

The Challenges in the Post-Epidemic Era : From Education, Tourism and e-Commerce Perspectives

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Abstract -- *In this post-epidemic era, all aspects of life are interlinked. Everything in life is changing at a very fast pace. Human beings have to make rolling adjustments to cope with different situations to achieve a balance in the lives. For examples, in the education industry, distance learning has played the biggest role during this period, allowing students to learn without interruption. Moreover, with the growth of E-commerce, online celebrities make full use of live streaming platform to promote and introduce products to create astonishing revenues. In addition to that, tourism, which people concerned the most, has also been affected. Manufacturers have advanced deployment of emerging non-contact technologies and applications with potential market, including robots and artificial intelligence with new business opportunities after COVID-19. (蘇孟宗, 2020) During this period of the epidemic, the online ticket booking and reservation have breakthrough growth. However, the online experiences and more convenient functions will become the key elements for consumers to determine whether the platform will maintain the sustainable development. As a result, the researcher will explore the impact and coping strategies of COVID-19, especially for Taiwan's economic restructuring, the service industry, and the education and technology industry in the post epidemic era. With an implementation of online questionnaire, the researcher has gained a better understanding of the post-epidemic era affecting tourism, education and E-commerce, and how to transition or respond in the wake of COVID-19.*

Keywords---- Post-epidemic era, COVID-19, distance learning, e-commerce, artificial intelligence

1. INTRODUCTION

The new coronavirus (covid-19) is not like the SARS that once existed only in Asia, but has swept the world. In order to face the virus, human beings have to change the lifestyle. Many industries were forced to change their ways to deal with it. For example, the educational institutes adopt distance learning and teaching; the tourism industry promotes cooperation between hotels and restaurants, and the catering industry uses delivery and ordering services. Moreover, many people were unemployed due to the epidemic, and many young people in turn began to operate e-commerce platforms to find a way out for their lives. "Stay at home economy" has become a choice and source of income for many people.

Tourism was originally one of the sources of Taiwan's economy, because of the epidemic people cannot enter and leave the country freely which results in a worse economy. In light of that, many tourism industries have begun to launch various domestic tourism schemes so that they can play a new role in the country. Many tourism industries have launched in-depth tourism series to allow people to visit cities they have never been to, or relax properly on busy days. (王一芝, 2020) The aviation industry was the first to bear the brunt. Many airlines around the world cannot afford this serious epidemic and closed down eventually. The virus outsmarts the scientists and they could not completely eliminate the virus so far. (王芊凌, 2020) It is better off mankind learn how to coexist with the virus.

Coronavirus has severely affected education systems around the world, and the governments of each nation have decided to temporarily close educational institutions to reduce the impact of COVID-19. According to the monitoring of the United Nations Educational, Scientific and Cultural Organization, more than 100 countries/regions have suspended classes nationwide, which affected nearly 90% of the students. (Wikipedia, 2021) However, according to United Nations International Children's Emergency Fund monitoring, there are 112 countries that have reopened the schools. (Wikipedia, 2021)

The suspension of classes has not only affected students, teachers and families, but it also has a strong impact on economy and society. The schools closed due to the coronavirus have revealed various social and economic problems, which include student debts, digital learning, food insecurity, the homeless, child care services, health care, housing, the Internet, and services for the disabled. In particular, the impact on disadvantaged children and their families are more serious, which result in the interruptions of learning, imbalanced nutrition, parenting problems, and economic losses to families. In response to school suspensions, the United Nations Educational, Scientific and Cultural Organization recommends using

distance learning programs, educational applications and platforms as the corresponding solutions. (Wikipedia, 2021) One of the killer applications in the 5G era is likely to be the zero-touch economy accelerated by this epidemic. However, Jian Li-feng, the former managing director of Google in Taiwan, observed that Taiwan has done too well in this epidemic, and it will miss the opportunity for transformation in business. (張庭瑜, 2020)

Covid-19 has taken us to a dangerous place but also helped accelerate the trend of this era. If a zero-touch economy is an inevitable trend, then the epidemic has accelerated this progress.

Most foreign companies have been working remotely in the past few months. Google and Facebook have allowed their employees to remote work until the end of the year; the revenue has not declined though. This phenomenon represents "the amazing remote combat capability in the post-5G era." (Gimbel, 2019) In the future, employees can be scattered in different corners of the world, and excellent jobs will come to Taiwan, which will bring opportunities for the next generation in Taiwan.

Looking back at 4G, the most touching thing is actually "live broadcasting," which not only changes shopping and educational behaviors, but it also promotes social movements. Therefore, looking at 5G applications, Taiwanese must solve problems from innovative thinking. For example, the current long-distance video conferencing tools are still not easy to use. Only one person can speak at a time, and other people's voices will not be heard when speaking at the same time. There is a lot of space for innovation. For example, Microsoft combining the participants head into a large virtual conference room to make the meeting more effective.

Next, mobile phones will become smarter mankind to enter the "smartphone era", in which putting the two "smart" together will be the era of intelligent edge. (張庭瑜, 2020) In the future, AI models will be more easily moved to mobile phones. When there is AI behind every application on the mobile phone, how can the mobile phone not smart? For example, mobile phone voice recognition will be more accurate, and the time required for immediate machine translation will change from two seconds to no time lag, and the distance of the world will disappear. (張庭瑜, 2020)

Taiwan misses the paradigm shift in the 3G and 4G era, recently we kept up with trends in food delivery, financial technology, and smart medical care. The 5G era should not be missed. In the past, people thought that Taiwan's dilemma was no Internet population. But looking at the most populous countries in the world, including China, India, Vietnam, etc., all of the countries are near Taiwan, which are actually Taiwan's demographic dividends. In fact, as long as people have innovative thinking and magnify their own vision, people can find their own opportunities regardless of whether you are in the 5G era.

1.1 STATEMENT OF PURPOSE

Since the COVID-19 has great impact on Taiwan, industries suffered from that had to deal with the severe situations and should be more conscious of the trend and development of the post-epidemic era. Since pandemic, the demands of mask are getting high. Mask factories have to purchase more automatic equipment instead of labors. This situation has not only occurred in mask industries, it has also happened to several industries. COVID-19 brought an impact to the world, but it also took an opportunity for change. The spread of the epidemic has also triggered the development of new applications and technologies. Manufacturers have

advanced deployment of emerging non-contact technologies and applications with potential market, including robots and artificial intelligence with new business opportunities after COVID-19. (蘇孟宗, 2020) For instance, during the hotel isolation, in order to decrease contacts between people, hotels bring in robots to serve residents. From booking reservations to check in the hotel, everything can be completed online instead of facing with the counters. Meanwhile, it also simplifies the process and save more time. In addition, Eva airline co- brands with Family Mart to provide people the meals used to be served in business class and VIP room, but now people could easily enjoy these at convenience stores as well as during the quarantines.

After the outbreak of COVID-19, students were unable to attend classes at school and could only adopt distance learning. Many teachers engaged a lot of time in planning online courses, and working hard to prevent formal courses from being affected by the epidemic. However, the education system should re-explore the nature and structure of education at this moment, and re-establish it in the post-epidemic era. In the future, how

should we use technology to create more diversified types of education so that students can learn through education channels that suit them? (潘柏翰、翁世航, 2021) Preventing to be impacted seriously by pandemic, human beings should be conscious of the trend and development of the post-epidemic era.

1.2 SIGNIFICANCE

In this post-epidemic era, as all aspects of life are interlinked, everything in life is changing at a very fast pace. We need to make rolling adjustments to cope with different situations to achieve a balance in our lives. For examples, in the education industry, distance learning has played the biggest role during this period. The use of the Internet in teaching is nothing special, but the epidemic has made people feel that the Internet may completely replace schools, allowing students to learn without interruption. And with the rise of E-commerce, more people are becoming their own bosses, using social networking to well-build their own personal images, and then using their popularity to introduce products to attract followers to buy the goods. Moreover, department store boutique salespeople use video calls to make customers feel like

they were shopping in a counter. At the beginning of the 2020 epidemic, our lives were severely affected and many people lost the jobs they depended on for their livelihood. The themes embedded in this study are to take the current post-epidemic era as the main axis to explore education, 5G era, tourism industry and so on. What are the new developments and the corresponding solutions of them?

Among these industries, tourism, which people concerned the most, has also been affected. The tourism industry spans transportation, hotels, catering, duty-free shops, travel agencies and so on. During the period of the epidemic, the ticket booking online and reservation have breakthrough growth during the epidemic. The consumers can customize their own itinerary and travel around the world just from the travel app. Additionally, it can be easy to search, select, combine and order your favorite airline tickets, accommodation, experience services, local food and other tourism commodities through your mobile phone. However, the online experience and more convenient functions will become the key elements for consumers to choose the platform. Through this study, the researcher will analyze the impact and coping strategies of COVID-19, especially for Taiwan's economic restructuring, the service industry and the science and technology industry in the post epidemic era. To sum up, the digital transformation not only creates value, but it also improves the sustainability of industries. The most importantly, it brings benefits to our lives in a better way.

1.3 RESEARCH QUESTIONS

1. How tourism, education, and e-commerce have transformed digitally in the post- epidemic era?
2. How will the progress of the industries of the post-epidemic era change our lives?

2. LITERATURE REVIEW

Due to COVID-19 breaking out, fast-moving trends have changed our lives. If people do not want to go out shopping for your groceries, Foodpanda or Uber Eats will deliver it to your front door. (Kelly, 2021) Covid-19 made people realized how convenient and safe e-commerce is, compared to brick-and-mortar stores. E-commerce offers an irresistible choice to avoid all of that by buying online, comfortably at home. With supermarkets offering delivery services, weekly food shopping becomes less stressful and less time-consuming. Moreover, consumers have an increased appreciation of local businesses and if they only deliver items to their door, people are more likely to buy from them, rather than big stores. As more time is spent locally and people don not travel as much as they used to, buying locally has become more often. (Kuzior, 2021)

The spread of the new coronavirus (COVID-19) epidemic has affected the order of human life, changed the implementation mode of school education, and blocked the pattern and pace of global school education, changed the established mode of school management, and disrupted school curricula and teaching. (王令宜, 2020) Currently, there are three common modes of distance learning, including (1) synchronous courses (live online); (2) Non-synchronous courses (pre-recorded videos); and (3) Electronic digital teaching materials such as presentations and handouts. Schools should cooperate with the government and the Ministry of Education on epidemic prevention policies. The school may also propose a complete alternative program or alternative course of study. In order to enhance competitiveness, schools can take this opportunity to strengthen students' workplace ethics and risk management courses. Only after the epidemic, students can have a different perspective on their future internship. At the same time, students will be more willing to participate in off-campus internships to gain valuable learning experience and work experience. The best way to maintain their competitiveness is to correct their attitude. (歐陽怡, 2021)

Through the impact of this epidemic, the original domestic market crisis has also turned into a point of inflection. Many travel companies have designed many distinctive itineraries and innovative tourism products and modes. The aviation industry and the cruise industry have been greatly affected. Several airlines have created flights to nowhere to satisfy tourists' desire to go abroad. (李卉, 2021) Apart from that, tourism industries have established epidemic prevention technology one after another. deploying cleaning robot not only can increase the need for high-frequency cleaning, but also reduce indirect contact. (岳炫, 2020) In addition, Taiwan's catering industry has undergone a tremendous change as well. Catering operators launched online transactions, sold goods, rolled out take-out services and combined food delivery services to develop new demands. In the future, the catering industry will continue to develop digital transformation including online food ordering, shopping, mobile payment and son on. (羅璿, 2021) Travel agencies have always played a major role in the development of the tourism industry. Due to the epidemic, many travel agencies have closed down. In such a dilemma, travel agencies can only switch to planning services for domestic tourism. Perhaps after the epidemic, it will bring more unexpected types of tourism.

3. METHDOLOGY

According to the purpose of the study, the researcher divided the questionnaire into three parts: education, tourism, and E-commerce respectively. The questions were aimed to 100 technologic university students and each section was composed of 20 questions designed to further analyze the opportunities and challenges brought by the changing impact of education, E-commerce and tourism enterprises in the post-epidemic era. Eventually, the researcher will unify the whole questionnaire and make reference doctrinal analysis.

4. DISCUSSION

In correspondence to research question one, the researcher compared most of the results, and found out that the three industries, tourism, education and e-commerce, have transformed digitally bit by bit in the post- epidemic era.

First, in terms of tourism industry, the online booking, reservation and ticketing were enormously growing during the quarantine. Choosing online platforms to experience more convenient services and functions would be the trend. Tourism Bureau in particular has promoted projects to boost tourists' willingness to travel. One of the projects combing Taiwan Tourist Information Website is "iTravel" APP, which facilitates tourists receive travel information anytime and anywhere. Tourists could also customize their itineraries, including hotel booking and restaurant reservation through the APP. The most importantly, combining AI in tourism and catering industries is the trend to keep their sustainable development and exempt from the elimination. For example, Department of hospitality management students develop synchronously with enterprises through collaboration between industry and school. Teachers collaborate with students to launch unmanned, touch-free robots or exploit apps. It can overcome human limitations and can be a great asset for the future progress. Through a collaborative approach, students are able to comprehend the basics, advanced structural knowledge and practical ability required for digital operations.

Additionally, Starlux Airlines cooperates with 7-Eleven to sell the special roasted pork rice that was originally exclusive on the plane. People can eat the on-board meal when they enter the convenience store. China Pacific Catering Services Ltd. of China Airlines Group launched heated food jointly with Carrefour. The aviation industry integrates logistics and convenience store as the marketing strategy, which has become a new state of today's society.

It is also common to use live-streaming nowadays. With the interactive mode of Q & A, consumers can leave messages and ask questions, and sellers can answer them immediately. Using online shopping, consumers cannot see physical goods and the quality of product can't not be ensured. The operation for setting up an online store is very simple, but there will be more competition. Similarly, the repeatability will be high. In other words, customers can shop around and choose cheaper ones.

On the other hand, the unemployment rate of tourism industry raised that might cause the rising price of the raw materials, even the economic collapse in the future. Due to the covid-19, the freight congested caused the price of containers rise then the raw materials rise as well. The rising prices frustrated some industries, especially the related tourism industries. Because of the loss of manpower, production of lots of industries get lower than before. So that the raw materials deficit, and in short supply then causing inflationary spike.

In terms of education aspect, due to the national level 3 alert and comprehensive distance teaching last year, students and teachers have substantially increased the needs to learn online in a short time, driving the trend of distance learning. Various online learning platforms have aroused learners' attention. Among them, Google launched the plan of free 40hour online license, with a total of 26 themes for users to explore, which can not only add credits to the resume while looking for a job, users can also prove themselves equipping with real digital skills and knowledge. The major change for students is saving commuting time owing to different learning modes, in which courses can learned repeatedly, and time allocation can be more flexible. Nevertheless, the learning effect of online classes may be lower than that in the physical classes, whether students can concentrate and stay in front of the computer all the time is also a hidden worry. Apart from that, some teachers adopted asynchronous classes that cannot interact with students directly and spontaneously. It might in turn lead to enthusiasm reduction, lower participation rate and absenteeism.

In the field of education, we are capable of increasing skills through Google digital courses. It is a free online course with more than 20 subject courses. Users can watch as long as they log in to their Google accounts and perform certificate exams on the Internet. (Google, 2021) Taking digital marketing course as an example, the Google course not only allows us to learn the basics of digital marketing, but it also facilitates companies or personal career development. If students can use Google digital learning program to improve our strengths after school or spare time, their résumé will be more impressive in the future. Moreover, obtaining an exclusive certification is an added advantage for job seekers, incumbents to refine their strengths or companies to strengthen their marketing efforts.

When it comes to digital transformation, e-commerce is the most representative link. In 1990s, many well- known cross-border e-commerce platforms such as Amazon, eBay and Shopee rose, and the operation mode became digitally. Last year, E-commerce platform combined with EVA Air kitchen in the aviation industry. Its classic cuisines such as beef noodles, garlic thick toast, chocolate and cream buns can be ordered through the Internet. People can also go to EVA Airways Corp., Shopee, or family group to purchase the products. Industries should learn how to extend sustainable development via E-commerce. No matter the scale of E-commerce, it is inevitable to face fierce competitions. As the business of physical stores is affected by the epidemic, the proportion of online shopping has increased significantly. Taking Shopee as an example, it utilizes profit incentives by giving coupons to promote sales to maintain the sustainable development. Shopee has launched a variety of promotions and marketing. Live streaming is the most advantageous because it can be the fastest time to leave comments and interaction. (周郁芬, 2021) Shopee recently has rolled out "Shopee Digital Transformation Program". (潘韜宇, 2021) It teaches sellers how to operate their stores and digital marketing techniques to help sellers expand their own e-commerce markets in the shortest possible time.

In conclusion, the trend of relying on digital services for the future of humanity has become an irreversible norm. Digital transformation not only creates value, but it also improves environmental sustainability. The most importantly, it also brings benefits to our lives in a safer way.

4.1 Pedagogical Implication

After a preliminary study, the researchers have gained a better understanding of the post-epidemic era affecting tourism, education and e-commerce, and how to transition or respond in the wake of COVID-19. The epidemic has had a significant impact on our lifestyles. However, these changes allow us to learn new business models as consumers change their lifestyles. The examples are as follows.

Under the impact of the epidemic, the tourism industry has developed a travel model that is suitable for this stage. And the development of domestic tourism is becoming more and more abundant, as well as the digitalization of the tourism industry. The promotion of the travel industry to become a better service team. This has also increased the demand for domestic travel, making the tourism industry open for longer hours than ever before. Makes people more willing to travel and enjoy their trips.

In the field of education, the role of distance learning in this epidemic cannot be underestimated. First, it provides a powerful service. Students are capable of watching the video repeatedly to better understand specific concepts. At the same time, they are able to find another way to teach students according to their aptitudes, instead of blindly following a fixed curriculum. Moreover, students can also study a combination of online courses to complete a degree program. These help students improve their abilities to learn independently, enhance the atmosphere of mutual learning, and be good at applying knowledge to practice.

In the era of the explosion of e-commerce, in order to capture consumers with high self-consciousness, improve customer reach and retention rate, and achieve the diversion effect of expanding customer base, it is necessary to rely on a high degree of personalization of content. We have learned marketing techniques from them, and apply what we have learned to help e-commerce companies achieve personalized marketing with precise timing, precise location, and precise recommendations. In the post-epidemic era, we can inject new services and growth momentum into the e-commerce market ecosystem.

In conclusion, all industries base on the needs of self-positioning in the post-epidemic era, make difficult changes, get rid of all old-time decisions, change the way to enter the market, imagine the correct amount and compensation of human resources, and make an ideal payment strategy. They know whether their major decisions and investments during this epidemic are in line with the current market environment.

In this era, a crisis can be an opportunity. If the industries are combined with each other, which can survive from the difficult epidemic era and produce benefits. Tourism can cooperate with education, so that students can accomplish educational entertainment, and have an in-depth understanding of local culture. E-commerce can be combined with the tourism industry as well. In order to reduce manpower and person-to-person contact, many hotels and restaurants have brought up advanced intelligent robots to replace manpower nowadays. In the future, when the epidemic has not yet subsided or there is a shortage of manpower, robots are a tool to assist life of human beings. Cooperation among industries may create a better lifestyle.

5. REFERENCES

Gimbel, E. (2019). With 5G networks, your campus meetings might become virtual. Retrieved from <https://edtechmagazine.com/higher/article/2019/01/5g-networks-your-campus-meetings-might-become-virtual>

Google (2021)。數位行銷基礎知識完整版。Google 數位學程。

<https://learndigital.withgoogle.com/digitalgarage-tw/course/digital-marketing> Wikipedia (2021)。嚴重特殊傳染性肺炎疫情對教育的影響。

<https://zh.wikipedia.org/wiki/2019%E5%86%A0%E7%8A%B6%E7%97%85%E6%AF%92%E7%97%85%E7%96%AB%E6%83%85%E5%AF%B9%E6%95%99%E8%82%B2%E7%9A%84%E5%BD%B1%E5%93%8D>

E5%93%8D

王一芝 (2020 年 09 月 08 日)。偽出國救航空公司? 星宇張國煒: 疫情下只能「不務正業」維持聲量。天下雜誌。

https://www.cw.com.tw/article/5101873?utm_source=cwmg_mycw&utm_medium=affiliate&utm_campaign=40cw&_ga=2.111355714.778531441.1637741082-763763272.1637741081

王芊凌 (2020 年 7 月 24 日)。後疫情時代的台灣! 十大學者分析改變了這些事。Heho 健康。

<https://heho.com.tw/archives/93094>

張庭瑜 (2020 年 7 月 22 日)。Covid-19 才是真正殺手級應用! 簡立峰反思: 台灣防疫做太好, 可能錯過轉型。商業週刊。

<https://www.businessweekly.com.tw/business/blog/3003244>

潘柏翰、翁世航 (2021 年 8 月 3 日)。學校與教室因疫情關閉後, 遠距教學不該成為「唯一」的學習途徑。The

News Lens。 <https://www.thenewslens.com/article/154364>。

蘇孟宗 (2020 年 11 月 6 日)。後疫情時代展望產業新趨勢。StarUP@Taipei 創業台北。

https://www.startup.taipei/index.php?action=news_detail&typeid=1&id=743

王令宜 (2020)。後疫情時代一校園防疫新生活。國家教育研究院電子報, 202008 (198)。

https://epaper.naer.edu.tw/edm.php?grp_no=2&edm_no=198&content_no=3496

歐陽怡 (2021)。疫情下的大學校外實習。臺灣教育評論月刊, 2021, 10(1), 132-135。

<https://mymkc.com/article/content/24507>

岳炫 (2020 年 11 月 20 日)。大疫情時代的旅遊業生存策略。奇寶網路。

https://www.seoseo.com.tw/article_detail_770.html

羅璿 (2021 年 9 月 15 日)。6 成 5 消費者看好餐飲業數位化衝刺！未來餐飲更貼近半零售快餐店。食事 追蹤。

<https://www.foodnext.net/news/newstrack/paper/5234628408>

周郁芬 (2021 年 3 月 18 日)。2021 品牌經營大解密：娛樂行銷為王 蝦皮化身接觸消費者的第一哩路。數位時代 Business Next。

<https://www.bnext.com.tw/article/61832/entertainment-marketing-shopee-ecommerce-reaches-consumers-directly>

潘韜宇 (2021 年 6 月 7 日)。助實體店家度難關！蝦皮推「數位轉型」優惠、蝦皮大學「成長營」速成

超夯電商。立報傳媒。

<https://tw.news.yahoo.com/%E5%8A%A9%E5%AF%A6%E9%AB%94%E5%BA%97%E5%AE%B6%E5%BA%A6%E9%9B%A3%E9%97%9C-%E8%9D%A6%E7%9A%AE%E6%8E%A8-%E6%95%B8%E4%BD%8D%E8%BD%89%E5%9E%8B-%E5%84%AA%E6%83%A0-%E8%9D%A6%E7%9A%AE%E5%A4%A7%E5%AD%B8-073821753.html>