school can be stressful, or the stress of an exam, a change of teacher, the fear of failing at school, etc. Stress affects a pupil's personality, it manifests itself in their behaviour, experiences, feelings and can also have physical manifestations. Some pupils are able to cope with problems without much difficulty, but there are also pupils who experience small things with great stress and strain. The effects of stress on a pupil's personality can develop into a long-term condition where, through the action of negative factors, mental and physical health problems can occur. In a stressful situation, the pupil experiences an exceptional situation that is outside his/her normal experience, outside his/her normal burden that he/she experiences on a daily basis (it may be, for example, the death of a loved one, the divorce of parents, the serious illness of a parent, etc.).

Typical reactions that occur with stress are inability to concentrate, tiredness, thoughtfulness, muscle pain, outbursts of violence, disinterest in anything or anyone, easy irritability, lying, change of behaviour. The student uses a psychological defense mechanism when experiencing stress at school or at home because he or she does not want to experience disappointment and pain. He or she tries to run as far away from the stressful situation as possible. The pupil's reaction to stress can be twofold - he either accepts and believes that the stressful situation has occurred and comes to terms with it, or he rejects it.

Mravec (2011) states that short-term activation of the stress response is necessary for the organism to cope with stressful situations; excessive and repeated activation of the stress response has an adverse effect on the organism's functioning. According to the author, the emotional response can manifest itself in:

- Anxiety - a person reacts to stress by feeling tense and worried about an unspecified threat.
- Anger and aggression - the person defends against stress, therefore behaves more aggressively than normal stress. Aggression is an active response that quickly reduces the psychological tendency that has arisen. Cause may be frustration, conflict, stress, excessive energy, lack of self-control and discipline, jealousy, hostility, fatigue, hunger, suffering, feeling misunderstood, lack of a sense of acceptance.
- Depression - sadness as a reaction to feeling the intractability of a particular burden.
- Apathy - resignation and withdrawing into oneself, these are manifestations of feelings of helplessness to find a solution.
- Cognitive impairment - in a stressful situation, logical thinking is impaired, change
Emotional attunement can burden the processing of information, disruption of the individual's concentration, internal thoughts triggered by the experience of stress can also be disturbing.
- Awareness of the stressful situation activates psychological defence mechanisms - which may vary depending on the individuality of each pupil. Mental processes influence not only the emergence but also the course of reactions.

The evaluation of a pupil's performance in the educational process has an important influence on his/her educational success. Testing and evaluation of pupils is an actual, serious, but also sensitive and complex part of educational work in school. It affects pupils and teachers directly, parents indirectly and, through them, the wider public. The results of the learning process, reflected in the form of assessment and subsequent classification of pupils, are an element of pedagogical communication and predetermine the future professional and life path of those educated. If assessment is to fulfil its mission, the basic conditions must be in place. Proper assessment consists of collecting the evidence from the various interim assessments, the results of which must be communicated to the person being assessed. The results are then used to reassess further approaches to the pupil.

Tracy (2010) states that all assessment requires courtesy, politeness, support, positivity and a willingness to help. If something goes wrong, there is no need to immediately criticise, get angry or complain. Such an approach leads to the discovery that pupils are interested in learning and improving.

The current changes in education are oriented towards the development of the pupil's personality and also require changes in the assessment of pupils. An important part of the teacher's activities is to get to know the pupil and to approach him individually, which implies obtaining information about him, his performance and behaviour. Assessment also includes all the activities of the teacher, the school, which result in the evaluation of the pupil or the class in various forms. Assessment has two main aims, namely to provide feedback that contributes to the development of the pupil's learning and the second aim is to assess and validate the pupil's knowledge.

From the experience of pedagogical practice, we can state that the so-called traditional assessment (classification by marks) and verbal assessment still prevail in Slovakia and in other countries. In recent years, the requirement to humanise the teaching process and all its components, including testing and assessment, has been emphasised. In this paper we have mentioned only some of the factors that can influence pupil performance. There are many of them, but it is important to realise that they need not only to be identified, but gradually eliminated if they bring problems to the pupil's learning.

1.4. Discussion and conclusion

In this section of the paper, we present selected results of a survey that aimed to find out what motivates high school students to learn, what motivates them the most to learn and be successful. We investigated whether students experience fear before class and what causes it. We were interested in the extent to which secondary school pupils are satisfied with the teaching methods that teachers use in their lessons, and whether parents are interested in the way

their child learns and is assessed at school. 148 respondents from three secondary schools participated in the survey and the questionnaire method was used.

We found that parents with higher education are role models in teaching their children. In the survey, we evaluated the responses about the parents' education and the students' grade point average for the previous schooling period. 48.65% of the respondents are interested in what is happening in school daily, 16.22% of the respondents are interested in what is happening in school once a week and 7.43% of the respondents are not interested in what is happening in school at all. 39.19% parents attend class meetings regularly, 50% parents attend class meetings occasionally and 9.46% parents never attend class meetings.

We wondered what motivates secondary school students to learn, the most answers were - better future 23.65%; followed by - I want to quit school 16.22%; my parents make me learn 12.84%; I like to learn - stated by 10.14%; my surroundings, school make me learn - 8.11%; I feel good about my knowledge; I want to get a job; I want to further my education were also stated by 2.7% of the respondents. For boys the most common answer was - I want to finish school 8.12% and for girls the most common answer was - I want to learn for a better future 18.24%.

When asked if secondary school students were bored in school, what was the cause of their boredom, the most frequent response was - uninteresting subjects 34.12%, followed by - boring explanation of the subject 10.59% and interestingly the response of not engaging students in activities 3.53% and teacher being late for class 2.35% were the most frequent responses. When asked whether secondary school students experience fear before class, 52.70% answered yes and 45.27% answered no. The causes of fear most frequently mentioned by the secondary school students are - fear of written paper 29.49%; strict teacher 20.51%; fear of bad grade 16.67%; unpreparedness for class 12.82%; fear of answer 10.51%; fear of parents' reaction 6.41%. At the same time, respondents were asked to suggest ways to improve relationships, communication with teachers. They gave the following suggestions - change teaching methods; approach to pupils; listen to pupils' opinions; use more modern technology in teaching; do not underestimate pupils and reprimand them, but use more praise and mutual communication in evaluation.

We have given only a selection of the results of the survey, but they also point to the need for a change in the management of the educational process, the use of modern means and technologies of teaching, the establishment of a better teacher-pupil relationship and their communication. School and family are the most important institutions in a person's life, which play an essential role in the socialization process of an individual. They both fulfil a number of functions which are closely related to each other. One of them is educational, which includes motivation to learn. To stimulate pupils' interest in learning is extremely challenging for both teachers and parents. As Petlák (2020) states Motivation for learning, elimination of negative factors affecting pupil's performance are important tasks not only of the school environment but also of the pupil's family environment.

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Comparison of Fulltime and Distance Education in the Subject of Biology at the 2nd Level of Elementary School

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Abstract

Recently, distance learning appears to be an opportunity for students who cannot attend classes in person for various reasons. The connection of information and communication technologies and especially the Internet with education provides new opportunities not only for teachers, but also for students. The work is devoted to the issue of comparing the advantages and disadvantages of distance and face-to-face education from the point of view of students of the second grade of elementary school, to start distance and face-to-face education in practice in biology classes in the 7th grade of elementary school and to compare the results in education. Research has pointed to various factors influencing distance and face-to-face education. Although the results of the knowledge tests pointed to differences in knowledge, the statistical evaluation of the hypotheses that there are better educational results in the classroom with face-to-face education than in the classroom with distance education did not confirm and there is no statistically significant difference in education ($p = 0.217$). Based on these findings, recommendations were made for pedagogical practice in connection with distance and face-to-face education, taking into account the social and economic conditions of students, using information and communication tools and software interfaces intended for education, encouraging communication between students and teachers, and relieving the burden on parents. from the supervision of education.

Keywords: education, students, elementary school, biology

1. INTRODUCTION

Information and communication technology and technology have brought about a great change in the life of schools. This concerns not only pupils, but also teachers. In addition to the so-called pupil's agenda, which takes place via software aimed at school management, the parent-teacher internet connection provides freedom of communication between the parties involved even outside school hours. The teacher's preparation for the classroom becomes more creative, in a sense easier, thanks to ICTT. If we would like to specify it more precisely, thanks to the technology and technologies that are gaining more and more space in schools, the teacher communicates with pupils and their parents interactively = directly (online) or non-interactively = indirectly (offline) and the educational process becomes easier

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and more attractive for pupils. This is provided that both the teacher and the pupil know and can use ICTT. The Ministry of Education, Science, Research and Sport of the Slovak Republic is aware of this link and therefore approved in 2014 the Concept of Informatisation and Digitisation of the Department of Education with a view to 2020. The document talks about the further development of education, science, research and sport in terms of digitisation. It is a document about defining the needs and activities in the field of computerisation, with the aim of improving the quality of education with adequate support. In this way, the state wants to respond adequately to the needs of practice and the labour market (Bobot et al. 2012; MoEHE and § SR 2014). However, this involves equipping schools, computerising and digitising them, developing and optimising e-services, digitising educational content, increasing the digital competences of teachers and pupils, and mutual cooperation at all levels of education. The Edunet.sk project announced by the Ministry of Education and the subsidies provided in the field of informatisation helped in the introduction of electronic services, and the Microsoft.sk support project in cooperation with the Ministry of Education helped in the software equipment of schools, or the SANET project with the help of which high-speed Internet was brought to schools, among others. The use of ICTT and applications supporting online learning is an important component in the European Commission's strategy to ensure the efficiency of European education systems and the competitiveness of the European economy. In 2000, the European Commission approved an "e-learning initiative", called the Action Plan, which sets out central themes for development in the coming years (EACEA 2000). E-learning was defined as "the use of new multimedia technologies and the Internet to improve the quality of education by facilitating access to resources and services" (EACEA 2000). Ultimately, for a teacher to be able to use the available distance learning applications (both online and offline) and ICTT resources in the educational process, he/she must have the conditions created by the school, have the relevant digital skills acquired through training, and be willing to deliver the subject content in this way. It is this last factor that the willingness to digitally educate and be educated fails.

Teaching methods, organizational forms, teaching means and environment are all part of teaching and are the subject of further research in didactics. Learning is a long-term and never-ending process. During its duration, a person changes his knowledge of the world, changes his behaviour, improves his skills. Just as the educational process is influenced by various factors, so is the teacher who chooses teaching methods and organisational forms, who makes teaching aids, uses ICTT and other didactic technology. His teaching style, i.e. the way he uses these factors and evaluates them in his teaching, cannot be precisely defined theoretically. The literature is full of information and definitions of both teacher and pupil learning styles used in the teaching process. It is up to the teacher and the pupil to choose their own style or to adopt one. However, the aim of education must be to increase the quality and quantity of the knowledge and skills acquired, the acquisition of competences, i.e. the learning process (Dravecký 2017).

Transfer education is the most common form of education in our school system, as far as formal education is concerned. So far, no other form has been either necessary or desirable. However, the global pandemic situation has brought other modes of learning into formal education such as distance learning in online or offline mode.

The advantages of face-to-face education clearly include contact with the learner. This is the basis for the use of some innovative methods in teaching. To be more specific for the subject of biology, this can be, for example, experiments under the supervision of a teacher, excursions in a botanical garden or in nature. Of course, experiments can also be carried out in distance education, in this context, experiments in which a teacher and technical support are needed. The impact of the pupil's critical thinking can be directly explored in depth by observing and comparing with other pupils directly in the teaching process, and thus ruling out unfavourable factors such as write-offs, whispering by a third party, use of online sources of information. The influence of the teacher's personality on the pupil can be considered as another advantage of face-to-face education, not only in terms of discipline in the classroom, but also through the influence of the teacher's image, charisma and other personality characteristics. Similarly, this is also true of the influence of the pupil on the teacher. The socialisation and integration of the pupil into the collective is an essential component of the educational process and therefore the present form has undeniable advantages in this respect. As for the disadvantages of face-to-face education, we would include the pupil's independence and the traditional methods in education, which are still the most frequently used methods in primary schools. Another disadvantage is regular attendance at classes. This can be a problem for children with disabilities. Attendance-based education has a strict timetable and a set time span (lessons). This loses the opportunity to learn in the area in which the pupil is most interested, devoting the same amount of time to all subjects. What is on the one hand an advantage of full-time education can on the other hand be a disadvantage if there are distractions in learning from classmates or other influences arising in the group. The teacher's opinions are accepted by the pupils as the only ones and there is not much room for disagreement, confrontation or doubt (time constraint, the lesson lasts 45 minutes). If we look at the above factors from the perspective of distance education, its advantages are the opposite of face-to-face education, i.e. the pupil's space for problem solving and studying is almost unlimited, he is not influenced by classmates, he learns in a home environment, his studies are not affected by incidental expenses such as food, transport, clothing, registration fees, etc. Distance learning allows flexibility in the schedule of the day as well as the week. The main

disadvantages of this form of education can include the loss of teacher control over the student (in education) and more distractions in the home environment. The pupil does not undergo socialization and integration (which may not be a problem for some children), the interaction between teacher and pupil is less dynamic, delayed (the influence of the quality of ICT resources and the power of the Internet) and may be less effective. While teacher evaluation in face-to-face education is generally more rigorous in distance education it is more benevolent, but this need not be the rule; it is entirely within the teacher's discretion (Gazdíkóvá 2003).

2. METODOLOGY

The research sample consisted of 202 respondents (n = 102 girls, n = 100 boys) of grade 2 primary school students. A total of 220 questionnaires were distributed and 202 were returned. Data were collected in grades 5-9. The respondents were pupils of the Sabinov Primary School, which is a residential school and one of the largest in the Sabinov district. The research was carried out qualitatively in the form of a questionnaire. The essence of the research was to find out how pupils perceive distance education in comparison with full-time education. A questionnaire is a means of collecting data by means of questions asked to respondents in written form, in this case to pupils of the 2nd stage of primary school. The survey was conducted using an empirical method - a handout questionnaire, which is most suitable for gathering information in a short period of time even with a larger number of respondents forming a representative sample. Through it, it is possible to capture the opinions of respondents and obtain suggestions, possibilities of improvement of the phenomenon under study.

The questionnaire had 17 questions, of which there were 2 demographic questions, 12 closed questions and 3 open questions. The questionnaire was anonymous in order to obtain the most objective data. Prior to the submission of the questionnaires, the Grade 2 primary school pupils were informed for what purpose they were completing the questionnaire. The questions were formulated clearly, in a logical sequence, thoughtfully. The two closed questions were demographics-related, related to the age (year) and gender of the pupils, and multiple choice questions were selected by marking the correct answer with a cross or a circle. However, most of the questions were closed questions and pupils expressed their opinion on a scale of 1 - 5, with 1 being the least agreement with the phenomenon under study and 5 being the most agreement or they chose from the options offered. The open-ended questions were related to the indication of aids other than those used in distance education.

The questionnaires were administered in person to primary school level 2 pupils. The results were sequentially evaluated in a Microsoft Excel spreadsheet. The results were tabulated, sorted and evaluated both graphically and verbally. We were interested in answers to questions related to distance education and comparison with face-to-face education. The key questions were statements:

1. Distance education is better for me than face-to-face education. Pupils could answer this question on a scale of 1 - 5, with 5 presenting the highest agreement with the statement and 1 presenting the lowest.
2. Was distance education more challenging than face-to-face education? Pupils answered the question by marking only one of the options 1 - 3, where each number meant 1. Yes; 2. No; 3. Don't know.
3. Did you understand the learning and tasks you were given during distance education? Students answered the question by marking only one of the options 1 - 3, where each number meant 1. Yes; 2. No; 3. Sometimes yes, sometimes no.

In addition to these questions, which were asked to primary 2 pupils through questionnaires, the aim of the research was also to compare learning outcomes in the Year 7 biology subject. Class A was educated in a face-to-face way and Class B in a distance learning way. We focused on thematic units:

1. Human musculoskeletal system,
2. Human digestive system,
3. Respiratory system of man,
4. The circulatory system of man,
5. The excretory system of man.

The lessons of the respective thematic units were taught through presentations using ICT (class 7. A) and power point presentations the same was done remotely (class 7. B) but without verbal commentary by the teacher (offline). The learning outcomes of the pupils in each thematic unit were compared on the basis of tests presented to the pupils

always at the end of the thematic unit. The comparison of the learning outcomes from the test period is evaluated in the Results chapter. The Alf tests (<https://programalf.com/alf/sk/download.html>) were used for the unit-by-unit tests.

3. RESULTS AND DISCUSSION

The evaluation of the questionnaires is done from tables, verbal evaluation and graphical evaluation. The tables present the data collected from the questionnaires and summarized in an Excel spreadsheet editor. Both absolute and relative frequencies in terms of gender and year are given. The checksums in the columns of the relative abundance tables in the last row together are determined as the average of the number of responses. The verbal evaluation (below the tables) is related to the responses of primary 2 pupils with respect to the total number of respondents participating in the research, with a split between boys and girls. The graphical evaluation is a representation of the total number of responses (relative frequency) in each question of the questionnaire with respect to gender and the total number of pupils. In the following chapter, all the results obtained from the questionnaire research were used in the evaluation and analysis.

The relative abundance is determined with respect to the total number of respondents by gender (Table 1). The sample of respondents consisted of 32 Grade 5 pupils, 18 boys (18% of the total number of boys) and 14 girls (13.7% of the total number of girls), 32 Grade 6 pupils, 14 boys (14% of the total number of boys) and 18 girls (17.6% of the total number of girls), 50 Grade 7 pupils, 50 Grade 7 pupils (17.6% of the total number of girls), 50 Grade 7 pupils (14% of the total number of boys) and 50 Grade 7 pupils (17.6% of the total number of girls). Grade 7 pupils, comprising 25 boys (25 % of the total number of boys) and 25 girls (24,5 % of the total number of girls); 38 Grade 8 pupils, comprising 20 boys (20 % of the total number of boys) and 18 girls (17,6 % of the total number of girls); and 50 Grade 9 pupils, comprising 23 boys (23 % of the total number of boys) and 27 girls (26,4 % of the total number of girls). From the graphical representation, it is identifiable that the sample of respondents was fairly homogeneous in terms of representation of respondents by grade and gender.

Table 1 Class and gender of respondents

	Absolute abundance (n)		Relative abundance (%)	
	Boys	Girls	Boys	Girls
5. grade (32)	18	14	18	13,7
6. grade (32)	14	18	14	17,7
7. grade (50)	25	25	25	24,5
8. grade (38)	20	18	20	17,7
9. grade (50)	23	27	23	26,4
TOTAL (202)	100	102	100	100

Question 1: Which of the following statements best describes your opinion? On a scale of 1 - 5, where 1- least describes it, 5 most describes it, "Distance learning is better for me than face-to-face learning." Relative frequency is determined by the total number of respondents by grade and gender. The checksums in the relative abundance are the row totals determined from the average number of responses 1 - 5 (calculated in Microsoft Excel). Response 1 was answered by 46 respondents (23 boys and 23 girls) which was 22.8% of the total number of respondents, response 2 was answered by 48 respondents (26 boys and 22 girls) which was 23.8% of the total number of respondents. Answer 3 was answered by 33 respondents (15 boys and 18 girls) which is 16.3% of the respondents, answer 4 was answered by 38 respondents (19 boys and 19 girls) which is 18.8% of the respondents and answer 5 was answered by 37 respondents (17 boys and 20 girls) which is 18.3% of the respondents. From the above we can conclude that distance education is not better for 46.6% of the respondents (94, answers 1 and 2 together) than face-to-face education and on the contrary it is better for 37.1% of the respondents (75) than face-to-face education (if we consider answers 4 and 5 together). The difference is seen in Year 8 where 55% of boys and 50% of girls find distance learning better and in Year 9 the same is true for 65% of boys and 63% of girls. This statement was least agreed with by pupils in Year 5 (23% boys, 14% girls), Year 6 (7% boys, 17% girls) and Year 7 (20% boys, 32% girls). Table 2 shows the absolute and relative frequency of responses by grade and gender.

The issues related to distance education, its pros and cons compared to face-to-face education are relatively young, there is not much relevant research in this area. Denard V. Budao (2021) of the Palawan State University1 (Palawan National School, Puerto Princesa City, Philippines) published a study entitled Parenting Amidst the Pandemic: The Case of Parental Involvement in Adolescents' Reading Engagement and Modular Distance Learning. The study focused on analysing the role of a parent in his/her child's distance learning. The respondents were parents of eight high school students from low-income families. This study revealed that parents played the roles of inspirers,

encouragers, but had limited knowledge of the curriculum and poor communication skills; therefore, they relied on internet search engines, consultation for necessary information, and so on. This study confirmed the difficulty of education during a pandemic especially in economically disadvantaged families. The study was based on the fact that children needed parental help especially at a younger age.

Table 2 – Distance learning is better for me than face-to-face education

	Absolute abundance (n)										Relative abundance (%)									
	Boys					Girls					Boys					Girls				
5. g.	6	6	2	3	1	6	4	2	1	1	33	33	11	17	6	43	29	14	7	7
6. g.	5	5	3	1	0	6	7	2	2	1	36	36	21	7	0	33	39	11	11	6
7. g.	7	8	5	3	2	6	6	5	4	4	28	32	20	12	8	28	32	20	12	8
8. g.	3	4	2	5	6	2	3	4	5	4	15	20	10	25	30	11	17	22	28	22
9. g.	2	3	3	7	8	3	2	5	7	10	9	13	13	30	35	11	7	19	26	37
Σ	23	26	15	19	17	23	23	18	19	20	24	27	15	18	16	25	25	17	17	16

Question 2: Was distance learning more challenging than face-to-face learning?

1. Yes; 2. No; 3. 2;

Relative abundance is determined with respect to the total number of respondents by grade and gender. The checksums in the relative abundance are in the row total determined from the average number of responses 1 - 3 (calculated in Microsoft Excel). Response 1 was answered by 72 respondents (40 boys and 32 girls) which was 35.6% of the total number of respondents, response 2 was answered by 125 respondents (56 boys and 69 girls) which was 61.9% of the total number of respondents. Answer 3 was answered by 5 respondents (4 boys and 1 girl) which is 2.5% of the respondents. From the above we can conclude that for 61.9% (125) of the respondents distance education was not more difficult than the face-to-face form of education. Distance education was more challenging than face-to-face education for 56% and 50% of the boys and girls of grade 5 and grade 6, respectively, and for 57% and 50% of the boys and girls of grade 6. From Year 7 onwards, 65% of boys and 60% of girls found distance learning no more challenging than face-to-face learning, and in Year 8, 65% of boys and 56% of girls did so. The most significant difference from the lower grades was in Grade 9, where 74% of boys and 89% of girls chose answer 2. Table 3 shows the absolute and relative frequency of responses by year group and gender.

According to research by Ahmed Sameer El Khatib of Faculdade de Economia, Administração e Contabilidade (FEA/USP 2020), distance education alternatives have been developed around the world to ensure effective communication between teachers and students. It explored three different forms of video conferencing namely Desktop Video Conferencing (VCM), Interactive Video Conferencing (VCI) and Web Video Conferencing (VCW). The results of the research revealed specific opportunities for learning namely distance but online learning through video conferencing. So far the use of these means has not been effective because of the simultaneous presence of face-to-face learning, but when using video conferencing systems during learning in the home environment, one of the serious problems of distance learning is removed and that is the need for socialization, the need to be with classmates from school.

Table 3 Was distance learning more challenging than face-to-face education?

	Absolute abundance (n)						Relative abundance (%)					
	Boys			Girls			Boys			Girls		
5. grade (18/14)	10	6	2	7	6	1	56	33	11	50	43	7
6. grade (14/18)	8	5	1	9	9	0	57	36	7	50	50	0
7. grade (25/25)	9	15	1	5	20	0	36	60	4	36	60	4
8. grade (20/18)	7	13	0	8	10	0	35	65	0	44	56	0
9. grade (23/27)	6	17	0	3	24	0	26	74	0	11	89	0
TOTAL (100/102)	40	56	4	32	69	1	42	54	4	38	59	2

Q9 Did you understand the learning and tasks you received during the distance learning?

1. Yes; 2. No; 3. Sometimes yes, sometimes no;

Relative abundance is determined with respect to the total number of respondents by grade and gender. The checksums in the relative abundance are the row totals determined from the average number of responses 1 - 3 (calculated in Microsoft Excel). Answer 1 was answered by 96 respondents (47 boys and 49 girls) which was 47.5% of the total number of respondents, answer 2 was answered by 46 respondents (25 boys and 21 girls) which was 22.8%

of the total number of respondents. Answer 3 was answered by 60 respondents (28 boys and 32 girls) which is 29.7% of the respondents. From the above we can conclude that for 47.0% of the respondents understood the learning and tasks given to them and 29.7% sometimes understood and sometimes did not, 22.8% did not understand the learning and tasks given to them. As many as 60% of the boys (15) and 60% of the girls (16) of the Grade 7 pupils said that they understood the tasks and learning given to them during distance education. Grade 6 pupils (29% of boys, 22% of girls) were the least likely to understand the learning. Table 4 shows the absolute and relative frequency of responses by grade and gender.

Table 4 – Did you understand the learning and tasks you were given during distance learning?

	Absolute abundance (n)						Relative abundance (%)					
	Boys			Girls			Boys			Girls		
5. grade (18/14)	8	5	5	5	3	6	44	28	28	36	21	43
6. grade (14/18)	4	5	5	5	3	10	29	36	36	28	17	56
7. grade (25/25)	15	5	5	16	2	7	60	20	20	60	20	20
8. grade (20/18)	10	4	6	8	7	3	50	20	30	44	39	17
9. grade (23/27)	10	6	7	15	6	6	43	26	30	56	22	22
TOTAL (100/102)	47	25	28	49	21	32	45	26	29	45	24	31

From the statistical evaluation we can conclude that the overall more successful class in the tests of the above mentioned thematic units was class 7. A, which was educated in a face-to-face form using the same teaching aids as were sent via EduPage to class 7. B, which was educated in a distance form. The tests for both classes were the same as was the grading scale. The results of the testing are shown in Table 5 and Table 6.

Table 5 Average test scores in Year 7

Test	7. A	7. B
Test 1	2,14	3,02
Test 2	1,92	2,58
Test 3	2,42	2,64
Test 4	2,44	2,54
Test 5	2,65	2,80
Average	2,29	2,72

7.A, 7.B –class;

From the results of our research, we concluded that pupils in the face-to-face class had a better average academic performance compared to pupils in the distance education class, but a statistically significant difference was not found.

Table 6 Statistical processing of the final evaluation of pupils of 7.A and 7.B classes

Class	n	AP	SD	t	df	p
7 A	23	2,29	0,22	0,96	49	0,217
7 B	27	2,71	0,17			
	50	2,507				

n - number of pupils AP - arithmetic mean SD - standard deviation t - calculated value Student t-test df - degree of freedom p - value of statistical significance (p < 0.05)

The table shows the number of subjects studied for both classes 7.A and 7.B, the arithmetic mean of the variable and the standard deviation (measure of dispersion) in both groups. Student t-test statistical method was used to test the differences between the classes. Jessica B. Heppen (2016) from the American Institutes for Research, Washington, DC, USA conducted research entitled *The Struggle to Pass Algebra: Online vs. Face-to-Face Credit Recovery for At-Risk Urban Students*. This research involved 1,224 9th grade students and was in the subject of mathematics (algebra). The research was conducted in schools in the Chicago area. A portion of the respondents took the math test online and a portion took the math test in person (face-to-face), and there was no statistically significant difference in the educational outcomes of the students. The students reported that the online testing was more challenging and they

scored lower compared to the students who took the testing in person. The results of our research showed that the overall more successful class in the tests of selected thematic units in the subject of biology was class 7. A, which was educated in a full-time form under the same conditions as class 7. B, which was educated by distance learning.

The aim of the empirical part of the thesis was to compare the advantages and disadvantages of distance and face-to-face education from the learner's perspective. According to the Institute of Educational Policy of the Ministry of Education and Science of the Slovak Republic, which conducted a survey by questionnaire in primary and secondary schools on the course of distance education in the school year 2019/2020, it was found that 565,000 pupils had access to the Internet in this period (81.5% of the pupil population), and 52,000 pupils of primary and secondary schools (7.5% of the pupil population) were not involved in distance education. Almost 128,000 pupils (18.5% of the pupil population) were not learning via the internet and other means, e.g. by sending printed worksheets (Ostertágová and Čokyňa 2020). From the perspective of the teachers involved in the research, distance learning was found to be less effective than face-to-face learning and the biggest problem from the teachers' perspective was the lack of effective explanation of the curriculum, providing feedback to pupils and contact with pupils. Another problem was the lack of pupils' online skills.

5. CONCLUSION

The face-to-face form of education has its advantages and disadvantages as well as the distance form of education. The search for answers also revealed the reasons why pupils failed to approach the distance form responsibly, again confirming that ICT and technology are still a missing element in the homes of many second cycle primary school pupils. Related to this are the pupils' skills in the use of technology. The most appropriate form appears to be a combined form. The main recommendation for pedagogical practice is to consider the possibilities and abilities of the pupils and to sensitively combine face-to-face education with distance learning.

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The Discourse of Diversity and Inclusion within Police Recruit Teaching Materials

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Abstract

Police recruit training in dealing with diverse groups is vital for ensuring that officers can secure public trust and co-operation. This study contributes to an understanding of the ways in which recruits are trained in the area of diversity and inclusion, including the related aspects of hate crimes, youth offending, and stop and search policy. Police Scotland's recruit teaching materials are analysed from a discourse analytic perspective in order to reveal discursive dilemmas within the lessons. On the one hand there is an affirmation of diversity and inclusion, while on the other prejudiced views are located 'down' at the level of individual attitudes. Overall, the teaching material presents criminal actions where diversity and inclusion are challenged as being ascertainable through suspects' discourse, often presented in the teaching material through declaratives that indicate prejudiced motives. In a similar vein, the operational nature of policing, for example in relation to dealing with youth crime or stop and search, is pitched in terms of a dilemma of duty of care versus due investigative process. This places officers in the position of operationalising codified rules and procedures which are presented in terms somewhat abstract and static terms.

Keywords: police, recruit, training, diversity, inclusion, discourse

1. INTRODUCTION

Police recruit training plays a vital part in ensuring successful police-public relations and in ensuring trust and co-operation. The preparation of officers through a period of recruitment training is crucial to how they are able to handle various situations they are likely to confront, especially in relation to minority groups (Garland & Hodkinson, 2014; McDevitt et al., 2002; Miles-Johnson et al., 2021). The nature of police recruit training attempts to inculcate the capacity to tackle complex situations within various communities and most police organisations educate officers about diversity issues as part of this. For example, in Scotland recruits receive a 12-week course on inclusion and diversity issues as part of their overall training. As society has changed in becoming more inclusive and diverse, the nature of policing has had to alter accordingly and this is reflected in the mission statements, targets and goals within police strategic plans. to identify detailed information on targeted solutions that would deliver direct and tangible positive outcomes.

Research has focused on the nature of trust between police officers and the communities they serve in terms of reciprocity and how, during the process of encounter, members of the public come to accept and defer to the authority of the police (e.g., Bradford, 2014; Davidson et al., 2015; Van Craen, 2016). What is crucial is that officers are perceived as policing in the same way for all members of society and remain even-handed without any signs of apparent bias (Innes et al., 2009). In line with shifting societal and organisational norms, police officers are considered in terms of being service providers who can attend to incidents and engage with members of the public in a non-discriminatory manner in order to maintain law and order. Police officers must be able to attend to incidents

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and respond respectfully and appropriately to all concerned, including victims, suspects and witnesses (Mastrofski et al., 2016; Wood & Bradley, 2009). Police recruit training that involves teaching how officers should engage with different members of public is therefore vital in equipping them to make appropriate, fair and balanced decisions, particularly in relation to diverse groups (Cordner & White, 2010).

Inclusion and diversity training is now commonly included as part of the police recruit training curriculum in terms of a move towards a service-orientated approach to policing (Miles-Johnson, 2016). It is also the case that police organisations are much more aware of training related to crimes that are targeted at minority groups (Garland & Hodkinson, 2014; McDevitt et al., 2002). In addition, there is a recognition that the instruction of recruits should also include an examination of the operational factors that are appropriate when responding to calls from diverse groups in terms of common forms of victimisation and the procedural rules for recording such crimes against these groups (Mason et al., 2015). However, it must be noted that research has indicated that training courses that deal with inclusion and diversity have been found to be inadequate in terms of officers' lack of understanding and knowledge of minority groups and the nature of crimes against them (Garland & Hodkinson, 2014; Grattet & Jenness, 2005). In this regard, Chappell & Lanza-Kaduce (2010) consider the socialisation of recruits and argue that police training should involve both classroom and in-the-field elements in the curriculum so that there is a degree of congruity between what is learned formally and what is learned when on-the-job. Given that police officers are routinely involved in making decisions that involve complex judgements based on the analysis and evaluation of evidence, then recruit training that involves a combination of classroom and field-based elements makes sense (Cleveland, 2006). It has been argued that training that focuses on minority groups and that is incorporated into police officers' routine performance enables more effective engagement with diverse groups (Goldstein & Buxton, 2014; Wheller & Morris, 2010). Recruit training programmes that foster contact between police and diverse groups has been therefore a crucial inclusion in the curriculum and it is a moot point as to how much of should be given over to this aspect of policing.

The ways in which police officers engage with diverse groups has been the subject of criticism (Constable & Smith, 2015) leading to a focus on the adequacy of police training in relation to these groups. It is also the case that minority diverse groups often voice a lack of confidence in the ability of the police service to treat them equitably and with respect and as a consequence they are often unwilling to engage with police in terms of reporting crimes against them or in offering to co-operate as witnesses (Cherney & Chui, 2009; Miles-Johnson, 2013, 2015, 2016; Murphy, 2013; Murphy & Cherney, 2011; Skogan, 2006). For example, in a contemporary report of a survey conducted by LGBT Youth Scotland (2022) it was found that 38% of LGBT participants had experienced hate crime rising to 49% of transgender respondents. Yet only 11% who experienced hate crime had reported it, and when asked to imagine if they were subject to hate crime only 17% of LGBT participants, and 12% of transgender participants indicated that would feel confident in reporting it. The report goes on to point out that many believed that:

“.....their report would not be taken seriously, or that any incident they reported would not be worth wasting police time for unless it was 'severe enough' to be worth the effort. Others described the emotional cost to them as victims of reporting hate crime, with fears centring around being brushed off, having to out themselves to police and/or parents in reporting a crime, or the potential for police staff not understanding their experience as an LGBTI person.” (p. 41)

In a study of queer youth participants reported harassment and discrimination from police officers due to both their youth and identity as LGBTQ+. The authors argue that this suggest an intersectional approach is required in understanding relations between police and queer youth (Fileborn, 2019). Miles-Johnson & Wiedlitzka, (2021) found that there were significant differences in awareness levels and perceptions of police recruits toward members of minority communities, and that factors such as recruits' gender and sexuality and types of social interaction experienced with diverse groups influenced those perceptions.

What is apparent is that this situation needs remedied as it is both in the interest of the LGBTQ+ community and the police service to ensure that all sections of society are treated with due respects and in accordance with due process to ensure efficient and effective policing (Rowe & Garland, 2013). It is therefore crucial that police recruit training involves an understanding of the frequency of victimisation of diverse groups and the procedural issues in responding to hate crimes (Mason et al., 2015).

2. METHODOLOGY

This article draws upon a discourse analysis approach that is concerned with ideological dilemmas and contradictory discourses within recruit teaching materials used by Police (see Billig et al. 1988, Wetherell & Potter 1992). Three main research questions were central to the analysis: How is diversity and inclusion constructed in the teaching materials? How are operational matters constructed in relation to diversity and inclusion? What dilemmas are apparent in considering diversity and due police investigative process? The research conducted in this study is part of a larger investigation of how the police service in Scotland engages with the LGBTQ+ communities, and in particular young people. Consequently, the focus of this paper is on aspects of police recruit training that bears upon aspects such as teaching about diversity and inclusion, the nature of hate crimes, policing and young offenders, and stop and search policy and operational practice. These aspects play a significant part in teaching about diversity and inclusion within police recruit training in Scotland.

The analysis stresses the nature of discourse as a social construction highlighting the ways in which such discourses that maintain practices. These discourses provide a detailed view of practices in the context of police recruit training and offer and insight into interpretative repertoires or commonplace ways of referring to matters that can be used in various and flexible ways. This analytical approach is useful in examining the just-so taken-for-granted discourses drawn upon as well as the conflicting demands that they raise. Repertoires are part of larger discourses, and these are discussed in presenting analytical examples of the teaching materials below. These materials were requested as part of a projects on ‘seldom heard voices’ by Police Scotland. No claim is made as to being representative of police recruit training in general. Rather they serve as an analysis and intervention in examining key discursive constructions that inform police recruit training.

3. ANALYSIS

3.1 Diversity and Inclusion

The discourse analysis undertaken focuses on Police Scotland recruit training materials and in particular how their concerns with issues surrounding inclusion and diversity. The first discourse withing the diversity and inclusion material is what may be termed an affirmation discourse where diversity and inclusion and presented as a positive benefit for policing in terms of being in touch with the communities that are served.

Police Scotland recognises and values difference. We believe that Diversity enriches the organisation and provides our officers and staff with the potential to be more creative and dynamic. Whether it is exploring new forms of community engagement to identify people’s needs, or considering how to get the best from staff through flexible working conditions, equality and diversity issues are at the core of Police Scotland’s business.” (Unit 6 Lesson 1 Valuing Diversity and Inclusion, p.1)

The aims of Valuing Diversity and Inclusion training are to help police officers understand how diversity contributes to both the richness of the organisation, our communities and the statutory framework with which officers must comply. (Unit 6 Lesson 1 Valuing Diversity and Inclusion, p.4)

Diversity is located withing the individual through the application of categories that are dislocated from any socio-political or historical dimension. In other words, these categories are presented in an essentialist manner as ways of defining aspects of personhood. This can be seen in the following extract:

Diversity is about understanding that we are all unique and recognising our individual differences. The following are just a few dimensions of diversity in no particular order:-

- Sex
- Religious beliefs
- Race
- Marital status
- Ethnicity
- Parental status
- Age

- *Education*
- *Physical and mental ability*
- *Income*
- *Sexual orientation*
- *Occupation*
- *Language*
- *Geographic location*

In essence, diversity awareness is about understanding and accepting that we live and work in a society where everyone is different. This does not mean that one person or group is any better or worse than the next – just different.” (Unit 6 Lesson 1 Valuing Diversity and Inclusion, p.3)

The source of failure to recognise diversity is also located within individual psychology rather than any socio-political or historical dimension:

For all practical purposes we will define a stereotype as:- “A prejudicial mental image held about particular groups of people which is based around false, distorted, simplified or incomplete knowledge about that group.

You will all be able to recollect a time that you have stereotyped a person.” (Unit 6 Lesson 1 Valuing Diversity and Inclusion, p.5)

Bias, conscious or unconscious, are not limited to ethnicity and race. Though racial bias and discrimination are well documented, bias can exist toward any social group. A person’s age, gender, gender identity, physical abilities, religion, sexual orientation, weight and any other characteristics can be subject to bias.” (Unit 6 Lesson 1 Valuing Diversity and Inclusion, p.5)

It is also the case that diversity is cast within wider legislative frameworks such as the Human Rights Act (1998):

This act gives further effect to rights and freedoms guaranteed under the European Convention on Human Rights. You will receive or have already received an input lesson “Human Rights” in Unit 3.

Article 14 of the Act (Prohibition of Discrimination) provides that the enjoyment of the rights and freedoms set out in the Convention shall be secured without discrimination on any ground such as sex race, colour, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status. As such Article 14 does not promote equality in its own right but imposes an obligation to secure the non-discriminatory enjoyment of the rights and freedoms protected by the other articles of the Convention. Unit 6, Lesson 1, p. 8)

What is interesting about this is that inclusion and diversity are externalised through reference to legal frameworks. This is further strengthened by pointing to protected characteristics:

There are nine "Protected Characteristics" which are addressed by equality legislation:-

- *Sex*
- *Race*
- *Disability*
- *Sexual Orientation*
- *Religion or Belief*
- *Gender Reassignment*
- *Age*
- *Marriage and Civil Partnership*
- *Pregnancy and Maternity in respect of females (Unit 6, Lesson 1 p.8).*

While the analytic points made above indicate a focus on prejudice and discrimination as being rooted in individual psychology the lesson also draws attention to broader processes at a cultural level. For example, the concept of ethnocentrism is raised as follows:

Ethnocentrism is a commonly experienced concept and can be explained as a belief that the people, customs and traditions of your own race or nationality are better than those of other races. It's the making of judgements about the behaviour and culture of others based upon your own culture as the norm—viewing others through the eyes of your own culture.

Such behaviour is likely to lead to the feeling that one group's mode of living and values (your own) are superior to those of other groups. In extreme cases ethnocentrism may manifest itself in attitudes of superiority or hostility toward members of other groups, e.g. Hitler's "Master Race" theories and the attendant persecution of those deemed non-Aryan.

Whilst ethnocentrism is not inevitable or excusable it is, perhaps, understandable. The socialisation process is a strong one and people tend to see "their way" as the "right way" and in extreme cases the "only way". (Lesson 6, pp. 17-18)

While there is mention here of socialisation and the issue is pulled back to the operation of assumed psychological constructs in the form of "attitudes of superiority or hostility". This is offset later through a discussion of positive action in terms of helping "to redress the imbalance caused by history and old attitudes" (Lesson 6, p. 20). The latter gives an indication that there is an historical dimension to prejudice and discrimination. However, while this broadens the scope of the recruits' learning it is still set within a traditional psychological conceptualisation, and indeed this is strengthened further in the lesson through the introduction of Allport's (1954) book on the Nature of Prejudice and his (1-5) Scale of Prejudice and Discrimination. The lesson provides an explanation of this scale, for example:

Scale Point 1. Anti-locution

Most people who have prejudices talk about them with friends, colleagues and occasionally with strangers. This could include verbal rejection by negative talk, racist or sexist jokes or by using offensive terms. Anti-locution occurs when a majority group freely make jokes and derogatory statements about a minority group. Speech is in terms of negative stereotypes and negative images.

This is also known as "hate speech". It is commonly seen as harmless by the majority. Anti-locution itself may not be harmful but it sets the stage for more severe outlets for prejudice. (Lesson 6, p. 29)

At the conclusion of these points is a Key Information point for recruits that encourages self-reflection:

Key Information

It is important that as a police officer you are aware of your own prejudices, where they come from, the potential implications of holding them and how to control them. By doing this officers will eliminate the external factors which may influence their impartiality and fairness. (Lesson 6, p. 33).

Note how this reflective process is pitched 'down' at the level of individual police officers rather than, for example, an examination of the police recruitment processes, typical recruitment pool, or at the level of the police as an institution. The crucial point here is that responsibility for ensuring "impartiality and fairness" falls upon individual officers who must ensure that they are aware of their own prejudices and "the potential implications of holding them and how to control them". Officers must therefore exercise self-control in order to perform their duties effectively.

The diversity discourse within the above extracts presents diversity and inclusion as both a desirable aspect of society as well as a challenge

3.2 Hate Crime

In considering hate crime the following definition is offered in the training material:

Any crime which is perceived by the victim or any other person, as being motivated (wholly or partly) by malice and/or ill-will towards a social group. (Lesson 2, p. 2)

What is apparent from this definition is the mentalism which is apparent in the notions of perception and motivation. In other words, the definition trades on an attributional process:

To assist in identifying whether or not a Hate Crime/incident has taken place, we should ask the victim or witnesses these questions:-

- *Who perceived the incident to be hate related?*
 - *Why that person perceived the incident to be hate related?*
 - *Remember we do not challenge another person's perception, we explore it.*
 - *What impact did the incident have on the victim and/or community?*
 - *The evidence of a single witness is not sufficient to prove a charge.*
 - *However, it is competent to label a hate crime aggravation based on the evidence of one person.*
- (Lesson 2, p. 5).*

As can be seen in the above excerpt from the lesson, there is an emphasis on perception in terms of how matters are viewed and attributed at an individual level. Note how this is considered as a subjective process and that the police are concerned with exploring such views. The training material develop further the potential nature of hate crime in terms of being aggravated and its target in terms of being racial, religious, aimed at a person with a disability, or related to sexual orientation. Aggravation is explained in terms of the offender's motive:

You will deal with numerous crimes and offences during the course of your duties and with the exception of a very few genuinely "motiveless crimes", your enquiries will reveal or indicate why the perpetrator acted the way he or she did, i.e., the offender's motivation. In many cases this motivation will be no better explained than, "I didn't like him because he was a" Such an explanation is a possible indication of Hate Crime, i.e., the victim became a victim because of his or her membership of a group as opposed to his or her status as an individual. Many of the reasons given for "not liking" a person will mean that the crime or offence has been aggravated because of this "dislike".

An Aggravation is not a substantive crime or offence in its own right but a circumstance or series of circumstances which make a perpetrator's criminal or offensive conduct even worse. (Lesson 2, p. 9)

In looking at this explanation of aggravation the example presented relies on the discourse of the perpetrator being a relatively straightforward account ("I didn't like him because he was a...."). While there may indeed be cases where perpetrators offer such statements what may also be the case is an awareness of the normative disinclination against such overt prejudice and that it is more likely that there may be some attempt at minimising any such motivation. In this regards it is worth noting that "a circumstance or series of circumstances" are to be taken into account although it is assumed that this will "make the perpetrator's criminal or offence even worse". This statement sidesteps the issue of how such circumstances are not simply given but may themselves be the subject of rhetorical contestation. In other words, what this kind of explanation omits is the crucial role that police officers play in gathering testimony and in questioning suspects based on a common sense understanding of discourse and how descriptions may be given of actions that seek to excuse or offer mitigation. This point is alluded to in reference to sexual orientation and transphobic hate crimes. In pointing to the nature of such crimes the point is made about their non-specific nature:

When a sexual orientation prejudice or transphobic hate incident becomes a criminal offence, it's known as a hate crime. There are no specific sexual orientation prejudice or transphobic hate crimes. Any criminal offence can be a hate crime, if the offender targeted a person because of their prejudice or hostility against LGBTI people.[....]

It might not surprise you that the test as to whether a crime or offence has been aggravated on the grounds of a prejudice based on disability or sexual orientation or transgender identity is almost identical to the test for a racial or religious aggravation.

Sections 1 and 2 of this Act are sufficiently widely worded to make it an aggravation to victimise an individual on the basis that he or she associates with any person with a disability or a particular sexual orientation or transgender identity. (Lesson 2, p. 13)

This kind of wide reference and the can be considered as an acknowledgment that hate crimes are heavily contextual and open to interpretation. These kind of alleged offences may involve a discursive element making 'reading' the context problematic given that it can be claimed that remarks directed at an alleged victim were intended in some other innocuous manner.

The learning material includes the following example:

*One man is assaulted by another man. There are no other witnesses at locus but the whole incident is captured on CCTV. A review of the CCTV footage shows the perpetrator throw a single punch at the victim who falls to the ground. The perpetrator is clearly seen saying something to the victim but there is no sound on the recording. You attend the complaint. You note a statement from the victim in which he claims to have been punched to the ground by the perpetrator who then stated to the victim:
"TAKE THAT. I HATE POOFS LIKE YOU."*

You seize the CCTV footage. You have sufficient evidence to libel a charge of Assault aggravated by Section 2 of the Offences (Aggravation by Prejudice) (Scotland) Act 2009 against the perpetrator. The victim's claim of assault is corroborated by the pictures from the CCTV and his allegation of the words used by the perpetrator require no further corroboration.

Ultimately the perpetrator's guilt in relation to both the assault and the aggravation will be decided by the court. The victim's sexuality is not even an issue here as the perpetrator has made the assumption that he is gay.

Note:- Evidence of an aggravation will most frequently come from words spoken by the accused, but the important point is that there is evidence, not simply a belief on the part of the victim. (Unit 6, Lesson 2, p14)

What is evident from the above is the recognition that "evidence of an aggravation will most frequently come from words spoken by the accused". This recognition of the central role of discourse is welcome but again does not situate utterances within subsequent police interviews with the alleged victim, witnesses and suspect. It should also be noted that the alleged remarks by the perpetrator appear somewhat invented rather than being derived from an actual case.

3.3 Youth Offending

One of the key issues that conform the police is dealing with potential child offenders in a manner the recognises that their wellbeing must be weighed against due investigation of any potential criminal act:

Officers must treat the need to safeguard and promote the wellbeing of the child as a primary consideration. This is not the only consideration and must be balanced with the need to fully investigate crime, the need to record crime in line with SRCS and the needs and rights of victims. (Unit 6, Lesson 8.2, p.1)

This dilemma is presented in terms of the process of deciding to make an arrest:

Whilst the seriousness of the offence is the primary question to be answered this is not the only consideration. The following questions may assist that decision making process;

- What is the purpose of the arrest (i.e. interview or obtaining forensic samples?)
 - Is there any history of offending behaviour by the child?
 - What kind of response is in the best interest of the child?
 - Is this offence of a sufficiently minor nature that it may be dealt with by a warning/RPW or referral to partners?
 - Is the offence likely to go before a court or Children's Hearing?
 - Are there other factors affecting the child's wellbeing in addition to the reported behaviour
 - Do I have sufficient evidence to arrest (officially accused)?
 - If so, is keeping the child in custody necessary and proportionate for the purposes of bringing the child before a court or otherwise dealing with the child in accordance with law
- (Unit 6 Lesson 8.2, p.4)

It is also the case that child offenders are considered as being vulnerable for various reasons; Research has shown that offending in childhood if dealt with effectively may not continue into adulthood, hence the importance of catching and dealing with this behaviour early.

Factors which can contribute to on-going offending:-

- background of childhood abuse
- domestic abuse
- poor parental attachments
- care experienced
- behavioural problems
- truancy & poor educational outcomes

The earlier we can provide help and support the better. (Unit 6, Lesson 8.2, p. 10)

This dilemma places the police in the position of having to deal with child offenders in terms of a duty of care;

Unfortunately not all children live trouble-free lives. Some are neglected or abused emotionally, physically or sexually, often by their parents or members of the immediate family, the very people they should be able to trust. Consequently, some run away from home or from residential establishments and are further exploited. Some children commit crime which may lead to a pattern of persistent offending.

You will come into contact with many of these children. The law recognises that they need to be protected and you must ensure that when necessary this protection is delivered. You can make a difference to a child's life. You may be the only positive interaction a child has with an adult in their life, use any interaction you have with a child as an opportunity to have a positive influence. (Unit 6, Lesson 8.2, p.11)

This discourse places officers in the role of protecting children even if they have potentially committed crimes. It is evident that this is a sensitive aspect of policing premised on the recognition that young people may be exposed to poor background circumstances. The notion of influence here is tethered to psychological impact through socialisation.

3.4. Stop and Search

An area of policing that has attracted attention is the power of stop and search. In the introduction to the learning material on this it is noted that;

Stop and Search is an essential and effective policing tactic in the prevention, investigation and detection of crime. In Scotland, Stop and Search is governed by a Code of Practice which ensures that all searches are carried out in a manner that is proportionate, legal, accountable, necessary and ethical, ensuring that an individual's rights are upheld in accordance with the Human Rights Act 1998 and the Equalities Act 2010.

All searches must be conducted using statutory powers and recorded on the National Stop and Search database. (Unit 8, Lesson 1, p.1)

What is notable in this statement is that the power of stop and search is externalised to the code. Officers must therefore adhere to the Code of Practice in terms of applying it in operational terms. However, the nature of this comes under what is deemed to be reasonable ground for a search. This is most controversial when it applies to observed behaviour:

Reasonable suspicion may exist on the basis of the behaviour of a person alone. For example, if you encounter someone on the street at night who is obviously trying to hide something, you may (depending on the other surrounding circumstances) base such suspicion on the fact that this kind of behaviour is often linked to stolen or prohibited articles being carried. (Unit 8, Lesson 1, p.8)

Trainee officers are given a mnemonic to apply in order to operationalise stop and search:

Where you form the opinion that a person is acting suspiciously or that they appear to be nervous without good reason, you must be able to explain, with reference to specific aspects of the person's behaviour or conduct which you have observed, why you formed that opinion.

The mnemonic SHACKS is useful when considering the reasonable grounds

Seen - What did you see?

Heard - What did you hear, (phone calls, conversations etc.)

Actions – What did the person do?

Conversations - When engaging with the individual, what did they say, did their comments increase or reduce your suspicions

Knowledge - What do you know about the person? Is there recent intelligence?

Smell What did you smell? . (Unit 8, Lesson 1, p.9)

However, the training material acknowledges the potential negative perception of stop and search actions by the police, particularly among young people:

As previously highlighted, stop and search must be conducted in line with the principles of the Code of Practice as these interactions can affect people's perception of the police, long after the search is concluded. Despite the potential for this to be a challenging encounter, it is important that officers engage positively with the public, particularly with children and young people during a stop and search, fully informing those searched on what is happening and why. (Unit 8, Lesson 1, p.9)

What is presented to recruits through this information is the codified basis for stop and search as well as the notion of reasonable grounds for suspicion prior to actioning such a search. While the SHACKS mnemonic is presented as a useful means of operationalising such an action it is arguable if this is applicable in situ where police officers must act as events unfold. Perhaps more likely is that the mnemonic is applied in a post hoc manner when compiling a report of the incident. In other words, it may function as a post hoc means of recording the basis for initiating a stop and search.

4. CONCLUSION

This article has outlined how diversity discourse is weaved into Police Scotland recruit teaching materials. While there is an affirmation of diversity and inclusion both positive and negative attitudes towards this are located 'down' at the level of the individual attitudes. This precludes any view that both affirmative and prejudiced views are located, not within the intrapsychic world but rather in the social world and lived reality. Indeed, while the teaching materials includes information about, for example, protected characteristics such as gender orientation, this is decontextualised from the notion that police officers may deal with person with such characteristics routinely and that in the interest of effective policing and trust withing the community that they are aware of how to treat such person with due respect.

In relation to hate crime, the teaching materials present examples of what such crimes might involve in relation to aggravation. However, these examples are somewhat stilted and often bear little relation to the often elusive nature of hate crime, especially in relation to what someone said or wrote. Hate crime may involve physical assault but can also involve or be accompanied by discourse. In not presenting the ways in which such discourse is negotiated and contested by suspects of hate crimes, a distorted view is presented to recruits as if hate speech can simply be read off what is said. In turning to the material on youth offending the ideological dilemma of investigating such crime is

pitched against the notion of the vulnerable child whose socialisation may have led to being engaged in criminal acts. In this sense the police officer is presented with a dilemma of protecting such children's interests while also at the same time investigating through due process criminal behaviour. While police recruits are presented with, for example video material of actual cases to discuss, this can still be considered as somewhat remote from lived the experience of officers. It would therefore be interesting for recruits to see how police officer handle these kinds of dilemmas in practice. Finally, in relation to stop and search the mnemonic that is presented is decontextualised from actual police procedure and practice and is perhaps less than credible for how officers would react in situ. Rather it may serve as a post hoc rationalisation when constructing a police report of a stop and search incident.

In offering an overall concluding point, what is apparent from this analysis is the way in which the teaching materials offer a formal education and training for recruits that is detached from the workaday realities of policework and they ways in which victims, witnesses and suspects ordinarily talk. It is a little as if the common sense intelligibility of how people talk and how matters are reported, negotiated and contested is removed from sight in these materials. Police officers are in the midst of such matters, and this is why this paper argues that earlier calls for recruits to see how policing operates in practice is crucial. This is where the realities, and difficulties of police work lie and where police office learn about upholding the rights of all citizens but also the role of maintaining law and order in society.

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Questionnaire Item Response Times and Claiming Impossible Knowledge: An Analysis Using the Overclaiming Technique

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Abstract

When gathering educational data via questionnaire, it is important that researchers obtain accurate data. However, accuracy of student self-reports is a long-term issue in the literature, as these data could be subject to various biases and inaccuracies. The overclaiming technique (OCT) has been proposed as an approach to identify accuracy and exaggeration in respondents' self-reports of knowledge based on their familiarity ratings with existing and nonexisting items. Further, analysis of individuals' response times to the whole survey or its parts is one of the approaches for identification of careless or insufficient effort (C/IE) responding. It has been hypothesized that C/IE responding and overclaiming might be related and that claiming impossible knowledge might be a result of the shallow, hasty and inadequate processing of information, however, empirical support for this link is scarce. In this contribution, we analyze the relationship between OCT response patterns in relation to response time on a sample of 1,388 Czech lower secondary students in the domain of English as a foreign language. Our findings indicate both a marked decrease in claiming of nonexisting items and exaggeration, and an increase in accuracy, between students in the first and the second response time decile.

Keywords: overclaiming technique, response times, careless or insufficient effort responding, English as a foreign language

1. INTRODUCTION

In educational research, questionnaires employing self-report items with rating scales are often used, asking students to report on their attitudes, experiences, but also knowledge and skills. However, accuracy of student self-reports is a long-term issue in the literature, as these data could be subject to various biases and inaccuracies and a number of methodological approaches has been proposed to identify and adjust for the different sources of bias in students' self-reports (e.g., Duckworth & Yeager, 2015; Kyllonen & Bertling, 2013).

The overclaiming technique (OCT; Paulhus et al., 2003) has been proposed as an approach to identify accuracy and exaggeration in respondents' self-reports of knowledge. The technique asks respondents to report their familiarity with each item from a list, which contains both existing items from a certain field of knowledge (e.g., concepts, names, events from fields such as mathematics, biology, or history) called *reals* and nonexisting items called *foils*.

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Further, students might not invest their best effort into filling in the questionnaire and respond carelessly, biasing the data. Careless or insufficient effort (C/IE) responding means that respondents do not apply effort to respond accurately or thoughtfully to the questions asked of them (Curran, 2016). Analysis of individuals' response times to the whole survey or its parts is one of the approaches for identification of careless respondents (Curran, 2016; Goldammer et al., 2020). The assumption is that there is a minimum time necessary to read an item and select an appropriate response and when response time of an individual falls below this minimal time threshold, the trustworthiness of their responses is in question (Goldammer et al., 2020).

In the literature, it has been hypothesized that C/IE responding and overclaiming might be related and that claiming impossible knowledge might be a result of the shallow, hasty and inadequate processing of information (DuBois, 2021; Muszyński et al., 2022). However, empirical support for this link is scarce, especially as to the analysis of response times in OCT batteries (Muszyński et al., 2022). In this study, we examine the link between responding to overclaiming items in the English as a foreign language (EFL) domain and student response times to those items.

1.1. The overclaiming technique

The OCT is used to determine respondent's accuracy and exaggeration when providing an answer to questionnaire items based on familiarity with (a) existing items (i.e., concepts, names, events) from a certain field of knowledge (*reals*) and (b) nonexisting items (*foils*). The OCT typically works with four basic indices (Paulhus, 2011, Vonkova et al., 2018): (a) *the proportion of hits* (PH), i.e., claiming of real items, and (b) *the proportion of false alarms* (PFA), i.e., claiming of foils, (c) *index of accuracy* (IA), i.e., the difference between the PH and the PFA, and (d) *index of exaggeration* (IE), i.e., the mean of PH and PFA.

Since its introduction, the OCT has been used as a research tool in several fields, such as information and communication technologies (Vonkova et al., 2021), mental health literacy (Swami et al., 2011), personal finances (Atir et al., 2015), or psychology (Paulhus & Dubois, 2014). Furthermore, Paulhus et al. (2003) also introduced the Over-Claiming questionnaire (OCQ) which is a comprehensive measure containing 150 items from 10 different domains, such as fine arts, physical sciences, social science and law, or books and poems. Additionally, use of OCT was also implemented in *Programme for International Student Assessment* study in 2012 where it focused on the discrimination of items in the field of mathematics (Organisation for Economic Co-operation and Development, 2014).

1.2. Careless or insufficient effort responding and questionnaire response times

A number of methodological approaches have been proposed to identify careless or insufficient effort responding (Curran, 2016; Goldammer et al., 2020; Meade & Craig, 2012). These approaches include, for example (Meade & Craig, 2012): (a) including items in the survey that can detect careless responding (i.e., some obviously bogus answers that would be easily detected when reading the questions) (b) response consistency indices formed from responses to typical survey items (i.e., evaluating consistency in responses to similar items) (c) multivariate outlier analysis (i.e., examining the pattern of responses across a series of items) (d) examining the speed of response times and (e) asking respondents about their reporting behaviors.

Response times (i.e., the times it takes an individual to respond to a set of items) analysis is considered to be perhaps the most widely used approach to identify and eliminate C/IE (Curran, 2016). As such, this approach is hard to fool in a way consistent with careless or insufficient responding, because the key underlying motive of C/IE responders is to finish the survey as quickly as possible (Curran, 2016).

1.3. Response times to overclaiming technique items

DuBois (2021) discusses that claiming impossible knowledge might be a result of the shallow, hasty and inadequate processing of information and that people who deliberate more would exaggerate less on the OCT items. So far, however, we have only a limited knowledge concerning how response times to OCT items in a questionnaire survey relate to the degree to which respondents endorse reals and foils (DuBois, 2021; Muszyński et al., 2022).

DuBois (2021) used a 60-item version of the OCQ complemented by an OCT battery in the domain of English language vocabulary. In his study, median response times for foils were slightly lower than for reals and the time spent thinking about OCT items in general did not relate to exaggeration¹. However, contrary to the intuitive expectation

¹ Note that DuBois (2021) uses a specific exaggeration measure, the so-called Residualized Exaggeration Index which is calculated as the residuals of predicting foils rate by reals rate.

above (i.e., respondents spending more time on OCT items would exaggerate less), the author found that the time spent on foils relative to reals (foil delay) and time spent on foils alone tended to increase with exaggeration. Higher exaggeration thus seems to be related to relatively faster reals claiming and slower foils claiming (DuBois, 2021).

Muszyński et al. (2022) examined the link between total completion time and foil claiming in the area of digital competencies. Note that the authors did not use OCT in its typical format with items representing concepts, names, events, or vocabulary items, but rather descriptions of specific skills or knowledge (example of foil items: *I know how to access media apps to update personal search strategies*, and *I know how to use a spelling checker to speed up software execution*) and their rating scale was not targeting the degree familiarity but rather the degree of mastery (1 = *no mastery*, 4 = *full mastery of a topic*, and 0 = *I do not understand this question*). They found that faster respondents claimed higher mastery of foil items.

1.4. Our study

The lack of knowledge concerning the relation between OCT item response times and the endorsement of reals and foils across different knowledge domains and different groups of respondents represents a gap in current research. We address this gap by analyzing the relationship between OCT response patterns in relation to response time on a sample of Czech lower secondary students in the domain of English as a foreign language. In our study, we recorded the total time it took respondents to respond to the OCT battery. We aim to examine how respondents with different total response times differ in their claiming of reals, foils, accuracy, and OCT exaggeration.

Our research question is as follows:

RQ: What is the relationship between student response time to EFL OCT items and their EFL OCT item response patterns?

2. METHODS

2.1. Sample

We use data from 1,388 Czech students in the last year of their lower secondary studies (ISCED 2, typical age 14/15 years) from a total of 65 schools. In the Czech Republic, there are more types of schools providing lower secondary education. Our sample consisted of basic schools (in Czech, *základní škola*) and grammar schools (in Czech, *gymnázium*) and, for each school type, both private and public institutions were included. The different types of schools in our sample are represented as follows: public basic school (16 schools), private basic school (19 schools), public grammar school (17 schools), private grammar school (13 schools).

2.2. EFL OCT items

We use an overclaiming battery targeting the domain of English as a foreign language knowledge developed by Vonkova et al. (2022). It contains 15 reals and 5 foils, which were rated on a 4-point scale ranging from (1) *I have never heard of this item, I don't know it* to (4) *I know the item very well and I would be able to explain it*. The reals selected for the EFL OCT battery were all nouns with different levels of difficulty for EFL learners based on their correspondence to different CEFR (The Common European Framework of Reference for Languages) level (A1-C2). For more detailed information on the selection of reals and the creation of foils see Vonkova et al. (2022).

2.3. EFL OCT items response time

We measured the OCT questionnaire response time. During the administration, our battery of 15 real and 5 foil items was presented to students in two consecutive windows with 10 items being displayed in each window. We measured the OCT questionnaire response time as the total time a student spent on these two screens.

3. RESULTS AND DISCUSSION

The average time for the whole OCT questionnaire (15 reals, 5 foils) was 110.8 seconds (1.8 min), i.e., about 5.5 seconds per one item. We divided students into deciles according to their OCT response time and for each decile we computed the values of all OCT indices (Figure 1).

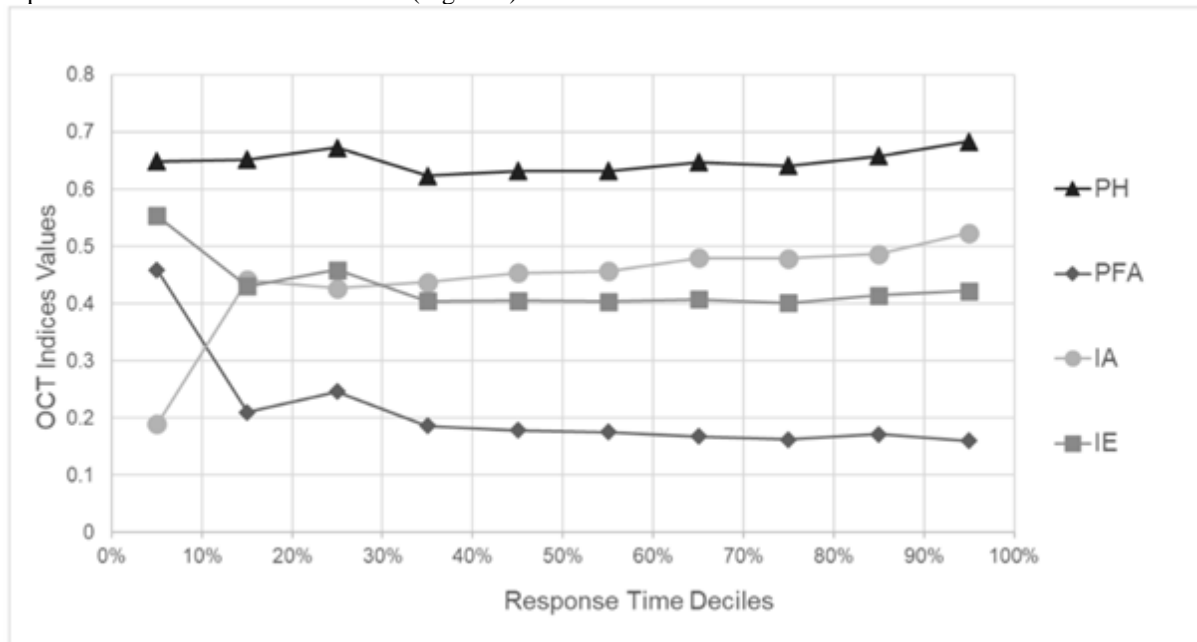


Fig. 1 OCT Indices Values for Different OCT Response Time Deciles

The PH values (normalized mean rating of all existing items) tend to be very similar across all the deciles. The difference between the PH values of the first decile (PH = 0.6485) and the tenth decile (PH = 0.6837) is not statistically significant ($p = 0.270$). However, a notable decrease in PFA values (normalized mean rating of all non-existing items) can be observed with increasing response time. The difference in PFA is especially notable between the first decile (PFA = 0.4592) and the second decile (PFA = 0.2100), the PFA values being the lowest in the tenth decile (PFA = 0.1599). The difference in PFA between the first and the tenth decile is quite notable and statistically significant ($p < 0.01$).

In correspondence with the results for PH and PFA, the accuracy in distinguishing reals and foils ($IA = PH - PFA$) increases with the time spent filling in the OCT questionnaire. There is an especially notable difference between the first and the second decile (IA = 0.1893 and 0.4416, respectively) after which the increase in IA with time becomes less steep (IA for the tenth decile = 0.5238). As for the exaggeration values ($IE = [PH + PFA] / 2$), these notably decrease between the first and the second decile (IE = 0.5538 and 0.4308, respectively). After this drop, however, the IE values become relatively stable. The differences in both accuracy and exaggeration between the first and the tenth decile are statistically significant ($p < .01$).

4. CONCLUSION

In the literature, it was hypothesized that claiming impossible knowledge might be the result of the hasty and inadequate processing of information (DuBois, 2021). Our results are in line with this notion. We have found both a marked decrease in foil claiming and exaggeration, and an increase in accuracy, between students in the first and the second response time decile. Bottom-decile students might have engaged in filling in the questionnaire, yet did not invest enough effort to really contemplate whether they are familiar with each of the OCT items or not, not thoroughly scrutinizing their actual knowledge of the item. Alternatively, some of these students might have been completely disengaged from the survey, responding carelessly just to get to the end of the questionnaire. However, even in the first decile, the claiming of reals was still higher than the claiming of foils, suggesting that students still discriminate between the two types of items, even when responding very quickly. Future research could further focus on response times to OCT items in different fields of knowledge at an item level (i.e., having a response time to each OCT item)

and analyzing the link between OCT response patterns and response times for different types of items (e.g., based on their difficulty in the case of reals).

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Exploring Student-Reported Socioeconomic Status and English as a Foreign Language Family Activities

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Abstract

The relationship between the socioeconomic status (SES) of students and academic factors is an important issue in educational research. This contribution aims to investigate the relationship between the SES of English as a foreign language learners and their families' use of English while traveling abroad and communicating with friends. We analyze data from 1,407 lower secondary students across the Czech Republic. For the purposes of our study, self-reported data about the possessions in students' homes served as a proxy for SES. Our findings show that indices for all types of home possessions were significantly higher in the group of students who communicate in English while traveling and speaking with family friends. The biggest difference was found in terms of cultural possessions (e.g., works of art, books of poetry, etc.). Further research should focus on the extent to which the socioeconomic background of Czech students indeed influences their learning of and the motivation to learn English as a foreign language and how this relationship is mediated or bolstered by family English activities and behaviors.

Keywords: socioeconomic status, home possessions, family use of English, motivation to learn English

1. INTRODUCTION

Socioeconomic status (SES) of families is considered to be a crucial determinant of adolescents' academic achievement, the relationship being consistently documented by a large body of research (Long & Pang, 2016). The strength of the relationship between SES and achievement has been found to differ for different school subjects, being somewhat stronger for language achievement compared to science/math achievement or general achievement (Liu et al., 2020). The authors discuss that language development may rely on both family resources and schooling while achievement in other subjects such as science and math might rely more on schooling and less on family resources. Specifically, in the case of English learning, high-SES parents might pay close attention to cultivating reading habits of their children and English education in earlier childhood (Liu et al., 2020). It thus appears that socioeconomic status might play an especially important role in foreign language education.

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Indeed, Rokita-Jaśkow (2015) found that foreign language knowledge is a type of social capital that is passed down from parents to children. Family environment (e.g., access to materials in the target language at home) and parental foreign language knowledge are two factors that were found to be associated with SES. The study ultimately concluded that the family environment is a key factor for ease of learning a foreign language as well as positive attitudes towards learning a foreign language (Rokita-Jaśkow, 2015). Further, Huang et al. (2018) found that students who travel abroad throughout their lives may have earlier exposure to English and increased exposure to the language in various settings. The study also found that adolescent students from a higher SES background tend to have parents with higher levels of English proficiency, potentially indicating that students will have more opportunities to see their parents engage in the meaningful use of English (Huang et al., 2018).

Given these findings, it would appear that students from families with higher socioeconomic status might be at a clear advantage when learning a foreign language as their parents might engage with foreign languages more often and might provide more opportunities for students to witness or enter meaningful communication in foreign languages. For example, such activities as communicating in English while traveling abroad with their family and speaking in English with family friends can provide students with meaningful interactions in English outside of school. This might affect not only their language proficiency, but also their attitudes to foreign language learning and motivation to learn foreign languages.

In the Czech Republic, student education performance is strongly related to their socioeconomic status (Palečková et al., 2013). Thus, it is important to investigate how differences in SES among Czech families relate to family EFL activities, as all these might have a tremendous impact on English as a foreign language learning success of Czech students.

Specifically, in this study, we aim to investigate the relationship between students' SES and students' family use of English during traveling abroad and communicating with friends. Our main research question is as follows:

What is the relationship between student-reported socioeconomic status and English as a foreign language family activities?

Student-reported socioeconomic status is measured by asking students about having various home possession items. Asking students about their home possessions (i.e., items in the household or the items students themselves own) is often used as an indicator of SES and it has been suggested to be more reliable than asking children and students about, for example, parental occupation or income (see e.g., Broer et al., 2019; Yang & Gustafsson, 2004). Similarly to Programme for International Student Assessment (PISA) studies (Organisation for Economic Co-operation and Development, 2017), we included items related to family wealth possessions, cultural possessions, home educational resources, ICT resources, and home possessions. Concerning EFL family activities, we focus on whether the student's family communicates with English-speaking friends and whether the family communicates in English while traveling abroad. Investigating this question can help us understand whether socio-economic status relates to specific family activities related to English use. Students with low socio-economic backgrounds (measured as home possession) may get less support from their family to communicate in English.

2. DATA

In this paper, we analyze data from 1,407 Czech students enrolled in the last year of their lower secondary studies (ISCED 2, typical age 14/15 years). Our sample includes, in total, 65 schools. As there are more types of schools providing lower secondary education in the Czech Republic, our sample consisted of basic schools (in Czech, *základní škola*) and multi-year grammar schools (in Czech, *víceleté gymnázium*). For each of these two types of school, both private and public educational institutions were included. The composition of schools in our sample is as follows: public basic school (16 schools), private basic school (19 schools), public grammar school (17 schools), private grammar school (13 schools).

3. METHODS

Socio-economic status of students was measured by the following 21 questionnaire items related to home possession (these items were inspired by the Czech version of PISA 2015 student questionnaire; CSI, n.d.). First 8 items were introduced as follows: *Imagine your household. How many of these are there at your home? (If you live in more households, imagine the one where you spend most of your time.)* The list of the eight items is: *Televisions, Cars, Bathrooms, Mobile phones with Internet access (e.g., smartphones), Computers (desktop computer, portable laptop, or notebook), Tablet computers (e.g., iPad, Nexus, Acer), E-book readers (e.g., Kindle, Nook, Wooki), Musical*

instruments (e.g., guitar, piano). Response scale was *None, One, Two, Three or more*. Other 13 items were introduced as follows: *Imagine your household. Which of the following are at your home? (If you live in more households, imagine the one where you spend most of your time.)* The list of the thirteen items is: *A desk to study at, Own room, A quiet learning place, A computer for schoolwork, Educational software, Internet access, Classical books, Poetry books, Works of art, Books for school preparation, Manuals, A dictionary, Art/music/design books*. Response scale was *Yes, No*. In our questionnaire, the first eight questions for possessions were inquiring about the total number of possessions. We coded them as follows: 0 for *none*, 1/3 for *one*, 2/3 for *two*, and 1 for *three and more*, i.e., the scale was between 0 and 1. The other 13 items were coded as follows: 0 for *no*, 1 for *yes*. Therefore, the minimum value was 0 and the maximum value was 1 for all 21 items.

Similarly to PISA studies (Organisation for Economic Co-operation and Development, 2017), we have derived five indices based on these items: (a) family wealth possessions (WEALTH), (b) cultural possessions (CULTPOSS), (c) home educational resources (HEDRES), (d) ICT resources (ICTRES), and (e) home possessions (HOMEPOS). These were calculated as means of the respective items. Given the coding we introduced, all items have the same weight in these indices. WEALTH index was a mean of questions that inquired about having an own room, internet access, TVs, cars, rooms with bath or shower, phones, computers, tablets, and e-book readers. CULTPOSS index included classic literature, books of poetry, works of art, books on art, music or design, and musical instruments. HEDRES index included a desk, a computer for schoolwork, educational software, books for schoolwork, manuals, and a dictionary. ICTRES index included educational software, internet access, phones, computers, tablets, and e-book readers. Finally, HOMEPOS index included all possession items.

English as a foreign language family activities were measured by agreeing/disagreeing with two statements. The statements were introduced as follows: *Agree or disagree with the following statements*. The two statements are: a) *My family has English-speaking friends that we communicate with at least once a month*. b) *We travel with my family at least twice a year abroad, where we communicate in English*. Response scale was *Yes, No*. The responses were coded as 0 for *no*, 1 for *yes*.

4. RESULTS

As data from Table 1 show, most of the respondents are in a family which owns three or more phones, closely followed by the number of computers. The number of TVs, cars, and musical instruments is, on average, nearing two per family, and the same can be said about the number of rooms with a bath or shower. The number of tablets averages about one per family, while most respondents do not have access to e-book readers.

When looking at the yes-no possession items, we can see that the overwhelming number of respondents have a desk for work and a computer for schoolwork, showing that these items are owned almost universally by students in our sample. Most of the respondents also have access to a quiet learning place and books for their schoolwork, which can allow them to prepare for school. This is also reflected by the HEDRES index, which reaches the highest value of all the indices. Contrarily, only around half of the respondents have works of art and poetry books in their homes, which is mirrored by the fact that the CULTPOSS index has the lowest value of all the calculated indices. Nevertheless, even this index is still higher than 0.5 on a 0-1 scale.

Switching focus to EFL family activities, we can notice that not even half of respondents have the ability to travel abroad twice or more per year and use English for communication in another country. Finally, only about a quarter of respondents have a family friend they speak in English with at least once a month.

The descriptive statistics for all possession items, the possession indices, and EFL family activities are in Table 1.

Table 1. Descriptive statistics for used variables

	Mean (Standard deviation)
Possessions	
TVs	0.613 (0.294)
Cars	0.568 (0.269)

Rooms with bath or shower	0.523 (0.233)
Phones with internet access (e.g., smartphones)	0.955 (0.162)
Computers (desktop computer, portable computer, laptop)	0.853 (0.235)
Tablet computers (e.g., iPad, Nexus, Acer)	0.376 (0.335)
E-book readers (e.g., Kindle, Nook, Wooki)	0.141 (0.244)
Musical instruments (e.g., guitar, piano)	0.521 (0.394)
A desk to study at	0.969 (0.172)
A room of your own	0.771 (0.420)
A quiet learning place	0.885 (0.319)
A computer for schoolwork	0.959 (0.197)
Educational software	0.577 (0.494)
Internet access	0.985 (0.121)
Classic books (e.g., Čapek, Neruda)	0.716 (0.451)
Poetry books	0.468 (0.499)
Works of art (e.g., paintings, statues)	0.520 (0.500)
Books for school preparation (e.g., encyclopedia)	0.847 (0.360)
Manuals (e.g., for computer software, household devices)	0.790 (0.407)
A dictionary	0.866 (0.340)
Art/music/design books	0.507 (0.500)
Indices	
HOMEPOS	0.686 (0.150)
WEALTH	0.643 (0.137)

CULTPOSS	0.546 (0.324)
HEDRES	0.842 (0.190)
ICTRES	0.648 (0.148)
<i>EFL family activities</i>	
Travel abroad speaking English	0.427 (0.495)
English-speaking family friend	0.272 (0.445)

Note. N = 1,407 for possession items and indices, N = 1,406 for EFL family activities.

Looking at the relationship between calculated possession indices and whether a family travels abroad twice or more per year where they communicate in English (Table 2), we can note that in all cases, those that have the ability to travel score significantly higher on the possession indices. This is most prominent in the CULTPOSS index which jumps up by more than 0.1. The same can be said about families which have an English-speaking friend they speak with at least once a month (Table 3). These results show that the families of such respondents have higher SES, i.e., that EFL family activities and the possession of inquired items are related.

Table 2. Results of a two-sample T-test for families that do not and do travel abroad where they communicate in English

Index name	Mean (SD) travel = no	Mean (SD) travel = yes	Mean difference	t	Sig.
HOMEPOS	0.651 (0.144)	0.734 (0.144)	-0.083	-10.717	0.000***
WEALTH	0.608 (0.125)	0.689 (0.139)	-0.081	-11.234	0.000***
CULTPOSS	0.492 (0.326)	0.619 (0.308)	-0.127	-7.506	0.000***
HEDRES	0.819 (0.193)	0.873 (0.180)	-0.054	-5.410	0.000***
ICTRES	0.614 (0.136)	0.693 (0.151)	-0.079	-10.135	0.000***

Note. N = 1,406. *** $p < 0.01$

Table 3. Results of a two-sample T-test for families that do not and do communicate with an English-speaking family friend

Index name	Mean (SD) friends = no	Mean (SD) friends = yes	Mean difference	t	Sig.
HOMEPOS	0.670 (0.146)	0.729 (0.150)	-0.059	-6.595	0.000***
WEALTH	0.630 (0.131)	0.677 (0.148)	-0.047	-5.397	0.000***
CULTPOSS	0.516 (0.323)	0.626 (0.315)	-0.110	-5.792	0.000***
HEDRES	0.832 (0.193)	0.870 (0.178)	-0.038	-3.506	0.000***
ICTRES	0.632 (0.142)	0.690 (0.156)	-0.058	-6.339	0.000***

Note. N = 1,406. *** $p < 0.01$

5. CONCLUSION

We have found a relationship between home possessions and using English while traveling abroad as well as using English with family friends. Home possessions served as a proxy for SES in the current contribution, thus we can conclude that there is a positive relationship between SES and family activities in English. Regarding the home

possession indices, the indices for all types of home possessions that we included in our study are significantly higher in a group of students who communicate in English while traveling and speaking with family friends, but the biggest difference was found in the cultural possession index. Especially for families communicating with English-speaking friends compared to other families, the difference in cultural possession index is about two to three times higher than the differences for other possession indices (home educational resources, ICT resources, family wealth). It shows that cultural possessions and possibly cultural attitudes strongly reflect English family activities such as family communication with English-speaking friends, while wealth and other indicators, though significantly different, do not play such a big role.

The literature regarding language learning motivation and its link to SES is scarce, though the existing literature has found that SES has an impact on students' motivation and non-cognitive academic behaviors, such as their beliefs about their ability to learn English (Iwaniec, 2020). Butler (2014) notes that in the context of EFL, the relationship between SES of young learners and their English language development has not been studied systematically. Butler's results in the Chinese context show the family activities or 'parent indirect behaviors' as they referred to them in this study, had a positive correlation with SES. The behaviors that were taken into account in this study were home literacy, language environment and indirect modeling (i.e., children seeing parents use the target language). Butler (2014) found that parents' beliefs about their children's abilities to learn a language played an important role in students' language learning success, parents from lower SES backgrounds having less belief in the ability of their adolescent children to learn a language. It has also been found that SES can affect the kinds of learning goals that students set for themselves (Kormos & Kiddle, 2013). Learners from higher SES backgrounds have been found to set higher goals for their learning in addition to believing that they can achieve these goals. Kormos and Kiddle (2013) propose that these findings are most likely related to the fact that higher SES students have more opportunities to see those around them using English proficiently, which thus contributes to their own self-efficacy, and beliefs that learning English is an achievable goal. Thus, higher SES students who see their family using English often, are more likely to expect that they will also learn and use English in their own lives. These results further point to the need to investigate different indicators of SES and parental foreign language-related behaviors and their relation to various foreign language learning among Czech students.

Further research should focus on the extent to which the socioeconomic background of Czech students indeed influences their learning of and the motivation to learn English as a foreign language and how this relationship is mediated or bolstered by family English activities and behaviors.

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Determinants of Global Business Literacy of Slovak University Students

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Abstract

For students studying economics, management and business who would like to work successfully in an international business environment, it is essential to be globally literate for the development of their future careers. The paper is focusing on identification of determinants of the overall level of global business literacy and its dimensions on a sample of students studying at the Faculty of Business Economy of the University of Economics in Bratislava, with seat in Košice, Slovakia. First, the analysis of differences is conducted comparing the level of global business literacy of a group of students who have already taken a course related to international business and those who have not. Then, other potential determinants of global business literacy, such as gender, degree of study and language competence, are further analyzed. The results indicate that completing the course related to international business has a positive effect on the overall level of global business literacy and majority of its dimensions. With regard to other factors, there are only negligible gender related differences, however, degree of study as well as language competence seem to significantly affect the overall level of global business literacy and some of its dimensions.

Keywords: global business literacy, gender, degree of study, language competence

1. INTRODUCTION

For students studying economics, management and business who would like to work successfully in an international business environment, it is essential to be globally literate for the development of their future careers. One of the few attempts to explicitly define global business literacy (*GBL*) can be found in the study by Arevalo et al. [1], who consider it an ability to navigate the global business environment and its key trends and issues, combined with an ability to adapt and function effectively in this environment. At the same time, the authors believe that this literacy is well cultivatable in the classroom and provide the evidence thereof.

There are also relatively numerous studies (e.g. [2, 3]) examining the cultivation of global business literacy or more broadly global competence through other co-curricular activities organized by educational institutions. However, competencies for global world can be cultivated also outside the formal education environment, through personal activities of students. In this context, the OECD survey [4] showed that students with a more favorable socio-economic background have better opportunities to engage in activities for the global world, and therefore demonstrated a significantly higher level of global competence than their disadvantaged counterparts. A more favorable socio-economic background enables students, e.g. participate in language courses, travel more intensively or study abroad.

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In the light of the above, the present study is focusing on analysis of differences in the level of global business literacy of the Slovak university students of economics, management and business, in terms of completion of specific course on international studies or international business, gender, degree of study and language competence. Hence, not only outcomes of formal education but also other factors are taken into account as potential determinants of global business literacy.

2. LITERATURE REVIEW

Questions related to students' readiness for challenges in a globalized world have interested many scholars who have investigated the effects of various pedagogical interventions on the cultivation of global literacy or global competence. Johnson et al. [5] tested the impact of specific web-based international negotiation simulation and found significant increases in students' knowledge and skills needed to become competent as citizens in a globalized world after completing this educational program. Similarly, Kang et al. [6] assessed the effects of cross- and intercultural online projects implemented simultaneously at the U.S. and Korean university and concluded that the projects significantly increased students' knowledge of the other country and intercultural communication skills. The investigation of the global competence discrepancies of Chinese undergraduates conducted by Meng et al. [7] showed that enrolment in courses related to internationalization is a predictor of students' global competence. Moreover, the authors also pointed to the influence of other factors in this direction, such as field of study, gender, experiences with contacts with foreigners at campus activities and students' motivation.

When looking further and in more details at other factors potentially influencing global literacy, following findings can be found in the literature. A study by Zhang et al. [8] compared high students' global literacy level in China and the U.S., taking into account factors like gender and grade (age). In the case of gender, while significant stronger awareness of comprehending and appreciating cross-cultural perspectives was found for women in both of countries, no differences were found in the case of other dimensions of global literacy. Similarly, in terms of grade level no significant difference was found for the U.S. students. However, younger Chinese students demonstrated greater level of literacy in three from four analyzed dimensions of global literacy. A recent study conducted by Karanikola [9] showed that gender and age affect only some of the sub-scales of global competence, namely both gender and age differences were shown in the skills dimension and gender differences were shown also within knowledge and understanding dimension.

Another important factor that especially within the European labor market allows people to take full advantage of the freedom to work or study, is an ability to understand and communicate in foreign languages [10]. A study by Semaan and Yamazaki [11] showed that there is a positive relationship between global competence and second language learning motivation. Similarly, in a study by Kiliñç and Tarman [12] conducted in the Turkish context was found that the combination of variables, such as speaking a foreign language, together with the use of social media, and attitude towards participatory citizenship significantly predicted global competence. In addition, former studies [e.g. 13] also demonstrated the need for raising students' global literacy through communicative competence in English as an international language, since it is considered necessary to have a constructive dialogue with people from all over the world. However, there is a lack of similar studies conducted in the Slovak context.

3. METHODOLOGY

The aim of the present paper is to identify determinants of the overall level of global business literacy and its dimensions on a sample of students studying economics, management and business at the Faculty of Business Economy of the University of Economics in Bratislava, with seat in Košice, Slovakia. It is of the particular interest of the author to take into account not only knowledge gained through formal education process but also other factors such as gender, degree of study and language competence.

Within the first step of the analysis, the differences in the level of global business literacy between a group of students who completed a course related to international studies/ international business (i.e. 62 students) and those, who have not yet had such an experience (i.e. 83 students), are evaluated. Next, the sample of students without specific formal knowledge of international business is deeper analyzed. At the same time, the research sample does not contain students who traveled, lived or studied outside their home country for a period longer than 4 weeks, since longer study abroad experience is generally considered to be a significant factor in global literacy enhancement [e.g. 14, 15]. Characteristics of this research sample in terms of other factors taken into consideration in the next step of the analysis are shown in table 1.

For the purpose of evaluation of global business literacy of the involved students, the concept developed and validated by Arevalo at al. [1] was used. Their concept and survey items were developed to assess the learning outcomes of a traditional classroom-based approach to education, which can be considered appropriate also for this case.

Table 1. Characteristics of a research sample

Characteristics	Percentage
Gender	
- women	69.9%
- men	30.1%
Degree of study	
- undergraduate	75.9%
- graduate	24.1%
Foreign language competence	
- one foreign language	38.6%
- two foreign languages	61.4%

Source: own processing

The online questionnaire delivered to the students contained 38 items/ statements, which belonged to five specific and interrelated dimensions of global business literacy, namely: relationships development (6 items), self-awareness (7 items), self-efficacy (8 items), technical competence (9 items) and willingness to learn (8 items). Students were asked to express the extent to which they agree with each statement on this 7-point Likert-type scale: 1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = neither agree nor disagree, 5 = somewhat agree, 6 = agree, 7 = strongly agree. There were also some statements that were negatively worded and the responses were consequently reverse coded. In general, the higher the score, the higher the achieved global business literacy.

The students filled out the questionnaire electronically, via the MS Forms platform, during the last week of the summer term of the academic year 2021/2022. Differences in the mean scores reported within particular dimensions of global business literacy counted as mean scores of individual items/ statements belonging to particular dimensions were analyzed, using a two sample t-test (two-tailed). An alpha level of 0.05 for all statistical tests is used and statistically significant differences are marked in bold while presenting the results.

4. RESULTS AND DISCUSSION

Before presenting the results, it is appropriate to mention that all participating students stated the Slovak Republic as their home country and Slovak as their native language, so the research sample can be considered culturally homogeneous. First, a difference in the level of global business literacy between that group of students who had already taken a course focused on international studies or international business (*IB course*) and those who had not, is tested. Table 2 presents the mean scores of individual dimensions of global business literacy, as well as the total mean scores for both groups of students, including the difference between the means and the t-test results.

Table 2. Differences in the level of GBL in terms of completing the IB course

Dimension	Mean with IB course	Mean without IB course	Difference	t-test <i>p-value</i>
Relationship Development	5.3065	4.9859	0.3206	0.0102
Self-Awareness	5.1060	5.0637	0.0423	0.7066
Self-Efficacy	5.0988	4.5708	0.5280	0.0046
Technical Competence	4.8728	4.5676	0.3052	0.0138
Willingness to Learn	5.4012	5.2545	0.1467	0.3184
Global Business Literacy total	5.1570	4.8885	0.2685	0.0033

Source: own processing

Students who completed the course related to international studies or international business show statistically significantly higher level of total global business literacy that is driven especially by the self-efficacy dimension. This dimension, among others, implies that students who have more detailed information about international business are more aware that operating in an international environment requires adaptability and self-belief. At the same time, these students seem to relatively easily develop relationships with foreigners. It is not surprising that another statistically significant difference is detected within the technical competence dimension, since this is connected with perceived knowledge of global issues, patterns of international investment and trade as well as foreign business environment. These topics usually form the key content of the courses related to international business, which the students with higher mean scores already completed.

Next step of the analysis was focused in more details on the group of students without having specific academic knowledge of international business. Other factors, such as gender, degree of study and language competence that can potentially affect global business literacy were taken into consideration. Table 3 shows differences in the particular dimensions and total global business literacy between women and men.

Table 3. Differences in the level of GBL in terms of gender

Dimension	Mean women	Mean men	Difference	t-test <i>p-value</i>
Relationship Development	4.9943	4.9667	0.0276	0.8824
Self-Awareness	5.1084	4.9600	0.1484	0.3939
Self-Efficacy	4.5560	4.6050	-0.0490	0.8572
Technical Competence	4.4598	4.8178	-0.3580	0.0500
Willingness to Learn	5.2931	5.1650	0.1281	0.5589
Global Business Literacy total	4.8823	4.9029	-0.0210	0.8789

Source: own processing

The picture of gender differences shows that women are almost equally globally business literate as men with small differences within individual dimensions. The only statistically significant difference was found in the case of technical competence, which may be related to a higher self-confidence in matters of technical competence and knowledge of the international environment in the case of men. Following table 4 shows results of similar difference analysis with respect to a degree of study. The object of comparison was a group of undergraduate students on the one hand and a group of postgraduate students on the other hand.

Table 4. Differences in the level of GBL in terms of the degree of study

Dimension	Mean undergraduates	Mean graduates	Difference	t-test <i>p-value</i>
Relationship Development	5.1481	4.4750	0.6731	0.0005
Self-Awareness	5.1451	4.8071	0.3380	0.0679
Self-Efficacy	4.6032	4.4688	0.1344	0.6451
Technical Competence	4.5679	4.5667	0.0012	0.9950
Willingness to Learn	5.3968	4.8063	0.5905	0.0105
Global Business Literacy total	4.9722	4.6248	0.3474	0.0146

Source: own processing

Undergraduate students surprisingly showed significantly higher level of overall global business literacy, which can be mainly attributed to their ability to establish relationships more easily. They seem to be also more self-aware and willing to learn, since much of the study is still ahead of them. In this context, it is important to mention the average age of undergraduate students, which is 20.75 years, while the average age of graduate students involved in this research, is 23.3 years. On the other hand, undergraduate and graduate students reported the same level of technical competence, namely knowledge of international business issues what is connected with the fact that none of the students took a college class / course related to international studies or international business.

The last part of the analysis was devoted to differences in the level of global business literacy with respect to gender, which results are presented in the table 5. A group of students speaking only one foreign language was compared with those who speak two languages, i.e. with a higher language competence given the number of languages other than native language that students speak. A closer look at language competence shows that while the majority of students reported English as their first foreign language, the choice of second foreign language was much wider (such as Russian, Spanish, German, French, Hungarian, English). With respect to the level of the language competence, all the students indicating to be beginners in the first foreign language have no knowledge of another foreign language. It seems that the higher the level of competence in the first foreign language, the higher the probability of knowing another foreign language at least at the beginner level.

Table 5. Differences in the level of GBL in terms of language competence

Dimension	Mean one language	Mean two languages	Difference	t-test <i>p-value</i>
Relationship Development	4.8333	5.0817	-0.2484	0.1553
Self-Awareness	5.0759	5.0560	0.0199	0.9038
Self-Efficacy	4.2383	4.7794	-0.5411	0.0324
Technical Competence	4.4271	4.6558	-0.2287	0.1874
Willingness to Learn	5.0625	5.3750	-0.3125	0.1280
Global Business Literacy total	4.7274	4.9896	-0.2622	0.0369

Source: own processing

Language competence appears to influence overall global business literacy in a significant and positive way. The only statistically significant difference with respect to individual dimensions of GBL is self-efficacy that can be related to better access to information about international business through better foreign language knowledge and resulting self-confidence in one's ability to have control over events to achieve desired goals.

Overall results indicate that global business literacy can be well developed in the classroom, e.g. through formal education. This finding is basically in line with previous findings [e.g. 5, 7]. However, when looking in more details at the group of students who did not complete any specific course providing knowledge of international business, it seems that different dimensions of global business literacy are effected by different factors.

In terms of gender, only technical competence seems to be statistically significantly affected, with more favorable results for men, what corresponds to the previous findings of Meng et al. [7]. However, the existence of this gender gap in favour of men can be rather attributed to their higher self-esteem and self-confidence in knowledge of international business issues. As indicated by Casale [16], this gap appears in adolescence and persists through early and middle adulthood until it diminishes in old age. For other dimensions of GBL, gender differences appear to be ambiguous and not significant, what reflects mixed findings resulting from the previous literature [e.g. 8, 9]. Hence, study of gender gaps in the context of global business literacy development deserves further attention in the future research.

When looking at the year of study, Meng et al. [7] did not detect any statistically significant relationship in this regard. However, Zhang et al. [8] in the case of Chinese students showed greater level of global literacy for younger students that is in line with findings of this study. One possible explanation is that young students have better computer resources and capabilities than older ones, allowing them to access global information that is rarely reported in the mass media.

Multidimensional facet of global literacy also indicates that it can probably be developed by various activities including development of foreign language knowledge, since foreign language proficiency has long been regarded as a critical component of global competence (e.g. [17]) and this study also suggests similar results. Hence, also students who did not participate in study abroad programs can develop their global business literacy through various internationalization activities at home. Active role should also be played by teachers in order to prepare globally competent leaders. One of the ways is to foster teachers' global awareness e.g. through teaching study abroad programs and actively using foreign teaching mobility options. In this regard, Doppen and An [18] showed that teaching international students promotes teachers' professional and personal growth.

5. CONCLUSION

This study was aimed to identify determinants of global business literacy, which can be generally defined as an ability to navigate the global business environment and its key issues and trends. The analysis was conducted on a sample of students who study economics, management and business at the Faculty of Business Economy of the University of Economics in Bratislava, with seat in Košice, Slovakia. For the purpose of the first part of the difference analysis, the global business literacy of a group of students who had already taken a course related to international business was compared with those who had not. The results of the t-test showed that formal education aimed at providing specific knowledge of international business leads to a significant increase in global business literacy in the most of its dimensions.

The second part of the difference analysis was focused on a group of students who had no specific academic knowledge of international business. Hence, other factors such as gender, degree of the study and language competence were taken into account. The results indicate that significant gender differences can be found only within technical competence dimension that is most probably underpinned rather by higher self-confidence of men. With regard to the degree of study, undergraduate students surprisingly showed significantly higher level of overall global business literacy and two of its dimensions. The language competence in terms of speaking two foreign languages seem to affect positively the overall global business literacy and its self-efficacy dimension. Based on these findings, it appears that global business literacy can also be developed through internalization activities at home.

However, this study is not without limitations. It relies on self-reported responses that can be highly subjective, therefore it is recommended to supplement it with other more objective data gained e.g. through qualitative study or experiment. At the same time, this is a preliminary study, which does not represent the entire Slovak university student population, and the generalizability of the results is limited. Therefore, further future research not just in the Slovak university context but also abroad is encouraged.

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The Current Status of Technical Education at the 2nd Stage of Primary Schools in the South Bohemia Region

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Abstract

The article is focused on an overview study that deals with the mapping of technical education teaching at the 2nd grade of primary school, especially from the teacher's point of view. The described conclusions are supported by a comprehensive questionnaire survey that took place at classical elementary schools in the South Bohemian Region. In the end, graphs are shown that summarize the responses of most schools to the questions asked and thus underline the conclusions of the study.

Keywords: technology, workshop equipment, elementary school

1. INTRODUCTION

Nowadays, great emphasis is placed on the acquisition of technical knowledge by pupils, including a positive attitude towards it and work. The most frequently mentioned reason is the fact that people nowadays are surrounded by technology that accompanies them throughout their lives, and therefore they must become familiar with it in order to avoid the so-called underutilization of human potential. A greater degree of technology prevails in society, and education must respond to this trend [1].

In order to be able to react effectively to this trend, it is necessary to find out the current state of technical education in elementary schools, which is closest to this social trend in terms of suitability and content.

Objectives

The objective of the contribution is the presentation of the results of an overview study, which determines the current state of technical education at the 2nd grade of elementary school from the teacher's point of view.

The aim of this study was to describe the position of technical education in the educational system in the Czech Republic and to point out its importance in terms of the all-round development of pupils.

1.1. Technical education in the educational process in the Czech Republic

Technical education, like other subjects at primary school, is described in a document from the Ministry of Education, Youth and Sports of the Czech Republic, which is called the Framework Education Program for Basic

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Education (FEP BE). In this document, which has been in force since 2005 and has been revised many times (most recently in 2021), technical education belongs to the area called Man and the world of work. This area is based on ordinary human life, where students learn to work with materials, tools, devices and develop their abilities such as skill, creativity, technical thinking, etc. The FEP BE is binding for all elementary schools, which must follow it [4].

At the second level, this area is divided into the following thematic areas:

- work with technical materials;
- design and construction;
- cultivation work and husbandry;
- operation and maintenance of the household;
- food preparation;
- work with laboratory equipment;
- use of digital technologies;
- the world of work.

Of these thematic areas, the World of Work area is mandatory for schools, which mainly deals with choosing a profession and must implement it in its entirety. Schools are also required to choose at least one more from the other thematic areas, which will be implemented in full [4].

Specifics of technical education

The technical education subject can be found at some schools under a different name. For example, it mentions the concept of work-based teaching and this subject defines a subject where pupils acquire all kinds of practical skills, work procedures and technical knowledge [5].

Other commonly used names are Technology, Work activities, Practical activities, etc.

Technical education is very different from other subjects, especially in the creation of suitable external conditions during teaching, the provision of the necessary work aids, which is a condition for achieving the defined goals of teaching technical subjects. In this regard, the possibilities and equipment of individual elementary schools sometimes differ significantly, which is related to the level of teaching itself [3].

Another specific feature of technical education is the duration of the teaching itself.

In this case, the teaching does not have to have a classic 45-minute subsidy, but it can be, for example, two consecutive teaching hours [3].

Due to the practical and in many cases handmade focus of the subject, we can also include the increased physical activity of the pupils among the specifics, which is quite often associated with greater requirements for safety and hygiene at work [6].

Technical subjects generally require specific teaching preparation on the part of the pedagogue. It is expected from him that he comes to the class not only well prepared in terms of knowledge (like his colleagues from theoretical subjects), but also that he provides all the necessary aids and tools that will be needed during the course [2].

Methods

A questionnaire survey was chosen as a suitable method, which took place among technical education teachers at the 2nd grade of elementary schools in the South Bohemian Region. Among the interviewed teachers, in addition to certified teachers, there were also non-certified teachers who, however, have been teaching this subject for a long time.

Within the South Bohemian Region, 132 schools were approached. Elementary school teachers were asked, among other things, about the equipment of the school and school workshops, their opinion on the expansion of

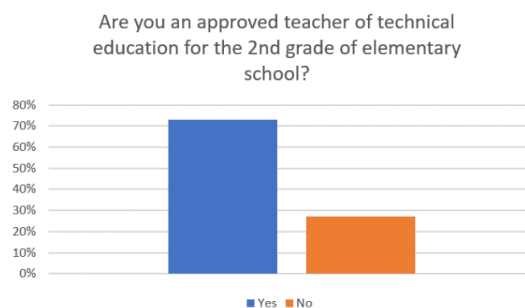
technical education teaching or work activities at the 2nd level of elementary school, and what effect, in their opinion, technical education has on the pupil's personality, specifically on his approach to work or his choice of future profession.

Only classical elementary schools with 2nd grade were approached. Alternative schools and small classes were not addressed in the survey.

Results

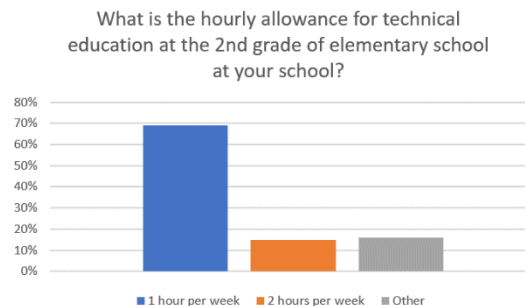
From the surveyed sample of 132 schools, we received feedback from 74 primary schools, which is 56 % of the total number of respondents, which we can consider a success, as we are working with a narrow but still more than half majority.

Graph 1 shows the percentage of teachers who teach technical education at the 2nd grade of primary school who are approved. We can see that there is still a predominance of certified teachers (73 %), however, other research shows that these teachers are rather older.



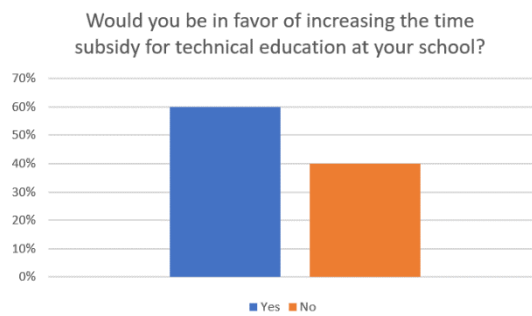
Graph 1: Approval of teachers at the 2nd grade of primary school

On graph 2, we can see how the hourly subsidy prevails at individual schools. The majority of schools (69%) still work with one teaching hour per week, despite the fact that it is possible to use the increase in the hourly subsidy to two teaching hours.



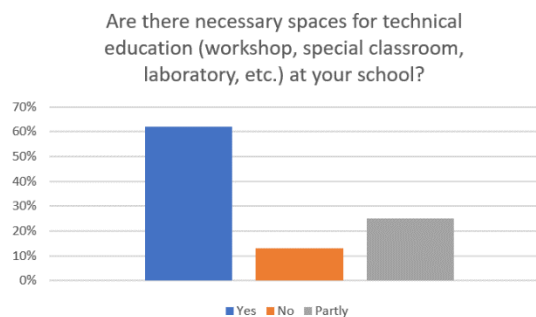
Graph 2: Hourly subsidy

The third graph shows the teachers' statements as to whether the hourly subsidy is enough for them or whether they would be in favor of an increase in the hourly subsidy for teaching at their school. We can see that 60 % of teachers are in favor of increasing the hourly subsidy, while 40 % of teachers are satisfied with the hourly subsidy.



Graph 3: Increase in the hourly subsidy

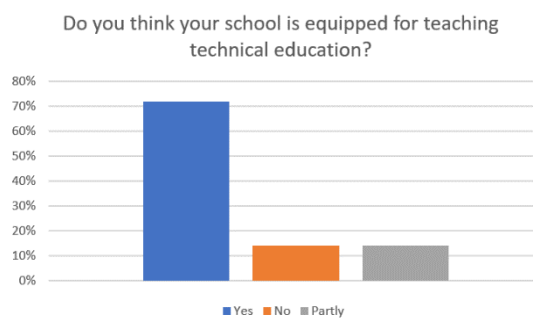
Another question focused on the environment in which teaching takes place, in particular whether the teachers have a workshop or specialist classroom at their disposal, and the teachers expressed how satisfied they were with this environment. We can see that 62 % of teachers have an adequate classroom or workshop, while 13 % of teachers do not have an adequate professional classroom or workshop. A quarter of the teachers have a workshop or specialist classroom, but they do not have it in the necessary specifications.



Graph 4: Suitable premises

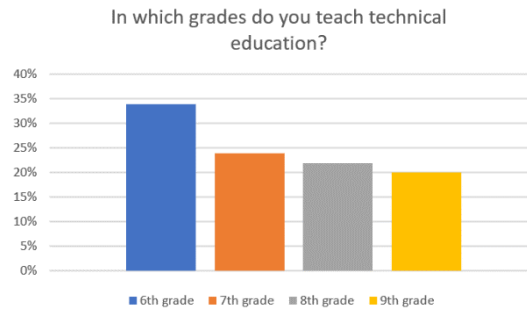
The following graph is related to the previous graph, which shows the percentage ratio in teachers' opinions about the equipment of the workshop or specialist classroom available to them.

We can see that 72 % of the respondents are satisfied with the equipment and 14 % are not satisfied or lack something.



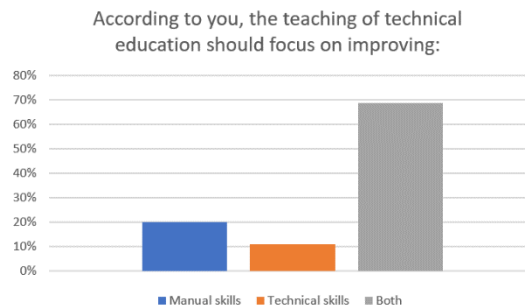
Graph 5: Workshop equipment

Graph 6 focuses on the distribution of technical education in individual years of the 2nd grade of elementary school. We can see that in many schools the subject is taught in the 6th grade (34%) and the other grades are relatively close.



Graph 6: Teaching in grades

In the second part of the questions, the teachers answered what, in their opinion, the teaching has on the pupils or what it should develop in them. Chart 7 shows teachers' opinions on the development of certain student skills. We see that the majority of teachers consider it important to keep the student's development in balance (69 %), while 20% and 11%, respectively, believe that students should develop more in manual and technical skills, respectively.

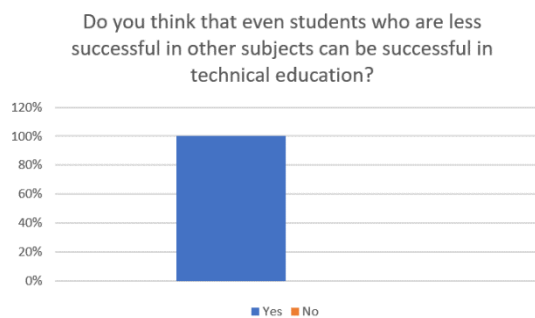


Graph 7: Improving skills

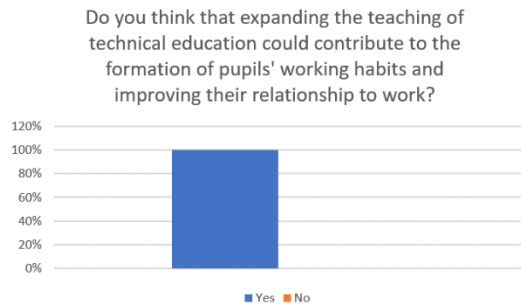
The following graphs 8 – 10 are the same, due to the teachers' agreement on the influence of technical education on the pupil. In particular, graph 8 is about whether pupils who are not successful in other subjects can be successful in technical education.

On graph 9, we can see agreement on the question of whether expanding the teaching of technical education would lead to better student habits and a better attitude to work.

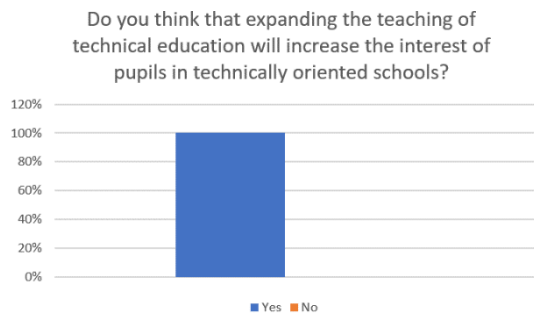
The last graph 10 shows the agreement of all respondents on the question whether teaching technical education can lead to a greater interest of pupils in secondary technical schools.



Graph 8: Pupils achievement



Graph 9: Habits and attitude to work



Graph 10: choice of technical field

2. CONCLUSIONS

From the results of the questionnaire survey, it can be concluded that currently the subject of technical education is positively evaluated even by non-approved teachers, and the teachers have shown an interest in expanding the time allocation of the subject.

The subject of technical education, although it may sometimes appear that way today, does not recede into the background and does not lag behind other subjects in its need and popularity, but is constantly innovating and moving forward.

A comparative study can be a basis for experts from among academics or teachers from practice, especially as a determination of the basic aspects of the teaching of this subject in elementary schools in the South Bohemian Region and its further development or innovation.

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Effectiveness of Teacher Training, Challenges and Perspectives

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Abstract

The continuing qualification of teachers is one of the biggest challenges that pre-university education teachers face today. Various agencies offer training on different topics to meet the needs of teachers that are to be trained. This paper aims at exploring the efficiency of these training topics for the continuing qualification of pre-university teachers.

This paper includes the following research questions.

- Are these offered training in accordance with the real needs of teachers?
- What is the level of efficiency of this training according to the point of view of the teachers and according to the point of view of the training providers?
- What are the challenges faced by these shareholders?
- How are these challenges to be faced in the future?

The methodology used is qualitative. The data are obtained from 27 in-depth interviews with teachers, school leaders, and providers of teacher training, combined with secondary data obtained from institutions that have in focus this issue.

The study highlighted that the topics offered for training are not always in alignment with the real needs of the teachers. The majority of training topics are held because teachers are more interested in getting credits, to fulfill legal obligations, or moving to higher rankings for the sake of qualifications, rather than getting trained for their professional development.

Teachers suggest that there should be a mechanism added to these training topics. The mechanism includes training topics according to the contracts they sign when they enter a position and also training topics that are free of charge in this regard.

Keywords: training, teachers, professional development, continuing qualification

1. INTRODUCTION

Lifelong learning, as a new philosophy that comes with the help of a changing society, has affected all professions and, in an inextricable way, the teaching profession as well.

In the Republic of Albania, there is an instruction of the Minister of Education and Sports no. 2, dated 05.02.2014, regarding the criteria and procedures for the qualification of teachers, according to which the teacher has a legal obligation to complete at least 3 days of training per year, equivalent to 1 credit (MAS, 2014, p. 2). Another important document that regulates the Albanian pre-university teachers' training is the Instruction of Ministry of Education, Sports, and Youth nr. 16, dated 28.07.2021 about the organization and functioning of the system of continuous professional development of educational workers (MASR, 2021).

The responsible institution that accredited the teacher training modules and monitor their implementation in Albania for many years was the Professional Development Institute (Instituti i Zhvillimit Profesional IZHA), and now Quality Assurance Agency in Pre-university Education (Agjencia e Sigurimit të Cilësisë në Arsimin Parauniversitar-ASCAP). Since this instruction has been implemented for about 8 years, there is a need for an analysis of how the teacher's qualification is being developed and how efficient it is.

Thus, this article, even though it is exhaustive, constitutes an attempt to explore the efficiency of these training topics for the continuing qualification of pre-university teachers.

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2. LITERATURE REVIEW

The economic competition at the end of the 19th century and the beginning of the 20th century, and the need to adapt to major changes, developed the need for post-school education all over the world. The practices of Further Education (FE) developed also in the framework of the philosophy of lifelong learning (LL) for teachers with great challenges. The term ‘lifelong learning is often used to encompass learning that takes place in settings beyond the education system (Jarvis, 2004). As Avis et. al (2018, p.5) affirms "Teachers have found their work more scrutinized and regulated, with an associated negative impact on their autonomy leading to a crisis about their professional identity and status".

Further and continued education is considered a central precondition for personal and professional development. With regard to professional development - the personal aspect, the practice aspect as well as the subject and the cultural aspect were important principles for the teacher training concept (IPLE, 2016, p.4).

The flourishing of agencies that offer continuous training for all professions, including the teaching profession, is not a typical phenomenon only in Albania. For example, in England, the increasing role of private agencies that enable the provision of lifelong learning was encouraged by the New Labour White Paper Raising Skills, Improving Life Chances (DfES, 2006).

During the application of this new philosophy and practice, a huge number of research have been conducted all over the world, with the aim to explore how further or practical training is provided for teachers. A study conducted in Barcelona by Ciraso (2012, p. 1778) found that there is a lack of transfer orientation in the organization of schools; although teachers seem to be very motivated and implicated in the introduction of changes, the way how schools are organizing the processes of analysis of training needs, planning training, evaluating it and establishing ways to integrate the new learning and skills to the center, are missing some core aspects. Also, the research “Training our future teachers” found it that for many teacher educators in the USA, teaching classroom management falls into the category of mere “technical transmission” of skills, a function that the field has largely rejected and replaced instead with the mission of forming professional identities (Greenberg et. al., 2014, p. 39). There is a gap in such studies in Albania, regardless of the positive efforts of some authors to highlight problems related to the work of teachers. The work of Kashahu et. al. (2020) can be mentioned here, where it is evident that teacher training must be provided in accordance with their real needs.

This modest research can be considered a contribution in this field, which could serve other more in-depth studies that aim to explore the efficiency of teacher training in Albania in the framework of the implementation of the philosophy of lifelong learning.

3. METHODOLOGY

The methodology used is qualitative. The data are obtained from 27 in-depth interviews with teachers, school leaders, and providers of teacher training, combined with secondary data obtained from institutions that have in focus this issue. The sample used is purposeful.

First, 21 teachers of pre-university education, who had no less than 8 years of work, during which the 2014 MAS instruction was implemented, were deliberately chosen, so that they could evaluate the efficiency of the qualification training. Of them 14 were female and 7 were males and this reflects the gender disbalance in practicing the teacher’s profession in the Republic of Albania.

Second, 3 school directors (2 males and 1 female) have been also interviewed, with the aim to explore from their perspective the challenges that the teachers in their schools face, during the qualification process.

Third, 3 trainers (3 females) have been interviewed as well, with the aim to provide their experience while providing the training for teachers.

Table 1. Sample characteristics

Category	No
Males	9
Females	18
Pre-University teachers	21
School directors	3
Trainers	3
Total	27

The instrument used to gather the data is a semi-structured in-depth guide that includes 10 main questions. All questions aimed to give answers to the following research questions:

1. Are these offered training in accordance with the real needs of teachers?
2. What is the level of efficiency of these training courses according to the point of view of the teachers and according to the point of view of the training providers?
3. What are the challenges faced by these shareholders?
4. How are these challenges to be faced in the future?

The thematic analysis was used to analyze the research findings.

4. MAIN FINDINGS

Following the thematic analysis of the data enabled by the direct interviews, and in response to the research questions, some of the research findings are listed below:

a. *The offered training and the real needs of teachers*

According to the teachers' opinion, some of the training is really offered in accordance with their needs, but it looks that their needs overcome what the training offer.

"We have much more needs compared to what the training offers. For example, I would need specific training regarding the increase of skills in the use of ICT in teaching, but training with 1 or 2 credits are insufficient" (Teacher of elementary level, female)

b. *The level of training efficiency*

In order to evaluate the level of efficiency for the offered training, the opinion of teachers and school directors, as well as that of the trainers, has been gathered. According to the teachers and school directors, factors that influence the efficiency of training are:

- The level of fulfillment of teachers' needs from the training topics
- The level of expertise offered by the trainers
- The credibility of the institution that offers the training
- The charges for the training

According to the teachers, they often run to gather credits and not to gather information and knowledge, because it is the system that has created this fictitiousness.

"In many cases, the trainers explain to us things that we know, that we have learned from the experience. In other words, this training should have been done before, but now, the experience itself has trained us, e.g. there is still training for teaching with competencies since we have been offering this teaching for 8 years" (Teacher of biology, female)

There are also teachers that positively evaluate training.

"According to me, the need for training is real. We take for granted that we know everything, and this is a big problem. We need to open our mind and to accept that it is necessary to be updated with new things and new documents because sometimes we become blind because of the overload of the daily work" (Teacher of math, male).

"When I saw the list of training topics that were offered, I chose a topic for which I needed a lot, which was related to civil emergency education at school. I was very satisfied with the training. I think that the training filled a gap of mine because usually, we think that, when a disaster like an earthquake, pandemic, etc. passes, it won't happen again, and we forget that continuous education to manage them is very important. I would recommend that training to my colleagues as well. I am very satisfied with the trainers and with the correctness of the service provided by the agency" (Teacher of History, female).

A school director sees the situation from another perspective, as follows:

"According to me, it is necessary to find a way how to financially support the teacher's qualification through training. I think that, if a teacher pays for the training, it exists the idea that I have no major obligations, because I paid and the relationship between the company that offers the training, and the teachers turns into a customer-service provider relationship. In fact, teacher training should be more than that. It should fulfill a teacher's need for development and not a teacher's need to get credits. If the funding was provided by the state, or other support donors, then the teacher would focus on the knowledge provided by the training and would feel obliged to give results, seeking to put the acquired knowledge into the function of improving the work in training" (School director, male).

The training providers see the issue of training efficiency from another perspective. According to them, there are some difficulties related to the efficiency of the teachers' training

1. The lack of time from teachers to dedicate to the training
2. The evaluation of the teachers about the training from the same provider that offers the training.
3. The lack of a system that evaluates how knowledge will be implemented in the everyday life of teachers.
4. The instrumentalization of the training by the credits system.

"I see that teachers are often satisfied with receiving credits and there are very few of those who ask for additional materials. Training often takes place on Saturdays and for teachers, it is the time taken from their day off, which often frustrates them" (Trainer).

"At the end, the training is concluded with a test, to evaluate the level of acquisition of information. This testing is managed by the trainer himself and to be honest, it is not always objective. So, so to speak, the trainer himself measures the efficiency of his work. In my opinion, this testing should be carried out at a more central level, independently of the one who offers the training" (Trainer).

According to the trainers, the system of collecting credentials, as a prerequisite for the qualification of teachers, has increased their demand for training, but on the other hand, it has instrumentalized it, diverting attention to getting credits and not too detailed knowledge and information and to the skills that are intended to be developed through training.

c. The challenges faced by these shareholders

Teachers' challenges

During their interviews, the teachers identify some challenges during their effort for qualification. They are related to the lack of finances to ensure the training, the lack of time to dedicate to them, and the lack of a policy from the educational system for the implementation of the acquired knowledge.

In addition to this, school directors mentioned the lack of a system to identify the needs of teachers periodically and officially for training topics.

Training providers challenges

According to the training providers the great competition between the agencies that offer training, makes it difficult to survive the agencies that offer training. This competition leads to the reduction of the price for the service offered and this diminishes the quality of the training because it is also reflected in the motivation of the trainers. On the other hand, since the agencies that offer training are mostly based in Tirana and the training is offered in different cities in Albania, the provision of physical environments for the organization of training remains a challenge. In cases where the training is offered online, the passivity of the participating teachers is observed, which reduces the quality of the training.

5. CONCLUSIONS AND RECOMMENDATIONS

How to face the challenges of teachers training in the future?

In response to the last research question, below are presented in tabular form some conclusions regarding the challenges faced by the shareholders in the process of professional development of teachers through continuous training as well as the ways to overcome them. These findings support the findings previously presented also by Ciraso (2012), Kashahu et. al. (2020).

	Challenges of teachers' training	The ways to overcome them
1	Lack of a system to identify the needs of teachers periodically and officially for training topics	Creation of a system to periodically identify the needs of teachers for training, for example through a customized questionnaire for teachers.
2	Bearing the cost of training by the teachers themselves.	Building a system to financially support the continuing qualifications of teachers, through funds generated by schools, donors, scholarships granted to schools based on performance reports, etc.
3	Great competition between agencies that offer training	Building a system that measures the training efficacy outside the training provider agency
4	The evaluation of the teachers about the training from the same provider that offers the training.	Building a system that measures the training efficacy outside the training provider agency
5	The lack of a system that evaluates how the knowledge will be implemented in the everyday work of teachers and the instrumentalization of the training by the credits system.	The instrumentalization of the teachers' training by creating a system that evaluates how the knowledge will be implemented in the everyday work of teachers

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Building and Rebuilding Knowledge Management in a Virtual Repository Databank: Best Practices for Virtual Learning

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Abstract

While the pandemic consumed the attention of many people in multiple companies, organizations, and industries, the academic community must act quickly in order to maintain some “semblance of educational order” in order to preserve and sustain their educational commitment to today learning population ranging from infants, high schoolers, college undergraduates and graduates, as well as doctoral students and lifelong learners. While many seasoned online instructors had several months, years, and decades’ worth of practice and experience, they also had a mission to share their knowledge and help to capture more knowledge along the way in some form of their current or non-existent knowledge management creations. Consequently, there were several challenges, issues, and changes that helped to change the “traditional viewpoint” of what the academic community viewed as the current educational paradigm. However, as Kuhn (1970) wrote about paradigm shifts, one can pinpoint the Covid-19 pandemic as a leading catalyst that caused a shifting in the established educational paradigm to be reshaped in different directions and interpreted in a variety of ways. As such, this paper will also examine if such a paradigm shift helped or hindered traditional and online teaching and learning, as well as explore and examine if there is a need for additional changes after each type of teacher and learning environment is viewed after the fallout period from 2019-2022. No matter what is discovered, explored, or published in the annals of American and/or Global educational history, many might agree that this period of world crisis happened in a world completely different from the crisis experienced by people, learning communities, and business operations during the time of the Spanish Flu of 1918. Thus, this paper will help to gather and examine information from a variety of sources as well as focus on the change factors and outcomes during this historical change in the educational movement.

Keywords: knowledge management, virtual learning, crisis management, educational shifts

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“Case Study or Case Report in Educational Research?” (Key Differences in the Two Formats Illustrated with an Example of Duchenne Muscular Dystrophy)

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Abstract

“A case study” (especially a qualitative research study) is confused with “a case report,” not only in the Czech environment. Even though both concepts are connected by the term “case”, they are different formats. While a case study is considered a design (method) of a qualitative research strategy, a case report is a short, usually non-research format illustrating an interesting or unique case from practice (most often clinical). Thus, all of the attributes set for (qualitative) research apply to a case study, as it works with empirical data, its analysis and interpretations, but a case report may lack these attributes. At the same time, different formats are applied for its processing. This paper summarises the methodological features and especially the differences between a case study and a case report in educational and other social science research, describes the possible methodological background and recommendations for their processing and finally illustrates the specific features using case report/case study approaches to the phenomenon of Duchenne muscular dystrophy. The findings of the paper are suitable not only for researchers starting with the qualitative case study method in the context of educational or social science research but also for others interested in developing – or publishing – a “unique case”.

Keywords: case study, case report, educational research, research design, Duchenne muscular dystrophy

1. “CASE STUDY OR CASE REPORT?” DEFINITION OF THE BASIC ASPECTS AND DIFFERENCES

In the professional community, the terms “case study” and “case report” are sometimes used incorrectly [1]. This may result in an inappropriate synonymic application of these two different formats. In the Czech academic environment and Czech scientific methodological literature, this is mostly caused by an incorrect translation of the terms from English and an incorrect interpretation of their meanings.

A *case study* is a research strategy (mostly qualitative; it is also normally used in quantitative or mix-method studies). From this perspective, this is a stable qualitative research method (design).

A *case report* is rather a summary form of presentation, explanation or interpretation of an interesting and unique case and is usually a means of presenting new findings for education or – probably most often – for publication in journals respected in the scientific community. In this context, a case report aims to point out a non-traditional, unusual, unclear, atypical, illogical or extremely different and interesting case and to present it to the scientific community.

The basic differences are also highlighted by the terminology used. The synonyms used for a *case report* (including the means of its processing) are, for example, “case approach”, “case exploration” and “case presentation”. For a *case study* (including the means of its processing), the terms are more stable: in addition to the most commonly used “case study”, synonyms such as “case study research”, “case research”, “qualitative case study” etc. [1] are used. This

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synonymic terminology provides researchers with the basic differentiation of these two formats: while a *case report is a non-research approach and a kind of report about an (interesting, unique) case* based on the knowledge of the case and its explanation; a *case study is a research approach involving the case or cases* that shows all of the basic attributes of the research process [1, 2].

In addition to the differences in the terminology and their meanings, another perspective is the direction of the activity: while a *case report is a retrospective processing of the case* (and usually the only one), a *case study is processed and planned prospectively or ambispectively* [1]. Last but not least, the differences between the two formats can be analysed through the perspective of their basic intent: *the purpose of a case report is mostly educational in the context of the scientific community* (symposia, case conferences, publication in scientific journals, education of future physicians, etc.) [2, 3], while *the purpose of a case study is an in-depth understanding of the case(s) based on empirical data* with enrichment of the existing state of knowledge (phenomena) as well as the methodology applied, proposals of new theories, changes, etc. [1].

Both formats can also be compared in terms of their common features. One of them is a “case approach”, that is, focusing on a case or cases that form the central interest and sources of information. *The common feature is the “case” itself* which should be unique, original, interesting, rare or even extraordinary. Other features are usually determined by the field of expertise in which the case report is processed and published and simultaneously by, for example, the requirements of a particular journal, conference, etc. The attributes that relate specifically to a case study include the *boundary of the case, context and complexity, indicator(s), sub/units of analysis*, etc. *The case in case reports is almost always a person* (sick person, patient). Still, in *case studies, the cases are different* (in addition to a person, they may include a social phenomenon, process, organisation, interaction, etc.) [1, 2, 3]. Therefore, published case reports use terms such as *a sick person, patient or persons XY*. In contrast, published case studies use terms such as *case (obviously the most frequent term) or informant or participant in the study*, etc. (however, the term “respondent” is not used – this term belongs to quantitative research activities).

A qualitative case study often includes “elements of psychological research” (including, for example, experiencing, behaviour, motives/motivation, needs, experience, values, expectations, wishes, coping with difficult life situations, etc.) – these can be challenging, subjective and, in a way, often intimate topics. A qualitative (research) case study is mostly processed as *a separate (autonomous) research plan* or as *complementary research* to other qualitative or quantitative methods, or as pilot research (“*pilot study*”, “*pilot case study*”) [1].

A qualitative case study can therefore be understood as a “research method/strategy” or “research design” (to complement other types of research such as ethnography research, phenomenological research, grounded theory research and others) or as a “data collection method/technique”. Case studies, in qualitative terms, mostly focus on a precise description or reconstruction of the case (or cases) and often use multi-source and diverse materials, data and resources. Therefore, the basic keywords of a qualitative research study include “case – detail/intensity – context – multiple data (sources)”. Both formats can be approached as a “*teaching technique/method*” or “*learning technique/method*” [1].

The key advantages of a case report are especially the possibility of presenting to the scientific community (including own experience, mostly from clinical practice), developing the knowledge and experience platform of the particular field and providing a means of education in the broadest sense of the word.

The key advantages of a case study in educational and social science research are especially its flexibility, memorability and reproducibility (“keeping the story in mind”), a high degree of conceptual/construct validity, lower financial requirements and lower theoretical demands for the researcher (compared with other qualitative research designs). A case study allows the researcher to model more complex causal relationships, recognise and understand human behaviour and functioning and thereby analyse the “unique phenomena of unique cases”.

2. “THERE ARE MORE TYPES OF CASE STUDIES AND CASE REPORTS” (THE BASIC STRUCTURE COMPONENTS OF A CASE REPORT AND METHODOLOGICAL FRAMEWORK OF A CASE STUDY)

Other difficulties (in addition to terminological) are caused by the fact that there are several types of case reports and case studies [1]. They are also associated with different characteristics and properties of the process of acquiring information, interpretation and, last but not least, the researcher’s approach to the overall concept and processing. A case report that was processed in the context of clinical practice (which is the most common and oldest purpose) is commonly referred to as a *clinical case report*. Generally, the following case report structure is observed: *Introduction – Case report – Discussion – Conclusion* or (outdated) *Anamnesis – Catamnesis – Analysis – Interpretation – Discussion – Conclusion*. [2, 3] In an international context, the recommendation for processing is identified as a

clinical case report format [4, 5]. In educational or social science research, however, professionals prefer other types of case reports because a case report has an irreplaceable function as *a means of education*. Case reports serve as a possible tool for designing problem-solving procedures, and they perform the illustrative function; they serve as case simulations in the teaching process, etc. [6, 7, 8]. As suggested by the authors Špatenková and Smékalová [9], a case report offers lecturers an effective way of fixation of the learning content as it records various cases and situations that become the basis for the learning process, i.e. *learning from the experience of others*. In education science, both terms (case report and case study) are applied in this context (however, they are still non-research formats). The area of education uses the terms (and types) such as “*instructional case report/study*”, “*didactic case report/study*”, “*pedagogical case report/study*”, and others.

This type of case report is used for “*problem-based learning*” and “*project-based learning*”. It is also the key instrument of “*case study exercise*” and “*case study discussion*”, which have become autonomous teaching methods in secondary schools and higher education institutions abroad [10]. This is a “*case study teaching*” concept or a “*case study approach to teaching*”. In this educational context, the term “*teaching cases*” is also used [11]. When it comes to a series of case reports/case studies used as a comprehensive set of educational objectives, learning tasks, learning content and didactic components, international literature uses the term “*learning case study*”.

Evidence-Based Practice (EBP) refers to, for example, an “*evidence-based case study*”, “*evidence-based case study report*”, “*evidence-based case focused approach*”, or “*clinically relevant case report*”. An independent type on the boundary between a non-research and research study is a “*systematic case study*” (also referred to as a “*scientific systematic case study*”) which is mostly used in the domains of counselling or therapy. One of its purposes is (self-)evaluation of interventions, plans and strategies as part of the counselling or therapeutic process, including sharing of experience, and as a means of (self-)education (“*learning from practice*”) [8]. At the end of the brief overview of the types of case reports, the structure of case reports used in international scientific literature should be mentioned. One of them is the *eight-component concept* [12]. The components are as follows: (1) “*Synopsis*” / “*Executive summary*”; (2) “*Findings*”; (3) “*Discussion*”; (4) “*Conclusion*”; (5) “*Recommendations*”; (6) “*Implementation*”; (7) “*References*”; (8) “*Appendices*”.

As far as case studies are concerned, in situations where *the researcher does not know in advance the number of cases* (how many cases are/may be available, etc.), the number of cases is usually derived from theoretical saturation. Conversely, when *the researcher has an idea (at least general) of the number of cases*, the selection includes willing and available cases or those that meet the predefined criteria (for example, criterion sampling). The basic types are *single case studies* ($N = 1$) and *multiple case studies* ($N = 2$ or more). A single case is presented in the form of, for example, a *typical case*, an *extreme case*, a *critical case*, a *unique case*, a *relevatory case* etc. Multiple case studies consist of a *typical case* and, at the same time, *verification cases*.

As far as the nature of the case is concerned, there are *community studies*, *social groups studies*, *case studies of organizations and institutions*, and *studies of events, roles and relationships*. Last but not least, the frequent case studies are *embedded case studies* and *holistic case studies*.

According to the research intent/purpose, it is possible – at least in a simplified and didactic manner – to choose from [1, 13, 14, 15]: (1) *descriptive case study* (also referred to as *illustrative case study*) with a complete detailed description of the case which is the subject of the study; (2) *exploratory case study* (also referred to as *heuristic/pilot case study*, *initial analysis*) searching for the answer to the question “*What next?*”; (3) *explanatory case study* (also referred to as *causal case study*) focusing on the explanation of a social phenomenon in a specific context; (4) *confirmatory case study*, mostly used in mix-method research. Last but not least, usual approaches include an *interpretative case study*, *comparative case study*, *intrinsic case study*, *instrumental case study*, *case studies in the form of life story*, *biographical approach* and many others [1].

In designing a qualitative case study, it is advisable to ask several basic questions that provide the answers to the basic components of the study. The basic components include (a) Strategy (question: “*What strategy should we follow?*”); (b) Conceptual framework (question: “*In what framework??*”); (c) Who/what should be investigated (question: “*From whom/from where should the data be obtained?*”); (d) Data collection means/techniques (question: “*How should the data be collected?*”); (e) Data analysis/interpretation procedures (question: “*How should the data be analysed?*”). The initial researcher’s analysis can be elaborated in more detail using, for example, the following Table 1 [1].

Table 1. Designing a case study – initial researcher’s analysis

Intent, concept and purpose of the study	Considered type of case study and its justification	Context (of the case, phenomenon, situation)	Objective(s) of the study, research questions	Case(s) (sub/units)
Selection of the case(s) (sampling plan)	Data collection procedure (techniques)	Proposed data analysis process	Expected findings, results	Study limitations/ Ethical aspects of the study

3. ILLUSTRATION OF THE DIFFERENCES BETWEEN THE TWO FORMATS ON AN EXAMPLE OF DUCHENNE MUSCULAR DYSTROPHY (DMD)

DMD is a congenital hereditary disease characterised by a loss of active muscle mass, which affects boys (X-linked recessive disease). Already during the stage of searching for published papers in available electronic databases (mostly in scientific journals), we can – according to the concepts contained in their names – notice the basic differences and the overall conceptualisation of the topic or phenomenon studied. The titles of “non-research” studies contain the term “case report” and *indicate the context of the case, health problem or a different problem or the reason behind the study*. The titles of “research” studies mostly contain “case study” or “qualitative case study” (in various alternatives) and indicate the *social context, research need or the aspect of understanding or explanation or a detailed description*.

The initial database search using a combination of keywords returns different topics, purposes and concepts of studies published on DMD (regarding the unique name of the disease, an incorrect translation or misinterpretation of the concept was impossible – for simplification, the method of *title analysis* was used, and title search (TI) was applied solely. These differences can be used to support and justify the differences between a case report and a case study as defined in this paper – for examples and evidence, see Table 2 below.

Table 2. Differences between case reports and case studies published for DMD

DMD and case reports	Monitored feature	DMD and case studies
TI “case report” or “clinical case” or “case series” AND TI duchenne muscular dystrophy or dmd or duchenne syndrome or duchenne’s	Keywords and their combinations	TI “case stud*” or “qualitative case stud*” or “research case stud*” AND TI duchenne muscular dystrophy or dmd or duchenne syndrome or duchenne’s
<ul style="list-style-type: none"> ▪ sEMG-Controlled Electrohydraulic Hand Orthosis ▪ Effects of a regular aquatic therapy program ▪ Personalised Degenerative Disease Modelling 	Phenomenon / topic in TI (selection of examples)	<ul style="list-style-type: none"> ▪ Patient life aspirations ▪ Siblings’ life aspirations ▪ Experiences of young adults with pediatric life threatening conditions transitioning from pediatric to adult services
<ul style="list-style-type: none"> ▪ A case report ▪ A clinical case report ▪ A clinical report ▪ Case reports and a review of the literature 	Type of format and study used (selection of examples)	<ul style="list-style-type: none"> ▪ A descriptive single case study design with embedded units ▪ Mixed research design (qualitative and quantitative) ▪ A comprehensive qualitative framework ▪ A qualitative study and the development of a patient-centred conceptual model ▪ A multicenter qualitative study
Disease, manifestations, treatment, intervention, quality of life, experience from clinical practice, disease management	Focus on	Aspirations, previous experience, needs, social and family context, personal support, difficult life situations

4. CONCLUSION

A *case report* is a non-research, non-scientific paper and is usually retrospective. The scope of the text is shorter, and the basic message is primarily the education of professionals in the scientific community, the presentation of experience with the case, and the publication of an interesting report about the case – mostly in scientific journals

recognised by the scientific community. It is also an excellent means of “*problem-based learning*”. It can be used in both undergraduate and postgraduate training, self-development and education in the broadest sense of the word (as for clinical case reports, this mostly involves medical education or education of future medical/health professionals).

In a research paper, the *case study* approach is a type of descriptive, exploratory, explanation or a different type of qualitative research and represents one of its methods. Typical features of a (qualitative, research) case study include a detailed description, analysis and interpretation of the individual nature of the case (or cases) in a (social) context and a variety of detailed data, usually of a large extent (in this respect, it is much more time-consuming than a case report). As a form of a research paper, it is mostly published in scientific journals.

As suggested by the selection of examples of already published case reports and case studies focusing on the same phenomenon (DMD), the concept and purpose of these studies differ. While *case reports focus mainly on clinical practice* (and the term “case report” was aptly used), *case studies focus especially on previous experience, wishes, needs and family and social life* arising from the specifics of DMD (the term “case study” and its alternatives were aptly used, often with the modifier “qualitative” in different forms).

The *take-away message* of this paper is the consideration of the differences between a case report and a case study in clinical or academic practice, correct use of the concepts and adherence to topics (phenomena, areas, subjects) for which the two different formats are processed and the application of appropriate terminology commonly used in an international context (in the Czech Republic, the situation is starting to develop in an appropriate and correct methodological direction).

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Post-pandemic Educational Efforts and Strategies in the New Normal Era

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Abstract

The recent pandemic has forced everyone to adapt to new habits, including the teaching and learning process in schools. Almost all students, teachers, school directors and parents have found themselves in technological devices and distance education materials such as computers, tablets and smart phones. The inability to adapt and transform to new method is likely to increase the problem and slow down the efforts to reach the educational goals. Therefore, educational efforts and strategies are needed in the transition to the post-pandemic era. In the context of education, the "new normal" has begun to occur globally since the Covid-19 pandemic. Teaching and learning activities that are usually carried out face-to-face directly, namely educators and students are physically present in classrooms and learning environments, are now being replaced with learning activities through electronic media (e-learning) either synchronously or indirectly. The New Normal Era in education has brought some new teaching and learning strategies, all of which are of great importance in personalized and independent learning. In the study, in addition to personalized and independent learning, some teaching strategies of New Normal Era and Post-pandemic period were referred in detailed.

Keywords: New Normal Era, Post-pandemic education, Mobile Learning, Education Management

1. INTRODUCTION

Although the Covid-19 pandemic has changed many aspects of life for every human being without us even realizing it, the presence of this covid pandemic has made people more creative and innovative at doing things. One of them is in terms of education. With the existence of the Covid-19 pandemic, it has indirectly taught every student how to use or take advantage of communication tools that they may not have known until now. In addition, with the Covid-19 pandemic, every educator can be more creative in using existing learning environments so that existing learning looks more interesting and students become more enthusiastic to participate in the learning process. The Covid-19 Pandemic is not only changing life in society but also changing education systems all over the world. What we really feel is such a change that those of us who used to work face-to-face (Offline) are now accustomed to working remotely (Online). By implementing an online education system, it will certainly have a huge impact on the development of students' knowledge and interest in participating in learning. In addition, educators need to be able to innovate more so that the learning material they convey can be well received and understood by students. Because we know that if educators only give explanations and assignments to students, this will of course cause students to get bored and make it difficult for them to understand any given learning material (Can, 2020; Setiawan, 2020; Mukhtil, 2021).

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2. THE NEW NORMAL ERA

The emergence of this pandemic certainly has an impact on many sectors of life, both social and economic. In dealing with a pandemic like this, of course the government needs many policy interventions in various sectors. Many countries seem very slow in dealing with this pandemic. From the moment it emerged, they were comfortable enough to underestimate the existence of the Pandemic. After the first cases emerged, the governments tried to design the necessary policies such as Physical Distancing, Social Distancing, Large-Scale Social Restrictions to the recently implemented New Normal policy.

Education is the provision of information to students, which is based on observations and facts showing that information technology developments and breakthroughs will continue going forward (Işık and Bahat, 2021). Therefore, it is not difficult to predict that one of the tests of management's proficiency and reliability in the future will be its ability to take advantage of these technological developments. The corona virus outbreak has had an impact on important sectors in all countries, one of which is the education sector. Currently, educational services and processes, especially learning activities, are carried out online (in a network) so that learning activities can continue even though we have experienced the Covid-19 pandemic.

Distance learning with online media that utilizes technological advances is considered ineffective, because there are various problems caused by limitations such as infrastructure, parents who have difficulty monitoring the child's distance learning activities and lack of understanding of the child's subject matter, and so on. One thing to note is the quality of education tends to decline. Improving the quality of education in the New Normal Era is very important.

3. PLANNING OF EDUCATION IN POST-PANDEMIC PERIOD

An activity should start with a plan. Planning is at the forefront of what needs to be done in various fields as well as in the field of education.

Planning is defined as a policy processing activity to determine the intended results. Planning can also be interpreted as an effort to reach goals by taking into account the resources they have.

Educational planning is the application of logical thinking, which is the change phase of activity based on rational thinking through systematic and thematic analysis to make the results more effective and efficient and to match the needs and goals of students and society.

Educational planning is an initial capital whose goals can be directed to support other social interests. Educational planning is an activity in which there is a management process and is structured in an orderly system so that it can provide support for the socio-economic development of a nation, as well as being a bridge between the expectations of students, parents, the community and the government in achieving educational goals.

Educators and education workers are two different professions. After the coronavirus epidemic, the first thing that both educators and education workers had to do was to develop and plan a new management strategy in the field of education. In this case, an update is needed to overcome the problems experienced in the field of education after the corona virus epidemic. Educational planning is an activity aimed at obtaining tools and techniques for setting priorities, so there will be more focus on educational development need as the planned needs are targets. Student success in the teaching and learning process is affected by various factors. In general, it is known that there are two factors, internal and external. The most decisive factor is primarily the influence of the students themselves, that is, 70% of student success. Next, we can list factors such as motivation to learn, perseverance, interest and attention, work attitudes and habits, physical and psychological health, as well as students' abilities. It is the quality of instructional administration that is greatly affected by external factors.

Recent Pandemic affected the education system and educational management all over the world. The most obvious change is in learning activities that were originally carried out face-to-face to virtual or online where there are various obstacles experienced by students and educators. Teaching and learning activities are communication between teachers and students. When face-to-face, the material is received directly. It's different if it's online, there will be obstacles whether it's network disconnection or voice is not clear, material can't be conveyed.

As for students, going to school in the midst of a pandemic has become their own suffering. Because apart from being forced to devour so many learning targets at home, they also have to deal with new teachers who don't know how to educate and teach in terms of mental and ability in this period. Meanwhile, for educators and schools, this does not lighten their burden. Even this leaves them with a lot of thought because there is little support for facilities, including the readiness of human resources to adapt to a complete online learning system. In the world of education, management has a very important role in the performance of an institution. The performance of an educational institution will be able to function smoothly and at maximum level if it implements the management functions correctly. Also, at the planning stage where planning is the first stage to be done in a management, a plan will greatly influence the process and results of management. However, the presence of online learning during the pandemic has

paved the way for various education problems in many countries. It also shows how uneven education development in some countries is and the need for in-depth assessment. It is hoped that in the future the development of education will be more evenly distributed throughout all regions in the world, not only the task of the central and regional governments but also various related organizations which cannot be separated from political policies, infrastructure, technological advances and the support of parents and the community so that the process of educating the nations can be optimal.

The success of the teaching and learning process is largely determined by the success of its leaders in managing the teaching staff present in the school. If you look deeper, the educational process during the Covid-19 pandemic has changed drastically compared to previous lesson plans. In normal learning activities, students carry out learning activities in direct conversation with teachers and friends, who have a great influence on the quality of the learning process; It can be directly processed and evaluated by the teacher to improve the quality and results of the educational process. With the emergence of this epidemic, limitations have occurred that have led to the declining quality of educational processes and outputs.

The success of learning depends on the quality of learning management (Kayalar and Kayalar, 2022). Learning management is an activity that includes three things: a. planning lessons, b. realize learning and c. assessing learning outcomes. Learning success can be achieved if it is determined by the quality of its management. The better the quality of learning management, the more effective learning objectives can be achieved. This demonstrates the need for learning management to achieve quality learning objectives. From the results of the data that has been collected through observations on social media, online media, print media which provide information regarding the decline in the quality of education caused by the pandemic, the educational planning is carried out:

1. Planning

a) Diagnosis: At this stage of diagnosis, planners make problem formulations according to the needs that occur in the community regarding educational needs, starting from the reasons for the decline in the quality of education to other needs that can improve the quality of education after the pandemic.

b) Formulation of Policy: After conducting a diagnosis, the next step is to trigger strategic points that will be used as a solution to existing problems.

c) Estimated Needs: Planners should also take into account the needs that will be carried out in the post-pandemic period, this is important in planning as a benchmark for cost needs and others.

d) Funding: Allocation of funds is also one of the stages that must be carefully considered by planners, bearing in mind that budgetary funds are bound to be limited in the post-pandemic period due to conditions that may not be completely stable.

e) Determination of Priority: Priority determination can be concluded through the diagnosis of problems that have been carried out, from various problems in the field the planner classifies the problems so that needs with higher priority can be done first.

2. Planning Formulation Stage. At the formulation stage of this plan, all the points in the planning stage will be more focused, so that the solutions offered can be on point. At this stage, the solution provided should also be in the form of an implementation program that will be implemented.

3. Planning Implementation Stage. This process is the implementation of the agreed plan formulation.

4. Revision and Re-Planning Stage. In the implementation process, of course, the process and results will be assessed, so that this assessment can become a benchmark for the success of the planning carried out. If it is deemed unsatisfactory, a re-planning will be carried out so that the need to improve the quality of education in the post-Covid-19 epidemic can be resolved.

The decline in the quality of education during the Covid-19 pandemic was indeed unavoidable, this was due to the impact of the pandemic which had a significant impact on reducing the quality of the country's needs, including education. Therefore, it is necessary to have educational planning activities after the pandemic, as one of the efforts to pursue a decrease in the quality of education during the pandemic.

The post-covid-19 learning planning process can be carried out by following the planning stages such as diagnosing problems, then preparing plans, implementing plans and revising plans.

4. CONCLUSION AND SUGGESTIONS

Learning through online platforms, which has been going on for almost two full years, has brought out many positive and negative outcomes. The positive thing was that students were protected from the high spread of the Corona virus at that time and students could freely learn from various sources, not just focusing on teachers and books. Students can access material from internet sources. However, along with positive things, negative things also become problems that are difficult to avoid, including the lack of students' understanding of the material because there is no detailed explanation by the teacher, students tend to only read the material provided by the teacher without a thorough explanation. This makes students' enthusiasm for learning decrease (Sulistiyorini, 2022).

In the new normal era, the government began to give instructions to educational institutions to re-open limited face-to-face learning. Learning by implementing strict health protocols has begun to appear in all regions in the world, and students are back at school.

The running of limited face-to-face learning again raises new problems, one of which is the low enthusiasm for student learning. This can be seen in the face-to-face learning process that has taken place. The number of students late for school and the passivity of students during learning activities are early indications that students are still surprised by face-to-face learning, which for the past two years has only studied through online platforms. We, as educators, must really pay attention to this so that it won't be sustainable.

Interesting and effective learning from the teacher gradually makes students want to learn from the teacher. Teachers can apply unique learning methods and arouse students' high curiosity. In this limited learning, the teacher should be able to adjust the lesson hours slightly, but still give the maximum. It's not just a matter of time, students' online learning habits tend to be immersed in face-to-face learning, which makes it difficult to condition students.

When learning online, students only work at home alone without meeting their peers. Therefore, it is difficult for students to be enthusiastic about learning. Based on this, as teachers, we can apply learning that allows students to interact freely with their peers so that students are free to express themselves while learning. Also, learning by interacting with other students based on the teacher's experience can increase student creativity. Students do not get bored and are more free to be creative with their peers. The learning model can be done using the group discussion method.

Group discussions make students interact more often with their peers and not be fixated on the teacher's rules. In order for the discussion process to run well, the teacher should not burden students with certain rules. The teacher should give students freedom in thinking and give appreciation to students' arguments.

As a conclusion, community social activities, including the education world, began to normalize after the Covid-19 pandemic. Educational institutions are starting to reorganize their curricula to return to pre-pandemic conditions. Although the obstacles in the Covid-19 process can be minimized, attention should be paid to the changing conditions of learning. Barriers faced by teachers include curriculum changes, changes in learning approaches and methods, use of learning media, and use of online media. Teachers should get used to teaching using information technologies, and to online media in teaching.

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**Transport, Logistics, Tourism and Sport Science
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The Challenges for Investment in Sport & Sports Infrastructure - Make it a Business?

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Abstract

This expert work aims to show that investing in sport and sports infrastructure can be a great profitable business. The directions that will be manifested in this paper open up several dilemmas, namely: Why is that so? Since when is it possible to make a profit by investing in sport or sports infrastructure? Sport is a globally growing industry, and its significance to people in terms of participating and watching is great. Sport business is expected to grow worldwide by around 6.4% percent in the next 3-5 year. Business growth demands competitiveness and determination, which are also characteristics of elite sports. This combination makes sports industry very interesting, but, at the same time, challenging to study from the entrepreneurship perspective. Generally, business often aims at maximizing profits. However, in sport business the aim could be more in utility maximization than in profit maximization and the motivation to run a sport firm often separates from general business. This makes sport and sports infrastructure as a business very unique, and therefore, worth studying from the entrepreneurship perspective. Sport business is an internationally fast emerging industry. Depending on what is included in this field of business, it is worth billions of dollars. For those reasons, this study will analyze every possible aspect that seriously indicates that through investing in sport and sports infrastructure, you can have a profitable and respectable business, which will make you recognizable in a wider framework. Let's cover a simple but perhaps and simply overlooked topic when discussing careers in sport - What is 'Sport Business' exactly? At its essence it can be defined as the off-field business of managing and facilitating sport. That's why it is important through this expert document to give a clear picture for this issue what is sports business and and what are the challenges for investment in sports.

Keywords: Sports business, Investment in sport, Sports infrastructure, Sports industry

1. INTRODUCTION

Perhaps, it still sounds a little vague, but the fact is that with this work let's go deeper into the topic, first by defining the business areas that are usually included in the space called "**Sports business**". Here, in this work, we have to show that sport as a social category who produces games, fun, happiness etc., today becomes a leading business in the world of economy.

Dilemmas: Is it really so? Can sport be profitable? If make investment in sport and sports infrastructure is that worthwhile?

With this paper, we will try to answer these dilemmas, but also to open new perspectives for investing in sports and sports infrastructure or sports events. But of course, this paper should motivate and direct future potential investors who would like to invest in sports infrastructure or sports events to think about why they should invest and whether it will be profitable for them.

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According to internet magazine The Grocer the value of sponsorship across all sport went down from US\$22 billion (£16 billion) in 2019 to US\$12.9 billion (£9.4 billion) in 2020. As one of the most important sources of income for sports organizations, such cuts could have severe consequences for the industry. Fans (and athletes) may well worry about the damage this could inflict on the future of their cherished teams and events.

1.1. Theoretical background

Investment is the dedication of an asset to attain an increase in value over a period of time. Investment requires a sacrifice of some present asset, such as time, money, or effort, for example, investment in durable goods, in service industry real estate, in factories, in product development, and in research and development.

The term sports business refers to any off-field role related to managing or facilitating sports. It incorporates a number of positions specific to the sports industry, including sponsorship, broadcasting and athlete management.

a. Investment

Investment is factors of production in anticipation of some benefit in the future - for example: investment in a durable good, in service industry real estate, in a factory, in product development, and in research and development.

Nowadays, the modern economic situation dictates that we use paper money as the most practical means of exchange. Many have a dilemma that sport as a general good is an opportunity for a good investment, but sport has more opportunities to benefit the investor through the creation of sports success.

b. Sports business

A question often asked by people considering a career in sport and the sports industry is, "What is sports business?"

The term sports business refers to any off-field role associated with the management or facilitation of sport. It includes a number of positions specific to the sports industry, including sponsorship, broadcasting and athlete management.

But working in a sports business offers a wider scope than this, including working and employing others in roles that companies in other industries have in order to maximize profits.

According to Aila sport business¹ is expected to grow worldwide by about 6.4% percent in the next 3-5 years (Aila Ahonen, 2022:15). Business growth requires competitiveness and determination, which are also characteristics of elite sports.

1.2. The challenges of investing in sports, athletes, sports infrastructure and sports events

As a potential investor, you will always have a dilemma whether and why you should invest in sport? Could it be a worthwhile investment for the investor?

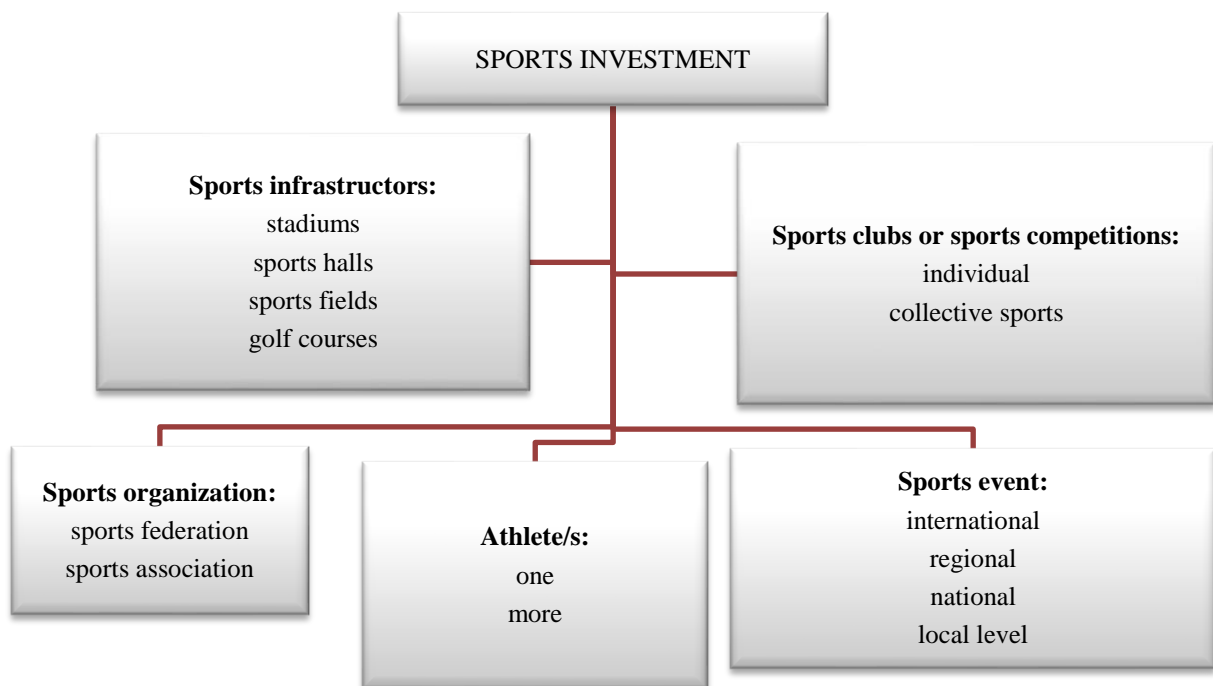
These are just two dilemmas that I will pose in this professional paper and I will also try to offer an answer.

Before a concrete answer, I would like to theorize and lay out a scheme of sports segments that can be part of sports investments (see below, Figure 1), namely:

- sports infrastructure (stadiums, sports halls, sports fields, golf courses, etc.),
- sports clubs or sports competitions, (individual or collective sports)
- sports organization (federation or association),
- athlete/s (one or more)
- sporting event (international, regional, national or local)

¹ Aila Ahonen, (2020). CHALLENGES IN SPORT ENTREPRENEURSHIP: CASES IN TEAM SPORT BUSINESS, Acta Universitatis Lappeenrantaensis 1010, Diss. Lappeenranta-Lahti University of Technology LUT, p.15.

Figure 1. List of schemes of sports segments that can be part of sports investments



a. Example 1. Investments in sports infrastructure

Investments in sports infrastructure mean the construction of a modern sports center (SC) depending on the goals of the sports federation or sports club. The primary goal of a suitable or modern SC is a professional training base or training camp through which future top athletes will be created. Viewed individually, SC should contain more infrastructural elements that will have primarily a professional but also a sports basis. The elements (see below, Figure 2) are graphically divided from the aspect of profitability (profit) which is a great motive for an investor and elements for achieving top sports results (sports success), namely:

- Ideal sports fields– (sports success)
- Central administrative building - (administration)
- Spa & Fitness center - (Profit)
- Hall for entertainment and recreation of young people – (profit)
- Restaurant/cafeterias - (profit)
- Medical department for physical & hydrotherapy – (sports success and profit)
- Meeting room – (administration)
- Conference and event hall – (profit)
- Apartments for athletes and professional team - (sports success and profit)
- Security room – (administration)
- Computer analysis center – (sports success and profit)
- Own kitchen – (sports success and profit)
- Shopping center (space for club souvenirs) – (profit)

Figure 2. List of the necessary infrastructural elements for the construction of a modern sports infrastructure



b. Example 1. Investing in an athlete/s

Investment in athlete (footballer) Lionel Messi, who made a transfer from Barcelona FC to Paris Saint Germain FC. Lionel Messi left behind a bad season in the shirt of PSG FC. The Argentinian left Barcelona FC and did not show much of the footballing qualities he possesses in the new football team.

The investor who investing financial resources in Lionel Messi does not get the necessary sports results in the first year of the investment, but the French media write that he "helped" the investor more outside the sports fields. With the help of commercial deals PSG FC has earned approximately 700 million euros, (satisfied investor). The earnings of the footballer Lionel Messi for the previous season amounted to 30 million euro, while this season is expected to be 9 million euro more than the previous one.

The seven-time Balloon d'Or winner's arrival at club PSG FC has significantly boosted the French club's shirt sales. Last year alone, over a million jerseys were sold, one jersey costing from 90 to 160 euro, and more than 60% of the sports jerseys sold had the number 30 of player Lionel Messi.

In continuation of this professional paper in the area of investing in athletes, I would like to offer a table of athletes (footballers) as an illustration, because according to many analysts, football is the number 1 sport in the area of advertising and sponsorship of the 10 most financially valuable sports or football contracts of athletes from the 5 most influential football leagues in Europe (see below, Table 1).

Table 1. List of most valuable commercial sponsorship agreement on football players in Europe in dollars

Footballer	Country	Fransfer	Sports brand	Year	Agree. per year
Cristiano Ronaldo	Portugal	FC Manchester United, FC Real Madrid	Nike	2016	14.7M/Euro
Lionel Messi	Argentina	FC Juventus & FC MU	Adidas	2017	25M/Euro
Neymar	Brazil	FC Barcelona & FC PSZ	Puma	2020	25M/Euro
Kylian Mbappe	France	FC Monaco to FC PSZ	Nike	2019	14M/euro

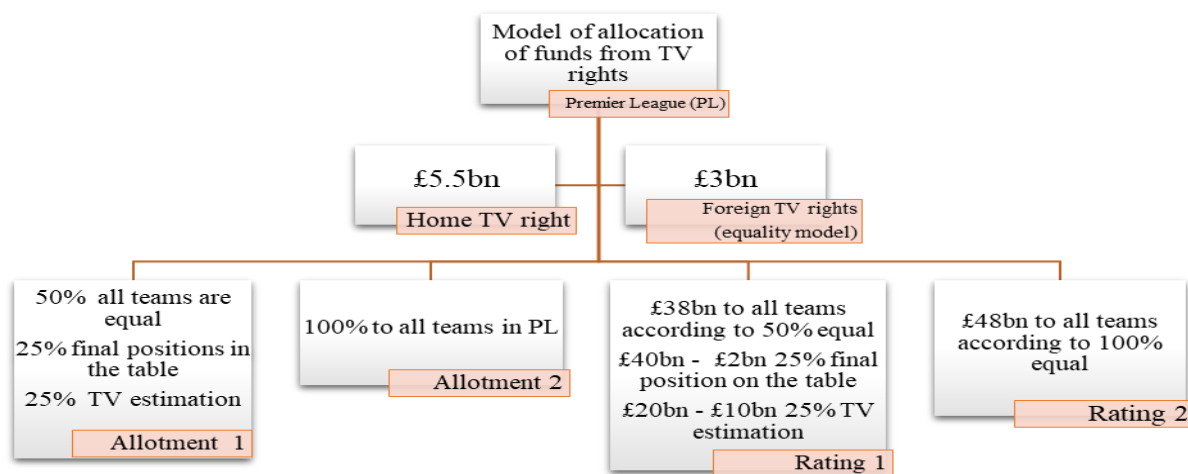
c. Example 3. Investing in sports clubs or sports competitions

I will go back to data from the time of the recession and the economic crisis to see how investments in sports (football) moved in those years.

The most profitable and significant sports investment today the Premier League (soccer) in England is the most popular and most watched sports competition in the world, which is followed by about half a billion people from 202 countries. In the United Kingdom and Ireland internet owners News Corporation or Setanta Sports have the rights to broadcast the matches, while in the United States coverage is split between Fox Soccer Channel & Setanta Sports North America. News Corporation sometimes buys billboards with the Fox Soccer Chanel logo, which replaces Sky's. In Australia Fox Sports (Australia), which is owned by News Ltd, broadcasts more than 5 viewers' choice match and more than 9 football matches in any given round.

Due to the high interest in watching the matches in Asia, especially in China where the matches attract between 100 and 400 million viewers, the PL financially supports the "Premier League Asia Trophy" in Hong Kong 2017 in which 4 football teams WBA FC, Leicester FC, Crystal Palace FC & Liverpool FC. The Premier League has so far organized three pre-season tournaments, the only Premier League tournament organized outside England.

Figure 3. List of investment model in Premiere League for TV right



d. Example 4. Investing in a sports event or sports organizations

Sport and sports events² represent an ideal opportunity for good advertising of a certain product, innovative idea or business company in the new millennium (Anastasovski Ivan, 2016).

In the context of investing in sport and a mega sports event, I will cite the example of the sports event that we as a country had the great honor and pleasure to see in the capital of Macedonia – Skopje. UEFA Super Cup 2017, where participated 1st ranked financial giant in football Manchester United FC with value \$3.69 billion and the 3rd ranked financial giant Real Madrid FC with value \$3.58 billion. This football spectacle brought more than 20 million euro as profit to our country Macedonia, which actually represents the most valuable economic event, not only football, but also economic, political and other, that has ever been organized in our country. This sports event was financed and organized by UEFA also sponsors.

Investing in sport and sports infrastructure today in this modern time of rapid technological and informational development is imaginable without the use of the Internet and social networks, which contribute to fast and high-quality advertising of a certain brand. This is a tool that allows the sport to reach a large number of potential investors because the sport is a public, manifest thing that has a large number of followers.

The biggest opportunity is social media which is a guaranteed value for investing in sports and sports infrastructure that sells the brand according to social media. According to the Hookit sponsorship analysis platform I will show

² Anastasovski Ivan, (2016). Sponsorship in sports and sports events, Skopje: Professional text, Fitness Magazine, Faculty of Physical Education, Sports and Health, number 5, UDC: 796.078(091), p. 20-23.

several tables of several athletes as well as economic with world brands that through advertising and investing in a sports event generate profit. The pandemic has placed enormous pressure on sport. Major competitions and events have taken place without supporters and fans, and vital sponsorship budgets have been drastically cut.

According to the writing in 2021 year of George Nott from journal *The Grocer* the value of sponsorship across all sport went down from US\$22 billion (£16 billion) in 2019 to US\$12.9 billion (£9.4 billion) in 2020.

As one of the most important sources of income for sports organizations, such cuts could have severe consequences for the industry. Fans (and athletes) may well worry about the damage this could inflict on the future of their cherished teams and events.

The sports industry a growing opportunity for private equity. The global sports industry is estimated to be worth between \$400 to \$500 billion, having grown steadily at around 6% per annum prior to the pandemic. Whilst Covid-19 has seen some winners (e.g. the rise of domestic fitness solutions such as Peloton, or other household-appropriate activities such as darts, snooker and eSports), the broader market has been heavily affected (circa 15% decline overall) by the lockdowns and social distancing measures which have led to event cancellations, empty stadiums, a hiatus in many amateur sports, and a reduction in certain sports retail sales.

However, market headwinds appear temporary, with the pandemic unlikely to adversely affect the strong structural foundations of the sports industry; a return to growth is forecast in a post-restriction environment.

2. CONCLUSION

As a conclusion from all the above said and established, it can be said that investing in sport, sports infrastructure or athletes, is more than worthwhile for any company. Investing in a humane activity such as sport should be a great incentive for any investor, primarily in helping young talents to develop a professional sports career, and then for the development of a recognizable sports brand that will bring great benefits to every company. For those reasons, the following can be concluded:

- Investing in sport, sports infrastructure and athletes is more than profitable in the global sports system,
- It is a fact that the funds invested in sport, sports infrastructure or athletes can be returned many times over if you work profitably,
- And finally, as many companies as possible should be encouraged to direct their profits in sport and sports infrastructure through seriously produced sports project concept.

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Determining Factor of the Tourist Recovery Speed after the Covid 19 Border Opening

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Abstract

The Coronavirus emerged on the earth in December 2019. Because the Virus was very severe, it spread from person to person and soon caused pandemic. To avoid person to person transmission of the virus, almost all countries banned international and long-distance domestic travel. In the second quarter of 2020, travel was virtually halted in almost all regions of the world. However, in the following months, countries started to relax the stoppage. The relaxation was done in stages: first the travel involved quarantine, then it required a negative test result and then a proof of vaccinations. As the stages relaxed, the number of travelers naturally increased. However, considerable difference is seen among the countries and regions, in the rate of the recovery of traveler number. This study tries to verify the factor that is influencing the rate of recovery. The data are taken from arrivals statistics of Singapore, Thailand, Japan, UK, Switzerland, Canada, and USA. The main determining factors were the volume of visitor arrivals before the pandemic, the duration of the lockdown or regulated period, and the impact of the relaxation.

Keywords: international tourism, tourism flow, recovery, pandemic, covid-19

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The Effectiveness of Problem-Based Learning in Hospitality and Tourism Education: An Experiential Study

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Abstract

As a cognitive constructivist learning approach, problem-based learning has widely been recognized as an effective education approach in hospitality and tourism education to (1) foster active learning, (2) develop generic skills and attitudes relevant to their future career, (3) facilitate an integrated core curriculum, and (4) motivate students. However, how such a learning approach should be designed and incorporated into hospitality and tourism course syllabus remains underexplored. Drawing on the active learning theory, this study adopted a quasi-experimental design to examine the effectiveness of problem-based learning in enhance hospitality and tourism undergraduates' problem-solving skills, critical thinking, theoretical applications, and teamworking abilities. Specifically, four surveys: (1) the start of the course, (2) the engagement in problem-based learning activities, (3) the participation in a marketing conference in which undergraduates are encouraged to share their thoughts on solving marketing problems with industry practitioners, and (4) one week after the course, will be conducted with an experimental group and a control group of hospitality and tourism undergraduates throughout a 13-week industry-centered marketing course in a tourism and hospitality postgraduate program, housed within a top-ranked comprehensive university that has an independent tourism and hospitality school. The results are expected to position problem-based learning design in the context of hospitality and tourism context and practically assist hospitality and tourism institutions with problem-based learning design.

Keywords: Problem-based learning, hospitality and tourism education, learning design, learning experience, experimental research design

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