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EDITORIAL

Dear readers,

Already in the umpteenth issue, I begin the editorial with the wish that the coronavirus crisis is behind us. Unfortunately, this is not yet the case. However, not only us that have embarked on an examination of the effects of this crisis on regional development. Therefore, in November, a student conference entitled "Innovative approaches and strategic planning during the pandemic" was held at the Masaryk Institute of Advanced Studies, at which students of several Czech and foreign universities examined the positive impacts of the pandemic on innovation in not only regional development. The best articles from this conference form the first part of this current issue. In total, five of the approximately twenty contributions were included. The first article you will find is Daniel Kvíčala from Silesian University in Opava on the topic "How Covid-19 Influenced Customer Buying Behaviour and Business Results of E-shops". This is followed by an article by Lucie Heczková from the same university on the topic "Analysis of an Inventory Management Model with Discounts". The third contribution is by Tatiana Lekýrová from the Masaryk Institute of Advanced Studies of the Czech Technical University in Prague, entitled "Innovative Ways of Accomplishing Organizational Change via Large-Scale Scrum". The fourth contribution was contributed by Nicole Pendezini and Luca Marcandalli from the University of Bergamo on the topic "Open Innovation and Organizational Culture: Global Companies Best Practice". The last contribution from the aforementioned conference is the work of a student from Augsburg, Germany, Pascal Marquard, entitled "Global Trends in Advertising Strategies in a Covid-19 Era: Evidence from China and Germany".

To make the topic coherent, not too small, several more papers on this topic will be included in the next issue of our magazine. At the Masaryk Institute of Advanced Studies, we are also preparing a larger international conference from our newly renewed conference cycle Regional Development between Theory and Practice, namely its 11th year on the topic Impact of the Covid 19 pandemic on the development of Europe's regions. The conference will take place on Thursday, 19 May 2022 at the Masaryk Institute of Advanced Studies CTU. The conference is held under the auspices of the Director of the Masaryk Institute of Advanced Studies of the Czech Technical University Prof. PhDr. Vladimíra Dvořáková, CSc. You can register for the conference through electronic registration via the following link: https://forms.office.com/r/nMkc1DsJfR

Our regular readers are accustomed to the fact that in the first issue they published papers on the topic of development strategies in the field of education and human resources written together with colleagues from Russia. In this context, we as a magazine also join the condemnation of The Russian – Putin's aggression in Ukraine and the boycott of Russia. We believe that Russian scientists who have not supported Putin's aggression have been published in our journal in the past, but we will not publish any articles from Russian authors at this time. On the other hand, we are glad that we do not have to disappoint our readers dealing with the above-mentioned issue of education, and we include articles by our Czech colleagues. There are five other articles, namely the work of Jana Marie Šafránková, Martin Šikýř and Jana Coufalová entitled "Development and Support of Higher Education in the Pilsen Region", as well as an article by Renata Skýpalová on the topic "Development of Primary School Employees in the South Moravian Region in the Field of Communication with Parents", as well as the work of Kateřina Tomešková dealing with the topic "A broader View of the Leadership Mission and the Management Skills Development". The penultimate is an article by Michaela and Wanda Tureckiová entitled "Co-teaching Strategies and their Application in Regional Education and Adult Education" and the last one in this issue is the work of Eva Škorňová and Jana Marie Šafránková on the topic "Current Trends in Human Resources and their Application in Higher Education". Wish Ukraine victorious peace and good health, an inspiring read for spring!

Vladimíra Šilhánková
Hradec Králové, March 2022

HOW COVID-19 INFLUENCED CUSTOMER BUYING BEHAVIOUR AND BUSINESS RESULTS OF E-SHOPS

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Abstract:
The aim of this paper is to compare customer purchasing behaviour and marketing activities and the results of selected e-shops offering different product categories in periods of 2019 and 2020. For this purpose, values such as number of visits, number of transactions, sales volume, and conversion rates of individual customers will be analysed. Furthermore, the total investment in online marketing communication and selected online marketing channels, as well as the impact of these channels on the overall performance of the e-shops, will also be analysed. Values such as cost per e-shop visit and customer acquisition, cost per transaction, investment-to-twist ratio, average number of purchases, and average order value will also be used for comparison. As a result, the author will provide insights into the real impact of the COVID-19 pandemic on customer buying behaviour, e-shop business results, and the performance of their online marketing channels.

Introduction

The development of the e-Commerce market has been attracting the attention of academics and practitioners for some time now and has given room for the creation of new companies, among other things, due to the ease of entry into this environment. As a result of the COVID-19 pandemic, the growth of the e-commerce market has been even more dynamic as firms across the market have been forced by government restrictions to rethink their marketing strategies and, where possible, move their activities to the online environment, which is unfamiliar to many firms. The e-Commerce environment also brings differences in customer purchase behaviour and needs, which firms need to take into account. At the same time, this environment offers the possibility of collecting and analysing data that can be used to further develop and optimize marketing strategies. Thanks to tools and platforms such as Google and Facebook, it is also possible to undertake sophisticated marketing and communication activities based on data, from creating an e-shop to communicating with customers, for example, using social networks or implementing marketing campaigns targeted according to detailed and specific customer characteristics and their online behaviour. From an academic point of view, the consequences of the pandemic have brought new factors that influence what happens in the market and it is essential that they are investigated. The aim of this paper is to use empirical data analysis of several e-shops to explain the impact of the COVI-19 pandemic on the performance of a few selected e-shops from different product categories, and to compare customer buying behaviour, e-shop marketing activities and the results of specific marketing channels.

1. Review of the Literature

In 2019, 1.92 billion people shopped online. Total e-commerce sales reached $3.535 trillion and represented 14.1% of total retail sales (e-commerce, 2019). The forecast for 2023 is $6.542 trillion and a 22% share of total retail sales. However, it should be noted that real results may be affected by the impact of the COVID-19 pandemic (Kvíčala and Starzyczná, 2020). The first electronic stores in the country were established in 1996. At the end of 2020, there were more than 40,000 e-shops on the Czech market (Czech e-commerce, 2020). The turnover of Czech e-commerce in 2019 reached CZK 155 billion and its share in total retail sales was 12.7% (Liang et al., 2008).

Specifics of the e-commerce market

The basic specificity of the e-commerce market is the Internet environment in which the companies operate. This environment offers customers unlimited possibilities to move between e-shops in a matter of seconds and also an almost unlimited volume of available products and e-shops as such, which customers can compare with each other. This creates pressure to optimize product offerings and the shopping environment as a whole to motivate customers as much as possible to purchase from a given e-shop (Toufaily et al., 2013). However, there is no possibility of physical contact with the seller or the products, so all interactions are virtual. Therefore, e-shops must offer sufficient volume and quality of information to be able to gain the attention, interest, and trust of customers (Valvi and Fragkos, 2012). In an e-commerce environment, an e-shop can be established or disappear in a very short period of time, which creates very low barriers to entry and thus a highly competitive environment (Liang et al., 2008). If an e-shop has sufficient capital, it can also very quickly launch a series of on-line marketing communication activities, the volume and form of which are limited only by finances and the ability to work with available platforms and tools such as Google Ads, Analytics, Sklik, or Facebook. This gives e-shops the ability to collect customer data such as interests, marital status, education, job title, favourite movie, football club or band, shopping preferences and behaviour, current location or travel intention, among many others, in addition to geographic data (Redkina, 2017). This data can then be used by e-shops to target advertising campaigns. In addition, e-shops have the ability to track customer activity in their e-shop and then respond to this behaviour with remarketing campaigns or automated incentives directly in the e-shop environment. Another very valuable benefit is the ability of these platforms to automatically collect and analyse data, which is further used to optimize campaigns without the need for human intervention (Liang et al., 2008). As such, the Internet also contains countless sources of information and content that can be used for strategy development, designing re-promotion campaigns, or training in, for example, working with advertising platforms. The absence of physical contact with customers can be partly compensated by communicating and sharing content in a range of available formats from articles, virtual tours or augmented reality. The results of the author's previous qualifying research suggest that the awareness and knowledge of e-shop operators in the area of customer shopping behaviour in Czech e-commerce contains significant reserves, which results in a reduced ability to analyse this behaviour and take steps to stimulate it in order to improve business results (Kvíčala and Starzyczná, 2020).

Customer purchase behaviour in e-commerce

The aforementioned possibility of unrestricted movement of customers between e-shops around the world, comparing product prices, quality or friendliness of a given e-shop gives customers a strong position and forces e-shops to continuously improve their marketing activities to meet the increasingly demanding needs of customers (Chou et al., 2010). The whole shopping process is also much faster, as customers can visit or leave the e-shop within seconds, for example at the time of payment. According to some authors, one of the cornerstones of success in e-commerce is gaining customer trust (Yun and Good, 2007). Of course, trust is also crucial in the offline environment, but it is much more important in e-commerce due to the fact that it does not provide the opportunity to touch, try, or even physically take away the product, which may raise concerns about product unsuitability or even fraud (Yen, 2011). Another disadvantage is waiting for the purchased product. For the e-shop, there is also the risk that the customer will not take delivery of the purchased product, and if they have not paid for it, the e-shop incurs lost costs (Toufaily et al., 2013). To remove these barriers, new technologies and ways to make the customer experience as pleasant as possible are constantly being developed (Chou et al., 2010). Some authors argue that customers are more price sensitive in e-commerce precisely because of the possibility of comparison, especially for undifferentiated products (Yen, 2011). On the other hand, there is a chance that an e-shop can reduce this sensitivity and increase the perceived value of products by communicating product benefits and additional content (Valvi and Fragkos, 2012). Regarding customer loyalty in e-commerce, authors' opinions are divided into two groups, with some claiming that loyalty is higher (Gefen, 2002, Srinivasan, 2012, Tahal, 2014), but their claims are not supported by empirical data and are mainly based on the results of a questionnaire survey. The second group of authors claim that customer loyalty is lower in e-commerce and support their claims with research on corporate data on purchasing behaviour (Romaniuk, 2011, Sharp, 2017). In the Czech market, this is confirmed, for example, by a study that states that e-shop customers usually shop at a given e-shop only once (Kvíčala and Starzyczná, 2020). However, the relevance of this study is limited by the number of e-shops included and the total volume of data.

The Impact of the COVID-19 pandemic on Customer Purchase Behavior

The impact of COVID-19 on shopping behaviour or activities of e-shops or e-commerce as such has been the subject of several studies. Bhatti et al. (2020) demonstrated general growth in the e-commerce market quantified by purchase volume and revenue. Elrhim and Elsayed (2020) focused on changes in revenue or market value of specific firms, namely the largest global e-commerce players such as Amazon, Alibaba, Rakuten, and Zalando, where pandemic-influenced growth was also demonstrated. Furthermore, there have been significant logical needs of customers and with them companies to move their activities online, to make services or product sales more accessible online and to increase the credibility, logistics, and technical aspects of customer contact, hence sales, which are often barriers to successful e-commerce market operations (Shahzad et al. 2020, Beckers et al., 2021, Dinesh and MuniRaju, 2021). However, none of these studies work with internal e-commerce data that directly describe customer buying behavior and quantify companies' online marketing activities. Thus, the paper provides relatively unique data and metrics (discussed in more detail in the next section of the paper) that are not part of any of the previously published research in this area. It should also be noted that, apart from one article, all of the aforementioned do not deal with the European e-commerce market. Therefore, these facts distinguish the paper from previous publications and offer new insights into the impact of the COVID-19 pandemic on e-commerce.

In the context of research on customer purchasing behaviour in e-commerce, the author published an article (Klepek and Kvíčala, 2020) which deals with the impact of the pandemic on customer buying behaviour. The limitation of this research is that it contains data from only one B2C e-shop that offers sportswear and accessories. Therefore, the results are not entirely relevant and generally applicable but suggest that the effects of the COVID-19 pandemic positively affect the number of transactions and the sales volume of the e-shop. The research sample for that study included data from nearly 15,000 customers who made more than 49,000 transactions and more than 77 million sales between 2019 and March-May 2020, when pandemic-related restrictions were in place.

Research methodology

E-commerce research can benefit from the almost infinite amount of data that is not only growing daily but is also automatically collected by the tools mentioned above. However, it must be added that there are very few academic studies that process these data, almost none in the Czech Republic, despite the fact that the Czech Republic is one of the countries with a very high number of e-shops per capita. Thus, by linking academic methods and data from practice, there is potential for a new di-resort of research that will help to significantly enrich the state of knowledge while providing practical insights for e-shop management and may help to mitigate the economic consequences of the pandemic.

The aim of this paper is to investigate the impact of the COVID-19 pandemic and its associated consequences on customer buying behaviour and business performance of e-shops. This will be done by analysing secondary data from e-shops using basic statistical methods. The data analysed will be divided into periods before and during the pandemic and then compared to meet the research objective. Thus, the object of the research is the customers shopping at the selected e-shops, as well as the e-shops in question in the context of what online marketing activities they are carrying out and in what volume, and what their business results are.

The research will analyse and compare data from 5 B2C e-shops for the period 2019 and 2020 using basic statistical methods that are likely sufficient for this purpose. It will also include data on the e-shops' investment in PPC advertising and social media and the impact of these channels on e-shop performance. To protect commercial confidentiality, e-shops will be anonymised and abbreviated. Only the product categories offered by the e-shops will be listed. To have the broadest possible view, e-shops from different product categories will be included. The DS e-shop offers gift candles, NS sports equipment, NP fitness supplements, HP pet products and BL bicycles and cycling clothing.

The dataset contains data on more than 4.5 million customers, 8 million visits to the e-shop, more than 125,000 transactions, sales of more than CZK 212 million, and investments in online marketing communication of almost CZK 17 million. The data comes from e-shop platforms, Google analytics tools, and Google Ads, Sklik, and Facebook platforms.

Research metrics will be divided into 6 categories:

a) Overall e-shop performance - total investment in marketing communications, revenue, and cost share of e-shop turnover.
b) Overall customer results - total number of customers, e-shop visits, transactions, sales volume, and conversion rate (ratio of visits to purchases.
c) Average customer values – average number of visits, transactions, order value, and sales per customer.
d) Costs associated with customers – cost per e-shop visit and cost per transaction.
e) Results of selected channels – organic visits, PPC campaigns, social media, and others (email, direct, referral, etc.) - investment, number of visits, number of transactions and sales are shown for each channel.
f) Cost of paid channels – PPC and social - includes cost per visit, cost per transaction, and cost to sales.

These metrics are further broken down for 2019 and 2020.

Results

For better clarity, the survey results are divided by category. No major changes were found in the overall scale except for a few cases, which are described in the following section.

Overall e-Shops‘ Performance

In terms of revenue, all e-shops generated more revenue in 2020 than in 2019. With the exception of the BL e-shop, all e-shops invested more in 2020 than in 2019. DS and NP e-Shops invested approximately double the amount, with DS also generating twice the amount of revenue. NP's sales only grew by 50%. HP invested a comparable amount, and its sales increased by 25%. For NS, both investments and sales increased by around 50%. BL invested a slightly lower amount, but generated 50% more revenue.

- **Figure 1:** *Overall e-Shops' performance*

Overall e-shops' performance										
	DS		NS		NP		HP		BL	
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Investments (thous. CZK)	700	1 357	4 722	7 784	234	650	435	465	309	289
Revenue (thous. CZK)	6 663	11 584	54 366	80 199	3 748	5 445	7 913	9 779	13 482	19 645
CRR	10,5%	11,7%	8,7%	9,7%	6,2%	11,9%	5,5%	4,8%	2,3%	1,5%
Profit increase (thous. CZK)		4 264		22 771		1 281		1 836		6 183
Profit increase (%)		71,51%		45,87%		36,45%		24,55%		46,94%

Source: Own processing

The share of costs in turnover has slightly increased for all e-shops except BL and HP, but we cannot draw a relevant conclusion from this as we do not know the other costs of e-shops on which the final profit is based.

Overall customer results

All e-shops in 2020 recorded a higher number of customers, visits, transactions and sales, confirming the findings of the author's previous research mentioned above.

- **Figure 2:** *Overall customer results*

Overall customer results	DS		NS		NP		HP		BL	
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Customers	147 016	223 894	1 312 788	1 717 757	49 393	106 007	99 336	115 406	327 345	422 043
Visits	215 496	360 023	2 307 883	3 055 559	79 245	162 486	149 503	188 067	680 420	815 784
Transactions	5 009	8 271	36 562	45 455	3 724	6 197	7 209	8 881	1 534	2 326
Revenue	6 663	11 584	54 366	80 199	3 748	5 445	7 913	9 779	13 482	19 645
CR	2,32%	2,30%	1,58%	1,49%	4,70%	3,81%	4,82%	4,72%	0,23%	0,29%

Source: Own processing

The customer conversion rate for the 3 e-shops is almost identical to the previous period. For BL, this metric has increased slightly. The largest decrease was recorded by NP a, by almost 1 percentage point.

Average customer values

With the exception of NP and BL, all customers made a slightly higher number of visits on average. The average number of transactions was also slightly higher, with the exception of the NP e-shop. The average order value increased slightly for 3 e-shops.

- **Figure 3:** *Average customer values*

Average customer values	DS		NS		NP		HP		BL	
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Visits	1,47	1,61	1,76	1,78	1,60	1,53	1,51	1,63	2,08	1,93
Transactions	0,03	0,04	0,03	0,03	0,08	0,06	0,07	0,08	0,00	0,01
Trans. value	1 330	1 401	1 487	1 764	1 006	879	1 098	1 101	8 789	8 446
Revenue	45,32	51,74	41,41	46,69	75,88	51,36	79,66	84,74	41,19	46,55

Source: Own processing

NP registered the highest percentage decrease, which was also found for BL. Except for NP, where a decrease in average revenue per customer of CZK 20 was found, this value increased slightly for all e-shops.

Costs associated with customers

The differences in these values are only in tens of crowns, but in the total volume such a change can mean a difference of hundreds of thousands of crowns. The price per visit was 0.5 CZK lower for DS and NS e-shops, while for BL it was 0.1 CZK lower.

- **Figure 4:** *Costs associated with customers*

Costs asociated with customers	DS		NS		NP		HP		BL	
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
CPV	3,25	3,77	2,05	2,55	2,95	4,00	2,91	2,47	0,45	0,35
CPT	139,75	164,07	129,15	171,25	62,84	104,89	60,34	52,36	201,43	124,25

Source: Own processing

NP paid on average CZK 1 more per visit, and HP CZK 0.5 more. The price per transaction increased for DS, NS and NP between CZK 20 and CZK 45. There was a decrease in CZK 8 for HP and CZK 80 for BL.

Results of selected channels

Here, it can be seen that with the exception of eight cases, the values for all e-shops have increased. In this category, the focus is primarily on financial indicators. DS invested three times more in PPC ads, where it gained seven times more revenue. In the case of social networks, both investments and revenues increased by approximately 500 thousand CZK. It also recorded increased revenues from organic traffic (+10%) and other channels (+70%).

NS invested 3 million more (63%) in PPC campaigns, which generated 70% more revenue. It invested about 400% more in social media, with sales up 100%. Revenue from organic traffic and other channels grew by 10% and 27%, respectively; interestingly, revenue from others grew by a relatively high percentage despite a decrease in traffic of about 5%.

- **Figure 5:** *Results of selected channels*

Results of selected channels											
		DS		NS		NP		HP		BL	
		2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
Organic	Investment	x	x	x	x	x	x	x	x	x	x
	Traffic	39 977	65 959	516 728	566 998	17 465	28 661	14 129	17 872	271 722	403 559
	Transactions	2 427	2 468	5 275	5 493	680	807	492	749	579	876
	Revenue	3 145 320	3 466 432	6 615 536	9 135 281	728 192	759 166	579 442	911 605	4 557 382	6 685 819
PPC	Investment	50 000	190 000	4 682 000	7 594 000	181 000	483 000	353 000	374 000	232 000	222 000
	Traffic	14 141	74 883	1 046 974	1 731 824	32 904	87 159	93 568	121 700	256 250	214 752
	Transactions	476	2 799	16 449	23 910	938	2 595	3 707	4 510	429	554
	Revenue	575 957	3 984 157	24 960 440	41 612 499	695 359	1 969 771	3 861 590	4 782 720	4 390 483	4 958 522
SoMe	Investment	650 000	1 167 000	40 000	190 000	53 000	167 000	82 000	91 000	77 000	67 000
	Traffic	135 754	187 392	22 324	77 939	2 891	6 603	3 498	9 649	24 452	30 213
	Transactions	1 425	1 974	329	660	111	154	94	130	34	67
	Revenue	2 077 391	2 683 385	501 647	1 104 729	125 909	154 789	129 238	147 613	239 077	552 718
Other	Investment	x	x	x	x	x	x	x	x	x	x
	Traffic	25 624	31 789	721 857	678 798	25 985	40 063	38 308	38 846	127 996	167 260
	Transactions	681	1 030	14 509	15 392	1 995	2 641	2 916	3 492	492	829
	Revenue	864 332	1 450 026	22 288 377	28 346 491	2 198 540	2 561 274	3 342 730	3 937 062	4 295 058	7 447 941

Source: Own processing

Overall, NP invested 200% more, organic search revenues increased by 5%, other channels by 17%, PPC campaigns invested 160% more and generated 180% more revenues. HP invested an almost identical amount, while organic search revenues grew by 56%, it invested an almost identical amount in PPC and generated 26% more revenues, it invested 10% more in social media and grew revenues by 30%, while revenues from other channels grew by 18%.

Overall, BL invested 20,000 CZK (approximately 7%) less and earned approx. 46% more. Revenue grew for organic traffic (25%), PPC campaigns (14%), social (130%), and other channels (74%).

The author considers it important to highlight that all e-shops saw an increase in revenue from organic search and other channels not directly affected by paid campaigns (PPC and SoMe).

Costs of Paid Channels

Costs tracked were cost per visitor visit (CPV), cost-per-transaction (CPT) and cost per revenue (CRR) for PPC and social media channels.

- **Figure 6:** *Costs of Paid Channels*

Cost of paid channels											
		DS		NS		NP		HP		BL	
		2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
PPC	CPV	3,54	2,54	4,47	4,38	5,50	5,54	3,77	3,07	0,91	1,03
	CPT	105	68	285	318	193	186	95	83	541	401
	CRR	8,68%	4,77%	18,76%	18,25%	26,03%	24,52%	9,14%	7,82%	5,28%	4,48%
SoMe	CPV	4,79	6,23	1,79	2,44	18,33	25,29	23,44	9,43	3,15	2,22
	CPT	456	591	122	288	477	1 084	872	700	2 265	1 000
	CRR	31,29%	43,49%	7,97%	17,20%	42,09%	107,89%	63,45%	61,65%	32,21%	12,12%

Source: Own processing

PPC
DS, NS and HP E-shops registered a reduction of CPV by CZK 1, CZK 0.09 and CZK 0.7. NP and BL registered an increase in CPV of CZK 0.04 and CZK 0.12, respectively. Within the CPT, the values decreased for DS (by CZK 37), NP (by CZK 7), HP (by CZK 8) and most of all for BL (by CZK 140). Only NS registered an increase in CPT (by CZK 33).
CRR values decreased by units of percentage points for all e-shops except NS. For DS it was 3.91, NP 1.51, HP 1.32 and BL 0.8. In the case of NS, it was a slight increase of 0.5 percentage points.

Social Media
CPV was higher for the DS (1.44), NS (0.65) and NP (6.96) e-commerce sites. HP saw a notable decline, down to to CZK 14.1, while BL was down CZK 0.93.
The CPT value increased for the DS (by CZK 135), NS (by CZK 166) and NP (by CZK 607) e-shops. The decreases were recorded in the HP (by CZK 28) and BL, where the decrease was very significant, by CZK 1,265.
Changes in CRR for individual e-shops ranged up to tens of percentage points. Increases in values were recorded for the DS (by 12.2), NS (by 9.23), and HP (by 1.8), and the highest for NP (by 65.8). Only BL showed a decrease of 20.09 percentage points.

Summary

The changes for the subcategories vary and have been described in more detail in the previous section, but the most important finding in line with the aim of the paper is quite clear. All e-shops saw an increase in the number of customers, visits, transactions, sales, which is in line with the results of the author's previous research (Klepek and Kvíčala, 2020) and also invested more compared to 2019. The changes in the sub-values for each channel were different; whether they were increases or decreases, in most cases they were rather moderate. However, it is definitely worth noting that all e-tailers saw an increase in sales for all channels. For paid channels, this may be directly affected by increased investment, then it is important to monitor the ratio in which both financials increased to avoid inefficient investment. In addition to an increase in investment, an increase in sales may also be due to an increase in demand for a given product category or an increase in the volume of purchases in e-shops in general. In fact, the Czech e-commerce industry recorded a 26.5% increase in sales in 2020 (Business info, 2020).

Taking only investments and sales into account, all e-shops also recorded higher profits, DS by 71%, NS by 46%, NP by 36.5%, HP by 24.6%, and BL by 47%. In absolute terms, profits increased the most for NS (by CZK 22.8 million), BL by CZK 2 million, DS by CZK 3 million, HP by CZK 1.8 million and NP by CZK 1.2 million.

The impact of the COVID-19 pandemic on e-commerce results is quite clear. In 2020, all e-shops that were significantly affected by the pandemic, for example, by restrictions and other measures that led to, among other things, a shift of purchases to the online environment, saw an increase in the number of visits, customers, transactions, investment, and sales volumes and, in theory, profits, if we consider only the costs of implementing campaigns and sales. For a full quantification, other costs associated with running an e-shop would also need to be taken into account. From this perspective, it can be argued that the COVID-19 pandemic has had a positive impact on the performance of e-shops. Customer behaviour in the e-shop was very similar in both periods, so no major changes were observed as a result of the pandemic. The costs associated with implementing online marketing campaigns for individual e-shops and specific channels increased and decreased, so the impact of the COVID-19 pandemic cannot be confirmed here.

The research results also suggest a number of managerial implications. One of the main findings is that the shift of business to the online environment is putting pressure on companies to focus on their online activities. This creates more competition in e-commerce, which is followed by increased investment. Therefore, companies should not delay in implementing online marketing activities, in contrast. However, it should also be noted that companies should not follow general recommendations and generalisations but should focus on their own data or data from their product category. This is due to the nature of the product as well as, for example, seasonality or the breadth or depth of the product portfolio. The results also show that increased investment in specific channels may not translate into increased sales from that channel, but may translate into increased sales in other channels such as organic traffic or other channels. Therefore, they should not judge each channel by the same criteria. At the same time, the total costs associated with running an e-shop should also be taken into account, without which it is not possible to make a relevant assessment of whether the e-shop's activity is profitable. Businesses also need to consider the potential of the market and see whether increasing investment also leads to increasing profits, which are limited by the potential of the market. As the volume of competition increases, differentiation, for example in the quality of the service associated with the purchase or the information provided, should also be taken into account, which, according to the findings of the literature search, may lead to a reduction in price sensitivity or an increase in trust towards the retailer. When planning future activities and developing strategies, e-shops must also take into account the current market situation, which is directly affected by pandemic government measures such as the lockout, which has already led to a shift of purchases to the online environment in the past. The more the measures are relaxed, the more offline purchases will theoretically increase, which may lead to a decrease in demand for products in e-shops.

Among the limitations of the research is the fact that the overheads and margins of e-shops are not known, which makes it impossible to estimate the profit of individual e-shops. Comparisons between e-shops are hampered by differences in the products and product categories offered, the size of e-shops, the length of time e-shops have been in business, or brand awareness or market share. Data also do not allow us to assess the impact of individual channels on overall performance or know the specific channels that were included. Nor is the market share of individual e-shops, brand strength, or the activity and strength of competitors known. The research also could not assess the breadth and depth of the portfolio, the price level of the products offered, the nature of the customer segments or the quality of service and level of user-friendliness of the e-shops. Despite these limitations, the author considers the research results sufficiently relevant to assess the impact of the COVID-19 pandemic on customer buying behaviour and e-shop performance in Czech e-commerce.

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ANALYSIS OF AN INVENTORY MANAGEMENT MODEL WITH DISCOUNTS

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Abstract:
This article deals with the theory of inventory management and sets it in the context of other methods of operational research, and it also emphasizes the importance of this theory for strategic decisions in enterprises and organizations. Next, based on a Master's Thesis 'Inventory Optimization of a Chosen Enterprise' by the author, this article deals with the discount model, which is analysed from the theoretical point of view with an emphasis on the variable part of storage costs. The respective mathematical formulas are also derived to calculate the total costs. Moreover, the mathematical structure of the discount model is compared with that of the EOQ model, which was the first inventory management model proposed as early as 1915. Various examples are given to illustrate the discount model. Finally, the article discusses the advantages and disadvantages of the discount model and formulates recommendations.

Introduction

Inventory management is a developing branch of a large part of operational research, which can be useful in entrepreneurship with inventories, namely, in e-shops, manufacturing industry or catering. In operational research, the theory of inventory management offers many possibilities for efficiently controlling inventory, processes, and profit. These facts have been known for a long time; see, e.g., Silver (1981). Before making a strategical decision in entrepreneurship, it is important to have good and deep knowledge of the inventory. Further information can be found in Muckstadt and Sapra (2010); see also Shah and Mittal (2020).

The aim of this article is to discuss the model with discounts. The model considers the inventory (goods, products, etc.) storage costs when the inventories can be bought with discounts; see Chung et al. (2018). The model is compared with the EOQ model, which is a basic model in the theory of inventory management, see Choi (2014) and Schwarz (2008); see also Muckstadt and Sapra (2010). The formulas for the calculations for the basic quantities in both models are compared.

Inventory binds the capital of the company, and this is why its analysis is necessary for strategic inventory management in order to minimize the total costs, which also include the supply costs the storage costs, and costs due to inventory insufficiency. In general economics, the inventory management is also related with the investment; see, e.g., Thompson (1975) or Harris (1997).

The discount model and the EOQ model are deterministic, which means that the demand for the inventory is known exactly in advance. The stochastic models better reflect the reality because the demand is understood as a random variable, which means that it is not known in advance. In stochastic models, the demand expected value is considered in both the cases of the discrete and continuous demand. See Lukáš (2012) and Choi (2014).

There is an example at the end of this article to illustrate several variants of the model with discounts, and then the results of the variants are compared. In this work, operational research is used.

1. The inventory management model with discount

This model is characterised by Jablonský (2007). As was mentioned in the introduction, this model is deterministic, and it is based on the EOQ model. The supplier offers discounts to the buyer depending on the amount of goods supplied. The larger the amount, the larger the discount. The amount of goods supplied is categorized. There are k discount categories indexed by $i = 1, 2, \dots, k$. The i-th discount category is determined by the interval $\left(\bar{q}^{i-1}, \bar{q}^{i}\right]$ of the amount of goods ordered for $i = 1, 2, \dots, k$, where $0 = \bar{q}^0 < \bar{q}^1 < \bar{q}^2 < \cdots < \bar{q}^{k-1} < \bar{q}^k = +\infty$ are the boundary points of the discount categories.

Let $\bar{c}^1 > \bar{c}^2 > \cdots > \bar{c}^k$ be the unit purchase costs of goods such that $\bar{c}^i$ is the unit purchase price for goods if the ordered quantity q belongs to the i-th discount category, i.e. $q \in \left(\bar{q}^{i-1}, \bar{q}^{i}\right]$, for $i = 1, 2, \dots, k$. The unit purchase price costs c^q, when the ordered quantity is q, is calculated by using the next formula:

$$c_1^q = \begin{cases} \bar{c}_1^1, & \text{if } 0 < q \le \bar{q}^1, \\ \bar{c}_1^2, & \text{if } \bar{q}^1 < q \le \bar{q}^2, \\ \dots & \dots \\ \bar{c}_1^{k-1} & \text{if } \bar{q}^{k-2} < q \le \bar{q}^{k-1}, \\ \bar{c}_1^k & \text{if } \bar{q}^{k-1} < q. \end{cases} \qquad (*)$$

For example, consider $k = 6$ discount categories, with boundary points $0 = \bar{q}^0 < 100 = \bar{q}^1 < 200 = \bar{q}^2 < 300 = \bar{q}^3 < 400 = \bar{q}^4 < 500 = \bar{q}^5 < +\infty = \bar{q}^6$.

The discount category is then given by the particular amount of the goods supplied, that is, from 0 to 100 is the first discount category with the unit price, e.g. $\bar{c}^1 = 1000$ Kč/unit, from 100 to 200 is the second discount category with the unit price, e.g. $\bar{c}^2 = 900$ Kč/unit, from 200 to 300 is the third discount category with the unit price, e.g. $\bar{c}^3 = 800$ Kč/unit, etc., above 500 is the sixth discount category with the unit price, e.g. $\bar{c}^6 = 500$ Kč/unit.

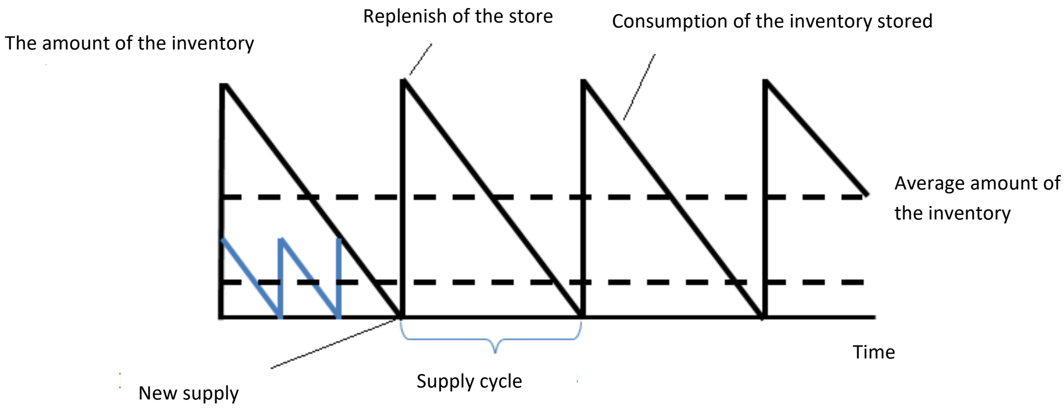
If the ordered quantity is, e.g., $q = 150$, then $q \in (\bar{q}^1, \bar{q}^2] = (100, 200]$, which means that q belongs to the category no. 2.

Analogously, if $\bar{c}_1^1 \ge \bar{c}_1^2 \ge \cdots \ge \bar{c}_1^k$ are the unit storage costs such that $\bar{c}_1^i$ is the unit storage costs for goods, if the ordered quantity q belongs to the i-th discount category, i.e. $q \in \left(\bar{q}^{i-1}, \bar{q}^{i}\right]$, for $i = 1, 2, \dots, k$. The unit storage costs c^q, when the ordered quantity is q, is calculated by using a formula analogous to $(*)$.

Unit storage costs are often given relative to the purchase price. Jablonský (2007) gives that the unit storage costs decrease as the amount of inventory stored increases. However, the author of

this article discusses whether unit storage costs should not be constant. Unit storage costs include, e.g., the rental of the storage facility or manipulation with the stored items.
The following Figure 1 presents a chart of the EOQ model, that is, the progress of amount of the inventory stored over time, which can also be understood as a chart of the discount model because the progress of the amount of the goods stored is the same in both models.

Figure 1: *A chart of the EOQ model and the discount model.*



Source: Jablonský (2007, p. 212), own editing. Taken from Heczková (2021)

The following Table 1 presents the formulas used in the model with discounts and those used in the EOQ model for comparison. In the EOQ model, there are two types of costs considered: storage costs and the purchase costs. Total costs are lower in the EOQ model because the stored capital bound in the inventory is not considered. However, the total costs in the model with discounts also include the third term $c^q \cdot Q$, where c^q are the unit purchase costs of the goods according to the respective discount category and Q is the demand per year in natural units, i.e., the capital bound in the inventory stored.

Table 1: *The formulas used in the EOQ model and in model with discounts*

	Model EOQ	Model with discounts
Total costs, N	$N(q) = c_1 \cdot \frac{q}{2} + c_2 \cdot \frac{Q}{q} = \sqrt{2Qc_1c_2}$	$N = c_1^q \cdot \frac{q}{2} + c_2 \cdot \frac{Q}{q} + c^q \cdot Q$.
Variable (storage) costs, N_v	$N_v = c_1 \cdot \frac{q}{2}$	$N_v = c_1^q \cdot \frac{q}{2}$
Fixed costs (purchase costs), N_f	$N_f = c_2 \cdot \frac{Q}{q}$	$Nf = c_2 \cdot \frac{Q}{q}$
The third term in the discount model, i.e., the capital bound in the inventory stored, i.e., the alternative costs.		$c^q \cdot Q$
The amount of a single supply *$q_{opt} = q^*$*	$q^* = \sqrt{\frac{2 \cdot Q \cdot c_2}{c_1}}$	$q_i^* = \sqrt{\frac{2 \cdot Q \cdot c_2}{c_1^q}}$ for $i = 1, 2, \ldots, k$

Source: own work according to Jablonský (2007) and Heczková (2021)

2. An example of inventory management: of iodine-bromine products using the discount model

This example is taken from Heczková (2021) and modified. An enterprise purchases idodine bromine (IBR) products (salt 1kg) from a supplier. Table 2 summarizes the input data for the subsequent calculations.

Table 2: *The input data for the subsequent calculations*

Input data	**IBR salt 1 kg**
Purchase price	109 Kč
Selling price	199 Kč
Margin (sale - purchase price), and also inventory unit price c_3 due to the insufficiency of the inventory	90 Kč
The number of the supply cycles per year	8× per year
The amount of the supply q	120
The demand Q per year	8·120 = 960
The unit storage costs c_1	2 % of the total purchase price of the IBR salt per year = 0,02·109·8·120 = 2092,80 Kč/piece
The unit purchase costs c_2	50 Kč
Time from order to the arrival of the supply to the store d	2 days = 2/360 year = 0,005555556 year

Source: Heczková (2021)

If the enterprise decides to order quantity of 500 or more pieces of the IBR salt, then the discount is 15% of the given purchase price. The calculated data are presented in Table 3.

Table 3: *Data for the calculations of the IBR products by using the discount model*

The amount of the order	Discount [%]	Unit price c^q	Unit storage costs c_1^q
0-500	0	109 Kč	2 % of the purchase price of a piece of IBR salt: 2 % of 109 Kč = 2,18 Kč/piece
500 or more	15 %	109 – 16,35 = 92,65 Kč	Remain the same, 2,18 Kč/piece
500 or more	15 %	109 – 16,35 = 92,65	2 % of the purchase price of a piece of IBR salt: 2 % of 92,65 Kč = 1,853 Kč/piece

Source: Own work according to Jablonský (2007, p. 226). Taken from Heczková (2021), own editing.

Calculation of the optimal amount of a single supply and of the total costs based on the data given in Tables 2 and 3 for the first discount category, that is, from 0 to 500 pieces, according to Heczková (2021):

$$q_1^* = \sqrt{\frac{2 \cdot Q \cdot c_2}{c_1^q}} = \sqrt{\frac{2 \cdot 960 \cdot 50}{2{,}18}} = \sqrt{\frac{96000}{2{,}18}} = \sqrt{44036{,}69725} = 209{,}84923 \text{ pieces}$$

Total costs:

$$N = c_1^q \cdot \frac{q}{2} + c_2 \cdot \frac{Q}{q} + c^q \cdot Q = 2{,}18 \cdot \frac{209{,}84923}{2} + 50 \cdot \frac{960}{209{,}84923} + 109 \cdot 960 = \\ = 105097{,}47131 \text{ Kč}$$

Calculation of the optimal amount of a single supply and of the total costs for the second discount category, that is, from 500 or more pieces, according to Heczková (2021):

$$q_2^* = \sqrt{\frac{2 \cdot Q \cdot c_2}{c_1^q}} = \sqrt{\frac{2 \cdot 960 \cdot 50}{2{,}18}} = \sqrt{\frac{96000}{2{,}18}} = \sqrt{44036{,}69725} = 209{,}84923 \text{ ks}$$

Since the optimal amount of a single supply $q_2^* = 209{,}84923$ pieces is not in the second discount category (500 or more pieces), it is necessary to increase the amount to the lower limit of this second category:

$$q_2^* \coloneqq 500$$

Total costs:

$$N = c_1^q \cdot \frac{q}{2} + c_2 \cdot \frac{Q}{q} + c^q \cdot Q = 2{,}18 \cdot \frac{500}{2} + 50 \cdot \frac{960}{500} + 92{,}65 \cdot 960 = \\ = 89.585 \text{ Kč}$$

Finally, consider variable unit storage costs, that is, 2% of the discounted purchase price of a piece of IBR salt, i.e., 1,853 Kč/piece:

$$q_1^* = \sqrt{\frac{2 \cdot Q \cdot c_2}{c_1^q}} = \sqrt{\frac{2 \cdot 960 \cdot 50}{1{,}853}} = \sqrt{\frac{96000}{1{,}853}} = \sqrt{51807{,}87911} = 227{,}6134423 \text{ pieces}$$

As above, since the optimal amount of a single supply $q_2^* = 227{,}6134$ pieces is not in the second discount category (500 or more pieces), it is necessary to increase the amount to the lower limit of this second category:

$$q_2^* \coloneqq 500$$

Total costs:

$$N = c_1^q \cdot \frac{q}{2} + c_2 \cdot \frac{Q}{q} + c^q \cdot Q = 1{,}853 \cdot \frac{500}{2} + 50 \cdot \frac{960}{500} + 92{,}65 \cdot 960 =$$
$$= 463{,}2500000 + 96 + 88944 = 89.503{,}25\ Kč.$$

It follows that it is beneficial to utilize the discount when taking q = 500 pieces because the total costs are lower than in the case without using the discounts.

The calculation of the total costs using the EOQ model based on the data given in Tables 2 and 3

$$N(q) = c_1 \cdot \frac{q}{2} + c_2 \cdot \frac{Q}{q} = 2{,}18 \cdot \frac{500}{2} + 50 \cdot \frac{960}{500} = 545 + 96 = 641\ Kč$$

It follows that using the EOQ model the total costs are about 641 Kč and by using the model with discounts the total costs are about 89.585 Kč in the first variant of the example and 89.503,25 Kč in the second variant of the example.

Conclusion

In practice, the use of the inventory management model with discounts is limited. The article compared the structure of the EOQ model and that of the model with discounts. The total costs calculated using the EOQ model are always less than the total costs calculated by using the model with discounts. This is because the model with discounts contains the term expressing the alternative costs, i.e., the capital bound in the inventory stored. Considering the storage costs, the author concludes that the unit storage costs should remain the same irrespectively of the amount of inventory stored. This is because the labour of the store worker to handle a single item of the inventory is the same irrespectively of the amount of the inventory items stored, which is a conclusion different from the opinion of Jablonský (2007).

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INNOVATIVE WAYS OF ACCOMPLISHING ORGANIZATIONAL CHANGE VIA LARGE-SCALE SCRUM

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Abstract:
The pandemic has disrupted the status quo companies around the world operated in before. The effective lever to achieve quick responsiveness to change and strategic advantage is the agile mindset based on pillars such as lean thinking, transparency, and empiricism. The problem of acquiring a selected agile framework to scaled contexts and its impact on one software organization lies at the core of this study. The study provides a strategy proposal based on a qualitative assessment of the situation to the researched firm. All the phases of qualitative assessment, including data gathering, were conducted virtually. An in-depth analysis of the data sources results in a SWOT matrix, which serves as a base for strategic planning. The strategy proposal synthetized strengths and weaknesses used in the scaled agile adoption. The study brings new innovative approaches from the fully virtual environment to agile practitioners and academia.

Introduction

The COVID-19 pandemic has affected businesses around the world. All the parts of organizations were impacted. From having to come up with new business models, to adjust their way of working and shift their operations and development to the online environment. Uncertainty and unpredictability became the new status quo. Individuals as well as companies had to undergo rapid change in their mindsets.

The psychological processes individuals experience under transition periods can be described by psychodynamic models of change, such as the Kubler-Ross model (Cameron & Green, 2019). Individuals go through stages of denial, anger, bargaining, depression, until they reach the acceptance stage, and are open to exploration and experimentation under the new conditions in the acceptance stage (Cameron & Green, 2019). Companies have been correspondingly subjected to similar processes in these uncertain times.

What can help businesses cope with change is agility. The word *agile* originates from Japanese and describes the ability to adaptively respond to one's circumstances. Agility can thus be beneficial to organizations. There are multiple frameworks how to scale agility to large company contexts (Digital.ai, 2021), such as the Spotify model, Scrum of Scrums, The Scaled Agile Framework (SAFe), and Large-Scale Scrum (LeSS).

The aim of this study was to analyze the Large-Scale Scrum adoption within one software company and provide the organization with a strategy proposal. To fulfill the research objective, the author chose the methodology based on the three sources of data, including semi-structured interviews, observations, and group of artifacts. The dataset was interpreted using thematic analysis. The author then compiled the data into SWOT analysis, which served as a base for the generation of strategy variants.

The following chapters provide an introduction to strategic management process and a theory of Large-Scale Scrum compared with the other scaling frameworks. Furthermore, a large-scale agile adoption from one software company is described. Qualitative study from this company follows and concludes with a strategy proposal outlining several alternatives which the researched company may consider.

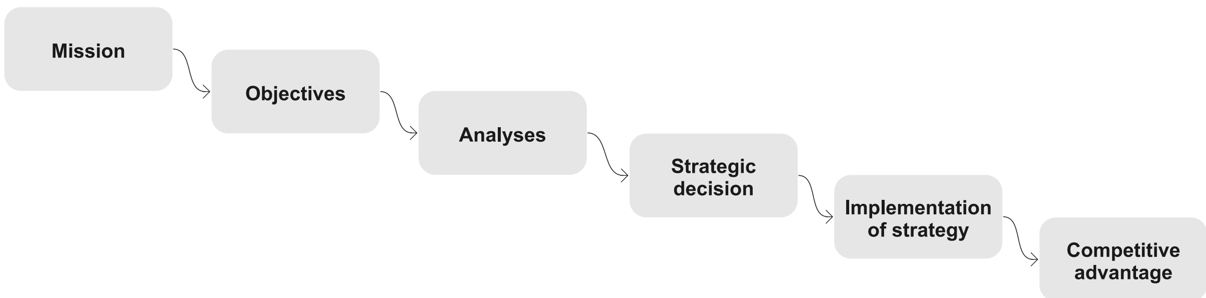
1 Theoretical Background

1.1 Strategic Management Process

Strategy helps companies gain competitive advantage over their competitors. Strategic management process describes sequenced activities that aid create and fulfill the strategy of an organization (Barney & Hesterly, 2010). The following scheme can be used to describe the steps of the strategic management process, as depicted in Figure 1.

The process starts with defining the mission of the firm and specifies why the organization exists. The second step consists of describing the objectives the company needs to realize to fulfill its mission. Objectives should adhere to the definition of SMARTER (specific, measurable, attainable, realistic, time-bound, ethical, and resourced) (Fotr et al., 2012). Once the objectives are defined, external and internal analysis of the firm's environment takes place. A typical tool in this step is the SWOT analysis, which can be written in the form of a matrix, where each quadrant illustrates one characteristic of a firm's environs. The acronym stands for strengths, weaknesses, opportunities, and threats (Fotr et al., 2012).

- **Figure 1:** *Strategic management process*



Source: adapted from Barney and Hesterly (2010) by the author

After the SWOT analysis, the process follows with strategic choice. The organization considers the strategy alternatives and selects the most suitable one aligned with its mission and objectives. One of the tools to produce strategy variants is the TOWS matrix. TOWS (threats, opportunities, weaknesses, strengths) takes the input from SWOT and transforms it into four strategy alternatives (Fotr et al., 2012): SO, which uses strengths in combination with opportunities, WO eliminates shortcomings to exploit opportunities, ST uses the firm's strengths to exclude threats, and WT which aims to reduce both weaknesses and potential threats the firm may encounter.

Once the alternative is decided, the company starts with implementation of strategy. Upon the completion of implementation, more economic value is gained, and strategy advantage is achieved (Barney & Hesterly, 2010).

1.2 Frameworks for Scaling Agile

The agile movement has its roots in the Manifesto for Agile Software Development which originated at the beginning of this century (Beck et al., 2001). The agile values promote interactions and individuals over processes, working code, customer collaboration, and adapting to circumstances over following a given plan (Beck et al., 2001). The 12 agile principles focus on continual delivery, cooperation among the business and technical sides, supportive environment, attention to quality, simplicity, self-organizing teams, and regular reflections and improvements based on previous experience (Beck et al., 2001).

There are multiple agile frameworks such as Scrum or Kanban (Diebold et al., 2018). In Scrum, the three important roles are the Scrum Master, the Product Owner, and the Development Team. The three roles together make a Scrum Team and work in iterations called Sprints. During Sprints, several ceremonies take place to ensure the open communication among the members of the Scrum Team and to aid deliver something of value to the customer at the end of each Sprint (Schwaber & Sutherland, 2020). Scrum uses the Product Backlog which stores the items to be delivered (Schwaber & Sutherland, 2020).

Scrum can be scaled to large departments via multiple frameworks. Large-Scale Scrum is based on pillars including Scrum itself, lean thinking, empiricism, transparency, customer and product focus, continuous improvement, queueing theory and systems thinking. LeSS possesses several differences to the basic Scrum events, such as two Sprint Planning events, and an overall Retrospective for the whole product group (Larman & Vodde, 2008).

At the heart of LeSS are the feature teams, which are cross-functional and autonomous teams with their focus being on the customer. Large-Scale Scrum promotes shared-code ownership. To ensure coordination of the same skill set across all feature teams, LeSS establishes the concept of communities of practice, which supports learning and lateral share of knowledge across organization (Larman & Vodde, 2008).

Recommended strategies to start with Large-Scale Scrum is to begin small and focus deeply on one and only one product, to use a mixture of top-down and bottom-up approaches and to work with volunteers and enthusiasts from the product group (Larman & Vodde, 2016). The LeSS framework describes two options based on the size of the product group: (1) basic LeSS with as many as eight teams and (2) LeSS Huge, which can have tens or hundreds of teams (Larman & Vodde, 2016).

In Large-Scale Scrum Huge, additional structure is necessary to sustain the extended complexity. The structure is ensured via classification of Product Backlog items which are then bundled into requirement areas (Larman & Vodde, 2010). In LeSS, a single Product Backlog is used across the whole product group. In LeSS Huge, there is one Product Backlog for each requirement area (Larman & Vodde, 2016).

Scaled Agile Framework is a scaling scheme established on lean practices. The ten fundamental principles focus on the business benefits, systems thinking, queues and work in progress management, cadence, intrinsic motivation of employees, and incremental learning.

Organizations interested in applying the SAFe framework may choose from four set-ups: Essential SAFe, Large Solution SAFe, Portfolio SAFe, and Full SAFe (Scaled Agile, Inc., 2021a, 2021b).

Essential SAFe is the most basic setup. It contains two layers: a team and a portfolio layer. At a team layer, Product Owner cooperates with the Scrum Master and a cross-functional team under a ScrumXP setting. Together these three roles form an Agile Team. ScrumXP is an amalgam of Scrum and Extreme Programming (XP) methods. Team uses a Team Backlog to store work to be done and works in iterations on Stories or Enablers (Scaled Agile, Inc., 2021a).

An analogy of a Product Owner at a portfolio layer is Product Management, Scrum Master is scaled to Release Train Engineer and System Architect is an equivalent role to cross-functional team. Iterations are analogical to Program Increment at a portfolio layer. SAFe uses Agile Release Trains that consist of teams of Agile Teams to deliver increments under a value stream (Scaled Agile, Inc, 2021a). At a portfolio layer, key stakeholders are Business Owners who cooperate with Agile Release Trains.

The Spotify model is an agile scaling model which originated in the Swedish audio streaming company (Kniberg, 2014a). In Spotify, teams are called Squads, which are comparable to Scrum Teams. Each of Squads has a mission and an end-to-end responsibility for the feature they develop. Squads are gathered into Tribes, which are a representation of a lightweight matrix. The primary dimension is a Squad, while the secondary dimension is called Chapter. Each person from each Squad is part of Chapter (Kniberg, 2014a).

Spotify developed their own heterogenous tailoring approach to agile at scale. The company uses the combination of each Squad deciding their development method and coordinating with the product objectives meanwhile being aligned with all other Squads in common shared practices (Kniberg, 2014b).

2 Research Methodology

The research methodology used in this study was qualitative assessment. The author gathered and evaluated a triplet of primary sources of data. As a base, semi-structured interviews were used, whose findings and outcomes were supplemented by observations and group of artifacts. The two latter sources furthermore provided a validation of concepts emergent from the interviews. The outcomes of primary sources of data were validated against the secondary sources of data, whose summary was provided in the previous sections at the beginning of this study.

The purpose of the research conducted in the selected software company was to qualitatively assess the adoption of the selected agile scaling framework and provide the organization with a strategy proposal based on the research outcomes. To fulfill the research objective, the author formulated the following research question.

RQ: How did the virtual large-scale agile adoption in the studied company perform in terms of strengths, challenges, and innovative aspects?

The author carried out 16 interviews using video conferencing online platform Zoom (2021) and used f4transkript (Audiotranskription, 2021) and SonixAI (2021) tools for transcription. After transcription, the author performed thematic analysis as defined by Braun and Clarke

(2013) to study the acquired primary data and define and evaluate the themes which then provided a base for the strategy planning activity. The author used an open-source analytical tool Taguette (Rampin et al., 2021) to perform thematic analysis. Braun and Clarke (2013) recommend the four-step process to carry out a thematic analysis. The first step is to re-read the transcripts to get familiar with the data. Following in thematic analysis is coding, which is a process of identifying parts of transcripts that address the research questions. The third step is to form clusters of codes from the previous step which together create themes. The final step reviews the resulting themes.

3 Strategy Proposal

3.1 SWOT Analysis

Proposed strategy is based on the qualitative assessment of the LeSS adoption in a scaled company context. The studied company can leverage the suggestions from this paper and use it for its own strategy formulation. At the beginning of the LeSS adoption, the two smaller departments merged and took a cooperative approach product-wise. The following paragraphs aid answering the research question of this study, whose objective is to determine the performance of the scaled agile adoption in terms of strengths, challenges, and innovative aspects.

Several strengths were identified in connection with success drivers and innovative ways the company used for the Large-Scale Scrum adoption. Considerable benefit lied in the online environment and digital tools that were used to carry out the studied LeSS adoption. Means of online communication and collaboration, such as Zoom (2021), Miro (2021), or Slack (2021) allowed for interaction, transparency, asynchronous information exchange and participation of even more introverted employees. Furthermore, the Dry Run event to rehearse the LeSS adoption proved to uncover initial pain points and favored effective conversations before the organization flipped to the new organizational setup.

Through the innovative success metrics, the newly merged department was able to measure employee autonomy and engagement. Continuous improvement enabled to empirically learn and adjust the framework and processes. Single Product Backlog across teams, which is a typical feature of the LeSS setup (Larman & Vodde, 2008) assisted transformation towards new unified product. One level of management was removed, and silos were consequently breaking down. Creation of communities of practice promoted skill sets and interests coordination and knowledge transfer across all teams from the department. The positive effect the establishment of communities of practice had is aligned with the theory (Larman & Vodde, 2016).

Several opportunities arose from the Large-Scale Scrum adoption. The department was able to gradually shift its mindset from a static, monolithic view into more dynamic way of thinking. Agility with the new unified product enabled for more innovation from bottom-up. The major opportunity lies in expanding Large-Scale Scrum to the whole firm in the future to become more agile and be able to respond faster to the company’s ever-changing environment.

The LeSS acquirement assisted to identify technical debt and support its resolution. Short increments invited more user feedback and thus aided with better product design. The department was able to bring solutions faster to market and be more customer oriented. Company’s overall reputation and consumer trust benefited from the aforementioned factors.

Furthermore, LeSS allowed for better architectural alignment throughout the department. The summary of strengths and opportunities is illustrated in Figure 2.

- **Figure 2:** *SWOT analysis of the studied organization's LeSS adoption*

Source: author's own work

Weaknesses that occurred during LeSS acquirement journey are generally connected to unequal preparedness for transition between the two sub departments. Whereas one sub department carried out agile experiments before the LeSS transformation, the other sub department did none of the preparations. The second weakness of the LeSS transition which caused some pain points in its initial weeks was the negligence of the LeSS adoption rules, such as all-at-once transition instead of the recommended gradual approach (Larman & Vodde, 2016) and putting too many requirement areas in place for the number of people participating in the transition. Omission of the LeSS rules had a side effect, when the employees were overloaded with coordination meetings, which contributed to initial ineffectiveness of the product group. This factor was later resolved thanks to the merge of the requirement areas and teams reshuffling.

Additionally, undone department occurred in the studied department, which is a feature sometimes present in LeSS adoptions (Larman & Vodde, 2016; Kalenda et al., 2018). The department had insufficient number of User Experience (UX) designers. The UX design team was thus on the side as a separate team and helped the feature teams according to the capacity of UX team members. The author observed that the studied department eliminated all shortcomings except for the undone department.

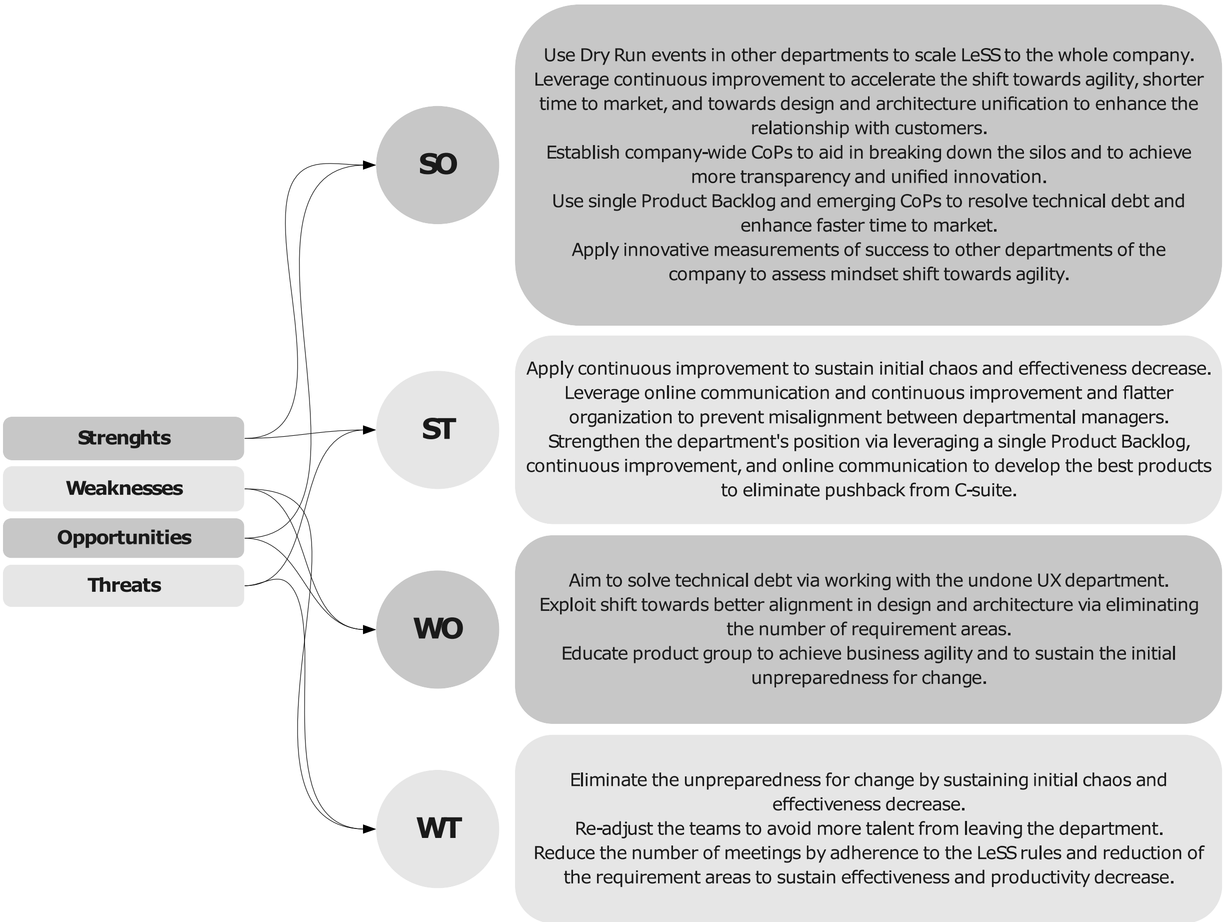
Threats that appeared during the LeSS adoption can be categorized into elapsed and potential threats. The category of elapsed threats includes initial ineffectiveness which was successfully eradicated over time. Potential threats incorporate suboptimization and misalignment posed by the rotating role of Product Manager goalie and the setup of the Product Management team. Furthermore, the former two sub departmental managers who now manage the whole unified department together may have unaligned views on the department's development in the future. Weaknesses and threats summarized are portrayed in Figure 2.

3.2 Strategy Variants

The TOWS matrix based on the previous analysis yields four strategy variants illustrated in Figure 3. During the research phase, when the author worked closely with the organization, the studied department had already used the WT strategy to eliminate its threats and weaknesses. For this reason and due to the stabilized position of the department, the author recommends the company to follow the SO strategy.

The SO strategy advises using rehearsals in other departments with an opportunity to scale LeSS even further, to the whole company. Moreover, empirical, continuous learning and improvement may serve a purpose to shorten the time to market, enhance design quality and provide a base for software architecture unification. The studied firm can benefit from establishing company-wide communities of practice which assist in breaking down the organizational silos. Specifically important is to include all levels of managements, from the lowest to C-level. Beneficial to the speed to market, quality of products and customer satisfaction is the resolution of the technical debt, for which purpose single Product Backlog may be used. Additionally, innovative success metrics in other departments may aid with the overall mindset shift towards agility and improvement of employee satisfaction at work.

- **Figure 3:** *TOWS matrix based on the qualitative analysis of the studied company's LeSS adoption*



Source: author's own work

Conclusion

In this paper, the author described the scaled agile adoption journey of a selected software firm. One product group within the organization adopted the Large-Scale Scrum framework in a fully virtual environment. This study presented the strategy proposal based on the qualitative analysis. The author identified strengths, opportunities, weaknesses, and potential threats which occurred during the Large-Scale Scrum adoption. The identification helped the author to answer the research question whose purpose was to determine the successes, challenges, and innovative aspects of the adoption of a selected agile framework conducted remotely.

Literature presented at the beginning of this paper provides advice on how to proceed with the agile transformations and adoptions. However, given the unique conditions posed by the COVID-19 pandemic, due to which all company operations were shifted to the online environment, the studied firm had no manual on how to successfully carry out a scaled virtual agile adoption. Notwithstanding the unusual, novel conditions, the researched organization successfully adopted Large-Scale Scrum. The digital technology platforms and means of communication were essential to the adoption.

New opportunities arose from the new status quo, such as shift towards new unified product, more open communication among teams and management levels due to silos breaking down, resolution of identified technical debt, and improved architectural alignment. The major opportunity lies in extending the Large-Scale Scrum framework to the whole company and thus become more customer-centric and better position the organization on the market.

Strengths the author identified include the online environment itself, which allowed for interactive knowledge transfer and more engaging contribution from even the more introverted employees. Furthermore, the Dry Run event of the transformation proved to be beneficial. The author advised the company to follow the SO strategy yielded by the TOWS matrix due to the stabilized position of the department at the time when this paper was finalized.

The SO strategy provides several options to consider. Online environment and rehearsals alongside with continuous improvement are levers to improve the internal processes, product development and build more meaningful relationships with the customers. The company can extend LeSS to its other departments and benefit from the structure given by the framework. Advantageous is the one Product Backlog which may unify efforts across the whole organization and company-wide communities of practice enabling effective knowledge exchange. Shift towards agility provides better responsiveness from the organization to its environment and competitors. Under the LeSS structure the innovation responsibility is given to the teams, which allows for faster improvements and increased employee engagement.
This study fills in the gap in large-scale agile scientific studies. It benefits the academia in providing an empirical insight into one firm's specifics carrying out solely virtual scaled agile adoption. Furthermore, the studied company can incorporate the strategy proposal into its actual strategy. Additionally, other companies are invited to take lessons learned from a scaled agile journey provided in this study.

For future research, the author suggests following the same company over longer time horizon to see how well the proposed strategy fitted the company's actual strategy planning activities. Furthermore, it is possible to extend the research into other companies to gain more general outcomes. Since the empirical research on virtual agile adoptions in scarce (Dikert, et al. 2016; Paasivaara et al., 2018), the author encourages other researchers to provide their scientific perspectives on the remote scaled agile journeys following different frameworks, such as LeSS, SAFe, or the Spotify model.

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OPEN INNOVATION AND ORGANIZATIONAL CULTURE: GLOBAL COMPANIES BEST PRACTICE

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Keywords:
Open innovation, organizational culture, best practice

Abstract:
The main aim of this article is to present the modern approaches and best practices of transnational (global) companies in the field of open innovation and organizational cultures in their interrelationship and performance. The application of open innovation is not always an easy and immediate process; in fact, it often involves a change in the organizational culture of the company. Therefore, it is interesting to discover to what extent these two concepts of open innovation and organizational culture in their dynamic are correlated**.** The best-practice analysis of global companies is carried out, where open innovation models correlate with organizational cultures. The authors' model of open innovation network is presented. The findings confirmed a positive association between innovative culture and the scope of open sources of innovation. The development of organizational culture and open innovation are interrelated in such a direction: both influenced on companies' successful results and increased brand awareness; collaboration and trust between members and partners are, perhaps, the most important features which unit organizational culture and open innovation. The systemic view on open innovation and the findings presented are beneficial not only to educational but business and research practice.

Introduction

To successfully compete on the battlefields of 21st century business, companies must reinvent their processes and culture in order to sustain innovative solutions (Prahalad, 2008). The term Open innovation is not a new one; it was born in 2003 by Henry Chesbrough, an American economist and writer, Adjunct Professor at the Haas School of Business, at the University of California, Berkeley. Chesbrough defines open innovation as follows: 'Open innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as firms look to advance their technology. Open innovation combines internal and external ideas into architectures and systems whose requirements are defined by a business model" (Chesbrough, 2003). In opposition, there is closed innovation, which is the traditional model, it relies entirely on internal resources and skills to generate, manage, and support new business ideas. All information is contained within the company, without any sharing with external parties.

The idea of Open Innovation (OI) is not a static concept, but rather it is constantly evolving. There is a lot of research in the field of open innovation. Vanhaverbeke and Myriam, 2014, focused on R& D projects while discussing open innovation theory and practice. There are other publications that have examined how strategy and open innovation are interconnected with each other (Dittrich and Duysters, 2007). Špaček and Hajek, 2017 discussed the concept of open innovation in the example of Czech projects in a sphere of sharing economy, the value open innovation approach can give companies, and the use of collaboration (Špaček and Hajek, 2017).

The continuous comparison between theory and practice allows companies to discover new nuances according to the contexts in which it is applied and observed. Open innovation studies must be sufficiently grounded in prior research in both open innovation and related fields (Vanhaverbeke and Myriam, 2014).

The paradigm of Open Innovation is a great opportunity for companies, which, however, must be good at placing it in their context. The application of open innovation is not always an easy and immediate process; in fact, it often involves a change in the organizational culture of the company.
The Organizational Culture (OC) is the soul of the company. It can explain work performance and has always been a critical driver of innovation. In order to successfully compete on the battlefields of 21st century business, companies must reinvent their processes and culture in order to sustain innovative solutions (Prahalad, C.K., & Krishnan, M.S., 2008).

Investigating many books and research works, following many discussions in the field of open innovation and organizational culture, we discovered a lack of research works that emphasize the interrelation between OI & OC.

The article aimed to focus on the open innovation paradigm in terms of its relationship to organizational culture. The research questions: What are the peculiar features of the concepts of open innovation and organizational culture? Is there any correlation between them, and if so, to what extent and how are these two concepts correlated in their dynamic? What are the advantages and drawbacks of this correlation? Are there any common characteristics and basic unifying principles between open innovations and organizational culture in their interaction?

The research method used: literature review, content analysis, analysis of best practical examples in a field of open innovation implications, and the benefits the OI concept brings to the company, regional and global level. Some elements of international benchmarking techniques are also used, when we compare the best practice of famous global companies.

The work is divided into three foundations according to the research questions. First, we looked at the two concepts separately. Second, we looked at open innovation concepts through the lens of organizational culture. Here, we analysed the best practices of global companies, considering open innovation adventurers and their disadvantages in terms of their relationship to organizational culture. Finally, we tried to find those basic unifying principles between open innovations and organizational culture in their interaction. In the last chapters, we present our findings and conclusions.

I. Open Innovation in Theory and Practice

The advantages of OI projects are widely discussed in innovation management research and practice (see, e.g., Man & Duysters, 2005). The continuous comparison between theory and practice allows companies to discover new nuances according to the contexts in which it is applied and observed. In the following chapters, we introduce the main OI advantages and main open innovation models with some examples. It also helps us to better contextualize the topic of our investigation.

Collaboration is the hallmark of open innovation. It is the main powerful force that, in turn, reinforces organizational culture, improving employee cooperation and knowledge exchange. Collaboration can be understood in different ways: between customers and the company, between employees and the employer, between start-ups and global companies (Luksch, 2021). Collaboration in all its forms brings a series of advantages and benefits to the company (organization).

Let us try to clarify some of the main advantages and problems starting from the comparison between different studies.

1.1 Open Innovation, Comparison of Authors

The issue of open innovation is very topical, and many studies have already been done on this paradigm; there are also many conflicting opinions on it. Some authors argue that the benefits are significantly higher than the problems caused by the introduction of open innovation in an organization.

The study by Laursen and Salter (2006) reveals that companies that are more open to external knowledge are more likely to achieve innovative performance. Alexy and George (2013) study the relationship between open innovation and the market value of society, concluding that adopting open innovation practices has a positive effect on corporate value. Other scholars, however, such as Gambardella and Panico (2014) argue that the phenomenon and the potential are very little exploited.

In still other cases, open innovation is evaluated as a problematic and complex practice. Chesbrough (2007) argued that the increasing cost of developing new technology and shortening the life cycle of products make it more difficult for firms to justify high spending on innovation. Belderbo et al. (2010) underline how an excessive percentage of innovation activities carried out in collaboration with external parties have a negative effect on the market value of the company. By opening its borders, the firm can lose some control over its resources and operations, likely incurring higher coordination costs.

The theory of open innovation is therefore not essential from criticism and ambiguity. For example, Laursen and Salter associate the number of external innovation resources with openness (Laursen and Salter, 2006), while Henkel (2006) identifies openness as revealing knowledge that was previously protected within the company.

It has been seen how this tendency to ‘openness’ is far from perfect and, although it brings undoubted benefits, it also leads to a series of inefficiencies and problems. We will now see in open detail some advantages and disadvantages brought about by the introduction of innovation within an organization.

1.2 Benefits of Open Innovation

Sharing of talent, technology, and infrastructure

It may happen that there is often not enough talent available to meet market demand and capital to properly develop the innovation development of the organization. Open innovation allows companies to collaborate with as many brilliant minds as possible and create new partnerships with larger university research facilities, governments, and companies that have more resources. The best example of this is the ‘increasing role of cities as a driver of open innovation and entrepreneurship, where innovators and entrepreneurs seek to engage with local governments and citizens in an effort to improve quality of life and promote local economic growth' (Cohen, 2016).

In this context, the case of the authors of the presented article is also a good example. Being involved in the student conference, we prepared this article, strongly collaborating with our scientific supervisor and conference organizers. We prepare our research papers and presentations for the coming event. Sure, many of us propose new interesting approaches or even new ideas, according to the research questions. We will then present and publicly share these ideas with others on the University conference site. There is a mutual benefit: we master the new skills of writing the research papers; University increases their brand awareness.

New Revenue Streams and Innovations of Old Products and Services
Some projects are not part of the company's core business. This does not mean that they should be discarded. Open innovation can be leveraged to develop new activities from the core business model, and thus create new partners. The best example of open innovation is sharing (collaborative) economy models such as Airbnb, Uber. These famous companies introduced the new user-friendly business platform models to the 'old' service of the hospitality, tourism, and car service industry, among many others. When a platform enters the marketplace of a pure pipeline business, the platform nearly always wins, causing the transformative change to the industries: so Amazon changed retail buying patterns; Bitcoin challenged traditional currency; Tesla reshaped the auto industry; Airbnb upset the status quo of the hotel industry; Uber disrupted the taxi industry (Ostapenko, 2018).

Cost, Risk, and Development Timescales Reduction
Larger enterprises can get stuck in their ways, held back by red tape and stringent processes. Meanwhile, smaller start-ups may have talent but often struggle because of a lack of resources and financial muscle. When partners come together, a partnership reduces costs for small start-ups and accelerates product life cycles for larger companies. The union also spreads the risk to both companies.

Customers-Company
Users are a fundamental part of a company; they provide feedback that allows the product to improve and the brand to grow. Again, the good examples are Airbnb and Uber, Trip Adviser rewires, and star ratings. This is why it is important to involve the community in the development of a product or service, mapping the customer needs, and having feedback. This, in turn, improves customer loyalty and increases the value of the brand.

Employees-Company
A major source of employee dissatisfaction is a lack of sense of belonging to the projects they work on. When people feel more involved in the organization's goals, they are more excited to come to work (Novoseltseva, 2017).

1.3 Disadvantages of Open Innovation

Increased Coordination of Processes and Implementation Costs
If it is true that open innovation helps, through the sharing of resources, to reduce costs in terms of the purchase of technological material, experts, equipment, etc.; it is also true that with open innovation, the costs of coordinating processes and implementing them increase. Multiple ideas from different minds sometimes difficult to coexist.

Strong Dependence on Outside Knowledge
Open innovation greatly increases the entry of new knowledge and new strategies, but at the same time, it can stress a strong dependence on this external knowledge. In fact, it is a good idea, in addition to listening to the opinion of outsiders, also to have its own internal development, in order to know the ideas and have a critical thought about it. Furthermore, an internal development team allows you not to waste precious time in the event that interesting proposals do not arrive from the outside.

Ability to Disclose Information not Intended for Sharing
Open innovation is also a risk in terms of competitive potential. In fact, it may happen that information not intended for sharing is mistakenly detected, for example, the original and unique characteristic of a product, thus entailing the loss of value, of advantage in the market, and of the potential of the product itself.

Increased Complexity of Innovation Control and Regulation of How Contributors Affect a Project.
Having an open innovation means sharing information, knowledge, and much more. However, this sharing must be enshrined in some agreements; for this reason, before starting a collaboration, it is good to determine if its value is greater than the effort employed in controlling the collaboration itself.

1.4 Types of Open Innovation

There are different types of open innovation that must be classified according to the level of inclusion and the purpose of use. It is important to know the different models. It also helps us to better contextualize the topic of our investigation.

Level of Inclusion and Collaboration
- **Intracompany level**. It means that the collaboration happened within the company within different functions or business units.
- **The intercompany level** means that open collaboration is between two or more companies. Today, the modern trend is Cross-Industry Innovation (CII). CII aims to reuse existing solutions by leveraging the innovative power of partner knowledge from another industry. CII is a key concept for identifying and adapting potential (disruptive) innovations and technologies and has gained importance in recent years (Behne et al., 2021).
- **For experts:** all people outside the company who have the required knowledge to give relevant input.
- **Publicly open:** all people regardless of previous knowledge, stature, region, country.

Purpose of Use
- **Marketing:** Getting information across
- **Gathering information:** Valuable information on the market and customers
- **Finding talent:** Scouting for talent
- **R&D:** “This is the most typical form in which you develop products or services” (Isomäki, 2018).

Table 1. below introduces the more detailed content of different innovation models, based on the purpose of use and the level of inclusion and collaboration approach. We also analysed some other examples of open innovation classified according to the level of inclusion.

Below are some other examples of open innovation classified according to the level of inclusion.

Facebook (Intracompany – R&D)
Facebook uses hackathons (meetings), which help surface some of its best ideas from within its ranks. Facebook offers all employees the opportunity to think creatively, and it can even prove to be a jumping start for some budding entrepreneurs (Morikawa, 2016).

Philips (Intercompany – Gathering insight)
Philips was an early adopter of open innovation when in 1988 it opened the R & D ecosystem. The campus is home to entrepreneurs, researchers, and product developers from all over the world who come together to create new ventures. Many of the projects created on campus focus on world problems, such as the challenges posed by overpopulation, climate change, and failing healthcare systems (Morikawa, 2016).

Lilly (For experts – R&D)
Eli Lilly and Company launched an open innovation platform designed to help build the company's pipeline of tomorrow and identify molecules that may have application for treating multidrug resistant tuberculosis (MDR-TB).

Mc Donald (Publicly Open – Gathering insight)
Mc Donald and innovation go in the same direction.

The company engages customers by letting them suggest and create their favourite sandwiches. With the mobile app, customers can register their preferences and then customize their product.

Table 1: *Different Open innovation models*

		Level of inclusion			
		Intra-company	**Inter-company**	**For experts**	**Publicly open**
	Marketing			Conveying information about niche products	Sharing information about new product
Purp ose of use	**Gathering insight**	Gathering tacit knowledge from employees	Gathering useful tips from partners	Getting relevant input from the pros in the field	Getting customer feedback to build relevant products
	Finding talent	Finding unrecognized talent inside the company	Finding hidden expertise in partnering firms	Recruiting experts from various fields (ex. Moodle)	Finding the best match for the open job position
	R&D	. Uniting business units for product development	Utilizing collective knowledge between firms	Developing products that require specific expertise	Developing products with the largest possible audience

Source: Authors based on Isomäki model, 2018

By keeping their classic products, Mc Donald still manages to follow a constantly evolving market, satisfying local and global demands.

1.5 Open Innovation Methods

Open innovation has more than one nuance and cannot be generalized. Open innovation has benefits, but also brings many risks; open innovation can be used in many areas. Here are some examples of open innovation methods.

Open Innovation Challenge

An open innovation challenge is an event in which entrepreneurs, researchers, and specialist teams compete against each other to try to solve a defined problem in the industry. Innovation challenges help companies gather ideas and find solutions.

An innovation challenge can be of two types: Internal or Open, and the difference consists in the type of participants it is addressed to.

In the case of the internal innovation challenge, it is the human resources within the organization.
An Open Innovation Challenge, on the other hand, allows you to obtain new ideas both from inside and outside the organization, and thus also to have a foreign point of view.

An example is Unilever’s innovation portal, which seeks solutions to the problems companies face with the packaging, transportation, and storage of food products (Startup Geeks, 2021).

Open innovation can be used as a way to connect with talented young professionals and recruit new talent for the company. Innovation challenges for individuals and universities can be a good way to do this.

Crowdsourcing

In crowdsourcing, a company works with an accelerator to find innovation. The company presents an initial problem, question, or theme and encourages outsiders to come up with ideas or potential solutions.

This model reduces R&D costs and reduces production time, as your company can maintain open communication channels with your audience, gaining input at every stage of production.

Crowdsourcing is perfect when you have some time to wait for ideas to come in and to pick and choose the best ones. The problem is that many companies turn to crowdsourcing when they need something right away. If you are in a crisis of time, an open community may not have the freedom to conduct due research and provide well thought out,, carefully thought out and fully developed ideas, so in that case, it is best to entrust the task to an internal team (Wenning, 2016).

Open Innovation Labs

An open innovation lab is a dedicated workspace that operates outside the normal routines and practices of the business. In doing so, it allows the team to think and work differently.

The team in the lab operates like a start-up in several ways. Quite often, the teams that work in these laboratories comprise new hires and external experts, who will collaborate to provide solutions to targeted problems or come up with ways to improve existing products, services, or systems at the company (Isomäki, 2018).

II. Open Innovation and Organizational Culture

2.1. Organizational Culture

There are many definitions of Organizational Culture (OC). Basically, OC includes the organization's vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits. The Organizational Culture is the collection of values, expectations, and practices that guide and inform the actions of all team members. A great culture exemplifies positive traits that lead to better performance. It is a guide for member behaviour and is expressed in member self-image, inner workings, interactions with the outside world, and future expectations (Needle, 2004).

Simply stated, organizational culture is ‘the way things are done around here’ (Deal & Kennedy, 2000). Organizational culture is a set of shared assumptions that guide what happens in organizations by defining appropriate behaviour for various situations (Ravasi & Schultz, 2006; Cancialosi, 2017).

The organizational culture tells the company how to respond to a crisis, how to adapt to new customer demands, or how the manager has to correct an employee who makes a mistake.

Culture is a key advantage when it comes to attracting talent and outperforming competition. The culture of an organization is also one of the top indicators of employee satisfaction and one of the main reasons that almost two-thirds (65%) of employees stay in their job (Wong, 2021). For example, Wong, 2021, discovered that more than 77% of workers consider a company before applying, and almost half of employees would leave their current job for a lower pay opportunity in an organization with a better culture. The culture of an organization is also one of the top indicators of employee satisfaction and one of the main reasons that almost two-thirds (65%) of employees stay in their job (Wong, 2021). The culture is different, and it is important to find and develop what makes your company unique.

In the following chapter, we show the main qualities of a successful organizational culture.

2.2. Qualities of a great organizational culture

Cultures of high-performing organizations consistently reflect certain qualities that you should seek to cultivate. Based on several research works (O'Donnel & Boyle, 2008; Wong, 2021), we choose the main qualities of a great organizational culture. There are the following.

Alignment
Alignment occurs when the goal of the employees and the goal of the company go in the same direction.

Appreciation
A culture of appreciation is one in which all team members acknowledge the contributions of others.

Trust
With a culture of trust, team members can express themselves and rely on others to have their back when trying something new.

Performance
In these companies, talented employees motivate each other to excel, and as shown above, greater profitability and productivity are the results.

Resilience
A resilient culture will teach leaders to be alert and respond to change with ease.

Teamwork
Collaboration, communication, and respect between team members. When everyone on the team supports each other, employees will get more done and feel happier.

Innovation
A culture of innovation means that you apply creative thinking to all aspects of your business, even your own cultural initiatives (Wong, 2021).
In the following chapter, applying the benchmarking technique, we are going to introduce the paradigm of open innovation from the point of view of relationship to organizational culture.

2.3. Relationship between Open Innovation and Organizational Culture

Open innovation and organizational culture are very closely linked. When we are talking about the classical models of management, we should say that the classical type of leadership with top-down decision making, the hierarchical organizational structures, closed or reserved mentality of people who are not involved in the company strategy are typical characteristics of these models of organizational behavior. Here, it is difficult to speak about the open innovation concept. In fact, open innovation goes hand in hand with a culture that is inclined to openness, collaboration, and sharing.

On the practical examples of famous global companies, we analysed their organizational behaviours from the context of the relationship between organizational culture and open innovation. (Table 2).

Table 2: *Example of the organizational culture of global companies*

GLOBAL COMPANY	ORGANIZATIONAL CULTURE	RELATION BETWEEN OC AND OI
SAMSUNG	The cultural organization focuses on achieving a high degree of innovation that involves human resource development strategies. Samsung's organizational culture intersects with all areas of the company and influences the degree of competitiveness it has in the global market.	Samsung's characteristic of focusing on human resources helps the open innovation implementation process. Collaboration and sharing within the company make open innovation easy to apply.
LEGO	LEGO's cultural organization is based on openness, creativity, imagination, quality, attention to detail, and the constant desire to improve.	LEGO has a very strong community and is very good at exploiting it. Company, employees, and customers that we met to get to work together and develop ideas, this is open innovation.
MOZILLA	Mozilla is strongly linked to the Open Source community, and the culture reflects that. The aspects that distinguish it are the decentralization of projects and the openness, anyone can connect to the meeting and propose their idea.	Mozilla has been a highly innovative and open company since its inception, as confirmed by its Open Source community, which is one of the best-known types of open innovation. A company that exploits the sharing of tools and ideas to grow.
P&G	P&G has a purpose-oriented organizational culture seen as a goal that guides individual and group activity towards the success of both. The company combines quality and value as factors that influence employee behavior.	The organizational culture of P&G focused on the alignment of objectives between employees and the company, favours open innovation as employees are aware of the company's ideas and share them, and are therefore protagonists and not mere spectators.
APPLE	Apple's cultural organization is based on creative innovation. The main characteristics of Apple's culture are: maintaining a high level of innovation, creativity, consistency, secrecy, which does not mean closure, and the desire to always be first in the market.	Even Apple like Mozilla has always been a very innovative company. The creativity and consistency they have always had have allowed them to open numerous collaborations, establishing themselves as world leaders in their field and as one of the companies with the best open innovation.

Source: Authors

As can be seen from Table 1 that we put organizational culture in front of the research topic question, then we analysed the best practice in this field and commented on their OC in relation to open innovation. These companies have already implemented the open innovation paradigm due to their innovative and open culture. We discovered that the companies are all united by strong leadership and by their propensity for open innovation, which is made possible by their innovative and open cultural organization. The companies listed above are willing to share their talents, their infrastructures, and their technologies to bring values and increased the company value. They formed the collaboration and trust atmosphere between the members within the company and with the internal partners. The question is how exactly is it happening, we mean how the companies manage to do so? The following chapters aim to answer these questions.

2.4. The Open Innovation Networks

Introducing open innovation into a company is not easy at all; there are a thousand parameters and a thousand situations to take into consideration. First, the cultural organization of the company itself. If the company has a strong propensity for innovation, then it will be easy to use the paradigm of open innovation, but if, on the other hand, the company has a much-closed culture, then it will be very difficult to push towards a model of transparency and collaboration.

Open innovation is not just a paradigm, but a lifestyle for a company. Open innovation means collaboration and flexibility: collaborating within the company, externally, with its customers, and flexibility, that is, being able to listen, understand, and above all learn from experts and opinions that often and can differ from one's own.

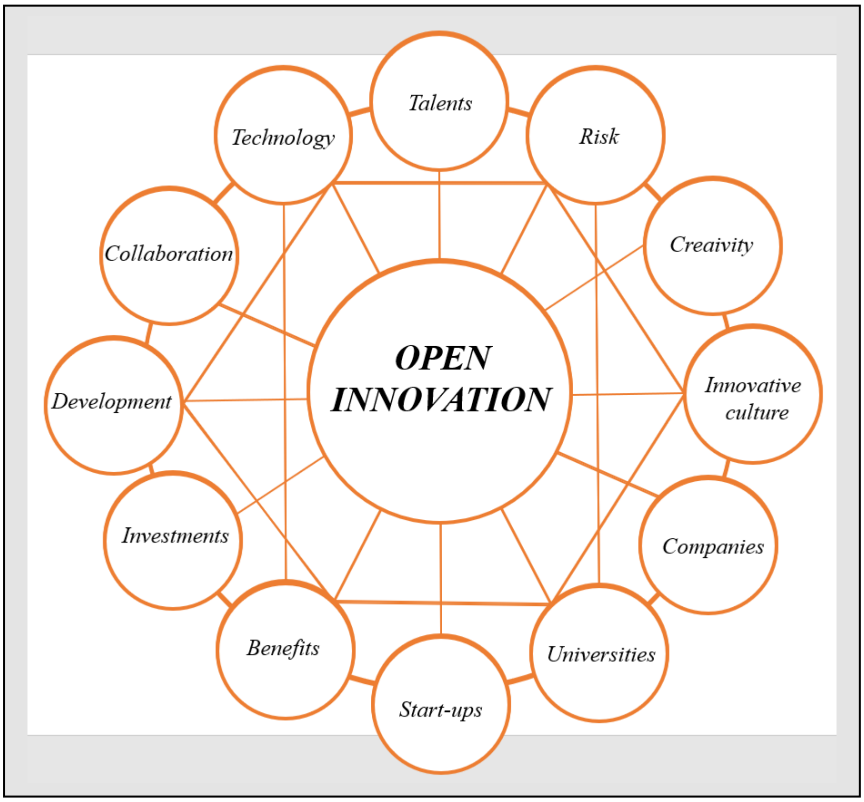
Open innovation is an important step for a company, and you need the intelligence to understand the right way to implement it and the time to find ways to propose it.

However, open innovation is not just about benefits and advantages; open innovation is also about fatigue and risks. Sometimes the risks are greater than the benefits, and this is where you need to be careful to step back and take some time to think. Innovation attracts and excites, but it is easy to get carried away by too much emphasis and overdo it.

We are therefore faced with a paradox, the euphoria due to the increase in the flow of learning and the increase in resources is soon transformed into "excess", it is no more enough to walk, but you want to learn to fly, you always go looking for something more with the risk of falling and having to start over.

We have discovered that there are many independent components that bind themselves by becoming dependent and making up the open innovation (see Figure 2). If one component develops, then the other develops as well; if one fails, the others suffer.

Figure 1: *The Open Innovation Network*



Source: Authors

From Figure 1 above, it is possible to see how large the open innovation network is. Many elements intertwine and bond and become dependent on each other. Among the most important are the innovative culture, risks, and collaboration. The 'innovative culture' is because open innovation is applicable in a company with an innovative cultural organization; 'the risk' is coming because when you decide to engage in open innovation, you have to evaluate risks and sometimes accept them; 'collaboration' because collaboration and in the same way share technologies, infrastructures, and ideas are fundamental in open innovation.

2.5. Open Innovation Best Practices of Global Companies

As we have previously seen, there are many types of open innovation. There are also many ways to apply open innovation within a company. All of them greatly depended on the type of company, as well as the established and developing organizational culture.

Below are some examples from best practices of global companies, where open innovation models correlate with organizational cultures of chosen companies (Table 2).

Table 3: *Examples of best practice of global companies introduced open innovation models*

GLOBAL COMPANY	ADVANTAGES	DISADVANTAGES
SAMSUNG	By partnering with startups, Samsung aims to benefit from the variety of innovations that smaller companies have already achieved by integrating them into their products.	On the other hand, the kind of company that aims to bring about new innovations that require high initial investments is typically better invested in or just acquired.
LEGO	LEGO allows its users to help create products that satisfy their desires listening to their feedback and proposals. This allows you to reduce the risk in research and development.	But make sure you can implement at least some of the more popular ideas, or users will not feel they have made an impact.
MOZILLA	Mozilla uses an approach to Open Innovation, which is that of Open Source, the source code of a product is open, and anyone has the right to develop the software.	Many types of proprietary hardware need specialized drivers to run open-source programs, which are often only available from the equipment manufacturer. This can potentially increase the cost of your project.
P&G	P&G bypassed a lengthy R&D process by partnering with OraLabs to release a new lip balm, a market that was suddenly trending. By communicating its needs, P&G also creates competition for solution providers and, therefore, can choose the best partner.	The risk in this case for P&G is that of having a strong dependence on external knowledge. The strategy saves time, but in some cases, it is better to have an internal development team that knows the culture and needs of the company.
APPLE	Apple's strength lies in regulating and controlling its open innovation so that application developers can create their products to work in the Apple environment, while not having visibility into other aspects of internal research and development.	However, you have to think about whether being in control gives you enough value. Regulating openness also means that collaboration may not create breakthrough innovations.

Source: Authors

From Table 3 above, the advantages and disadvantages of applying open innovation models are given. There are more benefits of using open innovation approaches, but do not forget that there are also closed innovation approaches. For example, for this reason, Procter and Gamble created internal development teams, members of which better know the culture and needs of the company, despite also having cooperation with external teams and organizations. A clear example of the relationship between OI & OC is applied in a great company, Apple. In fact, Apple has an organizational culture for creative innovation. The cultural characteristics of the company focus on maintaining a high level of innovation that involves creativity and a mind-set that defies conventions and standards. Business depends on cultural support and consistency, which are crucial to the competitiveness and leadership of the sector, especially in dealing with aggressive and rapid technological innovation and product development.

Apple’s organizational culture supports rapid innovation.

The company is frequently rated as one of the most innovative companies in the world. Based on this cultural trait, the firm trains and motivates its employees to innovate in terms of individual work performance and contributions to product development processes. Rapid innovation ensures that the company continues to introduce new products that are profitable and attractive to target customers (Meyer, 2019*)*.

In summary, it is important to evaluate the applicability of open innovation for companies according to the context, analysing the various situations. In each case, determining whether the obtainable value is greater than a risks is the question of great importance in the strategic decisions of any company.

III. Open Innovation and the Health Emergency

Open innovation also plays a fundamental role in the economy, both locally and globally. In fact, Open Innovation can accelerate economic recovery. Open innovation has played and will play a fundamental role in the battle against the Coronavirus in the world in the future. The Open Innovation Approach has made it possible to slow down the pandemic. This happened due to the right company / organization strategy, as well as the successful collaboration of a company with many other organizations.

Some areas of the economy will take a long time to recover and should be the first to focus on. Others, on the other hand, benefit from the pandemic situation. Digital transformation and acceleration during the Covid-19 pandemic bring new knowledge flows deriving from open innovation, new growth opportunities. The innovation of consulting more parallel development options and allowing to grasp more open in allows and solution any solutions or not suitable.

The first step in combating the spread of the disease is to become faster and more flexible. Within the collaboration approach, each part can be involved, contributing with their properties and knowledge, improving, and speeding up the development times of innovations. Furthermore, open innovation drives the reuse and recombination of resources. If we look at the vaccines that have spread, they are in many cases the result of collaborations between start-ups, universities, and large companies.

UNDP (United Nations Development Program) provides a good example of open innovation during the pandemic. During the Covid-19 pandemic, the UNDP Accelerator Lab, together with the Ministry of ICT and Innovation, Rwanda, Africa, brought health professionals to design and deploy antiepidemic robots. These advanced robots help to screen people and detect COVID-19 cases at Kigali International Airport and provide additional services at local hospitals and treatment centers, including food and medication delivery (Richards, 2021).

Another example is the successful experience of the Czech Technical University. In response to the spread of the pandemic and the lack of pulmonary ventilators, the research team, led by Professor Karel Roubik, the Faculty of Biomedical Engineering, was formed in March 2020. For the treatment of patients from the Czech Republic and all over the world under a license from the CTU, they began to develop CoroVent a pulmonary ventilator. Thanks to the funds raised by Czech citizens, local and international organizations/companies and after the certification given by Czech Ministry of Health and approved by World Health Organization ventilators, CoroVent was mass-produced by Mico Medical, the Trebic-based company and distributed first to many Czech hospitals, then to other people. (CTU, 2021).

As we can see, collaboration, sharing of resources, and mutual support are the keywords of this partnership against the emergency on local and global levels.

IV. Recent Statistics on Open Innovation

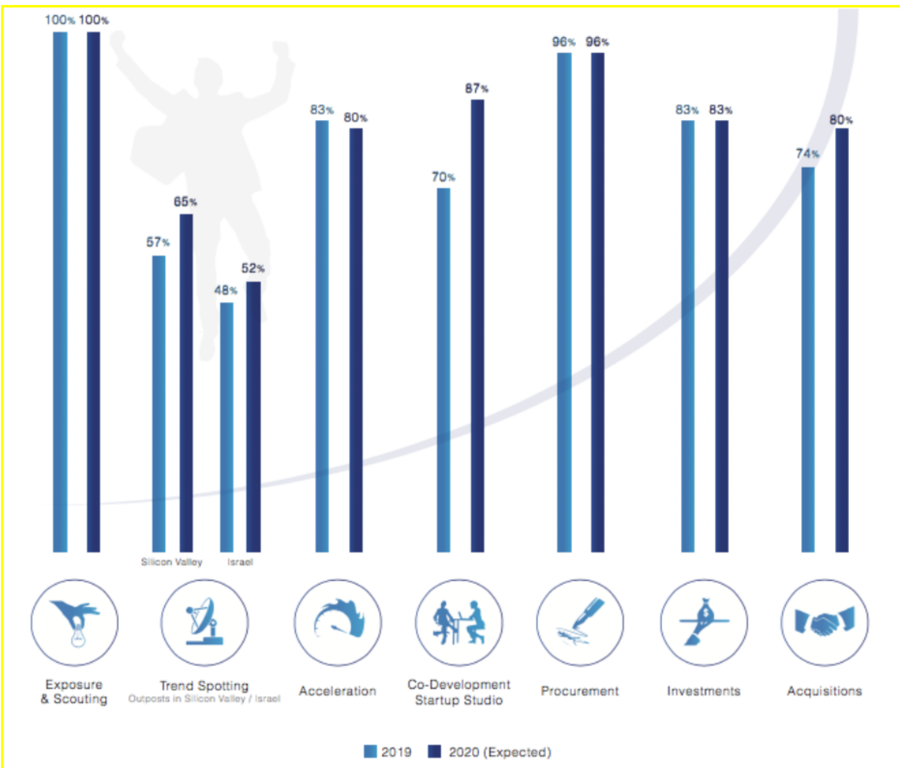
The paradigm of Open Innovation is constantly evolving and being discussed. It spreads quickly and flexibly throughout the world and in various companies. Let us now look at some reports, and with the help of percentages and statistics, we try to define the current scenario and frame the evolution of the phenomenon in recent years.

4.1. Collaboration between Companies and Start-ups

In the following paragraph, we analyse the most important trends in Open Innovation and in particular the collaboration between companies and start-ups through the data collected by Mind The Bridge and Nesta during the Open Innovation Forum held during the Scaleup Summit in Madrid in 2020.

a) **Procurement will continue to be the predominant mode of involvement between companies and start-ups.**
   96% of the Corporate Start-up Stars will continue to engage start-ups commercially through funded POCs (proof of concepts) and pilot projects.
b) **A growing interest in start-up acquisitions, and continuity of investments.**
   80% of Corporate Start-up Stars plan to acquire start-ups in 2020 (versus 74% in 2019). 83% of Corporate Start-up Stars will continue to invest in start-ups.
c) **Business start-up accelerators are losing momentum.**
   More and more companies are abandoning/downsizing their start-up acceleration programs. It is a clear trend now (down from 83% in 2019 to 80% expected in 2020). (Mind the Bridge, 2021)

Figure 2: *Start-up Corporate Collaboration: Macro-trends*



Source: Mind the Bridge

Where do Corporate Start-up Stars go hunting for innovation?

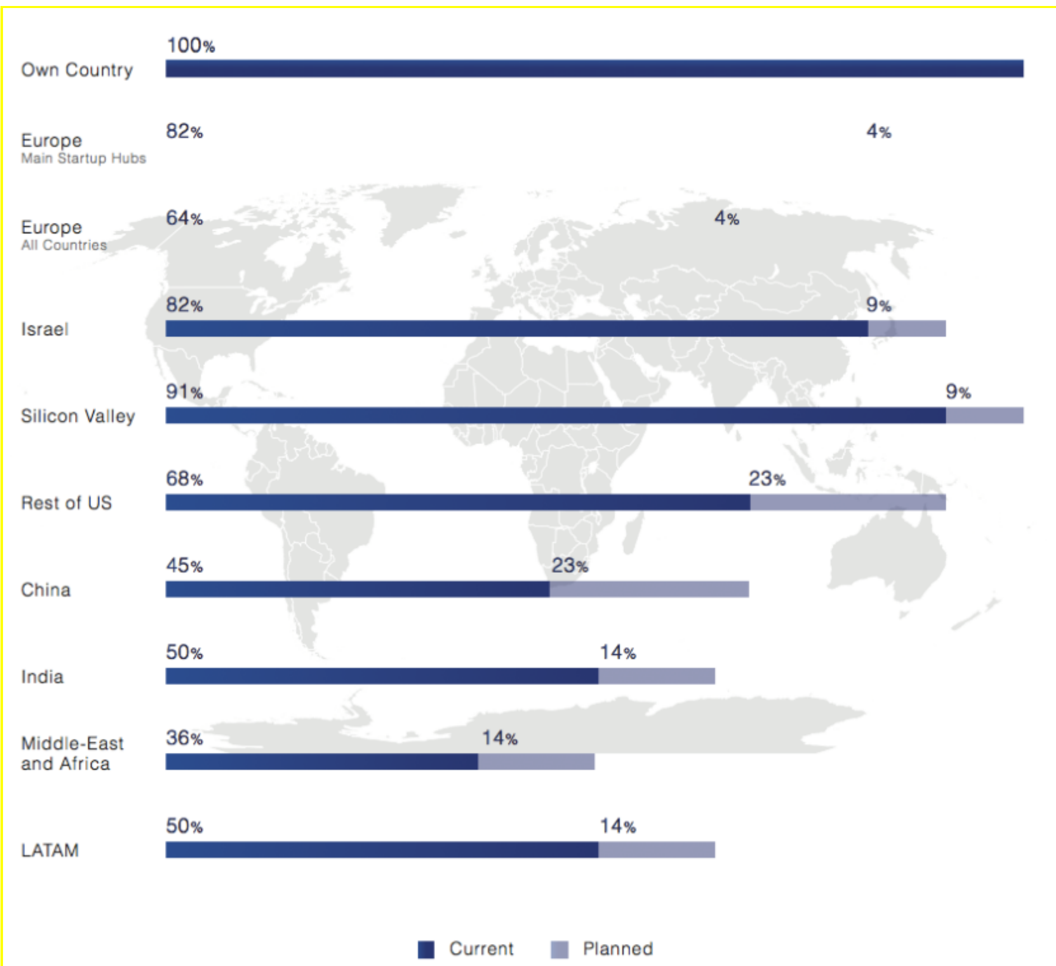
In addition to their country of origin (100%), the Corporate Start-up Stars are focused on the main global technology hubs:

- Silicon Valley (91% are already active; the remaining 9% foresee it in the near future)
- Israel and the main European clusters (London, Paris, Berlin) follow (82%).

Outside of the major hubs mentioned above, there is still not enough critical mass of mature start-ups to justify dedicated scouting investments.

"In fact, scouting produces results where there is a strong concentration of mature start-ups. Europe, with the exception of a few major hubs, China and India - have not yet reached a critical mass in terms of both volume and quality. However, we see a growing interest in looking at these geographic areas. ***Alberto Onetti, President of Mind the Bridge and SEP Coordinator.*** (Mind the Bridge, 2021)

Figure 3: *Start-up scouting: geographies*



Source: Mind the Bridge

Involvement between Start-ups and Companies: Main Obstacles to Overcome

What are the main obstacles to transforming open innovation into action and producing results?

- Rigidity of processes (68% of respondents);
- The lack of resources (budget and team for open innovation are considered insufficient by 41% of the interviewees);
- The lack of involvement of the business units (41%);
- The corporate culture of risk aversion (in addition to the lack of internal entrepreneurial culture). (Mind the Bridge, 2021)

4.2. Open Innovation, the Italian Scenario

Let us now analyse the Italian Open Innovation scenario based on the data that emerged from the Fifth Observatory on Open Innovation and Italian Corporate Venture Capital.
Between September 2018 and September 2020, investments in innovative start-ups increased by almost 84%.

When analyzing the statistics, it is immediately evident that:

- The turnover produced by start-ups and innovative SMEs is approximately 1.46 billion euros;
- The vast majority of corporate partners of innovative start-ups (68.7%) and innovative SMEs (58.4%) are based in the north of the country;
- The distribution of innovative start-ups and SMEs is rather homogeneous throughout the Italian territory;
- The start-ups and innovative SMEs that benefit from Corporate Venture Capital investments (about 29% of the total) are those that contribute most to job creation (about 43% of the total);
- The economic indices of start-ups and innovative SMEs with CVC investments are better than the economic indices of start-ups and innovative SMEs with investments by Specialized Operators and Family & Friends (€ 95,000 for CVC investments, against € 76,000 for Family & Friends investors and € 16,000 of investors among Specialized Operators) (Spremute Digitali, 2020)

Today, open innovation is a model widely used all over the world, and, also in Italy, about 75% of large companies have adopted open innovation approaches, albeit in different ways from case to case. The 2020 Open Innovation Observatory records that currently in Italy there are about eight thousand Corporate stakes in the ecosystem of innovative Start-ups and SMEs and that over the past 10 years, over a billion and 700 million have been invested by Corporate companies in Start-ups and SMEs; numbers that show how much even in Italy companies believe more and more in the added value deriving from collaboration with innovative companies. (Di Bartolomei, 2021)

Conclusion.

Within this paper, insights are given on the approach to consider open innovation and organizational culture in their relationship. Introducing open innovation as a **paradigm that states that companies can and must make use of external ideas**, we discovered many benefits of open innovation on different levels (intracompany, intercompany level, collaboration for experts, and open innovation for the public). We proposed the model of an open innovation network, where there are many independent components that bind themselves by becoming dependent and organizing the open innovation model success and practically applicable. Based on best practices of famous global companies who already introduced the open innovation approach, we discovered many adventures and drawbacks of OI, such as lack of support from stakeholders, the disclosure of information not intended for sharing, the possibility of losing one's competitive advantage, the increased complexity of control over the project due to lack of strategic alignment, and lack of communication.

The organizational culture is the main bone of open and closed innovation development. However, innovation culture does not always have a direct effect on the percentage of sales of new and modified products, but rather through marketing and organization types of innovation, employee cooperation, as well as inter cooperation with universities, experts, other companies. Trust in communication and collaboration between the members of companies within the company, as well as with internal parties, is the main linking principle that connects integrative cultures and open innovation model development. We prove this message with practice companies.

Open innovation and organizational culture are both about a sincere and mutually trusted collaboration that create long-lasting relationship, openness between many involved parties, and mutual value creation, leading to the company excellence. Rephrasing the famous expression, we can conclude: ‘The winners take it all: open innovation, attractive organizational cultures, and best performance results’.

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GLOBAL TRENDS IN ADVERTISING STRATEGIES IN A COVID-19 ERA: EVIDENCE FROM CHINA AND GERMANY

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advertising strategies, digital marketing, Covid-19, China, Germany

Abstract
The aim of this article is to examine the impact of Covid-19 on marketing and advertising strategies in a global context, with particular references to China and Germany. To reveal the changes, the situation in marketing and advertising strategies within the international context before and during the pandemic is compared. The differences between traditional and digital marketing are analysed; the marketing techniques to boost marketing strategies are revealed; the peculiarities and future trends in the advertising strategies of both countries are discussed. We discovered that in the last decade companies, advertising agencies and marketers of both countries have spent a lot on digital advertising, year by year increasing investments and expenditures. It was concluded that digital marketing and digital channels are the best way to reach customers, especially in a time of the Covid-19 era. Despite the immediate drop in advertising spending, especially at the beginning of the coronavirus pandemic (15% decline in China and 8 % in Germany), trends towards the development of digital advertising will continue in post-crisis recovery.

Introduction

The Covid-19 pandemic affects many aspects of our social and economic life. It tremendously influenced businesses, changing their business and marketing policies. Covid-19 has shown that businesses need to develop strategies in a context that is often changing rapidly and highly uncertain (Morieka de Moojie, 2021). This also applies to marketing and advertising. Challenges and changes in business and marketing strategies at the global and local level have already emerged before the Covid 19 crisis. They are related to globalization and the digitalization of the economy and society. With the development of communication and information technology, new technological platforms have appeared that change the global market, business models, and consumer behaviors. One of the major changes that occurred in traditional marketing was the emergence of the global digital market (Patrutiu Baltes and Loredana, 2015). This has led to concerns that advertising strategies based on models and experiences developed with traditional media and within the context of classical marketing may need to be reviewed in the digital marketplace (Truong et al., 2010). As we will see later, digital marketing has become the most common term around the world.

We assume that the global coronavirus crisis has accelerated the trend from traditional to digital marketing. To find the changes that happened in marketing advertising strategies in the international context, we compared the advertising strategies of China and Germany before and during the Covid -19 period, the budget companies spent on advertising on the national level, and the channels they used to reach their customers. We have chosen these two countries to compare for two reasons. First: we are firmly convinced that the level of economic development of the nation plays an important role in people's consumption behaviour. China is a strong economic power in the East and Germany is a strong force in the West; therefore, it makes sense to compare their leading position in world trade, national marketing, and advertising policy. China, the United States of America, and Germany are the largest consumer and advertiser markets. They are also the third largest exporting nation in the world. According to the statistics for last year, China ranks first with about 2.6 billion dollars, followed by America (USD 1.4 billion) and Germany (USD 1.3 billion) (Statista, 2020). The second reason is that today, as an Erasmus student from Germany, I am interested in my country's competitive position in the global context as well as current and future trends in marketing and advertising strategies.

The aim of this article is to explore changes in marketing strategies in Germany and China in response to the Covid-19 pandemic, focusing on both online and traditional marketing and their timing. In this context, the general global trends are elaborated, as well as the similarities and differences between China and Germany in this respect. Therefore, two sets of research questions need to be answered. First: 1) What are the main global trends in marketing and advertising strategies? 2) What are the peculiarities of traditional and digital marketing and the techniques that can be used to reach customers in the most effective way? The other set of questions is 3) How has Covid-19 affected marketing and advertising strategies? 4) What could companies do to adapt their marketing strategies to meet their customers' needs in the future?

Methods used: Content analysis technique, qualitative research and statistical data analysis, involving descriptive data, such as several international survey data and observational data, comparative country analysis. Marketing forecasting methods, such as trend projection.

The structure of the research paper is the following: first, comparing traditional and digital marketing we tried to find what are actual global trends in the field of marketing and advertising, and second, using two selected countries as examples, we compared the advertising strategies before and during the Covid 19 period. We tried to discover how the modern trend towards the increasing development of digital advertising in selected countries will continue in a post-crisis recovery. The last chapter contains the discussion and conclusion with some recommendations for businesses and marketers.

2. Global trends towards digital marketing and advertising.

2.1. Traditional vs. digital marketing: advantages and disadvantages

Thanks to the opportunities provided by the advances in technology, companies have gone through a lot of changes in a very short period since the beginning of the 21st century. Digitization and the associated skills and technologies influenced almost all areas of life and changed customer behaviour in the direction of e-customers, e-commerce, and digital advertising marketing. According to Eurostat, e-commerce is growing globally, and this has been supported by the use of smartphones. People aged 20 to 34 comprise the majority of active electronic shoppers (81% of internet users) than any other age group. Employees and the self-employed (75% of internet users), as well as students (70%), are more likely to shop online than retired/inactive or unemployed people (both 54%) (Eurostat, 2019).

We can see a stable trend of increasing digital buyers worldwide. According to Eurostat, more than 2.14 billion people worldwide are expected to buy goods and services online in 2021, up from 1.66 billion global digital buyers in 2016 (Statista, 2017). The second trend is to decrease traditional marketing advertising and to increase digital marketing. Therefore, it is important to identify the reasons and how this is happening, as well as the changes in our time under the influence of the Covid-19 pandemic.

Digital or Internet marketing has been described simply as ‘achieving marketing objectives by applying digital technologies´. Digital marketing is the use of technologies to help marketing activities to improve customer knowledge by matching their needs (Chaffey, 2013). The main difference between digital and traditional marketing is the medium through which an audience encounters a marketing message. Classic marketing channels involve traditional channels such as billboards, printed media, newspapers, TV, radio, and have been reaching a large audience for decades due to the simple and structural presentation style. Even today, the classic methods of advertising have a strong presence in the population and often a high reach because people who have little internet affinity are also addressed. Corresponding examples can be observed in the text on numerous advertising posters in Germany and China (picture 1 and picture 2).

Figure 1: *Traditional advertising posters in Bochum (Germany), 2019*

Source: derwesten.de, 2019

Figure 2: *Traditional advertising posters in HongKong (China), 2019*

Source: alarmy.com, 2019

Online advertising is a powerful marketing vehicle for building brands and increasing traffic for companies to achieve success (Song, 2001). The biggest advantage of digital marketing is to be able to reach the target audience using interactive media. However, in many cases, it can be more cost-effective, it cannot be used anywhere nor is it targeted to the concrete audience and individuals. As John Chandler-Pepelnjak (2008) noted, in terms of producing results and measuring success of the advertisement money spent, “digital marketing is more cost efficient to measure the ROI on advertisement” (Pepelnjak, 2008). Additionally, it is very difficult to accurately measure success, communicate with possible customers, and to personalize the ad in some way.

For a better comparison between traditional and digital marketing, their benefits, and drawbacks, see Table 1.

Table 1: *A basic comparison of the strengths and weaknesses of traditional and digital marketing*

Traditional Marketing	**Digital marketing**
Traditional advertising is physically perceptible and radiates a high level of seriousness (+)	Very high expenditure due to high competition (-)
High reach & strong branding effect, as target groups that are not internet-savvy, are also reached (+)	Only internet users are reached (-)
Depending on the medium, high scattering loss (-)	Relatively low waste due to the personalization of advertising material (+)
Ad placement rigid and unchangeable (-)	Variable area of application (+)
High investment (-)	Already possible with low costs (+)
Accurate measurement of success is very difficult to realize (-)	Precise tracking of all activities possible (+)
Little scope for personalization (-)	Personalized customer approach (+)
Hardly any dialogue possible (-)	Interactive channels (+)

Source: author

From the comparison of advantages (+) and disadvantages (-) of both forms of marketing, we just summarized the following: a) in many cases the advantages of traditional marketing are disadvantages of digital; b) the perfect marketing does not exist; the two forms of marketing compared have made sense and are used by companies depending on the context and the stage of development of the company. However, traditional marketing was successful decades ago (Yusof, 2017).

What trend can we see today? In the following chapters, based on statistical data analysis and predictive data mining, we will discover the modern trends and strategies of global advertising, having in mind the following research questions: 1) Could we find the main traditional marketing instruments and methods that are still effective in use together with several new approaches? 2) Which of these two marketing strategies is optimal for a particular company in a time of a global pandemic where digital marketing is becoming increasingly important, but traditional marketing is still present?

2.2. Trend in marketing techniques and advertising strategies

There are a variety of classic marketing techniques, which together with new approaches are universal to use in business and marketing companies' strategies. In the following, we will take a look at some specific techniques that are used in both traditional and digital marketing, starting with the AIDA model.

<u>AIDA model:</u> Although the AIDA model was developed a century ago, the basic principle of the model is still relevant, despite a variety of modifications. Solomon (2010) defined that the key to the successful implementation of the AIDA model is understanding the mental state of the buyer. AIDA is a communication model designed to capture the process that firms go through to reach prospective buyers to sell their products and services. There are four main

steps: Attention, Interest, Desire, Action (Belch, 2008) and Satisfaction (Kotler & Armstrong, 2003 & 2011).

PPPP is a variation or concretization of the AIDA principle. The four P's stand for Picture, Promise, Prove, and Push. The final aim of this multistage model is also to turn the potential customer into a buyer. A typical example of the use of PPPP is the sales shows on television.

Unique Selling Proposition: In marketing, the term USP ("Unique Selling Proposition", also "Unique Selling Point") refers to a unique value proposition that sets a product or service apart from similar offers by competitors. The USP is also equated with a unique selling point. By defining USPs and communicating them to the customer, an attempt is made to influence the purchase decision in favour of one's product in a highly homogeneous market environment. In short, it is a feature of the product that is unique or special.

Social networks can help connect consumers and companies around a cause to emphasize social responsibility. In 2018, Mercadé-Melé and a group of researchers developed a model to predict the impact of socially responsible activity advertising on perceived corporate social responsibility (CSR) and its influence on customer loyalty (Mercadé-Melé et al., 2018).

Discussing the relationship between a social media platform and the value co-creation to offer, Kim & Choi (2019) concluded that there are four key drivers of social media success: Experience, satisfaction, expression, and sharing ability. Each of these drivers, in turn, contains conditions for understanding the user value creation process and creating drivers for successful social media strategies.

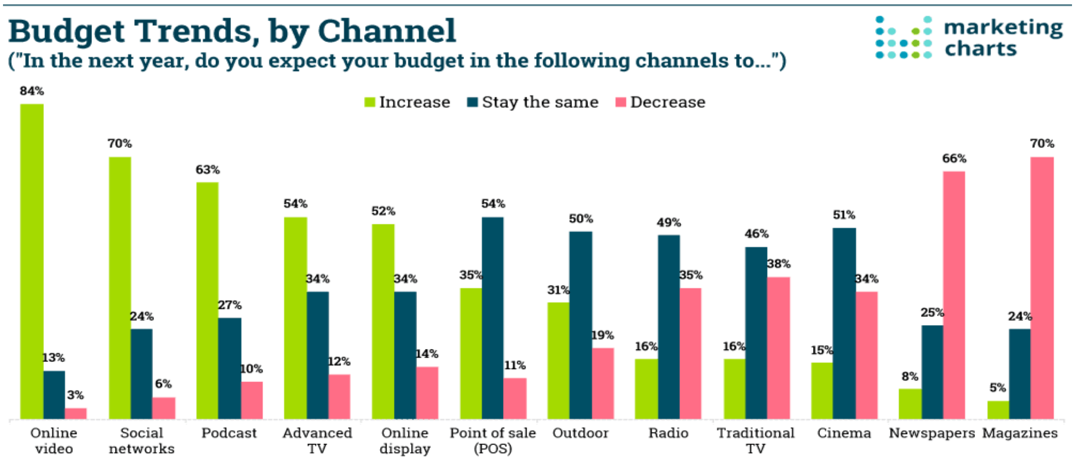
We strongly believe that this diversity of marketing techniques and approaches has a universal design. Old methods like Aida and others, together with modern approaches to marketing and advertising strategies, will continue to be used by companies in the future, regardless of whether the marketing is traditional or digital, whether it is a time of crisis (Corona-crisis, others) or "normal" life.

As we will see in the following, the relevant literature also advises companies to do this in general because only with this mixture of older and newer research methods can both past and present conditions be fully analysed and understood. This is necessary to be able to assess future developments. That this is also confirmed in the case of global trends in advertising before and after the Covid era, we see in the following statistical data analysis (involving descriptive data such as several international survey data and observational data).

2.3. Global trends in advertising before and during the Covid era: statistical data analysis

At the beginning of 2020, the coronavirus began to spread bit by bit throughout the world. This presents us with unprecedented challenges in medical, social and, above all, economic terms. Restaurants, offices, and hotels have had to close, and local customers are staying away. Therefore, the following questions arise: What influence does the pandemic have on the international marketing and business success of companies? Were the trends identified trends strengthened or broken? The international business practice shows us that during a recession, businesses usually become alarmed by declining revenue and consequently cut back their advertising budgets. On the contrary, there are several research studies showing that businesses ‘maintain or even expand advertising spending’ can generate a boost in revenue and market share’ (Adgate, 2019). The question is how long in a period of the Covid-19 crisis can the companies do that? In the analysis of companies advertising spending on social media channels, we can discover the companies' trends in advertising policies before, during the pandemic, and in a post-pandemic recovery. Figure 1 demonstrates the trend towards this fact. The mood in the marketing industry before the spread of the pandemic was significantly better.

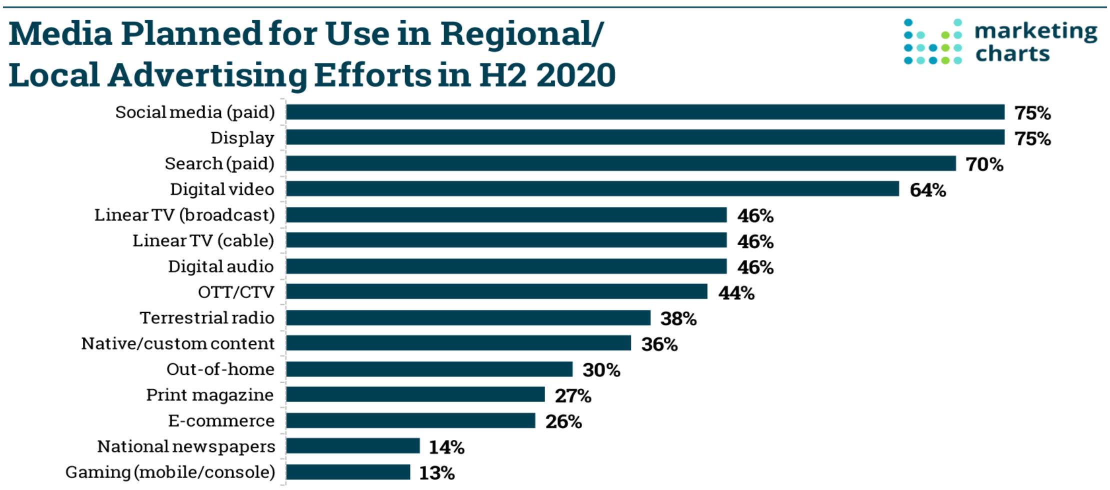
Figure 3: *Global Budget Trends, by Channel according to Kantar Survey in 2019.*



Source: marketingcharts.com (Data source: Kantar), 2019

According to the Kantar Survey in 2019 (Kantar, 2019), 488 senior marketing leaders from different global agencies and media companies were asked to answer a question about how the budget for the individual marketing channels will change in the next year. Because the statistics show us by what percentage the budget will increase, stay the same, or decrease, we get a very good idea of the sentiment in the marketing industry before the pandemic spread. This is because the statistics are from the middle of 2019, a time when no one predicted that the world could be captured by a global pandemic. However, some important global trends towards increasing online marketing can already be identified. While more and more money are being put into online videos (+84%), social networks (+70%) and podcasts (+63%), the budget for cinemas (-34%), newspapers (-66%) and magazines (-70%) is being greatly reduced. Spending at point of sale (POS) (54%), outdoor (50%) and radio (49%) remains largely unchanged (Kantar, 2019).

Figure 4: *Media Planned for Use in Regional/ Local Advertising Efforts in the second Q., 2020*



Source: marketingcharts.com, 2020

Based on the media statistics from June 2020 with 150 marketer and agency respondents, it can be observed (see Figure 2. above), that the trend to digital marketing and advertising has taken hold not only on a global level but also on a regional level (an US, as the example) with even more efforts being put into digital advertising for the second half of 2020 (the year of the Covid-19 outbreak).

In summary, investments in traditional marketing channels are decreasing, while those in digital marketing channels are increasing. In the following chapters, we will use examples of China and Germany to uncover the strategic trends in the advertising strategies of these countries. For this purpose, comparative country analysis (China and Germany) and marketing forecasting methods such as trend projection (Figure 3, Figure 4 and Figure 8) will be used.

3. China: the strategic trend in advertising in a Covid-19 era

China will be the world's largest economy by 2025 at the latest (55% digital at about $12 trillion), $30 trillion (GDP) in total by 2030, and $50-60 trillion (GDP/PPP) by 2050 (Reserach and Markets, 2021).

The following two statistics show the developments in digital advertising spending for two overlapping but different periods. The comparison is particularly interesting because the first statistic (2018-2023) from 2019 was assembled before the outbreak of the Corona pandemic, and the second statistic (2019-2024) from 2021 was compiled during the Corona pandemic.

Figure 5: *Digital Ad Spending in China (2018-2023)*

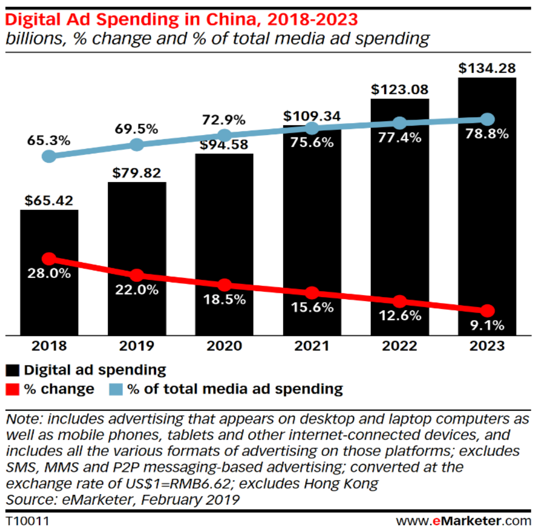
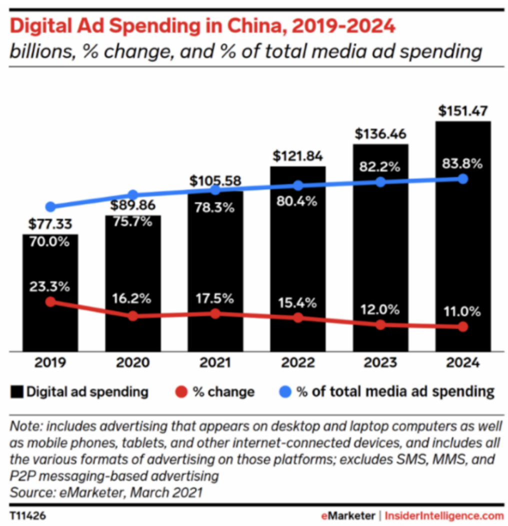


Figure 6: *Digital Ad Spending in China (2019-2024)*



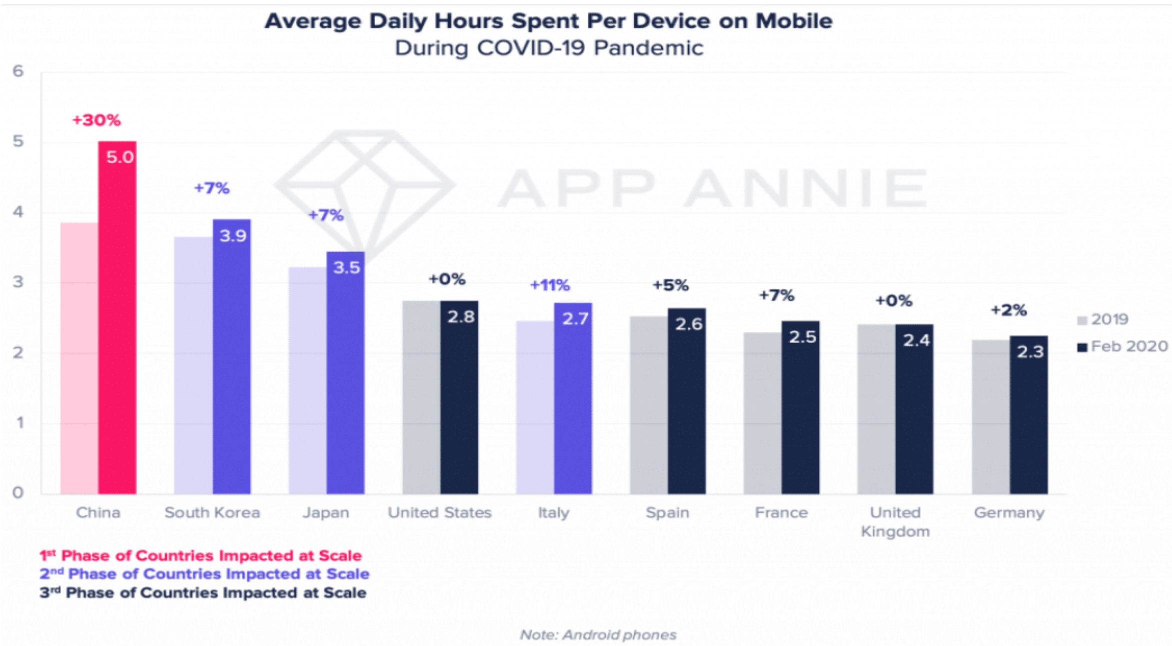
Source: eMarketer,2019 and eMarketer2021

Above (see Figure 3 & Figure 4) we can observe
data set with two contrasting statistics. Statistics for February 2019 not only illustrate current figures but also provide forecasts for the coming years. With the statistics from March 2021, it is possible to optimally check whether these forecasts have been undercut or exceeded, or whether they have remained the same. In the February 2019, it can be seen that digital ad spending increased, reaching $65.42 billion (Emarketer, 2019).

This trend is expected to continue for the next 2019-2023 years, reaching an overall digital ad spending of $134.28 billion in 2023, or almost double the growth from 2018. Figure 4 with the statistics from March 2021 shows that the actual firms' expenditures in digital advertising in 2020 were $89.86, which was below the projections, i.e., $94.58 billion.

Many companies in China have lost a lot of revenue due to the corona pandemic. To ensure the firms' liquidity and financial stability of firms, international marketing had to be restricted. Respectively, the forecasts for the years 2021 and 2022 have been corrected downward. Therefore, it is more interesting that the forecast for 2023 has been raised from $134.28 billion to $136.46 billion (Statista 2020, forecast for 2024). Digital marketing spending is estimated to reach a record $151.47 billion in 2024. This illustrates once again that in China, too, the pandemic is a catalyst for the shift away from traditional to online marketing. Whether it is accessing corporate websites, checking the latest news, or socializing on the various social media channels, the hours we spend online each day increased significantly in the coming weeks after the Corona crisis was announced. According to the Mobilkommunikation Forum (2020), the consumption of mobile data volume has increased by 30%. In China, where the measures have been in effect for some time, the development is seen even more clearly: in February 2020, smartphone use also increased by 30%, reaching 5 hours per day compared to the annual average in 2019 (Kristanto, 2021 from App Annie).

Figure 7: *Average daily hours spent per device on the mobile during the Covid-19 pandemic*



Source: appannie.com, 2020

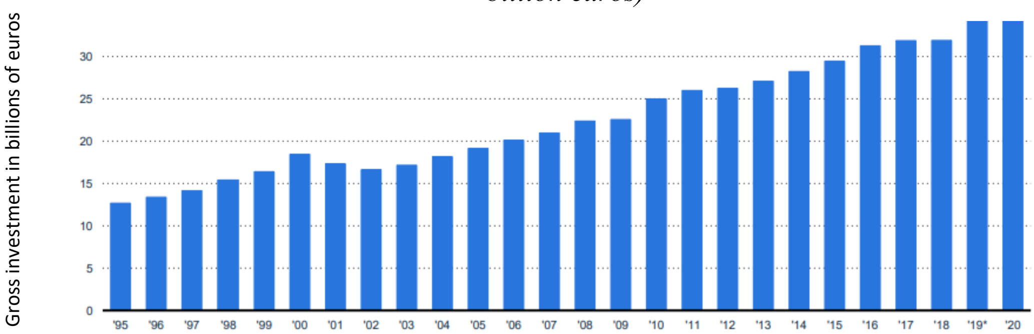
The global developments trends in digital advertising against traditional one that accelerated under the impact of Covid-19 were revealed in China. The use of digital devices such as mobile phones has increased proportionally during the pandemic. In 2020, an extremely high proportion (75.7 %) of all advertising spending was put into digital marketing. China can lead the way in advertising spend growth. According to Business Insider Intelligence, this is exactly the case, as of the 37 national markets we cover, only China saw overall ad spend growth of 7.4% in 2020, but even this increase represented a huge slowdown. This year, all markets will recover (Business Insider Intelligence, 2021). This is another reason why we now look at another country with a strong economy, Germany.

4. Germany: the strategic trend in advertising in a Covid-19 era

Before making a purchase, beyond the price, German consumers like to learn as much as possible about other similar products, features, etc. According to some studies, German consumers are among the most demanding in the world. Some consumers are willing to pay more for a better-quality product. Consumer confidence is high (above the average for OECD countries), but it dropped by 5.9% in September 2020 (OECD stats, 2020). Online shopping has become the norm in Germany and the country is Europe's largest online market. Consumers are relatively open to the products of international companies, with slight preferences for local, national, and European products. The quality of products is the main source of brand loyalty to Germans. Recent research in this field has shown that about 60% of the population is willing to buy the same brand several times in this case. Social networks are a useful way to learn about products, but also in the discovery process. Comments left by other users can determine a purchase decision. However, due to concerns about data collection by companies, Germans can be passive users of social networks (Nunan et al.,2018).

To get an initial overview of the overall situation in the field of marketing and advertising in Germany, it is useful to look at the developments of advertising investments in Germany until 2020.

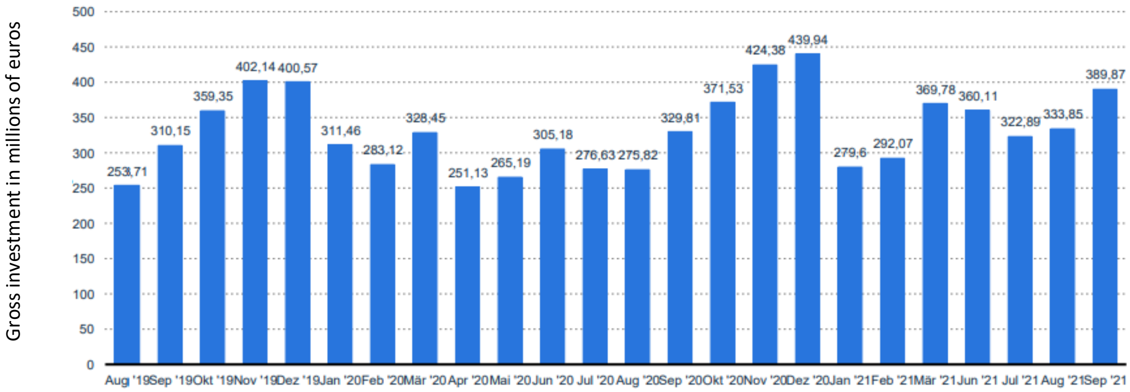
Figure 6: *Development of gross investment in advertising in Germany from 1995 to 2020 (in billion euros)*



Source: Statista.de, 2021

We can see that before the pandemic Germany's digital advertising investments tripled from 13 billion euros in 2015 to 35 billion in 2019 (see Figure 6 above). However, after the beginning of the year 2020, investments began to decrease. Figure 7 shows the gross advertising expenditures by months from the pre-pandemic and pandemic period (August 2019 – September 2021) during the year based on selected months. Let us look at the big picture again. In February 2020, we forecast 13.6% growth for digital advertising spending worldwide for the year. The final figure was very close 12.7%. However, total ad spending declined by 1.2%, driven by a 15.7% contraction in traditional ad spending (Cramer-Flood, 2021).

Figure 7: *Gross advertising expenditure for online advertising in Germany in selected months from August 2019 to September 2021 (in millions of euros)*



Source: Statista.de, 2021

It can be observed that regardless of whether it is a phase of normal life or a pandemic, advertising expenditure is significantly higher in the months from September to December than in the following months. In our opinion, it could be explained by the following reasons. Firstly, after the warm summer months, fewer people are out and spend more time at home, where they are more likely to become aware of advertising via digital devices. Secondly, spending is particularly high in December due to the Christmas business, when numerous promotions are advertised in different ways. Data from April 2020 shows the lowest digital value compared to other period ad spending (Figure 7). The main reason for the lowest digital, but also general marketing expenditures at this period is Angela Merkel's television speech on the occasion of the Covid-19 pandemic on 18 March 2020. In her 13-minute speech, Merkel described the Covid-19 pandemic as the greatest challenge since the Second World War. This can be considered as one of the biggest influences during this time because I cannot remember that Angela Merkel has ever talked that directly to people, especially in such an emotional way. Numerous companies already recognized here what drastic consequences this pandemic could have for their business and restricted marketing in general, but of course also specifically in the digital sense.

It is particularly striking that digital marketing expenditures continuously rose in the period from August 2020 to December 2020, when they reached a record high of €439.94 million. There are several reasons for this. On the one hand, we have observed that the Christmas business plays a special role. On the other hand, we have already seen in the second graph that the efficiency of digital marketing channels (social media, email, SEO/SEM, PR, TV) has a significantly higher presence than traditional ones (radio, magazines, newspaper). Last but not least, companies have also taken into account the additional factor that more and more people have shifted their lives to the digital world. Furthermore, it can be noted that in the monthly comparison, the advertising expenditures for 2020 and 2021 clearly exceeds that for 2020. The month of September can be taken as an example. Therefore, the expenditure in 2019 amounted to €310.15 million in this month. For the same month, €329.81 million was spent in 2020. For the same period, these increased again by more than 18% and reached a level of €389.87 million.

If we observe the peculiarities of ad marketing in Germany before and during the pandemic within the main industries (see Table 2. Below), we can see the interesting trend of which industry will spend the most on digital advertising.

Table 2: *Growth in digital advertising spending in Germany by industry, 2019-2023% change*

Main Industries	2019	2020	2021	2022	2023
Retail digital ad spending	10.6%	8.5%	25.6%	17.8%	14.8%
Digital advertising spends for financial services digital ad spending	14.1%	14.8%	20.1%	15.4%	11.5%
Automotive digital ad spending	10.3%	4.0%	11.4%	12.0%	11.0%
Travel digital ad spending	8.4%	-42.0%	26.4%	26.0%	20.2%
CPD digital ad spending	9.4%	21.7%	21.2%	16.8%	13.1%
Digital advertising in health and pharma digital ad spending	17.6%	22.2%	10.2%	8.3%	7.4%
Other digital ad spending	9.0%	18.6%	20.6%	13.3%	9.7%
Total	**10.5%**	**8.0%**	**10.0%**	**15.0%**	**12.0%**
Note: Includes advertising that appears on desktop and laptop computers, as well as mobile phones and other devices and includes all the various formats of advertising on those platforms					

Source: Author on the basis of eMarketer.com statistics, 2021

In Table 2. we see the dynamics of the main sectors of digital advertising spend. Here, we can observe an overall increase in spending from 10.5% in 2019 to reach 12.0% in 2023 with a moderate decrease during the beginning of the pandemic from 10.5% in 2019 to 8% in 2020. The decrease in spending is reasonable because during the first year of the Covid-19 pandemic, companies had to maintain their financial stability, limiting the marketing budget.

The pandemic is not over yet, but a strong increase in total advertising spending can be observed for 2021, with both digital retail and digital financial services leading the way. We can explain that with the peculiarities during the pandemic. This Covid 19 pandemic is creating new behaviours among people who stay at home, teach, learn, and work from home. Of course, this also applies to customers who buy online, which in turn is changing the behaviour of manufacturers and marketers that are rapidly taking more of their business online. From Table 2 we can see that recovery from the crisis is expected at different rates within different industries in Germany. The travel digital ad spending is decreasing, which is obvious: due to the Covid-19 virus and the restrictions in every country caused by it, a lot of people don t want to travel, while others are not even allowed to do so. That is why there was a strong decline (fivefold drop) from 8% in 2019 to 42% in 2020. So, the question remains whether the travel industry can recover with the planned 20% increase in digital advertising spending by 2023? From the table above we can also realise the overall increase in spending from 10.5% in 2019 to 12.0% in 2023 with a moderate decline during the beginning of the pandemic to 8% in 2020. The decline in spending is reasonable because during the first year of the Covid pandemic companies had to maintain financial stability, limiting the marketing budget.

In summary, it can be said that the importance of digital marketing in Germany is increasing year by year and that the Corona pandemic has not slowed this trend down, rather it has driven it forward.

Conclusions

The global pandemic has resulted in changes in advertising, marketing, promotional, and media spending, forcing businesses and brands to revaluate their thinking about current and future advertising and marketing campaigns to maintain a steady stream of income. These challenges and changes could belong to the post-recovery period and normal life; therefore, we think that this period of business and social life might be called a pandemic Covid-19 era.

In general, this article has proven that digital marketing is becoming increasingly important on the international market in general, as well as on the national and regional levels. We presented the strategic business challenges caused by the Covid-19 pandemic at the country level in China and Germany. For me, I have never experienced Chancellor Angela Merkel in such a direct and emotional way. On at least one day, 18 March 2020, almost every citizen of the Federal Republic of Germany became aware of the seriousness of the situation. Businesses and marketers have responded in spades, having to navigate a turbulent world from the beginning of the pandemic period to the present day. It also affected companies' marketing and advertising strategies. Immediately after the pandemic, there was an immediate drop in advertising spending (15% in China and 8% in Germany). However, we have also shown how quickly the advertising market is recovering and will continue to grow in the future (we observed this for the period up to 2023). It became clear that within a few months, the penetration of digital advertising and e-commerce in China and Germany had jumped years ahead, accelerating the slow digital transformation process that was still taking place before Covid-19 broke out.

The fact that traditional marketing is increasingly being replaced by digital marketing is mainly due to the efficiency of the individual marketing channels. For example, right from the start, we found that digital media (social media, email, SEO/SEM, TV) were significantly more effective than traditional media (radio, magazines, newspapers). Since younger people, in particular, are spending more and more time on their mobile phones, social media, and in front of their computers, this trend will most likely continue in the future. In addition to the higher effectiveness of the respective marketing channels, this is also due to the aforementioned techniques that the management of a company can use to attract customers. In the specific description of the Aida model, the PPPP model, and the USP, it became clear that all these techniques can realize their full potential in the online area only.

The pandemic accelerated digitalization and changed consumer behaviour, as well as business, marketing, and advertising strategies. Consumer behaviour is likely to change after the quarantine period and shift towards online shopping in general. New patterns of consumer behaviour can serve as indicators for manufacturers, retailers, and marketers. (Svecova et al. 2020).

The global trend away from traditional to digital marketing that emerged in the years leading up to the Covid -19 era not only continued under the influence of the pandemic but is more likely to intensify in "normal" life in the future. How all of the above tendencies, trends, and developments will continue in the post-Covid -19 era, in particular how quickly different industries will recover in the post-pandemic period, and how marketers will change their brand advertising policies during the Covid-19 era and beyond, will be the subject of our further research.

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DEVELOPMENT AND SUPPORT OF HIGHER EDUCATION IN THE PILSEN REGION

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Abstract
Based on the authors' scientific cooperation, research results, and teaching experience, the goal of the article is to analyze examples of development and support of higher education in the Pilsen region. The University of West Bohemia in Plzen is the only public higher education institution in the Pilsen Region. In the years 2017 -2022, two ESF projects were realized and one of its activities is focused on "Improving Educational Activities and Modern Educational Trends" and on the subsequent implementation and reflection of student education with new teaching methods. The aim of the project is a comprehensive system of interconnection of the education of academic staff in the area of increasing pedagogical competencies with the introduction of new teaching methods into practice and taking into account the extension of pedagogical competencies within the framework of the career order the evaluation of the quality of teaching in full time and part-time study programs as the part of the key criteria for university evaluation. The results show one example of approaches to survey this problem.

Introduction

The University of West Bohemia in Pilsen (UWB) is the only public university based in the Pilsen Region. Its history begins in 1991 when it was created by merging two parts that have existed for more than forty years - the former University of Mechanical and Electrical Engineering (with four faculties - mechanical, electrical, applied sciences, and economics) and a separate Faculty of Education. At present, the UWB has 9 faculties and two university institutes, 62 departments, 110 study programs, and 11,000 students. It offers studies in technical, humanities, economics, medical and artistic fields. Individual faculties do not exist in isolation, but they cooperate in the preparation of students in science and research, they solve joint projects. An example of such cooperation is the ESF II project of the University of West Bohemia in Pilsen. Like the ESF I project (2017-2020), it focuses primarily on improving the quality of education at all faculties. The heterogeneity of disciplines and the unified study environment of the university make it possible to support multidisciplinary and modern education through subject changes, the use of modern teaching methods, and the innovation of existing study programs concerning the needs of the labor market.

In the ESF I project, many analyzes related to monitoring the success of studies, evaluating teaching methods, and evaluating study programs by graduates, applicants, and employers were carried out. Their results helped to identify problem areas in the educational process, which the researchers focused on in the follow-up ESF II project (2020 - 2022). The basis of the whole system of change became the education of academic staff in the field of university didactics. Courses are offered by the Quality Division in contact and online form. Authors of subject changes can use the methodological support of experts from the university pedagogy team when choosing new teaching methods. The department also provides mentoring for beginning university teachers and technical support for authors of electronic study materials. In the EF II project, new teaching methods are applied to the teaching of approximately 200 professional subjects. The whole process is monitored in terms of achieving the required learning outcomes. Experts from practice are involved in the preparation of subjects, their teaching, and its evaluation, and foreign experience is used. The researchers of the project, including the management of the faculties, meet regularly at seminars designed to share good practices in the field of teaching. Several solutions emerge from the solution of these projects, which by their nature go beyond the scope of the university. Above all, the effectiveness of the continuity of individual projects enabling a system solution was confirmed.

While the first project focused mainly on finding the causes of study failure, setting up a system of different teaching evaluation methods, and a support system for change authors, the follow-up project deals with specific solutions to identified problems and the use of methods that have proven effective. A key element is the education of academic staff in teaching methods and other pedagogical-psychological aspects of working with students. Every year, a significant qualitative shift is evident between the study aids created in both projects. Many authors used the knowledge gained from the courses, some of them learned in their creation of study materials during individual consultations with members of the university didactics team. Project leaders were initially concerned about how academics would accept support evaluations and possible criticism. However, it turned out that personal contact with experts in university didactics and the possibility of continuous control of the created study materials eliminated the problems in this area. A significant feature of the project is the constant evaluation of all processes. The researchers do not rely on their often-long-term experience but try to find out how to respond to the changes in the student population using qualitative and quantitative research methods.

The content of this article is based on research at The University of West Bohemia in Pilsen in two ESF projects of this university (2017 - 2022). The approaches in the survey are based on three steps of this research, the first was realized in the year 2017 as analyses of rules of the system of quality assurance of educational, creative, and related activities and internal evaluation of education of the University of West Bohemia. The second step was realized in the year 2018 as pilot research and the main results were published in this journal in article the quality assessment methods of teaching in the Czech Republic (Safrankova et all, 2019). In 2019, the ESF project of the University of West Bohemia in Pilsen (CZ.02.2.69 / 0.0 / 0.0 / 16_015 / 0002287) and its activities 2 focused on "Improving educational activities and modern teaching trends" and the subsequent implementation and reflection of students' education with new teaching methods.

The analysis of teaching methods aims not only to improve the educational process but above all to direct educational methods to the activity of students so that educational methods meet the needs of current students. To analyze the quality of teaching and the educational process, the survey used the method of questionnaire research in 2019 in connection with in-depth interviews with students, which took place in 2018. The survey was focused on 616 students of all faculties of the UWB. The results of the questionnaire survey are used to expand (accurate classification, delimitation, definition) of activation methods of teaching at all nine faculties of the University of West Bohemia.

The third part is concentrated on part-time students and part-time study programs in the part of teaching methods and to about survey on the organizational condition of part-time study and priorities of part-time students.

1. Universities and teaching methods

The quality of teaching at universities and methods of teaching are discussed for a long time. Currently, many authors analyze the problematics of labor market competencies of employees in the context of possibilities in changing theoretical approaches to educational methods. (Grenčíková, Kordoš, & Navickas, 2021; Stareček, Gyurák Babeľová, Makyšová, & Cagáňová, 2021; Pudil, Somol, Mikova, Pribyl, & Komarkova, 2021; Vetráková, Šimočková, Kubaľ, & Malachovský, 2020; Safrankova & Sikyr, 2018, 2019). Many authors discuss that continuous improvement of teaching must be permanently implemented in the pedagogical process, which requires increased demands on students and teachers, systematic awareness, explanation of the benefits of change for both parties, training of teachers, and methodological assistance, including the use of feedback mechanisms such as teaching assessment, teacher satisfaction surveys and students. (Lorencová, 2017; Vasutova, 2002; Tureckiova, Veteska, 2008)

This problem is too a long time emphasized and pointed out in earlier declarations aimed at harmonizing the construction of the European Higher Education System (European Higher Education Area, 1999). All other successive European Councils have consistently stated that European universities must contribute to the creation of a Europe of knowledge. These long-term approaches are also reflected in the Amendment to the Higher Education Act, approved in 2016. This obliges universities to ensure the quality of educational, creative, and related activities and the internal quality assessment of these activities in Section 77b. The text of the Act states: "The university is obliged to implement and maintain a system of quality assurance of educational activities in cooperation and mutual relations of the university with other universities, public research institutions and other legal entities engaged in research, experimental development or innovations, employers of graduates, entrepreneurs in the industrial and commercial spheres, business associations and other persons or bodies performing, supporting or using the educational or creative activities of universities or its results." (Amendment to the Higher Education Act, 2016). European Strategy 2030 towards universities declares the necessity to increase analyses on quality of teaching and compare their approaches to new teaching methods.

Continuous improvement of teaching must be permanently implemented in the pedagogical process, which requires increased demands on students and teachers, systematic awareness, explanation of the benefits of change for both parties, training of teachers, and methodological assistance, including the use of feedback mechanisms such as teaching assessment, teacher satisfaction surveys and students. (Lorencová, 2017)

2. Goal and methods

The goal of the article is to analyze approaches to analyses of quality teaching methods and opinions of surveyed students in the University of West Bohemia in Pilsen in years 2017 to 2022 in two ESF projects.

The pilot survey was conducted between May and September 2018 in the form of 79 in-depth structured interviews. The respondents were very active and motivated students, members of the Academic Senate and student organizations, as explained in the introduction. Selected students, especially those of higher grades, were trained for the pilot in-depth interviews. On average, there were 3-4 students (interviewers) per faculty. Trained interviewers conducted in-depth interviews with students, mostly over one hour. Students had at their disposal a detailed scenario of a controlled interview, recorded the interview after the respondent's consent, and then rewrote it for evaluation. The structure of respondents reflects the opinions of selected students from seven faculties (from the Faculty of Mechanical Engineering - 15 students, from the Faculty of Law - 11 students, from the Faculty of Philosophy - 13 students, from the Faculty of Education - 14 students, from the Faculty of Economics - 6 students and from the Faculty of Electrical Engineering 10 students). According to study years, 15 students' study in the bachelor program at the end of the first year, 23 at the end of the second year, and 22 at the end of the third year, 19 students are in the master's degree.

There are 32 key questions, focusing on different perspectives on the evaluation of individual teaching methods. The respondents first answer the questions as to how they would ideally study the field of study at university (ratio of lectures, exercises, other activities) and which activities motivate them to learn, anchor knowledge, and develop skills, including the development of analytical and critical thinking. In the second key part of the in-depth interview, respondents describe in detail the reality of using and evaluating teaching methods in terms of creating and fixing knowledge and skills development (breakdown into lectures, exercises, and other teaching methods), giving examples of good practice but on the other hand approaches of teachers.

The questionnaire survey starts in 2019 was established as a questionnaire focused on the evaluation of quality teaching methods. It aimed to obtain as many suggestions as possible to improve the quality of teaching methods. This targeted intention of the questionnaire survey on the one hand brought very good and detailed results on the quality of teaching methods, on the other hand, it is necessary to emphasize that the results contain only a small number of negative attitudes and opinions and are influenced by students' efforts to contribute to improving teaching methods. The questionnaire identifies respondents (faculty, year, field of study, study average, gender), questions about students' opinions on the study, such as their interest in the study, field of study, favorite and unpopular subjects, overall satisfaction with the study at the University of West Bohemia and possible experience from studying abroad.

In the survey were students of undergraduate and postgraduate study programs at all nine faculties of the University of West Bohemia. In this year these programs were studying 9000 students. The sample was 7 % of all students. To date was used a questionnaire with 39 questions was.

The structure of the respondents reflects the opinions of students from nine faculties: from the Faculty of Applied Sciences 20 students, from the Faculty of Design and Art L. Sutnar – 54 students, from the Faculty of Economics – 65 students, from the Faculty of Electrical Engineering 82 students, from the Faculty of Philosophy – 35 students, from the Faculty pedagogical – 124 students, from the Faculty of Law – 65 students, from the Faculty of Mechanical Engineering – 73 students, and, from the Faculty of Medical Studies 98 students.

According to gender, half of the men (307 in total) and half of the women 's sample (309 in total) from the total number of 616 respondents are represented in the sample. According to the

type of faculty and studied study programs, quite logically at FAV, FEL, and FST men significantly outweigh the number of women, which fully corresponds to reality, and at FDU and FZS the number of women significantly outweighs the number of men. In the economic study programs – FEK, at FF and FPE and FPR, one-third of the respondents are men and two-thirds of women, with certain, statistically insignificant differences in terms of the sample.
The second project ESF II of the University of West Bohemia in Pilsen 2020 –2022 in key activity 2.2: Elaboration of a plan for the organization of a combined form of study at the UWB analyzed firstly opinions of faculty management (pedagogical vice-deans, heads of study departments, other stakeholders in) on a situation with part-time students and part-time system in study programs. Workshops were realized in May 2021 and a questionnaire survey among current part-time UWB students in autumn 2021.

3. Results and recommendations

Full-time students

Results in surveys show that students who are interested in studying and studying the field are generally satisfied with the teaching methods at the UWB. At the same time, all respondents agreed that they preferred activating teaching methods, both guided discussions and group work, guided discussion within the group, and its presentation. In terms of lectures, they prefer lectures with activating elements, in which the teacher continuously asks questions and students answer them. An important stimulus for reflection can be considered the repeatedly repeated requirement for home preparation during the semester and, based on it, work in exercises or seminars. Although, as mentioned at the beginning of this section, students often responded motivated to study, it is positive that the negative elements in teaching were only rarely reflected. Overall, the interviews show a relatively high level of satisfaction with current methods used in teaching. The results of the processed interviews serve as suggestions for further possibilities of activating teaching. The outcomes of the survey will be the basis for the content aspects of lifelong learning programs intended for the further education of teachers at UWB (they will be gradually implemented into the career code).

Most of the interviewed 616 students from Pilsen agreed on the importance of activation methods in lectures, most emphasize the great importance of exercises for the development of knowledge and skills and various examples from practice. For critical and analytical thinking, it is confirmed that tasks, projects, discussions, and practical examples are important, less so in teamwork. Contrary to the results of in-depth interviews, the only things that were not confirmed by the questionnaire survey are homework and homework, which students emphasized as very important in the interviews. 45% of respondents would prefer home preparation for teaching and, on the contrary, 55% do not agree. 23% are in favor of introducing compulsory attendance at lectures. i.e., one-quarter of respondents disagree, i.e., 77% of respondents agree with the current state of optional participation in lectures.

Teaching methods in terms of expanding students' knowledge. The majority of students – 95 % are satisfied with the exercises, then the practice 74% and 71% of the lecture. Other teaching methods are only for some study programs, i.e., they are not widely used - studios were mentioned by a total of 25% of respondents, of which 16% evaluate them very positively, which is the majority of those who use them. The laboratories were mentioned by a total of 40% of respondents who have them in their study programs, of which 33% evaluate them very positively, which is the majority of those who use them. Overall, 33% of respondents who use them in their study programs use listening in them, of which 22% evaluate them positively, which is the majority of those who use them.

Teaching that will activate students to learn should include examples from practice, from life - 97% of respondents; a combination of interpretation with a practical example - 96% of respondents; interesting interpretation - 96% of respondents; dialogue of the lecturer with students - 86% of respondents; interactive approach - 86% of respondents; connection of interpretation with excursion - 83% of respondents.

Teaching motivating to learn according to the respondents is one that includes mainly internships and excursions - 89% of respondents, activation in teaching - 81% of respondents, teamwork - 68% of respondents, seminar work - 62% of respondents, repetitive tests - 55% of respondents, obligation to present -39% of respondents, homework -37% of respondents.

The activating lecture should contain - additional questions - 81% of respondents; materials online and during the lecture-discussion with students a demonstration - 76% of respondents; smaller tasks during the lecture to think - 73% of respondents; requiring activity from the lecturer - 71% of respondents; so-called collecting points for smaller tasks or activities - 55% of respondents; smaller tasks before the lecture to think - 50% of respondents; only exceptionally a test at the beginning of the lecture, which is passed by only 16% of respondents.

Part-time students

The second project ESF II of the University of West Bohemia in Pilsen 2020 –2022 in key activity 2.2: Elaboration of a plan for the organization of a combined form of study at the UWB analyzed firstly opinions of faculty management (pedagogical vice-deans, heads of study departments, other stakeholders in) on a situation with part-time students and part-time system in study programs. Workshops were realized in May 2021 and a questionnaire survey among current part-time UWB students in autumn 2021.

Discussion in workshops and sharing of experience with teaching and organization of part-time studies at UWB reflects enlargement of numbers of part-time students and study programs in the last 5 years and expected numbers of study programs and students in the next 10 years.

Reasons for teaching part-time students at faculties are in correlation with organization possibilities of part-time students teaching and student requirements Part-time students are teaching in the Pilsen region, mainly in town Cheb and Pilsen.

From an organizational point of view most faculties teach Friday and Saturday, but some too on Thursdays, Friday afternoon, Saturdays, Sundays.

Most faculties have a proven one-week adaptation course or weekly training, or 14 days of training.

Gradual changes are coming of approach to study in generation Z. Starts decreasing age of students for part-time studies. Many young people start to works after secondary school and would like have continued their carrier and study part-time. There are enlarging possibilities to digitize part of teaching as new changes in trends in university teaching. Innovation of teaching methods following the characteristics and needs of the current generation Z (modern technology, availability of materials, ICT tools). Generation Z students prefer certain flexibility

in educational activities (online support, sharing experiences in virtual reality, etc.). in general classes take place on weekends, Fridays, but also other days - students must take holidays and then replace work.
Characteristics of part-time students – results of research

- They know why they study
- They have a clear idea of what they will do after graduation
- Think more about things, look for or see connections based on their practical experience
- They take their studies more seriously
- They can appreciate the work of a teacher
- They can get excited
- They appreciate the possibility of further consultations and an individual approach
- They are interested in studying
- They learn from each other, they cooperate
- They enjoy returning to school
- Overload, sometimes greater differences between students - age, experience
- They are looking for a solution with the least resistance
- They accept failure worse in old age
- Sometimes an attempt to force relief (but less so than full-time)
- Fear of shame Summary of the Czech Republic's experience
- Mostly motivated, relatively much more than full-time students UWB topics

Conclusion

This paper summarizes the current results of the authors' research focused on the quality of teaching methods in the University of West Bohemia in a project realized in the last five years. The results of the survey and realization of methods incited two ESF projects to confirm the main findings of earlier studies cited above and show some interesting tendencies in the students' analyses of quality methods of teaching that should be well analyzed and discussed. These tendencies lie in the fact that students are very motivated to learn and study by best practice examples, but in this connection, they complain of theoretical subjects with connections and practical applications. This satisfaction can increase the motivation of students to study. Students are more concentrated on abilities for the labor market and less on theoretical background. Many of them prefer examples of good practice and concentration to the practical part of universities education.

The results of a survey focused on evaluating the quality of teaching methods confirmed many mostly known means of activating teaching, ie. interactive teaching, communication, discussion, the role of the personality of the lecturer and the instructor. These activation approaches need to be continued. The results of the surveys show a very strong moment of orientation to practical examples, application of theory to practice, and practical use of acquired knowledge and skills. This offers a continuation of the discussion on the role of higher education concerning the direct practical application of knowledge and skills (which rather belong to professionally oriented higher education programs). Today's students, although they proclaim the expansion and deepening of knowledge, still emphasize their rapid practical application.

The results of surveys show that students who are interested in studying and studying are generally satisfied with the teaching methods at UWB. At the same time, all respondents agreed that they prefer activating teaching methods, both guided discussions and group work, guided discussion within the group, and its presentation. From the point of view of lectures, they prefer lectures with activating elements, in which the teacher continuously asks questions, and students answer them.

Secondly, the results show reflection on knowledge, abilities, ability to analyses, to critical thinking seeing my students. Through questions, it was found that the following competencies are used by teachers for the development of university students' knowledge and abilities. New approaches in teaching - teamwork, context development, analysis. New possibilities for further research in the area of changing key competencies, motivation, and employability of university students, especially in the area of human resources management and diversity management in the management of various groups of workers.

The results are in the methodology of teaching methods and the system of training of academic staff focused on teaching methods is being developed. The aim is a comprehensive system of interconnection of the education of academic staff in the area of increasing pedagogical competencies with the introduction of new teaching methods into practice and taking into account the extension of pedagogical competencies within the framework of the career order. The project will be finished in December 2022, key results will be published at the end of the project.

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DEVELOPMENT OF STAFF OF A SELECTED PRIMARY SCHOOL IN THE SOUTH MORAVIAN REGION IN THE FIELD OF COMMUNICATION WITH PARENTS

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Key words:
corporate social responsibility, primary school, pedagogical staff, human resources management

Abstract:
Human capital is the cornerstone of any organization, including elementary schools. The role of pedagogical staff is not only to educate and educate pupils, but also to communicate with their legal representatives, with their parents. Currently, the methods and form of communication and its effectiveness are changing. This study focuses on the development of employees of a selected primary school in the South Moravian Region in communication competence with pupils´ parents. The questionnaire survey took place in the period September-December 2021 and was attended by 39 teachers. More than 70% of respondents consider their communication skills to be very good, but at the same time more than 80% of respondents say they would welcome an improvement in their skills in this area. The results of the survey show that there is no difference between the length of practice and the need for further development of competence in the field of communication with parents.

Introduction

The school is an institution that educates future generations, develops individual competencies of pupils. School and family are two basic institutions that influence the formation and development of pupils' competencies. (Triwahyuni, 2014) Cooperation between the school and the family, i.e., between the teacher and the parent, is therefore a cornerstone for the complete development of the pupil. (Epstein et al., 2018) For this area, the key competence of the teacher is mastering communication and using appropriate communication channels to cooperate with the pupil´s parent. In today's globalized world, school-family cooperation, mutual communication, and open conversation for the benefit of pupil development are key. School-family partnerships are key to mastering good behaviour, sustainable behaviour in society, and developing habits for self-development. (IIER 6: Wyatt (1996) - school effectiveness research, b.r.) Rimm-Kaufman & Pianta emphasize the need for teachers and parents to work together to achieve a set level of education for pupils and to combine elements in and out of school. (2006) Partnership and open communication between school and family, or between teacher and parent, have two key moments: 1) This cooperation has a demonstrably positive effect on the psychological and emotional development of the pupil. 2) Well-established communication and cooperation co-create an honour of security, safety, and a confidential environment for establishing a well-functioning relationship between the two parties.

1. School-family partnerships play an important role in educating pupils. Nayir & Cinkir (2018)stated that it is not easy today to establish a partnership. Setting up good communication

and good cooperation between parents and teachers directly affects teacher performance (Broussard, 2003). Visiting parents at school, communication with teachers not only about the benefit of the student but also about the current state of school improves the relationship between teachers and family. This strengthens mutual cooperation, which brings a synergistic effect in the overall teacher-parent communication. (Bos & Vaughn, 2002).
2.
Establishing a partnership between school and family has a positive effect on communication between teacher and parent. (Bay & Kalay, 2018) When talking to a teacher, parents should learn more about how to work together to develop their child. A suitable form of development of mutual communication and cooperation is a meeting of parents and teachers at the school in the form of regular informative meetings. These meetings can take various forms, such as training activities to improve communication. The overall setting of the strategy of communication and cooperation between parents and the school / teacher is a suitable strategic tool for each school's management.

This study summarizes the findings of a survey concerning the setting up of communication between teachers and parents of a selected primary school in the South Moravian Region with an emphasis on the development of this competence as a tool for further development of pedagogical staff.

2 Analytical frameworks

This study focuses on the development of employees of a selected primary school in the South Moravian Region in communication competence with pupils´ parents. The aim of the paper is to find out the tools used for pedagogical staff for communication with parents, the need for development and education in the field of competence with communication with parents.

The presented study presents the results of a questionnaire survey conducted in the period September-December 2021; it was attended by 39 pedagogical staff of the school out of a total of 43. The return of the questionnaires was therefore 90.7%. Teachers were asked about the usual activities with which they communicate with parents (regardless of the current situation around the Covid pandemic), the period of 2021 was monitored. The questionnaire contained a total of 10 closed questions and two open questions, 3 identification questions (length of teaching practice, gender, primary or secondary school teacher). The questionnaire was sent to 43 pedagogical staff, relevant data were obtained from 39 pedagogical staff. The results of the questionnaire survey were evaluated using contingency tables.

Respondents who completed the questionnaire were divided according to the length of teaching practice into groups:
a) 0-10 years (8 teachers)
b) 11-20 years (9 teachers)
c) 21-30 years (14 teachers)
d) 31 and over (8 teachers)
Research questions were identified to assess the data collected:
1) The need for further development in competence of communication with parents does not depend on the length of pedagogical practice.
2) The pedagogue informs and communicates with the parents especially in case of a negative deviation in the pupil´s behaviour and study results.

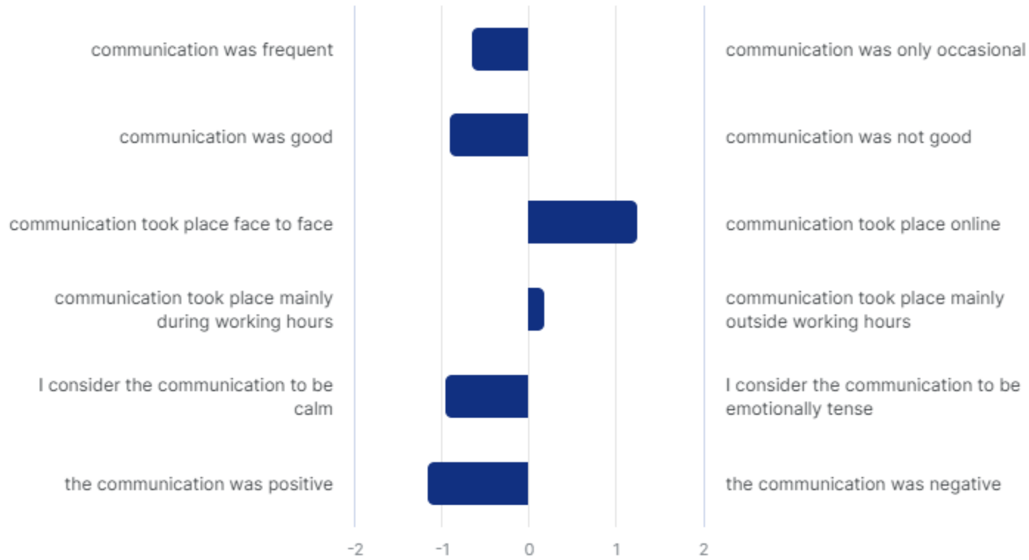
3 Results and discussion

This part presents the results of a questionnaire survey in the field of competence of pedagogical staff in the field of communication with parents. In a selected primary school in the South Moravian Region, 39 pedagogical staff (91%) took part in the research.

Out of the total number of respondents, 73 of them stated that they subjectively evaluate their ability to communicate with their parents as very good or rather good, and 27% as rather weak. In the case of resolving a conflict situation with parents, 63% of parents stated that they considered their communication skills to be rather good, 34% said to be rather weak. Although more than half of the school's teaching staff perceives their communication skills towards their parents as rather good, even in conflict situations, only 10% of them would not consider the area of communication with parents in their further pedagogical development.

This may be because 79% of respondents stated that they consider communication with parents to be a source of stressful situations in their pedagogical work. Another argument in support of the development of communication with parents may be the fact that 76% of respondents stated that they encountered aggressive behaviour and aggressive communication from parents in a given year. Considering the length of practice of pedagogical staff and their requirement for further development in the field of communication with parents, it was found that in all groups of teachers perceive the need to develop competence in the field of communication with parents as significant more than 50% of respondents.

Figure 1: *Communication with parents during the Covid-19 pandemic*



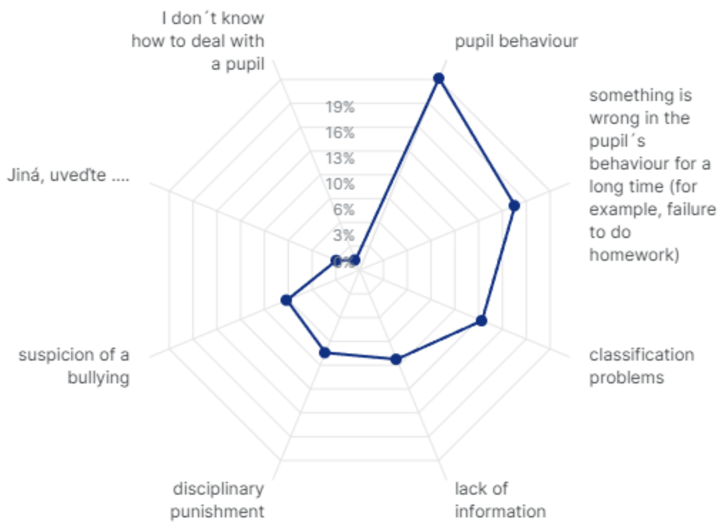
Source: author´s own

The Covid-19 pandemic (as can be seen in Graph 1) shifted communication to a much more frequent frequency than before, and the form of communication significantly prevailed in the online area (email, telephone, SMS, social networks). Although 33% of respondents stated that communication took place outside working hours and on weekends, and another 23% of respondents stated that communication took place during and outside working hours, 63% of respondents rate this communication as good, quiet (79%) and positively tuned (82%).

Overall, respondents assessed that in the last year, the Covid-19 pandemic affected communication with parents, but it was no longer as demanding and burdensome as it was in 2020 (during the first wave of the Covid-19 pandemic). The survey also monitored the area of the most common topics that the teacher communicates to parents. Educators most often inform parents in a situation where the child has a change in behaviour or learning outcomes towards deterioration, e.g., impaired achievement, insufficient attendance, suspected bullying. The educator is thus a messenger of bad news in the field of communication with parents, and this may indicate a bad or stressful experience for both parties from the communication. Topics related to pupils' strengths and achievements, information on teaching methods and forms, the school's educational philosophy, vision, and further development of the school, the class, the pupil are suitable tools for inclusion in the communication.

Currently, there are many new teaching methods such as the genetic method of reading. Parents are usually unaware of these methods, so they cannot know the principle of their use and how to proceed with this method in the framework of home preparation with the child. This is often stressful for the parents, and they can transfer this stress to the subsequent communication with the teacher. However, simply mentioning these new methods in parent meetings may not be enough for many parents. In combination with the fear or reluctance to ask the educator for an explanation, unpleasant situations arise precisely when solving the shortcomings in the pupil´s results, which may result from the initial information and communication barrier. The possibility of solving these situations (and thus alleviating the stress and tension in communication) is to regularly inform parents about what is happening at school, what procedures they use, what specific support in home preparation is welcome from the parent.
Respondents were also asked about situations they had contacted their parents over the past year. These were mostly situations concerning the pupil´s behaviour (89.5%), followed by the pupil´s work at school deteriorating over a long period of time (65.8%) and problems with the pupil's classification (50%). Only 10.5% of respondents contacted their parents when there was a lack of information passed between parents and the teacher. Other reasons for communication with parents were given by 10% of respondents, only in this group it was communication in passing on information about the pupil´s achievements, activities that the teacher takes in the classroom, new teaching methods, information about the classroom climate, passing on information about projects and opportunities for parental involvement (as in Graph 2).

Figure 2: *Topics addressed between the teacher and the parent*



Source: author´s own

Respondents were also asked about 10 possible forms of teacher-parent meetings. These forms of meeting support and deepen cooperation, increase the parent´s trust in the school and the teacher, help shape communication in the right way, as they allow continuous transmission of necessary information (not only in situations where there is a negative deviation in pupil behaviour or learning outcomes) and many also keep parents motivated to work with the school. Of the activities offered that support communication between teacher and parent, respondents use the most consultations / individual class meetings parent-pupil-teacher (15%), this is a so-called tripartite meeting.

The class teacher, the child´s legal representative and the child will meet at the agreed time. The class teacher has information and materials from the teachers who teach the child ready for this meeting. (Christenson & Reschl, 2010) Part of these meetings is the evaluation of the development of key competencies of individual children, such as communication and cooperation with classmates and teachers, motivation to learn, logical thinking, creative thinking (as in Table 1). It is common for most parents to communicate with the school only in case of difficulties and problems. Reports coming from school are often considered a criticism or a problem. It is therefore appropriate to keep parents informed about positive facts, about what has been achieved, what activities the children have completed. A parent who is used to communicating with the school more often (even if only passively), while obtaining positive information, will be less afraid of individual meetings with the teacher. If the meeting is initiated by a teacher, it is advisable to prepare the parents in advance, inform about the content and goals of the meeting. If the meeting is initiated by a parent and the solution is a conflict, it is appropriate if a third (neutral) person is present at the meeting (as can be seen in Table 1).
So far, an unused activity is the possibility of a curricular afternoon. During the curricular morning, parents learn from teachers and school management what they are learning, how and why. Parents could get acquainted with teaching methods, especially the new and unknown ones. Curricular mornings can become part of the program of information meetings for first-year parents, adaptation courses for children and parents, parent cafes, etc. Parents can help determine / choose the topic themselves, according to what they do not understand about the teaching. The meetings can be led by both teachers and invited experts. The frequency of meetings is at the discretion of the school, but meetings should not take place, for example, only once in the school year, their meaning then disappears. Another unused activity is meeting grandparents with pupils. The school invites grandparents to a lecture, which is given directly by the pupils. Grandparents can see the school and are introduced to the modern technologies used in the school. Pupils will play on the teachers and provide their grandparents with basic instructions and information on how to work with online search engines.

Table 1: *Activities supporting communication between parents and teachers (n = 39; v %)*

	Yes, I do this activity	The implementation of this activity is/ could be a source to improve communication
1A) Curricular afternoon/meeting	0	59
1B) Parent involvement in the project day/class project activities	7	15
1C) Teacher´s visit in the family	2	13
1D) Parent Cafe/educational seminars for parents that can be organized by a teacher or parent	0	71
1E) Presence of parents in teaching	3	21
1F) Consultations/individual class meetings parent-pupil-teacher	15	43
1G) Joint class meetings of parents (parent-pupil-teacher) associated with a demonstration of the pupil´s work	9	53
1H) Class meetings of parents associated with their active involvement (voting, joint activities)	5	67
1I) Meeting of grandparents and pupils	0	31
1J) Individual consultations with parents	13	49

Source: author´s own

Respondents also stated which of the offered activities, in their opinion, could lead to improved parent-teacher communication. 71% indicated the activity of a Parent Cafe/educational seminar for parents. The school has also not implemented this activity yet. The Association of Parents at School or the Association of Parents and Friends of the School can help organize an afternoon lecture for parents. The parents themselves find out from other parents the interest in the topic and organize the invitation of a certain expert accordingly. 67% of respondents described the activity of parents´ class meetings associated with their active involvement. During class meetings, parents can write messages to their children encouraging them, telling them what they have in mind, and adding a "indicia" (picture, symbol, or sentence) so that the child can recognize that the message is from them.

They will only sign themselves as "mom" or "dad". The messages are affixed with magnets on the blackboard and the children´s task is to find out the next morning that parental message belongs to them. The children they want can read the message aloud to others. 53% of respondents described the activity in the form of a joint class meeting of parents (parent-pupil-teacher) associated with a demonstration of the pupil´s work. These may include children´s performances (such as singing performances) or children in triplets representing individual subjects to the parents. Children also introduce themselves, what they like, what they enjoy at school, what they would like to be in the future. (Bos & Vaughn, 2002)

The content of joint class meetings is, of course, also the joint activities of children and parents, such as the technique of mutual drawing of hands – parents and children write in each drawn finger a mutually positive appreciation.

Table 2: *Forms of support for the development of communication and cooperation with parents by the school management*

	I already receive this support from the school management	I was interested in this support; it could help me support the development of communication and cooperation with parents
3A) Participation of school management in demanding negotiations with parents (aggressive parent, manipulative parent)	4	44
3B) Participation of a member of the school counselling centre (educational counsellor, prevention methodologist, school psychologist) in negotiations with problem parents	15	64
3C) Objection management training	36	69
3D) Training in the field of verbal and nonverbal communication	26	56
3E) Opportunity to prepare for a demanding meeting with parents in cooperation with the staff of the school counselling centre	19	39
Setting up an internal policy for conducting interviews with parents	0	44
Creating a sample document for minutes of meetings with parents	0	67

Source: author´s own

Respondents were also asked about the current forms of support from the management in support of the development of competence in communication with parents. So far, the setting of an internal directive for conducting interviews with parents or a model document for minutes of meetings with parents is completely missing. Very little support is also given by teachers in the school management´s participation within demanding negotiations with parents (situations where the parent is aggressive or manipulative).

Finally, the respondents were asked what form of support for the development of communication and cooperation between parents and teachers would welcome the school management (principal, deputy principal). The most requested activity is training in the field of objection raising (67%), the need to create a model document for minutes of meetings with parents (67%) and the participation of a member of the school counselling centre in meetings with problem parents (64%) is also perceived.

Conclusion

This presented study deals with the competence of communication of pedagogical staff with parents of pupils of a selected primary school in the South Moravian Region. All 43 employees were contacted, and 39 of them completed the questionnaire. Given that the issues of perception of current competence, tools for its development and support by the school management have so far been examined only sporadically, the topic of the study is unique in its focus.

The results of the research show that more than 70% of respondents consider their communication skills to be very good, but at the same time more than 80% of respondents say that they would welcome an improvement in their skills in this area. The results of the survey show that there is no difference between the length of practice and the need for further development of competence in the field of communication with parents. This may be because 79% of respondents stated that they consider communication with parents to be a source of stressful situations in their pedagogical work. Another argument in support of the development of communication with parents may be the fact that 76% of respondents stated that they encountered aggressive behaviour and aggressive communication from parents.

Current knowledge can be used by the school management in the strategic development of the competence of its pedagogical staff. This study is also a suitable basis for further research into the hitherto neglected issues of developing communication between teacher and parent with the aim of establishing cooperation in various types of schools in the South Moravian Region and other regions of the Czech Republic.

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A BROADER VIEW OF THE LEADERSHIP MISSION AND THE MANAGEMENT SKILLS DEVELOPMENT

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Keywords:
Management philosophy, leadership styles, management development, personnel management

Abstract:
Current "performance-oriented" management practice cannot see day-to-day management issues in a broader context. In many organizations, there can be seen an obvious worry or unwillingness of many managers to apply combinations of different leadership styles to deal with both the unique and routine management challenges of the organization and its people. The article aims to discuss management skills and leadership styles important for the success of managers and to provide an opportunity to better understand the need for systematic learning and development to achieve desired changes in managers' attitudes and behavior. The article is based on the analysis of scientific texts related to the behaviors and actions of managers and also on personal experience and observation of management practice. The article presents general theoretical and practical management and leadership concepts in both traditional and nontraditional contexts.

Introduction

People should strive to live their lives mostly like a joyful dance (Hay, 2007), which also applies to managers and their leadership practice, who should – just like therapists – "learn to dance" with the people who they lead (see Corey, 2006). In this context, the essence of a manager's role is a seemingly "simple" finding of a symbolic balance between reward and punishment (Hunter, 2013). However, this is exactly what many managers across various organizations will never succeed in. So, what's the problem?

When looking for an answer to a mentioned question, it is possible to start from a general challenge of leadership, namely how to lead people to achieve desired performance and at the same time how to build functional relationships between people at the workplace, especially between superiors and subordinates, but also between co-workers and other stakeholders. This challenge is being addressed by many researchers and practitioners from various fields around the world. The fundamental premise is the key idea of personnel management that "efficient management requires effective leadership" (Armstrong & Stephens, 2008) because management is mainly about managing and leading people (Šikýř, 2016).

A new perspective on managing and leading people relies on concepts such as "versatile leadership" by Robert E. Kaplan and Robert B. Kaiser, which emphasizes the importance of self-development and self-knowledge of managers at all levels of the organization (Pavlica, Jarošová, & Kaiser, 2015). Self-knowledge helps people to know their abilities, values, strengths, and weaknesses and thus understand their life roles and priorities (Košťálová, Cudlínová, & Němcová, 2018). The issue of self-knowledge is addressed not only in traditional scientific disciplines, such as psychology, philosophy, or pedagogy but increasingly also in other disciplines, such as management and leadership. As a result, more and more managers are realizing the importance of investing their time and effort in the development of their management skills in managing and leading people. However, improving these skills is a long way to go and requires continuous improvement in incremental steps with the support of the entire organization (Straková, Pártlová, & Váchal, 2017). Nevertheless, the responsibility for their development remains with individual managers, who need both practical experience and theoretical concepts, which will help them successfully find the right way ahead.

Based on the analysis of scientific texts related to the behaviors and actions of managers and also on personal experience and observation of management practice, the article discusses management skills and leadership styles important for the success of managers and provides an opportunity to better understand the need for systematic learning and development to achieve desired changes in managers' attitudes and behavior. The analysis of prevalent management skills and leadership styles is presented in the form of eight notes on general theoretical and practical management and leadership concepts discussed in traditional and less common contexts. The ideas of these concepts should encourage present and future managers to think about their leadership styles and develop their management skills to find a suitable leadership style depending on the current situation.

Note One: Learning to Dance with People

Changing one's approach to managing and leading people requires learning to see things in a broader context and not being afraid to use novel techniques. This leads back to the initial idea of "learning to dance with people" and realizing the "power" of human interaction. Dance is not only physical activity or a professional art, but also a more or less free personal show, thanks to which dancers have the opportunity to express their feelings and thoughts. In addition, dancing, as a natural team activity, requires a certain mutual trust between the dance partners. A similar mutual trust is required for cooperation between team members and especially cooperation between team members and team leaders. This can be a problem because natural trust between people does not have to be great and can be negatively affected by previous experiences (Vavroň, 2014). The natural distrust among people then increases in extreme situations, such as the covid-19 pandemic, when interpersonal relationships go through a demanding test and when real characters are revealed (Lesáková, 2021). In this context, it should be recalled that mutual trust is important for the development of effective relations in all human activities, but especially at the workplace, where people communicate and cooperate on achieving mutually shared goals. Striving to build good working relations based on the idea of "mutual dance" should be a priority, especially in performance-oriented organizations where there is a strong competitive spirit. Managers should learn to use various leadership styles according to the current situation.

Note Two: Using a Suitable Leadership Style

Just like any other radical change, a change in the leadership style requires first a reflection on the current manager's behaviors and actions and an awareness of both strengths and weaknesses. One of the most challenging tasks of managing and leading people is to recognize in which situations the application of a specific leadership style is efficient. A management decision about an efficient leadership style in a specific situation is associated with a manager's "mental model" of leadership, and traditionally a manager can choose from a combination of four leadership styles: directive, bureaucratic, democratic, or liberal (Košťan, Bělohlávek, & Šuleř, 2006). The problem in decision-making occurs when managers begin to realize that for more efficient leadership, they must reflect the individual reactions of team members as well as the entire team. The problem for many managers is that their behaviors and actions must focus on both the performance of the people and the performance of the organization. In this situation, finding an efficient leadership style becomes a real challenge. Managers' attempts to find a balance between people and organizations are aimed at finding "win-win" solutions that benefit all participants (Plamínek, 2011). Intentional looking for "win-win" solutions and applying them in practice to meet the needs of both the organization and workers allows managers to achieve optimal results. However, it requires systematically improving relations between superiors and subordinates.

Note Three: Changing Managers' Behavior

The idea of using various leadership styles according to the current situation requires a change in the managers' behavior. Such a change is the responsibility of each manager. Managers must learn to use new practices to meet the needs of both the organization and workers. However, managers must prepare for the change and their efforts to change must be supported by the organization. Each change means "a natural sequence of activities carried out to achieve the desired result in objectively given conditions" (Řepa, 2012). A change in a manager's behavior requires effective self-knowledge to improve one's abilities and make better use of one's potential. To do this, it is necessary to analyze the current behavior in more depth, both with the help of oneself and with the help of others. In today's "performance-oriented" environment, no one can improve without a solid analysis and a deeper understanding of what they can do for their success (Pacovský, 2000). The success of the organization is based on the individual success of each of its members, especially the managers responsible for managing and leading other people to achieve the success of the organization. Therefore, it is in the organization's interest to support managers' efforts to make any positive changes in their behavior toward finding suitable leadership styles. In particular, it is necessary to support the development of managers' soft skills, i.e., their ability to communicate and cooperate with subordinates, agree with them on specific, measurable, and achievable goals, provide them with regular feedback, or create favorable working conditions for them. All this should contribute to the better performance of workers, managers, and the organization.

Note Four: Applying Competency-Based Approach

Management theory and practice confirm that people are among the decisive factors in the success of an organization. However, there is no clear consensus on what constitutes this quality of people in the organization (Armstrong & Taylor, 2014). This quality is usually associated with the term "competency" representing skills needed to achieve desired performance. These skills are then divided into "hard skills" (technical competencies) and "soft skills" (behavioral competencies). And it is these behavioral competencies, which enable managers to efficiently communicate, collaborate, and coordinate subordinates at the workplace, are essential for successful management and leadership (Kubeš, Kurnický, & Spillerová, 2004). The development of these behavioral competencies is important for changing the managers' behavior toward applying suitable leadership styles, which, however, is not an easy matter. Conceptual changes in managers' behavior are prevented by dynamic and radical changes in the business environment. Managers are constantly facing new challenges related to new business models as well as new management practices (Nadella, 2017). In addition, a behavior change must be preceded by a change in attitudes, but this change usually occurs as a result of many years of experience, which makes the change in managers' attitudes and behavior a long way to go. Dealing with these facts requires a systematic competency-based approach to the development of managers' behavioral competencies supported by the organization. Managers must constantly acquire new skills and practices reflecting constant changes in the business environment to learn how to respond efficiently in different situations using different leadership styles. However, as already mentioned, the development of managers' competencies is primarily the responsibility of individual managers, which requires adequate motivation. The question, then, is whether managers are willing to systematically learn and develop to constantly change their attitudes and behavior.

Note Five: Encouraging Managers' Effort to Learn and Change

People are motivated when they expect that an action is likely to lead to the achievement of their goals and valued rewards that meet their needs and wants (Armstrong & Taylor, 2014). Based on this principle, it can be stated that if an organization needs its managers to systematically learn and change due to constant changes in the business environment, it must properly motivate them to systematic learning and change. Managers can be motivated by their work itself. To be motivated, managers should feel that their work is important and challenging and that it provides them with a reasonable degree of autonomy, opportunities to grow, and use their knowledge, skills, and abilities. Such work characteristics naturally motivate managers to do their best at their work. On the other hand, managers need to be stimulated by the organization to perform their work and achieve the desired performance of the individuals and teams they lead (Šikýř, 2016). To stimulate managers, the organization can use different financial and non-financial rewards, including the opportunity to learn and develop. The organization should provide managers with an environment in which managers will be encouraged to voluntarily learn and develop. Every manager in the organization should be encouraged and allowed to learn and develop their knowledge, skills, and abilities (Armstrong & Taylor, 2014). Managers are responsible for managing their learning and development, but they need the help and support of the organization. Learning and development activities should be competency-related, i.e., designed to help managers to acquire and develop the competencies they need to do their work and manage and lead people successfully. The result of organized learning and development activities should be positive changes in the managers' attitudes and behavior, which could enable them to find suitable leadership styles and face upcoming leadership challenges.

Note Six: Dealing with Upcoming Leadership Challenges

Today's world is characterized by many political, economic, social, and technical changes often coming unexpectedly and fundamentally affecting individual industries and organizations. These changes are also accompanied by significant changes in the labor market (Deloitte, 2020), both on the demand side (work arrangement and job requirements) and on the supply side (people's attitudes to work and their expectations regarding job opportunities and working conditions). The upcoming leadership challenges requiring constant changes in managers' attitudes and behavior are mainly related to the diversification of the workforce. At today's workplaces, people of different generations – generation X (1965-1980), generation Y or Millennials (1981-1996), or generation Z or Post-Millennials (1997-2012) – with different needs and expectations commonly meet (Šafránková & Šikýř, 2017). Representatives of the youngest and incoming generation Z naturally cope with life in the world of information and communication technologies, but at the same time, they deal more with interpersonal relationships and some social issues. At work, they require enough freedom and a work-life balance. On the other hand, representatives of older generations often face prejudices about their inflexibility and inefficiency, even though they have a wealth of life and work experience that they could share with younger co-workers (Cechl, 2021). These facts require a sensitive choice of leadership style, depending on the harmonization of communication, coordination, and cooperation between people of different generations at the workplace. Professional diversity at the workplace is desirable because it allows meeting the challenges of changing business environment (Kejhová, 2017). Principally, workers of different generations are better able to respond to the needs of different generations of customers. And satisfying different generations of customers is the way to sustaining prosperity and competitiveness. Diversity at the workplace affects both the performance and motivation of workers. To be motivated, workers must be properly managed and lead. And this is where choosing a suitable leadership style plays a crucial role. But it also depends on the example of the manager. Workers of all generations expect the manager to be a positive example of the proper performance of tasks and duties at the workplace. Managers must lead by example in continuous learning and improvement to meet the new challenges of the changing business environment (Dědina, Šikýř, & Šafránková, 2018).

Note Seven: Leading by Example

The idea of "leading by example" is principally associated with the initial idea of "dancing with people". Managers are responsible for achieving the organization's goals through other people who are managed and led by managers to perform their work and achieve desired performance (Armstrong & Stephens, 2008). This is a fundamental principle of cooperation between managers and other people working in and for the organization. The success of this collaboration depends on managers who are responsible for other people's productivity (Drucker, 2002). Managers must lead by example and show other people the right way to achieve shared goals, which is like dancing with other people. This challenge makes managing and leading people a very complex discipline that involves finding appropriate work patterns and suitable leadership styles depending on the current situation (Kejhová, 2017). Quality people and their inspiring management and leadership remain the key to the success of any organization. People need to understand why and how their work contributes to achieving the goals of the organization in and for which they work (Tureckiová, 2007). This is the mission of managers, who help other people to do their best at their work. Managers must set people their tasks and responsibilities, agree with them on their goals and standards, assess their results and provide them with regular feedback, create favorable working conditions and motivate them to continuously develop their skills and improve their performance. Such an approach by managers to other people will ensure that the lasting success of the organization becomes their common goal and that they will strive together to achieve it. In this way, managers can also find and bring up their quality followers among other people, which reminds the importance of people's learning and development led by managers and supported by the organization.

Note Eight: Applying Holistic Approach

Managing and leading people to achieve the goals of the organization is a complex issue requiring managers to learn to think globally and act locally (Dědina, Šikýř, & Šafránková, 2018). Managers must see issues of managing and leading people in the broader business context of the organization and then search for effective and efficient solutions to specific issues of managing and leading people to achieve the organization's goals. In this way, the issue of managing and leading people becomes a "free art" that deals with individual people and their contribution to the development of organizations (Drucker, 2002). Applying a holistic approach to managing and leading people requires thinking about the issues of managing and leading people in a broader context, treating people as individuals with unique strengths and weaknesses, and letting people do what they are good at by using their strengths (Váchová, 2020). And this is again where choosing a suitable leadership style plays a crucial role.

Conclusion

The article presented and discussed eight notes on general theoretical and practical management and leadership concepts to encourage present and future managers to think about their leadership styles and develop their management skills to find a suitable leadership style depending on the current situation. This seems to be the key to the success of a manager who manages and leads other people to do their best at their work. The fundamental idea that should help managers improve their work is to learn to dance with people, in other words, managers should learn how to lead by example and show other people the right way to achieve shared goals. This idea determines all eight discussed notes concerning the work of managers, that is learning to dance with people, using a suitable leadership style, changing managers' behavior, applying a competency-based approach, encouraging managers' effort to learn and change, dealing with upcoming leadership challenges, leading by example, and applying a holistic approach.

The choice of eight notes was not entirely coincidental, because the number eight is symbolic of the central idea of "dancing with people". The number eight corresponds to the number of advancing, hopping, or running steps that form the basis of simple Czech folk dances. So, following the example of Czech folk culture, where everything is related to everything, everything that takes place in our working lives can also be understood in context and from the overall point of view.

In modern times characterized by many political, economic, social, and technical changes increasing the uncertainty and complexity of work activities, it is necessary more than before to work with people. Planning for the future is difficult, so it is necessary to stay positive, be open to changes and make changes as a challenge. This also applies to managers who should accept the challenge of change of their attitudes and behavior to improve their abilities and make better use of their potential. Managers should constantly develop their knowledge, skills, and abilities reflecting constant changes in the business environment and the need to learn how to respond effectively and efficiently in different situations using different leadership styles.

The eight notes on general theoretical and practical management and leadership concepts discussed should encourage managers to think about their leadership styles and develop their management skills to find a suitable leadership style depending on the current situation. These eight notes to think about are presented to managers, believing that the number eight is given a special meaning in some parts of the world in the sense of "many" or "infinity". The decision to follow in the footsteps and use one's eyes on the path to change is up to each individual. Similarly, as another use of the finding that in this or that context it is often different from the Arabic numeral to its horizontal form, not to mention consideration in the future.

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CO-TEACHING STRATEGIES AND THEIR APPLICATION IN REGIONAL EDUCATION AND ADULT EDUCATION

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Abstract:
Co-teaching, i.e. the joint action of multiple educators in a classroom team or adult education, has many models. These strategies define the involvement of individual educators in teaching and point to the possibilities for guiding teaching. In practice, co-teaching can be encountered at all levels of the educational system. Co-teaching is applied in the Czech Republic in regional education, in tertiary education and its potential is also in continuing adult education. The text of the study first introduces the basic strategies of co-teaching and then discusses examples of the application of co-teaching in regional education in the Czech Republic and the possibilities of its use in initial (here tertiary) and continuing adult education, focusing on the group of (future) teachers as key elements of the educational system. The text deals exclusively with the application of the traditional form of co-teaching in face-to-face teaching.

Introduction

The text of the study is devoted to the traditional form of co-teaching and its use in the practice of regional education, tertiary and continuing adult education. Traditional or also classical co-teaching usually takes place in the full-time form of teaching in regional education, or it is part of full-time and/or face-to-face teaching (within the combined form of study) at universities and in continuing adult education (Veteška, Kursch, Svobodová, Tureckiová and Paulovčáková, 2020). The aim of this study was to define co-teaching and identify its basic models/strategies as described in the literature, especially for application in initial formal education with possible overlaps to other phases of lifelong learning (Chapter 1). The authors have also selected and briefly described examples of the application of co-teaching in the practice of different types of schools within the regional education system in the Czech Republic (Chapter 2) and in tertiary and continuing adult education (Chapter 3). In the latter chapter, attention was paid in particular to the application of co-teaching in the professional education of future teachers, and the possibilities of continuing development of educators in this innovative teaching method were presented, again mainly – but not exclusively – in the Czech Republic. For the sake of completeness, we would like to add that the Department of Andragogy and Educational Management (Faculty of Education, Charles University) is currently investigating the effectiveness of the application of virtual co-teaching (see for example Kursch, 2021) and gradually developing a methodology for its application in the practice of regional education. However, these were not included in this study and are the subject of further investigation.

The basic method used in this text was the study of electronic and printed documents that deal with the issue of traditional co-teaching. The databases used were google.cz (for examples from the Czech environment) and scholar.google.com. The international term co-teaching was first used as keywords for Czech documents. However, this did not bring the desired results and was eventually replaced by the more common team, tandem and pair teaching in Czech. Subsequently, illustrative examples were manually selected for each type of school, and for preservice teacher education and continuing education of teaching staff in co-teaching so that the selected examples were up-to-date (for the previous 5 years, i.e. since 2017). For the resources in English, the keyword co-teaching has been retained and supplemented with team teaching in the following combinations: co-teaching in tertiary/higher education, co-teaching in doctoral education, co-teaching in future teacher education, team teaching in teacher education. Relevant sources in English were selected for the study that describe models/strategies of co-teaching in its traditional face-to-face form and justify the importance of using and adopting co-teaching in tertiary preservice teacher education and in continuing teacher education.

1. Co-teaching – definition of the term and models/strategies

The term co-teaching, sometimes referred to in the Czech environment as pair, tandem or team teaching, refers to a method of education in which a larger number of teachers participate in the educational process and school teaching. Beninghof (2012, p. 16) defines co-teaching as "*coordinated instructional practice in which two or more educators simultaneously work with a heterogeneous group of students in a general education classroom*".

Dove and Honigsfeld (2018) define co-teaching similarly, but also add that co-teaching involves the overall process of preparing and delivering the lesson – through the planning, the allocation of individual teacher roles, the actual teaching with students in the classroom, its subsequent evaluation, feedback and assessment in the next planning of the teaching day.

In addition to the application of co-teaching in regional education, it can also be used in tertiary education and continuing adult education. The definition of co-teaching by the active participation of multiple educators who simultaneously act in different roles in education is given by Turkich, Greive and Cozens (2014, p. 2) for the role of the lecturer and the mentor and in relation to the goal of such a co-teaching activity as *"the lecturer and the co-teaching mentor formed a co-teaching partnership to deliver the unit, with joint responsibility for the learning outcomes and the teaching evaluations"*. Similarly, it would certainly be possible to combine other roles of educators (e.g. lecturer and tutor, theorist/academic with practitioner, less experienced and more experienced educator – see also the models or strategies of co-teaching below). The possibilities of co-teaching in tertiary and continuing adult education are also explored in more detail in Chapter 3 of this study.

Co-teaching in educational practice is therefore understood as the presence and participation of a larger number of teachers in a school classroom, or a pair or team of educators in tertiary and continuing adult education. Co-teaching can be implemented in several strategies/models. These differ in the involvement of the teachers/lecturers present in the teaching, but also in the overall distribution of teaching within the classroom/group of learning individuals. Cook and Friend (1995, In: Lusk, Sayman, Zolkoski, Carrero and Lewis-Chui, 2016) bring these strategies to life in an application to early/initial formal education. In addition, for each type, they also present the advantages of the strategy, but also point out challenges or problems that may arise.

1. One teach, one observe

One teacher leads the lessons, the other observes the progress of the lessons and collects data. In the preparation phase, they decide together what information will be useful for them and collect it, they also set up a system for collecting this data and analyse it together.

This strategy allows the teacher to collect the necessary data – this is always the focus of the observing teacher, who also reflects on which pupils are performing the tasks set. However, this model of co-teaching can create a feeling in the observing teacher that he/she is not a full-fledged teacher, but a mere observer. Even the pupils may not perceive the other (observing) teacher as a real teacher and thus may not perceive him/her as an authority.

2. One teach, one assist

In the classroom, teachers divide responsibilities – one always has the main responsibility, while the other observes students or provides assistance to students as needed.

The advantage of this strategy is that it is relatively simple to implement. Teachers take turns in their main role and divide lesson planning accordingly. Thanks to the work of the second (assistant) teacher, all students receive support. Even in this case, the students may question the teacher's work, so it is important to ensure that the main and secondary roles are rotated between teachers so that there is an equal rotation of leadership.

3. Station teaching

Teachers divide the curriculum into two or three stations and present their part of the lesson at these separate stations. If the students are older and more able to work alone, they can use the third station for their independent work or partner work with their classmates.

As students rotate between stations and thus work in smaller groups, they can benefit from a more personal and individual approach from the teacher. Similarly, disadvantaged students can be better included in this approach (they mostly benefit from smaller class sizes and possible individualisation).

Because pupils are being educated in different parts of the classroom at the same time, communication noise may be present, which may cause a poorer understanding of the material being discussed. In addition, teachers may have different levels of pacing in their explanations within each unit, which can cause problems with the timing of alternating between units – one group has to wait while the other has to finish explaining the material.

4. Parallel teaching

Teachers divide the pupils of a class and teach them the same information at the same time, this type of co-teaching also allows for a lower number of pupils per teacher.

Parallel teaching allows pupils to participate more in the practical aspects of the lesson, they can consult the material discussed together. However, as with the previous type of strategy, more communication noise tends to be present in the classroom, problematic for sustaining attention.

5. Alternative Teaching

One teacher works with a small group (e.g. 3-8 pupils), while the other teacher is in charge of the rest of the class. Small group teaching may consist of revision or preparation for the lesson.

Pupils with disabilities benefit greatly from alternative teaching, as they are also given individual attention. In a small group, pupils can communicate with each other and with the teacher. This alternative type of co-teaching strategy can stigmatise pupils with disabilities as they need more repetition and re-explanation of the material.

6. Teaming

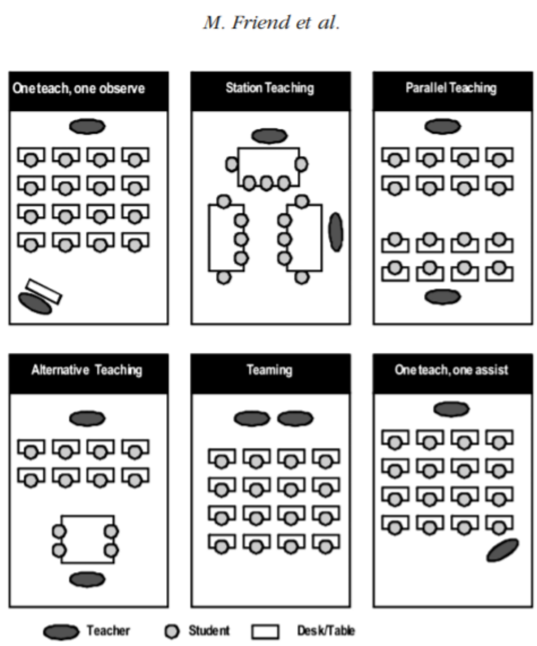
Both teachers provide the same interpretation of the material to the students, and within this approach, teachers can alternate – one leading the lesson and the other taking notes for further lesson planning.

Teaming requires a high level of commitment from teachers and a high level of mutual trust between teachers.

The different approaches suit individual teachers and classroom teams. If a school decides to introduce co-teaching, it must select suitable co-teachers who will benefit from working together and will support each other in planning and delivering the lessons.

Staněk, Karvánková, Popjaková, Kuřimská and Vančura (2017) provide further insight into the practice of team teaching used in regional education. In addition to the presence of a larger number of teachers, it can be a thematic linking of several subjects, which are connected by a single topic discussed during the teaching.

Figure 1: *Co-teaching strategies*



Source: Friend & Bursuck, (2009, p. 92, In: Friend, Cook, Hurley-Chamberlain and Shamberger, 2010, p. 12)

2. Co-teaching – examples from the practice of regional education in the Czech Republic

Co-teaching is applied in many educational institutions across the Czech Republic. This chapter will summarise some examples from the practice of schools that use co-teaching in their educational activities.

The Royal Kindergarten and Primary School profiles itself as bilingual – Czech and English teachers teach together, so both are native speakers. Not only does their working together transfer language skills from the native speaker, the presence of two teachers helps pupils who need more support. (Zajímavosti a přednosti školy, 2022)

The Vitae Primary School (Jižní Město, Prague) uses co-teaching to an above-standard extent – each class has a tandem of two class teachers, thanks to which the children have a really big space for individualization of teaching and addressing the current needs of the pupils. (Inovativní vzdělávání, 2020)

Dobronín Primary School incorporates a variety of trends into its educational process and participates in many projects; there is a well-run school parliament, formative assessment and paired learning. The school applies this in the subject of English language – teachers reflect that pair teaching is of great importance for them not only for the implementation itself, but also for the evaluation of students' performance and further planning of teaching (Dobrá praxe v Dobroníně: Párová výuka, školní parlament i projekty, 2020)

Another good example from practice is the Kunratice Primary School, where pair teaching has been applied in practice for over 10 years. Here, paired teaching is used with pupils from first to third grade. The use of paired teaching is most suitable for general subjects – these have clearly defined objectives to be achieved by each pupil. (Beran, 2021)

Staněk, Karvánková, Popjaková, Kuřimská and Vančura (2017) describe the application of team teaching in the Bohumil Hrabal Primary School. Here, they incorporate team teaching into the geography curriculum and link it to music education – for example, Smetana's Vltava can be a central theme. In addition to learning about the personality of this important composer, pupils can also learn about the Vltava River as part of a second subject.

In addition to their own staff, secondary schools also use the presence of practitioners in their teaching. The Gymnasium in Žďár nad Sázavou uses the presence of a lawyer in teaching the basics of social sciences. The Secondary School of Arts and Crafts Jihlava-Helenín uses the presence of a fashion designer for the implementation of a project within the subject Design of Clothing and Fashion Accessories in practical teaching. (Spolupráce s odborníkem z praxe – (nejen) tandemová výuka, 2022)

The presence of practitioners is widely used both in secondary vocational schools and in higher vocational schools – IT specialists, lawyers, gardeners or hairdressers can be involved in practice. All of them provide insight into practice from their profession, and often work with students in the context of their workplace, where students can try out their own experience.

3. Possibilities of using co-teaching in tertiary and continuing adult education – examples of preservice and continuing teacher education

In addition to the above examples of how co-teaching can be used in regional education practice, it can also be applied in various forms of adult education. Given the diversity of possible learning activities, in this text we will focus primarily on the application of classical co-teaching to a group of future and current teachers. The rationale for this selection was the assumption that it is mainly teachers who use co-teaching in their practice. If they are to use it effectively and of high quality, it is appropriate that it should be part of their professional preparation (e.g. in the form of teaching practice) and continuing education. The application of co-teaching in adult education is certainly more complex and not limited to the area of practice described here.

If we proceed chronologically in giving examples of the application of co-teaching within the levels of the education system, we will focus our attention first on tertiary education. There are certainly opportunities for co-teaching in this context, for example, arising from the requirement to link theoretical knowledge gained through study at university with its practical application, and also, for example, from the mentor-mentee relationship (when an experienced and a less experienced teacher/academic work together in the same or similar subjects at university and when there is a mentor-mentee relationship between them), or when different subjects taught within a university department or institute are linked, etc. (Turkich, Greive and Cozens, 2014; Veteška, Kursch, Svobodová, Tureckiová and Paulovčáková, 2020)

Various types of teaching practice are also an important part of the professional preparation of future teachers. Their successful provision (planning), their own course and evaluation require a continuous cooperation of universities with faculty or clinical schools. Although the method of co-teaching is not directly mentioned in the methodical materials of universities on pedagogical practices, the requirement of cooperation between academic and pedagogical staff and the ability to reflect on the preservice teacher is evident from them (see for example the material of the Faculty of Education of Charles University – Koncepce a pojetí pedagogických praxí v kontextu vzdělávání učitelů, online).

A foreign example of the use of co-teaching in professional education and continuing skills development for teachers is given in an article by Diana (2014). The author states that *"although co-teaching can have a positive impact on all stages of the continuum /of teacher development/, integrating co-teaching during preservice teacher education programs will have a long-term effect"* (Diana, 2014, p. 77). Graziano (2012) makes a similar point about the need to develop co-teaching skills in preservice teacher education when he writes that *"preparing preservice teachers to be effective co-teachers needs to be a significant component of teacher education curricula in higher education"* (Graziano, 2012, pp. 109-110).

The possibility of using co-teaching in university practice is certainly not limited to undergraduate education. Co-teaching is also used in doctoral studies. Chanmugam and Gerlach (2013) give the example of two doctoral students who co-developed and co-taught an undergraduate course. A common variant is of course the involvement of a doctoral student in the teaching of a more experienced academic.

Examples of the use of co-teaching by teachers of different types of schools in the Czech Republic have already been described in this text. Teachers also have the opportunity to acquire competences in co-teaching within the framework of continuing education for teaching staff.

Courses accredited by the Ministry of Education, Youth and Sports are provided for them, for example, by the Libchavy Academy (Tandemová výuka – párové učení /učitelská dílna/, online) or DVA (two) education (Tandemové učení, online).

Conclusion

Co-teaching is used in practice in all levels and types of formal education as well as in other forms of lifelong learning. It is a suitable method for individualizing teaching, for working with smaller numbers of students. This is very useful, for example, in a team that includes a pupil with special educational needs. However, co-teaching can also be used in mainstream schools in the context of regional education.

In general education and initial vocational education, the importance and effectiveness of co-teaching as a coordinated collaboration between at least two teachers and a group of pupils is gradually increasing. Other practitioners are also entering the educational process, working together with teachers to guide pupils and students in acquiring the necessary practical skills.

Responsibility for planning, implementing and evaluating co- teaching is shared between a larger number of teachers and/or other educational professionals. In addition, co-teachers bring their own competencies, often with different teaching styles, to the classroom to suit a larger number of pupils and students. Co-teaching also brings the possibility of linking multiple school subjects, for example geography and music education, history and geography, etc. Co-teaching in the presence of multiple teachers can also be included when a new or novice teacher joins the school. Mutual cooperation between new teachers and their more experienced colleagues is enriching for both parties.

Models (strategies) and concrete examples of the application of co-teaching in the practice of regional education in the Czech Republic can be used in tertiary and continuing adult education. For this study, we have also used several examples from the practice of applying and adopting co-teaching in the professional preparation and continuing education of teachers.

Currently, the possibilities of using co-teaching also in hybrid or virtual forms of education are being developed. However, these were not the focus of this study, although 'classical' or traditional co-teaching may be part of a blended learning format or inspire a virtual form of co-teaching. It is essential that the application of a particular co-teaching model is beneficial for all parties involved – whether co-teachers, academics, practitioners involved in teaching, adult education lecturers, or (indeed) especially their pupils, students and adult participants in initial and continuing adult education.

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CURRENT TRENDS IN HUMAN RESOURCES AND THEIR APPLICATION IN HIGHER EDUCATION

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Abstract
Based on the authors' scientific cooperation, research results and teaching experience, the goal of the article is to analyse views on inclusion of new trends in human resources in teaching, to assess the nature of the novelty, whether it is a modern trend or a practical and long-term useful tool, diagnose the nature of the news and characterized new or changed roles of human resources at present in the Czech Republic and compare different approaches and practices in human resource management activities. The aim of the article is to present the main findings of the authors' semi structured interview survey on new trends in human resource management in selected organizations in Czech Republic and define the current challenges in HRM practice. The survey by semi structured standardized interviews was conducted during the years 2020 - 2022. The respondents were personnel managers of selected organisations in public and private sector. The relevant data were obtained from 32 personnel managers. The research questions are concentrated on present opinions on changes in HRM methods in private and public sector in the time of covid pandemic situation. The results show that in surveyed organisation are many changes in HRM processes which must be implemented in teaching HRM at universities.

Introduction

The covid pandemic situation and beginning of 4.0 they also brought a lot of new things to the practice of personnel management from the point of view of university teachers on human resources management there are many questions on. (Grenčíková, Kordoš & Navickas, 2021; Stareček, Gyurák Babeľová, Makyšová & Cagáňová,2021) Are today's management graduates (millennials) willing to take risks, have the necessary qualities, are they motivated by the study to acquire these qualities and will the school equip them with the necessary knowledge and skills? Educators should be able to answer these questions during the preparation and implementation of curricula. At the same time, they should be interested in how students are accepted through the internship, what the internship expects and requires from them. Many research studies have been carried out in this regard, but their application is often problematic. The pandemic period has had a significant impact on many business processes. It affected the work of top managers, who had to consider how they would manage companies in uncertain and unpredictable times, design and implement transitions from captured processes to new untested operations. Challenging tasks were placed on line managers responsible for putting new procedures into practice and directly managing and implementing them in practice. (Revutska, Maršíková, 2021)

Thanks to the pandemic, processes that had been going on in business for a long time and were implemented very carefully were immediately put into practice. HR took on the role of advisor and coordinator of the implementation of these processes, when it was necessary to help management at all levels to keep motivated employees, to help implement new ways of working to ensure safety and health at work.

Teaching at secondary schools and universities must also be prepared for this fact, which should prepare flexible graduates within their teaching programs, in whose abilities and interest it will respond to unexpected situations and support flexibility as one of the key skills of HR professionals. They should be the bearers and supporters of new trends; they should always be one step ahead to prepare employees for change and at the same time they should be able to create conditions for a smooth and "safe" implementation of changes for employees. In addition to the classically introduced functions of human resources, new or modified functions are created that respond to current needs. We need to realize the need for the rapid introduction of technologies that we thought would be the music of the next unspecified future (Stachova, Stacho, Raišienė, Barokova, 2020). During the last pandemic period, HR professionals were often forced to brush up and update their knowledge of psychology (Troth, Guest, 2020), IT, health and law. And all this in a different changed context. Therefore, it is necessary to ask the question. In the division into key personnel activities, to present the new trends in human resources that we are currently encountering and are becoming very important.

1. Human resources activities

Creation and analysis of jobs, competency models and shadowing

Competence models have been used in companies for a long time. They are the connection between the company's strategy and the HRM, they must have a business strategy, they have an impact on the personnel strategy, they are reflected in the job description, they are used in the selection of employees and in their evaluation. Their use in the organization allows you to focus on the characteristics, qualifications, experience, knowledge, abilities, skills and personal characteristics needed to meet the goals of the organization and its profits. Today, sometimes come across the opinion that their time is limited and it will move to other more progressive forms of determining the necessary competencies. The benefits of using competency model in companies are indisputable for realizing the key company competencies, what competencies the organization needs to be successful, it is further reflected in the planning and development of employees, in the recruitment plan. A very important function of competency model is the unification of the language of human resources, managers and ordinary employees. (Strohmeier 2021, Šajgalíková, Copuš. 2020)

Competency model is defined as a list of characteristics, experience, knowledge, abilities, skills and personality characteristics that are needed to effectively perform the work tasks of a particular person. However, the problem is how to be able to implement the required competencies into practical life, how to equip existing and new employees with just the required characteristics needed to perform their work. Recently, shadowing has seemed to be the most effective. It is nothing completely new, the very principle of passing on practical experience is ancient, the whole system of masters and companions is based on it, it has been used by craftsmen for millennia. If the company has a well-established shading system, then it is one of the most effective, proven and also the cheapest ways to train new employees, the possibility of strengthening awareness of the company and its values among existing and potential employees. Why is shadowing so well received and recommended in current practice? It is a way of training during which the employee or external student follows an experienced colleague at work, which brings many benefits. These include gaining experience with minimizing mistakes, gaining instructions on how to do the job and how to avoid mistakes. At the same time, the new employee gets to know the colleagues to whom he / she is connected or to whom he / she provides the results of his / her work. He will know the interaction between employees, established relationships and company hierarchy. He / she will gain informal relationships with future colleagues without unnecessary stress on the new employee. Working with an experienced colleague will help newcomers to penetrate corporate life. The biggest benefit of shading is gaining problem-solving experience. Therefore, it is important to select an experienced mentor in the shading program who is proficient in his profession and in the operation of the company.

2. **Human resource planning and occupation of jobs** (Collaborative recruitment, recruitment marketing).

Onboarding or entry process in order to try to attract qualified candidates, companies have recently begun to promote so-called recruitment marketing, which we can evaluate as one of the biggest HR trends of the recent period. Best marketing practices are currently being used to recruit new qualified employees, various marketing channels are being used, and key employees are being targeted. Thus, recruitment marketing is based on classic marketing with everything that shapes it. (Deichmann, Gillier & Tonellato, 2021)

This is, for example, a brand that reflects the specific corporate culture that the company declares in order to acquire just the employees it targets, the company can attract new employees to the personalities it presents, their motivation, goals and behaviour. When looking for employees, the company is looking for innovative ways of recruitment, trying to present the key values, benefits and benefits of the company throughout the recruitment communication. In this area, we can also encounter the concept of content marketing, which includes photos of the company, recruitment videos, blogs, infographics, eBooks, manuals, webinars. (Bejtkovský, Rózsa & Mulyaningsih. 2018; Habets, Van der Heijden, Ramzy, Stoffers, Peters, 2021)

Another no less important trend today is the so-called onboarding. Companies often focus primarily on recruitment. To be effective and to help get candidates who fit into the company. But as important as recruitment is onboarding, the start - up process and adaptation of new employees, organized in such a way that they work well and quickly, precisely so that the candidates fit in well. Preboarding is often used here. This is the period between the recruitment and the start of the employee, when there is sometimes a relatively long time when the candidate runs out of time and the company has to wait for newcomers. It's a chance to introduce myself to a new colleague and convince him that he made the right choice. The main role of the adaptation process has a direct superior, the role of HR is to set up the entire onboarding process so that the superior has a newcomer under control, but also to involve colleagues in the adaptation process.

In this, internal communication and cooperation between HR professionals and managers is important. To ensure the smooth running of the entry process, it is also possible to use modern technology of the so-called conversation robot, such as the Arnold robot, which provides feedback to managers and HR professionals on how the adaptation process takes place using short interactive chats. Over the course of 3 months, the newcomers will talk to Arnold about 7 onboarding topics. He will then provide the manager and HR specialists with a clear report. This tool is also suitable for the case when a newcomer decides to leave. This way, the company also gets information about why this happened and can prepare for similar situations next time.

3. Examples of others new trend in HRM

- Use of social networks
- Gamification on boarding and recruitment
- Chatbot in HR
- Sophisticated identification of the profession that best corresponds to the actual representation of skills, ie anthropological biotypology. (It is a very old method, but still rediscovered).
- Trends in IT boarding and robotics

Management of work performance and evaluation of employees

- Shift planning by employees themselves
- Psychodiagnosis ¨
- In the field of development - Arnold robot for measuring employee satisfaction
- Mindfulness to increase performance

Staff training

- Online education, online courses, webinars
- Self-learning organizations
- Virtual reality in education
- Experiential learning - team building in the form of seemingly real situations involving actors and an extensive staff

Employee care

- Being less at work - reduced working hours, which will increase the employee's efficiency and at the same time give him more time off
- The concept of free companies
- Out boarding
- Benefits - dog friendly / children friendly office, remote work

4. Goals and methodology

The goal is to analyse views on inclusion of new trends in human resources in teaching, to assess the nature of the novelty, whether it is a modern trend or a practical and long-term useful tool, diagnose the nature of the news and characterized new or changed roles of human resources at present in the Czech Republic and compare different approaches and practices in human resource management activities. The aim is to present the main findings of the authors' questionnaire survey on new trends in human resource management in selected organizations in Czech Republic and define the current challenges in HRM practice.

The survey by semi structured standardized interviews was conducted during the years 2020 – 2022 in online forms. The respondents were personnel managers of selected organisations in public and private sector mainly in Prague, Brno and Central Bohemian Region and West Bohemian Region. The relevant data were obtained from 32 personnel managers. The research questions are concentrated on present opinions on changes in HRM methods in private and public sector in the time of covid pandemic situation.

The results show that in surveyed organisation are many changes in HRM processes. All 32 interviews with personal managers in private and public administration shows new trends and approaches in HRM. Interviews was analysed and most of personnel management from small, medium and large companies are agree in many of new roles in HR.

5. Results and discussion

New trends in human resources are applied in practice faster and for human resources, functions arise that they had to adapt to quickly. They use techniques and products that free them from unnecessary administration, speed up processes while complying with all requirements.

During the pandemic, HR had to take on the new roles that the situation forced:
a) Mentor of new technologies
b) Manager of remotely connected teams
c) Wellbeing manager
d) Paramedic
e) Data protection officer
f) Change Coordinator

Characteristics of individual roles according to the respondents.

a) **Mentor of new technologies**. The situation, where many employees were forced to work from home from day to day while keeping the company running, forced HR professionals to start using tools such as virtual meetings, shared files, remote project management and other tools that were previously part of office applications but were not used. Personnel had to learn to work with these tools themselves, so that as a mentor and lecturer they could pass them on to colleagues for wider use. These tools were then used for other personnel activities, i.e. recruitment of new employees, organization of virtual fairs, use of chatbots in HR, onboarding, etc. This period also changed the position of IT specialists in companies, to whom the new situation brought users and on the other hand users have stopped perceiving IT as someone who sometimes causes them complications and is unwilling to use the terminology they understand. Both sides immediately found common ground in areas where processes had to be applied quickly in practice.

b) **Remote connected manager.** A successful manager achieves results through the effective work of his team. Teams that have clearly defined goals, are well organized and properly led, can achieve excellent results. These goals had to be achieved even when the teams operated in an online environment. Managers and HR professionals encountered the term Remote Team Management on a theoretical level before the pandemic. During the pandemic, the theory had to be put into practice quickly. With the help of audio and video conference calls, team chat, shared project documents, WBS mind maps, Gantt chart, the use of critical paths and other tools, project teams began to follow. This way of project management enabled team leaders to clearly measure and plan the time and productivity of team work, plan time and facilitate their work using checklists, time sheets, workflows, roles and user permissions, using integrated calendars. The systems enable comprehensive control and reporting of projects with the help of earned value, graphs, activity reports, time sheets and alerts. For the HR department, the use of RTM meant taking on the task of monitoring team activities in terms of "human capital" management, i.e. monitoring team members as individuals and responding in case of threat to avoid team breakdown, e.g. due to frustration at home, inability to meet with colleagues, reworking, uncertainties, etc.

c) **Wellbeing manager**. Supporting all aspects of "employee well-being", including physical, mental, social and financial health, was essential for HR during the pandemic. The term wellbeing has so far been a term used by a small group of progressive HR specialists. The critical period of covid and the reaction of people to it made it necessary to deal not only with the physical health of home office workers, but also to monitor their mental state, communicate government measures and their impact on, for example, critical infrastructure companies that had to be maintained. If possible, other organizations and the components that were necessary for the operation of the organization remained functional. Workers working from home and those who had to go to work were then provided with various communication tools to help, such as virtual interviews, micro-questionnaires, chatbots, corporate hotlines, psychological counselling. Wellbeing remains and is still used, in companies it takes the form of new safety rules with an emphasis on the physical and mental health of employees, company discounts on the purchase of pharmaceutical products, free vaccinations and, of course, life and group accident insurance. To support a healthy lifestyle, Kaufland is developing the "We Enjoy Health" program, which has twice won the Company for Health award. The program supports sports and relaxation activities, includes the creation of a modern workplace adapted to the needs of employees and emphasizes the balance between work and personal life. Philip Morris CR is running a global Health & Wellbeing program, which was introduced in 2018 and seeks to promote a healthy lifestyle, reduce stress and promote a work-life balance. This program is based on four pillars: prevention, exercise, nutrition and balance. Programs where employees can influence their working conditions and safety are also important. An example is Amazon, where they are constantly interested in employees' views on working conditions and safety in Safety Saves programs, where employees have the opportunity to come to their managers in person with ideas on how to improve workplace safety. They can also express themselves electronically, using software (Eureka), the third tool (Connections) is global and is used for internal satisfaction surveys. Philip Morris evaluates people's feedback on the environment in which they work. "As part of the Health & Wellbeing program, it also collects feedback on the work environment.

d) **Healthcare**. At the time of the pandemic, the HR department also had to take responsibility for the application of government regulations concerning their implementation in the workplace. The employees also expected the company to take care of them so that they could perform their work safely, ensuring all the required safety and health conditions. This included plans for the location of workplaces, shift organization, monitoring the movement of people in the workplace, influencing the avoidance of unnecessary conflicts, ensuring disinfection, selection of suitable respirators and their distribution, ensuring appropriate tests whose results were electronically recorded, staff records and monitoring workers in quarantine and to provide compensation in the event of outages for such workers. Personnel had to demonstrate a significant dose of flexibility, physical and mental resilience, the ability to argue and negotiate, conflict management, and the ability to bear a high degree of responsibility for finance and health. Last but not least, it is necessary to mention the fact that the measures they enforced were not always positively received by management or employees.

e) **Protector of personal data.** The pandemic measures were, among other things, a period that significantly affected the rights of citizens and the use of their personal data. This was done in the field of society as well as in the corporate field. In companies, this ungrateful role in the application of anti-epidemic measures was taken over by HR professionals, when it was necessary to intrude on the privacy of employees. Thanks to this new situation, many experts consider the protection of personal and digital privacy of employees to be an issue that needs to be addressed in the future and specialized experts will need to be trained.

f) **Changes coordinator**. The last two years have changed the perspective on many important life and social phenomena. People began to perceive their surroundings, neighbours, co-workers and representatives in a completely different way. Society has become more polarized and some situations that were previously only at the level of discussion have also emerged. In the corporate area, this has resulted in a flattening of the corporate structure, more responsibility is placed on project teams, salary policy is changing, more work is done and not completed work and completed projects are more appreciated. Formerly widely used micromanagement, i.e. the supervision of each employee and his performance, is becoming a thing of the past and the emphasis is more on the result. Companies with a strong corporate culture that take care of the work environment and people as the source of their success have survived. These changes are not and will not be easy to enforce, and if during the HR pandemic, the situation was handled with minimal and successful resources, the HR staff proved their worth and the need for companies to build strong HR departments.

Conclusion

The aim of the article was concentrated on analyses of examples in new views and approaches on inclusion of new trends in human resources in practice of human resources managers in companies in Czech Republic and obtain specific examples from different organizations to assess the nature of the novelty, diagnose the nature of the news and characterized new or changed roles of human resources at present in the Czech Republic and compare different approaches and practices in human resource management activities. The main findings of the semi structured interviews on new trends in human resource management in selected organizations in Czech Republic show the current challenges in HRM practice. All 32 personnel managers use new approaches in HRM. Many of them are using as necessity, for example "paramedic". The results show that in surveyed organisation are many changes in HRM processes.

The covid pandemic situation and beginning of 4.0 they also brought a lot of new things to the practice of personnel management from the point of view of university teachers on human resources management and it is needed to integrate and incorporate these new approaches in topics of human resources lectures and seminars at universities. During the pandemic, HR had to take on the new roles that the situation forced - Mentor of new technologies, manager of remotely connected teams, wellbeing manager, paramedic, data protection officer, change coordinator,

New trends in human resources are applied in practice faster and for human resources, functions arise that they had to adapt to quickly. They use techniques and products that free them from unnecessary administration, speed up processes while complying with all requirements.

The research will be continued per enlarging interviews in organisation and by preparing online questionnaire for selected employees from private and public sector.

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