THE ROLE OF DIGITAL TECHNOLOGY IN SUPPORTING TOURISM INDUSTRY POST COVID-19 (CASE STUDY YOGYAKARTA TOURISM DEVELOPMENT

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Abstract

The empirical phenomenon of the COVID-19 Virus has caused hardly disaster for all people around the world. Changes from various aspects of the world of the tourism industry, education, and socio-cultural that must run and carry out an innovation strategy in response to the demands of all millennials needs in the pandemic post-COVID-19. The tourism industry has stopped operating for supported government policies to prevent the spread of the COVID-19 virus. This research uses qualitative research by observation and searching information, which gives more flexibility in translating information more worthy and hoping the data are relevant to the research objectives and applied sustainably. The support for the development of digital information technology has to be improved fast. In fact, it helps to provide many opportunities for every individual in society to still be able to carry out business activities and innovations online, so as to cover the needs for their survival. Thus, this research is able to get a strategic solution to the impact of post-pandemic COVID-19 on sustainable tourism education development.

Keywords: digital technology, program development, research strategy.

Introduction

Digital technology has changed all activities rapidly through communication networks on globalization that show significance to the tourism industry and education growth. Tourism has changed into a millennial dimensional, demanding role parties of Penta helix be involved and participate in tourism development (Bannon, 2011) . The community must be careful and aware of climate change and situations that really need to be managed effectively in and after the pandemic covid era. People's awareness may get covid virus disappears by itself, being hardly any discipline in health protocols, and all citizens must be vaccinated. Social and educational activities have carried out multimedia applications, online, which are faster and more sophisticated, but weak if the network facilities and communication infrastructure are still limited. Strengthened demands must be improved. Information technology includes everything related to processing, using tools, and managing information more effectively. Therefore, in the era of globalization, local communities must be competent in the role of hi-tech and hi-touch, and also high involvement in collaborated digital technology building a smart environment (Edi Susilo, Fadli, 2022) .

During the pandemic period, many things must be limited regarding cases of the covid virus which are still prone to developing so that people are still pressured by government policies against all business activities that are not running. This empirical

phenomenon of information technology has encouraged and inspired various community social activities that can still run online and even all programs can be carried out more quickly. The climate change impact of the pandemic has been addressed by government instructions on education programs that must continue to be carried out with the launch of the Kedai-Reka Matching Fund program in the independent Campus system and independent learning. By optimizing the use of e-learning programs that must be supported by the availability of networks, links, WIFI, as well as technological equipment, facilities, and financial support for funding educational institutions, it continues. The government in the field of education is still trying to improve student outcomes with quality performance standards. UNESCO (2003) stated that ICT is very important to support users in accessing, collecting, and manipulating big data to present global information through the use of educational programs in zoom and video conferencing. (Elston & Carol, 2007) .

The educational development program during the pandemic really experienced a very crucial problem where all educational activities with offline class meetings could not be held which had to be packaged online. Learning through zoom meetings is still constrained by the weakness of the WIFI network, which often disconnects or even there is no signal or the server is not functioning properly. Continuous education development learning programs cannot be overcome without adequate technological support. The increase in digital technology-based education is a major factor. This is where the role of digital technology in the pandemic period is to be able to continue to be able to carry out all

business and social activities, especially the online education process so that the output can reach the expected target. However, the role of technology must also be supported by the role of human resources who are able to carry it out properly and correctly. The Penta helix community consisting of academia, business, community, government, and multimedia must be able to interact and collaborate with each other. Thus, the role of digital technology, which is supported by a network of communication tools for education globally, must also be supported by the availability of adequate infrastructure and human resources, which is very important.

Based on the problems mentioned above, it can be formulated with several relevant questions to be more focused and in accordance with the expected research objectives as follows:

1.Is the community aware of and understanding the implications of the pandemic case on the development of world tourism?

2.What are the efforts to address the implications of changes in the tourism sector so that tourism development can continue to be realized?

3.What are the innovative strategies to increase tourist attraction from the influence of tourism climate change in the millennial era and globalization?

4.In accordance with the formulation of the problem above, it can be explained and described as follows:

5.Explain that the implications of the pandemic create opportunities and challenges in the development of regional tourist attractions to be understood by the public, and are able to create public awareness and

participation in post-pandemic tourism development in accordance with global demands.

6.Local communities are able to play an active role and be directly involved in supporting regional tourism development programs in a progressive and consistent manner.

7.The role of the Penta helix is that academics are involved in tourism development programs, investors collaborate with the community to be able to build new, innovative, unique, beautiful tourist objects that attract tourists, and with the sophistication of digital technology, they are able to create a competitive advantage in the development of tourism in the Special Region of Yogyakarta (DIY).

Tabel 1. Research Flow

Kuncoro, & Mudrajat, (2000) , state that the branding program through optimizing the use of information technology networks is a major factor in the development of regional tourism. The competence of local community products is the main element of regional resources, in line with regional products which are expected to be able to boost regional income and create job opportunities to reduce unemployment. The development of technological mobility through branding in tourism is very important and also able to accelerate the economic

business development of the surrounding area (Aditya & Yuli, 2011) .

Todaro (2000) states that instead of information technology the competency of human resources, the existence of facilities, followed regional tourism infrastructure, and multimedia have determined the success of achieving the target of sustainable regional tourism development. Meanwhile, according to Suwarni, (2006) , regional economic growth occurs when community resources can be united as more integrated capital.

Cohen, (2001) states that world tourism development must be socialized so that all tourism observers (Penta helix) understand so that they are able to take part together in responding to the rapidly growing demands of global tourism. In addition, it is also an effort to build innovative strategies with the involvement of the tourism community to build a competitive advantage for regional tourism. The development of regional tourism will boost community involvement, and strengthen local identity branding and public recognition of regional tourism development by activating all existing regional social capital strengths. The development of regional tourism through the concept of social capital innovation from collaborative relationships between individuals starting from the creation of awareness; active participation, mutual trust, mutual understanding, and sharing of cultural values from changing positive attitudes and behaviors that are formed in a sustainable collaborative community network in society.

Dominggus & Oktavianus, (2007) , state that the development of tourism-based industries in each region must be in line with the direction and goals of national industrialization, namely creating prosperity for the whole community. While the concern, participation, and role of the community in providing services to tourists. Tourist satisfaction can increase the confidence of tourists to come back. Meanwhile, regional industries really need the inclusion of human resource competency development with IT-based and digital technology.

Solow-Swan, & Jhingan, (2013) argues that the focus is on how to manage population growth, empower the accumulation of social capital, and advance technology as outputs that are able to interact positively in the process of community economic growth. Improving the branding marketing program for the tourism potential of the Special Region of Yogyakarta is carried out through the Tripartite concept, namely the development of tourism agents (Local Communities; Government; and Private investors) who must be able to collaborate hand in hand to build the intensity of innovation development of regional tourism potential in a sustainable manner through digital technology networks.

Method Research

Program qualitative research first step researcher makes observations from empirical situations and conditions that exist from the data needed in accordance with the objectives of the study. Research studies through the activities of observation by taking inventory of various interrelated data and solid interviews can produce propositional data that are empirical and relevant to research aspects. By determining the number of valid, accountable, and quality data in accordance with the empirical problems needed in the next research process. This study identifies various problems to determine and knit various opportunities and challenges that exist in the process of empowering local communities through the use of ICT information and communication technology networks used, in particular, to build innovative strategies, as well as implement regional tourism development program applications (Kuncoro & Mudrajat, 2000) .

The study relevant literature was used in this study to serve as a guide and guide that focused on research problems in accordance with the facts from the data needed in the field. In addition, the use of a bibliography

that is relevant to the object of research can be useful in being able to provide a concrete picture of the empirical background of the research used by the researcher. In this qualitative research, the researcher also uses perspective data that is related to the problem proposition in the research and takes advantage of several relevant literature review gaps and the problem analysis process that forms the basis of research (grounded research) which can provide precise and accurate explanations for discussion in this research (Moleong, L, 2011) .

Furthermore, it is possible to create new findings or studies. In this qualitative research, the researcher also took some relevant previous research results, from several scientists' opinions "qualitative research aims to explain phenomena in depth through more focused data with more in-depth research, as well as an emphasis on the depth of data obtained by researchers. The deeper and more detailed the data obtained, the better the quality of this qualitative research. (Kriyantono, 2012) .

Bungin (2007) , stated that qualitative research has a specific characteristic that dominantly in research used (1) empirical data sources that were directly obtained from location sources in the form of empirical data on existing situational conditions. (2) The use of qualitative descriptive data that is related to the objectives of the research, (3) This research is more oriented towards emphasizing meaning than the process, (4) Analysis data is worthy upon the result, while (5) The focus research has the main factor in the approach to this objective research. Qualitative research was conducted by using interviews and observation so that researchers could analyze the empirical phenomenon data that was obtained in detail

result. Research data is used from the social conditions of the community that is observed and objectives in a real-life community and reality occurs as a unitary phenomenon from the natural situation in pandemic issue. The results of this qualitative research are different from the existing theories so they can produce new theories and create novelty concepts.

Results and Discussion

The implication of the pandemic changed the perspectives on tourism development and education need for digital facilities and in the global era has totally required capability to be able to follow increasingly sophisticated technology. External aspects are also expected to remain of high quality and relevant to the demands of meeting the needs of the wider community. Educational programs through online access during the pandemic have indeed made learning less than optimal, especially those that use practice in learning (Vocational programs). Equity in education is still expected to be managed even though the reach of geographical aspects, education management standards, involvement of autonomy, and the value of accountability, efficiency, and sustainable productivity must be achieved. However, this cannot be overcome without the availability of adequate infrastructure and support for the development of communication technology. Information technology requires the availability of these facilities which can include a number of hardware such as computers and other devices, as well as sufficient software applications so that connectivity such as access to the internet, local network infrastructure, and video conferencing (Elston & Carol, 2007) .

Education programs are developing very fast and mobile following the development of the world of ICT, society and government are required to be smarter in order to utilize and apply technology properly. However, the use of ICT must also be more careful and professional because if it is not in accordance with reality and is good, it will create a precedent and a bad image for government institutions, institutions, or companies themselves. The development of tourism needs analysis showing that different publications should be sought with emphasis on its Human Resources factors such as:

1.   Technology needs smart people or smart collaboration as a characteristic of smart education,

2.   Transformative or incremental perspective on smarter governance change,

3.   Be able to create better graduate results, which can be more applicable and open and can be accessed by all parties, so that any information is more comprehensive for the public.

The Challenges of Developing ICT

The development and change of education and learning programs during the pandemic covid has become a major issue in various educational institutions' activities. Adjustment of the curriculum of learning applications in theory and practice must still be carried out using the online program (on the network) or e-learning. So technological advances must be addressed by educators and students. Based on the empirical phenomenon, the development of digital technology must be followed by the ability of human resources, improving tools and technology devices assumed by industrial productivity, both from the technological and the production aspect. The changed of development programs mostly need investment and reinvestment on a large scale for the provision of communication facilities, and infrastructure, to boost the level of industrial productivity. For example, hotel operational needs in the digital era have used many facilities to speed up hotel work processes. Improving digital marketing by ICT and using online travel agents (OTA) has been popular, greater, and wealthy. In the field of education, every program education improved its capabilities of digital devices, e-learning, zoom, webinar programs, e-laboratory, and administration with digital systems, following the demands of the world that are now increasing in the robotic era.

The function of the internet has a very big role in programs that are mostly done online and e-learning. as a science mediator can provide broad access to offers through data that has been connected to thousands of digital libraries, millions of articles/journals, millions of e-books, and others. ICT as a learning aid is easier help of ICT, to present the world in the classroom and can be presented to all students through ICT tools. The use of gadget technology has now become a necessity for every individual's life in the millennial era, knowledge, information, and education can be downloaded through online communication media so mobile phones are very important for everyone's life (Awaluddin, 2013)

Keen S, (2007) stated that during the covid-19 pandemic where all activities were limited to meetings and had to go through health protocols all business activities ranging from customer service, operations, marketing, and distribution of goods and services must be applied using zoom

information technology, e-learning, and online business. Business activities are very dependent on the ability of human resources competency in technology that can be utilized for example hotels, starting from the hotel room booking process, facility information, prices and booking confirmations all can be done online. Along with the demands of the people's needs and advances in technology, information systems have been able to assist the operations of various businesses, and hotel operations, including increasing sales of hotel products. on-line (OTA) such as Traveloka, OYO, Red-doors, etc.

So that online business is very widespread and the delivery service helps a lot of MSME business operations. Thus, the social media digital information system has replaced the manual system used in various business and hotel operations, particularly in the Marketing and Front Office departments. (Palmer, Dunford, R; & Akin, G., 2006) .

Local government efforts to develop tourism are demanded through information technology capabilities globally from strategic aspects: sensing, understanding, and controlling various resources in their respective regions, which must be managed more professionally, according to the demands of the times, tourism branding will be more effective by digital marketing to maximize results. Regional development must be able to be smarter in accordance with the smart city concept so that communication and collaboration between the government and the community in development is faster and more useful and sustainable. Improvement of website and WIFI network infrastructure facilities must be able to provide convenience for each individual community to find out all government

programs and reports in regional development in a transparent manner. In education curriculum program has been changed related to the situation in pandemic issues, is also a necessity that cannot be negotiable because it will be the main support in the development of technology in the world of education which is increasingly complex, digital, and requires multimedia devices that are able to provide solutions to all problems. educational learning programs, especially in online teaching activities.

Conclusion

The benefits of ICT in the digital era are very decisive in the sustainability of tourism and education development after the COVID-19 pandemic. The development of digital technology is completely a challenge and opportunity for the community to be innovative in following the demands and changing tastes of millennial tourists. So that the increase in HR competence must be programmed on an ongoing basis. The development of regional tourism is the responsibility of the community together with the government in its management involving the active role of the Penta Helix so that they are able to follow the development of global competition.

The role of ICT is to encourage the strengthening of educational learning and knowledge and experience in the competency development of educational curriculum programs that can be downloaded easily from the website, and communication media to be applied in continuing education. The tourism industry, in the post-pandemic period, must be able to demonstrate social, cultural, and community life and a continuous educational process through the role of ICT with e-learning, teleconference, webinars, short

course education, and very easy-to-follow, adequate telecommunication infrastructure support. The development of educational programs with independent campuses and independent learning provides facilities for more adequate learning programs.

Marketing of tourism branding in the special region of Yogyakarta can be developed through websites and various social media sites. The development of tourism destinations from the perspective of the existence of natural resource assets, potential heritage, and wealth of art & culture, and environmental attractiveness can be disseminated with a branding strategy through the role and access of multimedia. Regional tourism development requires the availability of professional management personnel and adequate knowledge, experience, and skills in providing excellent service to tourists, the main goal of which is able to create customer satisfaction.

Improving network capabilities and multimedia services, which must always be updated and maintained, so that communication runs smoothly and access to the global world can be accommodated perfectly. The role of tourism resources must be fully taken seriously by elements of regional tourism observers, (Penta Helix). Professional local communities have awareness, care, loyalty, loyalty, and responsibility in maintaining, managing and developing their own tourism destination assets which through tourism branding will be more useful and sustainable.

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