шляхом реального експерименту. Застосування віртуальних лабораторій дозволяє більш раціонально поєднувати колективні форми з індивідуальним підходом у навчанні фізики. В процесі такої роботи формується та розвивається дослідницька компетентність учнів та підвищується ефективність дослідницької діяльності [3].

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DOI https://doi.org/10.30525/978-9934-26-277-7-237

THE IMPACT OF SOCIAL E-COMMERCE TO TOURISM INDUSTRY

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Considering we live in a modern period, we have a terrific opportunity to benefit from a variety of possibilities. Everyone wants to save time because they are all now busy. It doesn't matter if it's a personal or professional situation; the key objective is to save time. People spend the majority of their time at work, have little free time, and can only complete personal tasks on the weekends. including paying for their own food or clothing, among other things. We can easily implement social trading in order to save time. We get the choice of purchasing or selling anything while at home. Particularly during the COVID-19 pandemic, this has given a really favorable chance. We had to employ social commerce when individuals were unable to walk outside. We should first be aware of social e-commerce. What exactly is social commerce? Along with advantages for the brand, social e-commerce also benefits the customer in a variety of ways. On the consumer level, social e-commerce allows for simple product and information discovery; creating unique, interactive touch points for users to engage with the brand, the product, and its features. On the brand side; social commerce creates a unique opportunity for building brand awareness, networking & social interaction, and data on consumer insights and behavior. The benefits of social commerce enables brands to satisfy the needs of each target audience member through a strong and more personalized digital user experience. Although there is no standard definition of the term, social commerce (also known as social business), generally refers to the delivery of e-commerce activities and transactions via the social media environment.

SC reflect the ideas of community-level participation and socioeconomic impacts in e-commerce. SC Web site is a place where people can collaborate online, get advice from trusted individuals, find goods and services, and then purchase them. The framework includes six key elements for classifying social commerce research: research theme, social media, commercial activities, underlying theories, outcomes, and research methods. The proposed framework is valuable in defining the scope and identifying potential research issues in social commerce.

Due to the complexity and innovativeness of SC, it is necessary to have a framework to organize relevant knowledge in a cohesive way that may be used to guide researchers and practitioners. E-commerce helps buy and sell goods and services on the Internet. it offers an ideal e-commerce development to make our digital business and improve our global presence. E-Commerce facilitates fundamentally the movement of goods from suppliers to customers.

The main way in which e commerce will affect the economy, in general, is its impact on productivity and inflation. The continued expansion of electronic commerce could also lead to downward pressure on inflation through increased competition, cost savings and changes in sellers' pricing behavior. The role of e-Commerce in business is that electronic commerce is synonymous with electronic commerce and involves the exchange of goods and services through electronic support. The number of electronic businesses has grown considerably since the Internet was launched.

Social commerce is currently developing in many areas, including tourism. The more people work, the more tired they feel and need both mental and physical rest. The time has gone when innovations took centuries for implementation, now there is always an instant solution to almost every problem within business. When it comes to IT and communication, there are plenty of options for advertising, in fact, even a single person can run a full-fledged company with just a limited amount of resources. This is what technology has done, you don't need to hire a whole bunch of people to help you achieve your goal anymore, you just require the right set of tools to monitor your organisation and business strategies. We can currently streamline our work thanks to the daily influx of fresh applications. Booking.com, Trivago, Expedia, Hotels.com, and many others are just a few examples. The travel and tourism sector has seen significant transformation in recent years, and e-commerce has fundamentally altered the idea of how consumers choose how they travel. As everything is technologically driven now, online and electronic solutions have made life more convenient and comfortable for everyone, as well as more competitive for businesses. Travel companies can now reach your global audience sitting anywhere in the world and easily tally their pricing with competitors to enable them to offer their own customers the best possible options. E-commerce has played the vital role in enhancing the travel industry. Service providers and consumers, both are now enjoying the feasibility of it.

E-Commerce has brought revolutionary changes in tourism and hospitality industry. Tourism as one of the biggest industries is a natural partner of Internet. It is a major component of most economies and community-based tourism is steadily increasing popularity. Tourism also has potential to induce local development and increase the income. It is essential to keep in mind the local environmental sensibilities. Applying the concept of e-commerce for tourism and hospitality has become the most natural outcome in recent years. Advantages are many. It facilitates local community access to tourism market and minimizes the financial information leakage. It links local communities and hospitality industry directly with the tourists. It could help building up local finance along with the national foreign exchange. It increases small enterprises by directly marketing the local products and industries anywhere in the world. Local communities get a direct share in the income while traditional cultures, social structures of the hosts get appreciated and extraordinary skills make a comeback. Tourism and hospitality mainly depend on the natural scenes and wildlife, for which locals or governments need not spend much other than maintaining them, along with effective hospitality facilities. Does that mean

that there are no disadvantages at all in applying E-Commerce into Hospitality Industry? Yes, there are many. It gives unnecessary and complete personal information of the tourist, which might not be appreciated in an underdeveloped part of the world.

Hospitality industry has to be thoroughly aware of its own labour market and its problems. It should not happen that there would be an eruption of unhappiness when tourists arrive, because the data could be used against the industry itself. Labour markets run on information, but they are invariably less than perfect mechanisms. What both buyers and sellers are left with is their perceptions and assumptions of supply and demand.

The Impact of E-commerce on the Industry

E-commerce has changed the whole concept of travel and tourism. Both consumers and the industry are taking advantage of e-commerce and expanding their businesses for good. With this huge phase of expansion, let us take a look at how it has been beneficial for travel and tourism industry.

1. Online Booking

Customers are no more required to visit offices and travel agents anymore. The whole booking system is online with a feasible payment system. Every system works individually but the integration of this set-up is helping to build and increase business.

2. Managing Recessions

The e-commerce industry has amazingly affected recessions. A recession is the period of loss that lasts for almost six months. E-commerce technology has introduced the quick recovery of recession through its ideal solutions to the problems that arise.

3. Automation and Networking

GPS is one of the greatest technologies that helps you in the industry of travel and tourism. If you'll look up any of the transportation services, e-commerce is the one thing that is helping you to connect and offer the best services to the consumers.

4. Additional Global Market

E-Commerce technology gives you better know-how about the additional market. The travel industry is not limited to a country or a city but it is globally targeting its customers. People can now book their trips to the exotic destinations from anywhere, such as their office or even the comfort of their own homes. E-commerce allows you to connect to the additional market around the world and provide the most feasible services to your clients, even if they are located overseas.

5. Ease of Accessibility

The planning and the strategy processes of business are now as easy as reaching out to the market. The travel agents can now get to know more about the competitors and plan their business accordingly. Apart from the bulk of information, it provides to the ease of accessibility to the customers and competitor behaviour. It makes it all easy for people to connect and grow together.

Furthermore, E-commerce technology provides you with many ways to enhance your business with ease. Just one click and the work is done, payment, booking, monitoring customer behaviour, business plans and marketing strategies are now at the fingertips of every businessman or woman.

The industry of travel and tourism is now dependent on E-commerce, it provides practical ideas to implement and plan anything in advance from cheap solo travel excursions to hefty family holiday packages. You can book last minute deals too. The best aspect is the global availability as well as the accurate information on hotels and the places to visit which are usually backed up by trustworthy customer reviews. Top e-commerce travel websites leverage a headless CMS and e-commerce microservices to respond directly to their customers. The travel industry popularized the importance and benefits of customer convenience, loyalty and rewards programs, competitive pricing and price comparisons, diverse search filtering, and streamlined checkout experiences.

The best travel e-commerce websites include Booking.com, Tripadvisor, Uber, and Airbnb, each of which uses an internally designed headless and modular architecture. Humans anticipate an improvement on the demand side of the equation as the economy starts to get better and the capital markets start to normalize, but negative room rate growth will still be a challenge. While the gap between pricing and demand is mostly to blame for the ongoing rate decrease, another element that makes hotel room rates more affordable is the transparency of pricing made possible by the usage of online booking services.

Percentage of survey respondents who use these services to make travel plans:

Online travel agencies such as Travelocity, Orbitz and Expedia: 34% Other Web sites: 27%

Personal referrals: 25%

Personal referrals: 25%

Travel company Web sites: 19%

Traditional travel agents: 9%

Calls to travel companies: 7%

Licensing fabric allows travel e-commerce websites to reduce development overhead without negatively impacting the customer experience.

E-commerce changed the way travel providers and online travel agencies (OTAs) served consumers. The 1960s launch of SABRE, the world's first computerized airline reservation system, led to the 1996 release of travel e-commerce website Travelocity. Today, online sales and travel e-commerce websites contribute to 66% of the revenue brought in by the global travel and tourism market. Altogether, the global market size of e-commerce travel exceeds \$517.8 billion. Headless commerce allows travel e-commerce websites to continually innovate and respond to customers' changing needs, especially as the industry responds to the COVID-19 pandemic. By using headless CMS solutions, the best travel e-commerce websites may continue to iterate, innovate, and grow their market share.

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DOI https://doi.org/10.30525/978-9934-26-277-7-238

MATHEMATICAL CHARACTERISTICS OF BOOLEAN FUNCTIONS' MODELS IN CRYPTOGRAPHIC TRANSFORMATIONS

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Currently, in information exchange via a modern information and communication network, data is processed in accordance with digital codes and technological packages, technical and technological means. The main technical and technological means of digital processing, and the use of information, are mainly formed by transformations of Boolean functions.