



The role of digital marketing in consumer behavior: A survey

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Abstract. This study reviews the recently published research on the role digital marketing plays on consumer behavior through three dimensions: (1) mobile apps, (2) social media platforms, and (3) electronic word-of-mouth. The main aim of this study is to shed light on the role digital marketing plays on consumer behavior with a specific focus on the tourism sector. This study will add to the body of knowledge and help in guiding future developments of digital marketing in tourism. The reviewed literature thoroughly showed the importance of digital communication for tourism competitiveness, eWOM, tourists' behavior, and their use of social media and mobile applications. This study will also contribute academically by identifying some gaps in existing research and providing both plans for future research and probable road-mapping for decision-makers.

Keywords: Mobile apps, Digital marketing, Consumer behavior, eWOM, Social media.

1. Introduction

The world is witnessing major developments in communications due to the intensive spread of technology and information through the Internet through different mediums such as the smartphone, social media platforms, and the electronic word-of-mouth (Al-Marroof & Al-Emran, 2018; Al-Qaysi & Al-Emran, 2017; Al-Qaysi, Mohamad-Nordin, & Al-Emran, 2018; Alshurideh, Salloum, Al Kurdi, & Al-Emran, 2019). These technological advancements make the world look like a small village as these communication media are able to facilitate access and interaction with consumers (Alghizzawi, Salloum, & Habes, 2018; Malik & Al-Emran, 2018; S. A. Salloum, Al-Emran, Shaalan, & Tarhini, 2019). Consumers use digital communication channels to search for product information and services. It has become part of people's everyday life (Stephen, 2016). The number of internet users worldwide has reached 4.1 Billion where 92% of them access the internet from their mobiles. Meanwhile, the number of active social media users recorded is at 3.56 billion (dazeinfo, 2018). Most people use digital marketing and social media intensively through their role as consumers of goods and services as they search for information and data on the products consumed in addition to communicating with others about their experiences (S. A. S. Salloum & Shaalan, 2018). Therefore, this responds to the marketers of this fundamental transformation through the increased use of digital marketing channels. In fact, by 2020, it is expected that approximately two-thirds of global spending will be on advertisements streamed on digital channels (Park & Lee, 2008). Therefore, consumer marketing in the future will be implemented to a large extent in digital environments, particularly social media and mobile phones.

2. Critical analysis of previous related studies

Providing a critical analysis for the studies under examination is an important part of any review study (Al-Emran, 2015; Al-Emran, Mezhuyev, & Kamaludin, 2018; Al-Emran, Mezhuyev, Kamaludin, & Shaalan, 2018; Al-Emran, Zaza, & Shaalan, 2015; Al-Saedi, Al-Emran, Abusham, & El_Rahman, 2019; Alghizzawi, Ghani, et al., 2018; Alghizzawi, Salloum, et al., 2018; Gulbahar & Yildirim, 2015; M. Habes, Alghizzawi, Salloum, & Ahmad, 2018; Mohammed Habes, Alghizzawi, Khalaf, Salloum, & Ghani, 2018; Kim, Joo, & Lee, 2016; Litvin, Goldsmith, & Pan, 2008; S. A. Salloum & Al-Emran, 2018; Stephen, 2016). In this study, a literature review was conducted to provide a broad understanding of the topic. The tourism sector is one

of the largest tributaries to an economy. It plays an important role similar to the industrial sector of the world's economy. Many countries depend on tourism as their major source of income in order to develop investments and support their overall economy (Magatef, 2015). Digital marketing can be used to make extra effort to affect tourist behavior. In Figure 1, the chart explains the effect of different digital marketing types on consumer behavior.

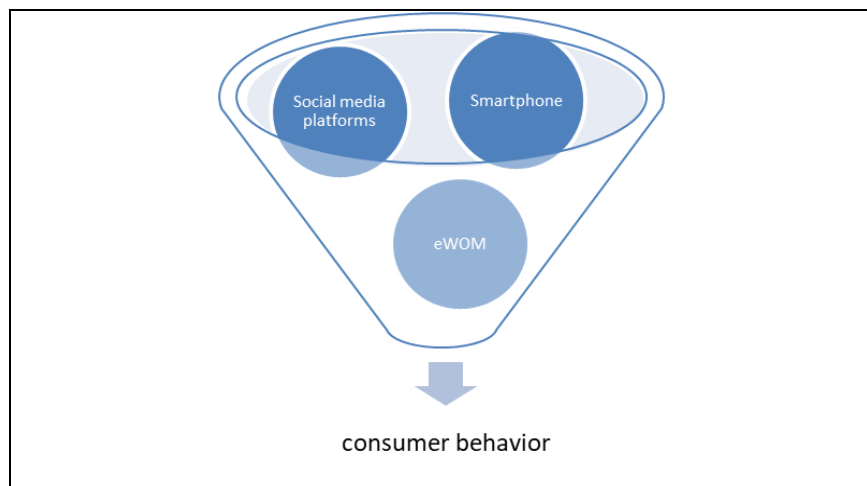


Figure 1. The effect of digital marketing on consumer behavior

3. The impact of smartphones on tourism

Smartphone is a consumer product that received international acceptance in a short period of time (Al-Emran, Alkhoudary, Mezhuyev, & Al-Emran, 2019). Smartphones are not only phones used to stay connected with other people. It can be used in every part in people's daily lives (Al-Emran, 2014; Al-Emran, Mezhuyev, & Kamaludin, 2018; Al-Emran, Mezhuyev, Kamaludin, & AlSinani, 2018; Al-Emran & Shaalan, 2017). For marketers and companies in different sectors, smartphones play an important role (Persaud & Azhar, 2012). There can be a new revolution in the tourism sector from the emergence of the smartphone which offers a new medium to convey knowledge and services (Hew, Leong, Tan, Lee, & Ooi, 2018). Smartphones have applications that act as tools to support its functions; therefore, the marketing of tourism services and products can be done through these applications in order to offer new features to consumers (Šimunić & Laškarin, n.d.). The digital means provided by smartphones are in a wide range of templates that can be used for advertising, enjoyment, and applications. These direct messages to consumers will affect tourists' destination choice (Al-Emran & Salloum, 2017; M. Habes et al., 2018; S. A. Salloum, Al-Emran, Monem, & Shaalan, 2017; S. A. Salloum, Al-Emran, & Shaalan, 2016, 2017a; S. A. Salloum, AlHamad, Al-Emran, & Shaalan, 2018). Tourism applications are important for the enhancement of the tourism industry. The perceived ease of use and perceived usefulness of smartphone applications have a positive impact on consumers (Alghizzawi, Ghani, et al., 2018). Tourism applications that can be accessed through smartphones will be the new way of marketing for the hotel industry and tourism agencies like Wego, Booking, and Trip Advisor (Morosan & DeFranco, 2016). An online survey conducted by TripAdvisor's Trip Barometer and the global research company Ipsos in 2015 found that 45% of connected travelers make their bookings from smartphones and they are ready to use it with booking functionality, while 34% use it for check-in reasons (Filofteia, 2016). According to Artyom Dogtiev (2018), in the United States, young people under the age of 18 spend an average of 3.2 hours per day using digital media. The other details are shown in Figure 2.

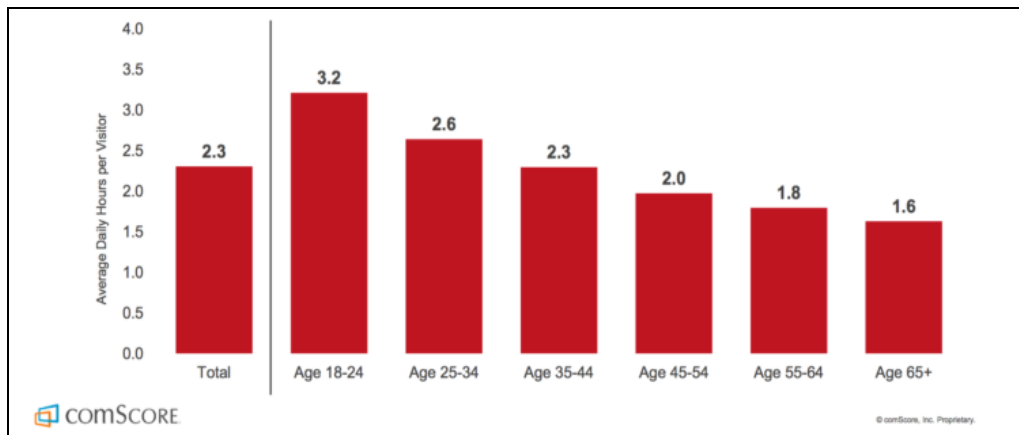


Figure 2. The time spent per user with digital media on mobile in the US daily in 2017 (Artyom Dogtiev, 2018)

The majority of marketers in the fields of tourism and tourism services have begun to develop their services in the form of smartphones and iPads applications. These applications help diversify their services and provide information on tourist destinations and brands promoted by marketers depending on their market needs (Alghizzawi, Ghani, et al., 2018; Artyom Dogtiev, 2018; Mhamdi, Al-Emran, & Salloum, 2018; S. A. Salloum, Al-Emran, Abdallah, & Shaalan, 2017; S. A. Salloum, Al-Emran, Monem, & Shaalan, 2018; S. A. Salloum, Al-Emran, & Shaalan, 2017b; S. A. Salloum, Mhamdi, Al-Emran, & Shaalan, 2017). All of these factors exist due to the proliferation of phones and smart devices applications in general, not to mention the high rate of individual adoption towards the services of applications by loading them on their smartphones (Artyom Dogtiev, 2018) as shown in Figure 3. Thus, it becomes imperative to use smart services and applications in the presentation of tourism services and trademarks of marketers that contribute to the formation of consumer behavior in the way that it obtains service (Mohammed Habes, Alghizzawi, et al., 2018; S. A. Salloum, Al-Emran, & Shaalan, 2017a, 2018, S. A. Salloum & Shaalan, 2018a, 2018b).

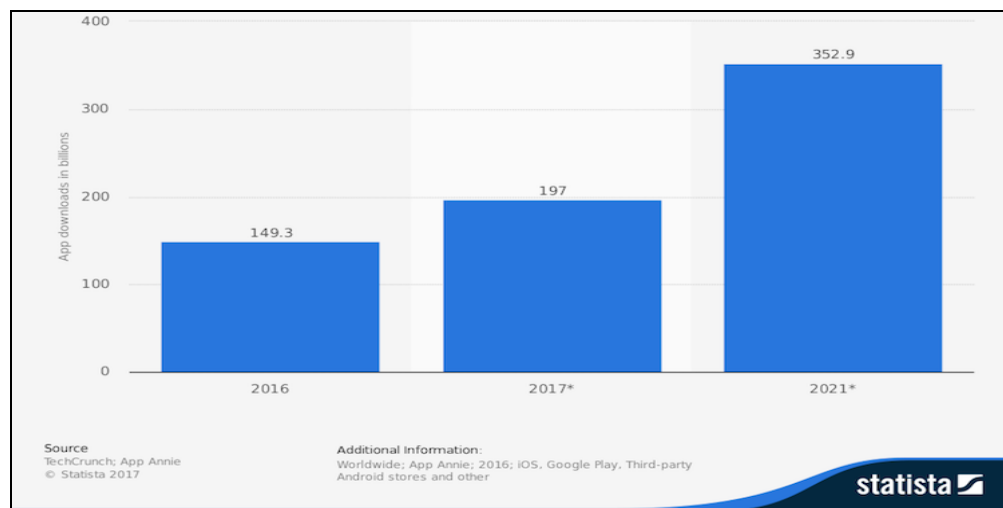


Figure 3. Number of mobile app downloads worldwide (2016, 2017, and 2021) (Artyom Dogtiev, 2018)

Consumers' behavior towards phone applications is enhanced by providing a range of features that are not available in conventional marketing tools such as the amount of data and the variety of templates in which information is delivered (Alghizzawi, Salloum, et al., 2018; M. Habes et al., 2018; S. A. S. Salloum & Shaalan, 2018). This can be further illustrated in Table 1 that was adapted from Filofteia (2016). The marketing needs will determine the consumers' behavior and time to browse the applications to suit their needs and tendency (Filofteia, 2016). Marketers have sought to diversify these marketing templates to meet the needs of all consumers as the widespread existence of mobile apps offer huge power and service for consumers, and is important to hotel and travel agencies (Filofteia, 2016).

Communication	70.16
Games	48.11
Widgets	32.78
Media video	25.18
Travel local	21.01
Tools	20.04
Music audio	18.97
Social	16.12
Finance	13.02
Sports	11.22
Weather	10.32

Table 1. Time spent on mobile devices and mobile app categories used (percentage %) (Filofteia, 2016)

4. The impact of social media platforms on tourism

All types of social media platforms now try to achieve the objectives of different sectors in the world. Moreover, the presence of many applications in social media has contributed to changing the traditional ways in marketing and communication (Alghizzawi, Ghani, et al., 2018; Alghizzawi, Salloum, et al., 2018; Mohammed Habes, Salloum, Alghizzawi, & Alshibly, 2018; S. A. Salloum, Maqableh, Mhamdi, Al Kurdi, & Shaalan, 2018; S. A. Salloum, Mhamdi, Al Kurdi, & Shaalan, 2018). According to the statistical report in 2019, the global social media use a wide range of social media platforms (The Statistics Portal, 2019) as shown in Figure 4. Social media have evolved in the past few years to encompass a variety of input capabilities, various features and unlimited Internet access, and powerful location awareness function. Importantly, the increased capabilities of the mobile application support thousands of social media which extend the functionality of social media to a wide range of information services such as specialized information search and marketing (Fotis, Buhalis, & Rossides, 2011; M. Habes et al., 2018). Indeed, recent studies indicate that social media and their apps have the potential to assist travelers by providing easy access to information anytime and (almost) anywhere. From a very small base, marketers have already begun to explore a wide array of approaches towards leveraging the social media medium (Galan, Lawley, & Clements, 2015). Marketers in the field of tourism have made attempts and experienced both early and encouraging successes and helpful and informative bombs. Direct-to-consumer advertising has understandably become the accepted norm of social media marketing because it is well understood as the direct, linear descendant of old-style advertising messages that have always been pushed at customers from helping tourists find resources important to them at the moment they need them; to assisting people with finding critical information whenever and where ever they need it (Alghizzawi, Ghani, et al., 2018; Bazazo & Alananzeh, 2016).

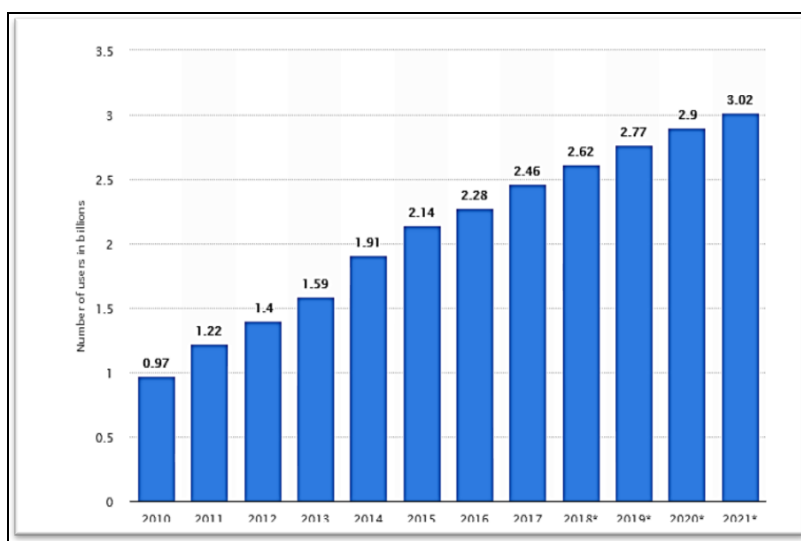


Figure 4. Number of social media users worldwide (from 2010 to 2021) (in billions) (The Statistics Portal, 2019)

According to Abd Al-sameeM (2012), it is recommended to increase the efficiency of using social media platforms in tourism marketing for its many advantages. In their study, all respondents accepted the idea of using social media to promote tourism in Egypt. Social media platforms play an important role for

consumers in providing travel information and services such as lists of hotels, maps, and tourist destinations (Leung, Law, Van Hoof, & Buhalis, 2013). Moreover, Miguéns, Baggio, and Costa (2008) confirmed the importance of social media platforms in promoting tourism destinations. According to that, managers in the tourism sector need to recognize this important role; and thus, make extra efforts to develop their usage of interactive technologies in order to improve their position in the market.

5. The impact of eWOFM on tourism

Electronic word-of-mouth (eWOM) is the most important topic in e-marketing, social marketing, and consumer behavior in general (Mohammed Habes, Salloum, et al., 2018). This is normal as users rely on Internet services greatly. eWOM is defined as all communications directed between consumers through Internet-based technology where people spread their ideas and opinions through the Internet. As it is clear from the definition, eWOM is a transfer of information between consumers without the control of a particular party on the dialogue to exchange experiences and reduce the risks that may occur with the consumer with the possibility of this dialogue going through social networking platforms, hotel sites, and electronic tourism services. Many researchers in different studies confirm that word-of-mouth plays an increasingly important role in consumers' attitudes. With the growth of online social media platforms for communication like Facebook, Twitter, and Snapchat, the eWOM has become a serious topic to marketers and business managers. The effect of eWOM on tourism choice and global branding is growing day after day as online travel reviews written by users are ever more available and are used to inform others about travel-related decisions, especially services (El-Sherbiny, n.d.). More than a third of travelers visit the online community to see others' reviews before making any purchase as they think these reviews are helpful in facilitating their purchase decisions. 34.7 % of total online spending is related to tourism. A recent survey also indicated that more than 74% of tourists use the opinions of other travelers as a source of information when planning for trips (Jalilvand, Ebrahimi, & Samiei, 2013). There is a relationship between electronic evaluation and sales where increasing electronic feedback by 10% increases the percentage of booking and sales by 5%. Therefore, Ye, Law, Gu, and Chen (2011) recommended the importance of shedding light from the tourism sector on the increasing numbers of users of the Internet because of its positive effects. eWOM's positive effect on tourists' behavior gives incentive to tourists to visit Islamic sites in Iran (Jalilvand et al., 2013).

6. Conclusion

Digital marketing through mobile technologies, social media platforms, and eWOM has become a part of our global lives and serves as the new way for communication and marketing (Alghizzawi, Ghani, et al., 2018; Alghizzawi, Salloum, et al., 2018; Bazazo & Alananzeh, 2016; Bazazo, Alananzeh, & Taani, 2016; M. Habes et al., 2018; Mohammed Habes, Alghizzawi, et al., 2018). Recently, the field of marketing has become more developed due to the impact of high global competition on many sectors through new technology. These factors change customers' behavior and tourists' thinking, not like the old way of marketing and advertising. The new large templates of digital technology provide consumers pleasure, an abundance of information, and many tourism services. With the revolution in technology and the habits of the new generation, it is clear that people today need to adopt the new way to communicate with consumers, especially in the tourism sector because the choices of destination are not like before (Gao & Koufaris, 2006; Mistilis, Buhalis, & Gretzel, 2014; Penni, 2015). Finally, eWOM through digital surveillance influences the behavior of tourists and their use of social media and mobile applications. The results in this article are part of this new wave of research and provide sufficient data to keep the attention on the role digital marketing plays in consumer behavior from the perspective of tourism.

References

- Abd Al-sameeM. (2012). *Role of Social Media sites in Marketing Egypt as an international tourist destination*.
- Al-Emran, M. (2014). *Investigating Students' and Faculty members' Attitudes Towards the Use of Mobile Learning in Higher Educational Environments at the Gulf Region*. The British University in Dubai (BUiD).
- Al-Emran, M. (2015). Hierarchical Reinforcement Learning: A Survey. *International Journal of Computing and Digital Systems*, 4(2), 137-143.
- Al-Emran, M., Alkhoudary, Y. A., Mezhujev, V., & Al-Emran, M. (2019). Students and Educators Attitudes

- towards the use of M-Learning: Gender and Smartphone ownership Differences. *International Journal of Interactive Mobile Technologies (IJIM)*, 13(1), 127–135.
- Al-Emran, M., Mezhuyev, V., & Kamaludin, A. (2018). Students' Perceptions towards the Integration of Knowledge Management Processes in M-learning Systems: A Preliminary Study. *International Journal of Engineering Education*, 34(2), 371–380.
- Al-Emran, M., Mezhuyev, V., Kamaludin, A., & AlSinani, M. (2018). Development of M-learning Application based on Knowledge Management Processes. In *2018 7th International conference on Software and Computer Applications (ICSCA 2018)* (pp. 248–253). Malaysia: ACM.
- Al-Emran, M., Mezhuyev, V., Kamaludin, A., & Shaalan, K. (2018). The impact of knowledge management processes on information systems: A systematic review. *International Journal of Information Management*, 43, 173–187.
- Al-Emran, M., & Salloum, S. A. (2017). Students' Attitudes Towards the Use of Mobile Technologies in e-Evaluation. *International Journal of Interactive Mobile Technologies (IJIM)*, 11(5), 195–202. <https://doi.org/10.3991/ijim.v11i5.6879>
- Al-Emran, M., & Shaalan, K. (2017). Academics' Awareness Towards Mobile Learning in Oman. *International Journal of Computing and Digital Systems*, 6(1), 45–50. <https://doi.org/10.12785/IJCDS/060105>
- Al-Emran, M., Zaza, S., & Shaalan, K. (2015). Parsing modern standard Arabic using Treebank resources. In *2015 International Conference on Information and Communication Technology Research, ICTRC 2015*. <https://doi.org/10.1109/ICTRC.2015.7156426>
- Al-Marouf, R. A. S., & Al-Emran, M. (2018). Students acceptance of Google classroom: An exploratory study using PLS-SEM approach. *International Journal of Emerging Technologies in Learning (IJET)*, 13(6), 112–123. <https://doi.org/10.3991/ijet.v13i06.8275>
- Al-Qaysi, N., & Al-Emran, M. (2017). Code-switching Usage in Social Media: A Case Study from Oman. *International Journal of Information Technology and Language Studies*, 1(1), 25–38.
- Al-Qaysi, N., Mohamad-Nordin, N., & Al-Emran, M. (2018). A Systematic Review of Social Media Acceptance from the Perspective of Educational and Information Systems Theories and Models. *Journal of Educational Computing Research*. <https://doi.org/https://doi.org/10.1177/0735633118817879>
- Al-Saedi, K., Al-Emran, M., Abusham, E., & El_Rahman, S. A. (2019). Mobile Payment Adoption: A Systematic Review of the UTAUT Model. In *International Conference on Fourth Industrial Revolution*. IEEE.
- Alghizzawi, M., Ghani, M. A., Som, A. P. M., Ahmad, M. F., Amin, A., Bakar, N. A., ... Habes, M. (2018). The Impact of Smartphone Adoption on Marketing Therapeutic Tourist Sites in Jordan. *International Journal of Engineering & Technology*, 7(4.34), 91–96.
- Alghizzawi, M., Salloum, S. A., & Habes, M. (2018). The role of social media in tourism marketing in Jordan. *International Journal of Information Technology and Language Studies*, 2(3).
- Alshurideh, M., Salloum, S. A., Al Kurdi, B., & Al-Emran, M. (2019). Factors affecting the Social Networks Acceptance: An Empirical Study using PLS-SEM Approach. In *8th International Conference on Software and Computer Applications*. ACM.
- Artyom Dogtiev. (2018). App Download and Usage Statistics (2018). *Business of App*.
- Bazazo, I. K., & Alananzeh, O. A. (2016). The Effect Of Electronic Tourism In Enabling The Disabled Tourists To Communicate With The Touristic And Archaeological Sites Case Study–Jordan. *European Scientific Journal, ESJ*, 12(5).
- Bazazo, I. K., Alananzeh, O. A., & Taani, A. A. A. (2016). Marketing the Therapeutic Tourist Sites in Jordan Using Geographic Information System. *Marketing*, 8(30).
- dazeinfo. (2018). *the number of internet user in the world*.
- El-Sherbiny, M. (n.d.). The Impacts of Electronic Word-of-Mouth on Tourists' Attitude and the influence of (eWOM) on food tourism. *Recherches et Pratiques Marketing*, 1(2).
- Filofteia, T. M. (2016). MOBILE APPLICATIONS FOR TOURISM. STUDY REGARDING THEIR USE BY ROMANIANS. *Annals of Constantin Brancusi University of Targu-Jiu. Economy Series*, (4).
- Fotis, J., Buhalis, D., & Rossides, N. (2011). *Social Media Impact on Holiday Travel Planning*. *International Journal of Online Marketing* (Vol. 1). <https://doi.org/10.4018/ijom.2011100101>
- Galan, M., Lawley, M., & Clements, M. (2015). Social media's use in postgraduate students' decision-making journey: an exploratory study. *Journal of Marketing for Higher Education*, 25(2), 287–312. <https://doi.org/10.1080/08841241.2015.1083512>

- Gao, Y., & Koufaris, M. (2006). Perceptual antecedents of user attitude in electronic commerce. *ACM SIGMIS Database: The DATABASE for Advances in Information Systems*, 37(2-3), 42-50.
- Gulbahar, M. O., & Yildirim, F. (2015). Marketing efforts related to social media channels and mobile application usage in tourism: Case study in Istanbul. *Procedia-Social and Behavioral Sciences*, 195, 453-462.
- Habes, M., Alghizzawi, M., Khalaf, R., Salloum, S. A., & Ghani, M. A. (2018). The Relationship between Social Media and Academic Performance: Facebook Perspective. *International Journal of Information Technology and Language Studies*, 2(1).
- Habes, M., Alghizzawi, M., Salloum, S. A., & Ahmad, M. (2018). The Use of Mobile Technology in the Marketing of Therapeutic Tourist Sites: A Critical Analysis. *International Journal of Information Technology and Language Studies*, 2(2).
- Habes, M., Salloum, S. A., Alghizzawi, M., & Alshibly, M. S. (2018). The role of modern media technology in improving collaborative learning of students in Jordanian universities. *International Journal of Information Technology and Language Studies*, 2(3).
- Hew, J.-J., Leong, L.-Y., Tan, G. W.-H., Lee, V.-H., & Ooi, K.-B. (2018). Mobile social tourism shopping: A dual-stage analysis of a multi-mediation model. *Tourism Management*, 66, 121-139.
- Jalilvand, M. R., Ebrahimi, A., & Samiei, N. (2013). Electronic word of mouth effects on tourists' attitudes toward Islamic destinations and travel intention: An empirical study in Iran. *Procedia-Social and Behavioral Sciences*, 81, 484-489.
- Kim, Y. B., Joo, H. C., & Lee, B. G. (2016). How to forecast behavioral effects on mobile advertising in the smart environment using the technology acceptance model and web advertising effect model. *KSI Transactions on Internet and Information Systems (TIIS)*, 10(10), 4997-5013.
- Leung, D., Law, R., Van Hoof, H., & Buhalis, D. (2013). Social media in tourism and hospitality: A literature review. *Journal of Travel & Tourism Marketing*, 30(1-2), 3-22.
- Litvin, S. W., Goldsmith, R. E., & Pan, B. (2008). Electronic word-of-mouth in hospitality and tourism management. *Tourism Management*, 29(3), 458-468.
- Magatef, S. G. (2015). The impact of tourism marketing mix elements on the satisfaction of inbound tourists to Jordan. *International Journal of Business and Social Science*, 6(7), 41-58.
- Malik, S. I., & Al-Emran, M. (2018). Social Factors Influence on Career Choices for Female Computer Science Students. *International Journal of Emerging Technologies in Learning (IJET)*, 13(5), 56-70.
- Mhamdi, C., Al-Emran, M., & Salloum, S. A. (2018). *Text mining and analytics: A case study from news channels posts on Facebook*. *Studies in Computational Intelligence* (Vol. 740). https://doi.org/10.1007/978-3-319-67056-0_19
- Miguéns, J., Baggio, R., & Costa, C. (2008). Social media and tourism destinations: TripAdvisor case study. *Advances in Tourism Research*, 26(28), 1-6.
- Mistilis, N., Buhalis, D., & Gretzel, U. (2014). Future eDestination marketing: perspective of an Australian tourism stakeholder network. *Journal of Travel Research*, 53(6), 778-790.
- Morosan, C., & DeFranco, A. (2016). Modeling guests' intentions to use mobile apps in hotels: The roles of personalization, privacy, and involvement. *International Journal of Contemporary Hospitality Management*, 28(9), 1968-1991.
- Park, D.-H., & Lee, J. (2008). eWOM overload and its effect on consumer behavioral intention depending on consumer involvement. *Electronic Commerce Research and Applications*, 7(4), 386-398.
- Penni, J. (2015). *The Online Evolution of Social Media: An Extensive Exploration of a Technological Phenomenon and its Extended Use in Various Activities*. University of Huddersfield.
- Persaud, A., & Azhar, I. (2012). Innovative mobile marketing via smartphones: Are consumers ready? *Marketing Intelligence & Planning*, 30(4), 418-443.
- Salloum, S. A., & Al-Emran, M. (2018). Factors affecting the adoption of E-payment systems by university students: Extending the TAM with trust. *International Journal of Electronic Business*, 14(4), 371-390.
- Salloum, S. A., Al-Emran, M., Abdallah, S., & Shaalan, K. (2017). Analyzing the Arab Gulf Newspapers Using Text Mining Techniques. In *International Conference on Advanced Intelligent Systems and Informatics* (pp. 396-405). Springer. https://doi.org/10.1007/978-3-319-64861-3_37
- Salloum, S. A., Al-Emran, M., Monem, A. A., & Shaalan, K. (2018). Using text mining techniques for extracting information from research articles. In *Studies in Computational Intelligence* (Vol. 740). Springer. https://doi.org/10.1007/978-3-319-67056-0_18
- Salloum, S. A., Al-Emran, M., Monem, A., & Shaalan, K. (2017). A Survey of Text Mining in Social Media:

- Facebook and Twitter Perspectives. *Advances in Science, Technology and Engineering Systems Journal*, 2(1), 127–133. Retrieved from <http://astesj.com/archive/volume-2/volume-2-issue-1/survey-text-mining-social-media-facebook-twitter-perspectives/>
- Salloum, S. A., Al-Emran, M., & Shaalan, K. (2016). A Survey of Lexical Functional Grammar in the Arabic Context. *International Journal of Computing and Network Technology*, 4(3), 141–147.
- Salloum, S. A., Al-Emran, M., & Shaalan, K. (2017a). Mining Social Media Text: Extracting Knowledge from Facebook. *International Journal of Computing and Digital Systems*, 6(2), 73–81. <https://doi.org/10.12785/ijcnds/060203>
- Salloum, S. A., Al-Emran, M., & Shaalan, K. (2017b). Mining Text in News Channels: A Case Study from Facebook. *International Journal of Information Technology and Language Studies*, 1(1), 1–9.
- Salloum, S. A., Al-Emran, M., & Shaalan, K. (2018). The Impact of Knowledge Sharing on Information Systems: A Review. In *13th International Conference, KMO 2018*. Slovakia.
- Salloum, S. A., Al-Emran, M., Shaalan, K., & Tarhini, A. (2019). Factors affecting the E-learning acceptance: A case study from UAE. *Education and Information Technologies*, 24(1), 509–530. <https://doi.org/https://doi.org/10.1007/s10639-018-9786-3>
- Salloum, S. A., AlHamad, A. Q., Al-Emran, M., & Shaalan, K. (2018). A survey of Arabic text mining. In *Studies in Computational Intelligence* (Vol. 740). Springer. https://doi.org/10.1007/978-3-319-67056-0_20
- Salloum, S. A., Maqableh, W., Mhamdi, C., Al Kurdi, B., & Shaalan, K. (2018). Studying the Social Media Adoption by university students in the United Arab Emirates. *International Journal of Information Technology and Language Studies*, 2(3).
- Salloum, S. A., Mhamdi, C., Al-Emran, M., & Shaalan, K. (2017). Analysis and Classification of Arabic Newspapers' Facebook Pages using Text Mining Techniques. *International Journal of Information Technology and Language Studies*, 1(2), 8–17.
- Salloum, S. A., Mhamdi, C., Al Kurdi, B., & Shaalan, K. (2018). Factors affecting the Adoption and Meaningful Use of Social Media: A Structural Equation Modeling Approach. *International Journal of Information Technology and Language Studies*, 2(3).
- Salloum, S. A. S., & Shaalan, K. (2018). Investigating students' acceptance of E-learning system in Higher Educational Environments in the UAE: Applying the Extended Technology Acceptance Model (TAM). The British University in Dubai.
- Salloum, S. A., & Shaalan, K. (2018a). Adoption of e-book for university students. In *International Conference on Advanced Intelligent Systems and Informatics* (pp. 481–494). Springer.
- Salloum, S. A., & Shaalan, K. (2018b). Factors affecting students' acceptance of e-learning system in higher education using UTAUT and structural equation modeling approaches. In *International Conference on Advanced Intelligent Systems and Informatics* (pp. 469–480). Springer.
- Šimunić, M., & Laškarin, M. (n.d.). Mobile marketing and advertising strategies in tourism and hospitality industry.
- Stephen, A. T. (2016). The role of digital and social media marketing in consumer behavior. *Current Opinion in Psychology*, 10, 17–21.
- The Statistics Portal. (2019). *Number of social media users worldwide from 2010 to 2021 (in billions)*.
- Ye, Q., Law, R., Gu, B., & Chen, W. (2011). The influence of user-generated content on traveler behavior: An empirical investigation on the effects of e-word-of-mouth to hotel online bookings. *Computers in Human Behavior*, 27(2), 634–639.