

Retraction

Retracted: Analysis of Digital Photography Technology in the Era of Big Data

Mobile Information Systems

Received 25 July 2023; Accepted 25 July 2023; Published 26 July 2023

Copyright © 2023 Mobile Information Systems. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

- [1] Y. Lu, S. Liu, and Y. Bai, "Analysis of Digital Photography Technology in the Era of Big Data," *Mobile Information Systems*, vol. 2022, Article ID 3880755, 8 pages, 2022.

Research Article

Analysis of Digital Photography Technology in the Era of Big Data

Yifeng Lu , Sihua Liu, and Yunting Bai

China Medical University, Party Committee Propaganda Department, Liaoning 110122, Shenyang, China

Correspondence should be addressed to Yifeng Lu; yflu@cmu.edu.cn

Received 14 March 2022; Revised 12 April 2022; Accepted 18 April 2022; Published 15 June 2022

Academic Editor: M. Praveen Kumar Reddy

Copyright © 2022 Yifeng Lu et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

The term “Digital Photography” has been a relatively new research topic in the field of computer-mediated technology. Although Digital Photography emerged thirty years ago, continuous developments and upgradations are being recorded frequently. Advanced technologies like Digital Technology transformed all the technology into digital mode. The field of photography underwent several developments in terms of camera quality, image quality, image clarity, image transfer, image storage, and other sensitive surfaces. Most of the studies confirmed that digital photography permitted the photographer to record videos at high resolutions. All the developments in the field of Digital Photography have largely contributed to the concept of modern photography and enabled the photographers to produce high-quality images. It also helped photographers enhance their photography skills and accomplish their tasks. All the transformations in the field of Digital Technology happened at a pace, and it was extremely difficult. Therefore, the current paper sheds light on the developmental stages of digital photography. It also highlights the significance of digital photography technology in the era of big data.

1. Introduction

Towards the end of twentieth century and in the early twenty-first century, digital photography continued to be one of the significant breakthroughs in this technology-dominating world. Researchers have been continuously searching to capture and transmit images by means of electronics. In the year 1826–1827, the first still photographic image was produced by Nicephore Niepce, followed by digital communication that is long distance in nature [1]. With the aim of conveying messages, Samuel Morse and Alfred Vail came up with a binary code and viable electric telegraph. Gradually, the inventors started to send and record images through dashes as well as dots. Therefore, the history of Digital Photography can be traced back to 40 years [2].

Recently, traditional film photography has been replaced by digital photography. Majority of the film manufacturers stopped manufacturing and using film cameras and films by the year 2006. All the productions of camera and film, initially followed in the traditional photography, were abandoned by Minolta in the year 2006 [3]. There has always been a shift from traditional camera to modern

photography, due to which several companies in the photography were badly affected. However, the consequences of this shift can be ideally reflected in digital photography [4]. The changes in the field of photography will be discussed in this research paper.

Recent studies opined that the concept of digital photography does not always come in the form of computer-mediated communication, as the existence of photography is in no way connected to fashion [5]. Until the late nineteenth century, photography was regarded as a pure analog medium that uses different chemical processes and light to embed images. Gradually, digital cameras, scanners, Photoshop programs, and so forth gained extensive popularity in this modern world. In fact, these packages initiated revolution in the field of photography, which further led to the computer-mediated communication [6]. This new way of communication permits individuals to share the computerised photographs through blogs, Internet sites, web pages, and other networking sites. Different professionals like police, scientists, and others use these computerised photographs for easier communication in this digital world.

Very limited literature is available on digital photography, which is in the form of computer-mediated

communication. However, this research area interests multiple scholars and thus aimed to examine the role of photography at workplaces. Even the jobs of individuals underwent fundamental changes and deliver computerised photographs [7]. Therefore, it can be argued that the digital photography revolution transformed the way people carry out their jobs. Most importantly, it was opined that photography plays a crucial role as a result of computer-mediated communication. Photography has become a passion for a wide variety of people, as it is an egalitarian form of art [8]. While painting or sculpture requires extra training and skill set, the camera permits photographers to produce images with easy identification. Nevertheless, additional practice and training will help gifted photographers to expose towards high standards. Several studies have confirmed that cameras or photography is omnipresent around the world.

Although Digital Photography emerged thirty years ago, continuous developments and upgradations are being recorded frequently. Advanced technologies like Digital Technology transformed all the technology into digital mode. The field of photography underwent several developments in terms of camera quality, image quality, image clarity, image transfer, image storage, and other sensitive surfaces [8]. Most of the studies confirmed that digital photography permitted the photographer to record videos at high resolutions. All the developments in the field of Digital Photography have largely contributed to the concept of modern photography and enabled the photographers to produce high-quality images. It also helped photographers enhance their photography skills and accomplish their tasks. All the transformations in the field of Digital Technology happened at a pace, and it was extremely difficult [9, 10].

Recent studies have confirmed the importance of image processing and digital photography. It was informed that different kinds of techniques are prominently used in the field of Digital Photography and Big Data Analytics [11–14]. Nevertheless, the interaction between these two fields would require additional insights into the modern techniques. Thus, the current study focuses on the developments in the field of Digital Photography. It also highlights the significance of digital photography technology in the era of big data [15–17]. Therefore, the primary aim of this paper is to examine the importance of digital photography technologies in the era of big data. Recent developments and trends in the field of Digital Photography will also be highlighted. This paper also reviews the short history of digital photography and its impact on the lives of individuals. Advantages of Digital Photography will also be discussed in this study. This paper follows the layout given below. Section 2 presents the examination of the available literature review. Section 3 discusses the methodology adopted in the study and the ways to gather data. Section 4 presents the prominent findings derived from the study followed by discussion. Section 5 presents the conclusion of the paper.

2. Review of the Literature

The existing literature review on Digital Photography suggested that it is, indeed, a form of computer-mediated communication, wherein computers are predominantly

used to communicate ideas, emotions, and information. Computerizations helped the experts in the field to have a smooth communication with others. Hence, the computers have a positive impact on the communication process. Multiple researchers have seriously delved into digital photography [18]. Also, computer-mediated communication started gaining attention gradually, especially in recent times. Although there is an extensive literature available on photography, not many studies discussed the relationship between the social consequences. Due to the rapid advancements in the field of photography, researchers started focusing on computerising the photographic process [19]. Thus, the researchers in the field of communication technology tried to pay attention on the recent advancements in the field of digital photography. The prevalence of digital photography tools and software paved way for numerous studies in this research area. Few other studies discussed the history of digital photography which began in the year 1957. In fact, the study found that the first digital image was created and produced using a computer. Gradually, images were also scanned with the help of rotating drum device [20, 21]. Gradually, the field of Digital Photography began to flourish. Figures 1–3 represent digital cameras used in the past, which were gradually replaced by the recent digital photography devices.

There is a considerable amount of literature that discusses on digital photography as the significant form of computer-mediated communication. Different professionals use digital photography as a tool for collecting data/information, collecting data to maintain personal information, and so forth [22]. People in general use wide range of images to examine different issues, along with the aid of computer-mediated technology. Photography is also used to represent on the issues arising with regard to people, crimes, and other legal issues. Digital photography is also used to examine the crime scenes and even legal aspects. Few other studies conducted research on digital photography and found that with the use of digital photography and the tools across different organizations can lead to a huge number of tensions. These studies also confirmed that digital photography is different from film photography [23].

Digital photography is much easier than film photography. In fact, digital cameras are easy to use and handle and are simple unlike advanced technologies used in film photography. Nevertheless, digital cameras would require complex computer technology to process their packages in its full swing. Films are used in film cameras, which come with detachable lens, and the films are sent for further developments. Cameras that are being used in films are not that expensive as compared with digital cameras [24]. Digital cameras, on the other hand, are quite expensive as they require lens, memory cards, computer to retrieve images from camera, important software to make necessary changes in the images, printer to print the images, and lastly fees to access online. Digital cameras would need memory card to store the images, which are later transformed into a computer using the card. These cards can also store the images, unlike film cameras. Different software is used to manipulate



FIGURE 1: Prototype digital camera.



FIGURE 2: First still video camera.



FIGURE 3: Autofocus camera.

the images. This entire package was relatively common in the past; however, recent cameras come with optional elements and hence are much advanced. Use of dark rooms is essential in photography and not in film photography.

Past studies proposed that the concept of digital photography and eventually sharing the images being photographed on websites and other networking sites can transform the lives of people. The definition of life would be different from what people carried in the past. These studies also stated that people would not find it weird to click pictures of mundane activities and post them on

Internet, web, or social networking sites. One such study observed that photo bloggers are highly interested in sharing their views of the world through their blogs. Also, they find it as a source of motivation and inspiration in this world. It was also found that photobloggers find it motivational to take pictures and post them regularly. Few other studies also found something similar to this, where people invest time in taking photographs, once they start using digital cameras in their lives. There has been a steep increase in the number of people who use cameras to click photographs and post them on social networking sites [25].

There is an extensive body of literature that stresses on photoblogging as a new research interest area. It was found that photoblogging is part of web 2.0. Generally speaking, photoblogging is considered as a social networking activity, which allows the users to post their photographs or images on the Internet or web. It also enables the users to share the images with other people. Photobloggers are of different types. Some of them would post the images on the Internet on a regular basis. Such people dedicate their time to websites and increase their followers [26]. On the other hand, some of them are interested in sharing the photos than photoblogging. These kinds of people post and share the snapshots of friends, events, travel, family, and so on. In addition, these photo-sharers use Flickr than personal websites to share the images with others.

Prior research discussed that casual photographers use digital technologies and photographic technologies in their daily life, especially in the era of big data. It was noted that such people found it difficult to take prints of all the photos, organize them in the albums, and then keep it safe. Hence, these people found a new way of sharing the images or pictures with others, either for professional or personal use. New ways of sharing, indexing, sending, and annotating photographs were identified in the past [27]. Likewise, few other studies found that experts in the field of Digital Photography are using only limited features of software namely date-based sorting and suing thumbnails on the screen. Advanced software features were not used by the users, after their initial use. On the other hand, people who use camera phone had less interest in taking pictures and annotating photos. Such people also found it funny to comment on the images.

Previous studies also found that digital cameras play an important role in the new era of big data. The new technology makes use of video cameras, camera phones, and small digital cameras in their daily lives with the aim of turning their lives more livelily. It was also found that digital cameras are also used to take snaps of pictures of crimes being committed. People find it interesting to record images or videos of crimes like abuse, murder, and physical violence and later disclose them on media or Internet [28]. There are several websites that have been set up to track the brutality, misconduct, and misbehaviour of the people. Therefore, to find out the crimes, catch the criminals, and identify the inappropriate behaviour of the people, digital photography plays an immense role. Use of digital photography in such instances can certainly help people have a peaceful life.

Past studies also confirmed that digital photography, digital images, videos, and others ways of digital communication are been prominently adopted legally in the courts. Even courts and police stations have begun using software programs that allow them to retrieve digital images from computer, modify them, and store the images or crime scenes for future references. By doing so, legal departments can have a database along with them, unlike the traditional legal system [4, 6, 9, 10]. Police departments also began using digital photography to transmit and store digital images, which could be crucial for the cases registered. Likewise, at crime scenes, digital images can be recorded and later can be sent to crime scene technicians who will be able to analyse the crime scene and provide further leads. To be precise, these images clicked by the photographer can be the duplication of what the photographer witnessed with his/her own eyes. Key observations of the photographer will be recorded in the images and can be used for further discussions.

Surprisingly, digital photography in this era of big data allows the police to prove the crime and abuse cases in an active manner. Traditional photography snapshots could be blurry and hence would require processing labs and later would be produced in the courtroom. However, digital photography technology enables the user to share the images in an electronic format, which can be later used as evidences in the legal court. This readiness factor of digital photography saved the life of people, who were having abuses. It also punished the abusers, who were uncooperative [12–14, 28]. Digital photography also permitted the concerned authorities to present the required evidence in the court against the crimes.

Recent studies also found that scientific digital photography is one of the developing areas where digital photography is predominantly used. Majority of the science projects consider photography as an integral part to document significant findings. Likewise, archaeologists also use digital photography techniques to document the wildlife, excavations, and others. Microbiologists use photography to track and identify the animals of various species. They also record images to identify the microscopic specimens [26]. Astronomers use digital images to study the distant suns and galaxies. Medical field professionals use digital images or photographs to identify brain imaging and disorders of dermatology, document plastic surgery follow-ups, perform mammography, and obtain other forms of patient data. Only very limited literature is available on the usage of photography or digital photography and their consequences in the field of science.

3. Research Methodology

Research knowledge accumulation can be built as foundation only through literature review. Literature review provides base for the theories, its expansions, and identification of research gaps; helps to close research gaps; and finally discusses on uncovered areas in any topic of the research area. The key research areas that have not been focused so far will be identified and explained in literature review. This

research adopts Systematic Literature Review Method (SLR) to grab an in-depth understanding of Digital Photography. Therefore, the primary aim of this paper is to examine the importance of digital photography technologies in the era of big data. Recent developments and trends in the field of Digital Photography will also be highlighted. SLR process includes the following steps: (1) identify the research questions, (2) systematically analyse the existing literature (search for literature), (3) identify the inclusion and exclusion criteria, (4) selection process and data extraction, and (5) data synthesis.

By adopting SLR method, researchers as well as practitioners will be able to easily identify the findings of the study to understand, analyse, and identify the factors that promote and hinder knowledge management as well as knowledge sharing within the organizations and further provide the inferences consequently. Moreover, researchers and practitioners across the world can make use of the findings and compare their results. In a nutshell, SLR method identifies, analyses, and interprets the results within the specific period related to the topic in five phases as shown in Figure 4.

In order to trace the appropriate publications during the period of 2010–2020 on the analysis of digital photography in the era of big data, the researcher raised the following research questions: (1) what are the characteristics of Digital Photography? (2) What is the importance of Digital Photography in the modern world? (3) What are the advantages of Digital Photography across the fields? (4) What is the relationship between digital photography and Big Data? Table 1 presents the identified research questions and key themes derived from them. The questions and the respective themes were drawn and identified from the gaps in knowledge, researcher's experience with respect to Digital Photography, and its development and application in different fields. The themes for the study were identified based on the theoretical support. To analyse and identify the factors that examine the impact of Digital Photography in the era of big data, the study discussed various identified themes and research questions.

To address the research question identified, numerous keywords were used in the study. Keywords used in the study are presented in Table 2 which includes Digital Photography, Image Processing Technology, Big Data and Digital Photography, Computer-Mediated Communication, Advantages of Digital Photography, and Application of Digital Photography across the fields. The search for the articles was carried out from multiple electronic databases, which includes Wiley Online Library, Science Direct, Springer, and other Digital libraries. The study includes the articles and research papers that include "Virtual Reality Technology" in the titles, summary, abstract, keywords, and the body of research that were published during the period of 2010 to 2020. Basically, the inclusion criteria were as follows: (1) research papers, (2) research journals, and (3) unpublished thesis. Similarly, the exclusion criteria in the study were as follows: (1) research articles written in English and (2) research articles that were not fully available in the electronic database. Total number of research articles found was 20.

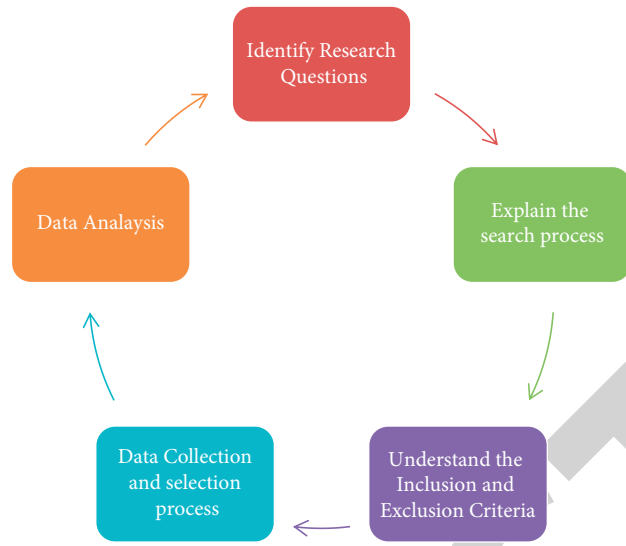


FIGURE 4: SLR phases.

TABLE 1: Summary of research questions.

Research questions (RQs)	Possible answers
RQ1. What are the characteristics of digital photography?	Easy to store, efficiency, multisensory perception, and easy to access
RQ2. What is the importance of digital photography in the modern world?	Photoblogging, photo sharing, used for legal purposes, and used across different professions
RQ3. What are the advantages of digital photography across the fields?	Resolve crimes, easy accessibility of crime scenes, database of the crimes, document significant and findings across the disciplines like science, astronomy, and courts
RQ4. What is the relationship between digital photography and big data?	Able to improve the efficiency of images, reduce trial-and-error cost, integrates new technologies to highlight the humanistic values, and handle technology and art Implementing technology

TABLE 2: Selected keywords.

Location	Educational context
America	Digital Photography
Singapore	Image Processing Technology
Australia	Photography
Korea	Big Data and Digital Photography
Australia	Computer-Mediated Communication
Canada	Advantages of Digital Photography
China	Application of Digital Photography across the fields

Out of them, 12 duplicates were eliminated from the research paper. The articles selected for the study were based on their quality, title, keywords, and abstract. Articles that did not focus on Digital Photography technology were eliminated. Remaining articles were selected for Systematic Literature Review and the following data were extracted: title of the paper, name of the author, year of publication, summary of the paper, and location of context. To analyse and locate the data, a form was used and the answers were validated on a three-peer review. Finally, the reviews shared and discussed approached 100% verification of the data. Based on the research questions developed, the data collected were synthesized

and further supported the content analysis of the selected research articles. Thus, the study presents the inferences from the content analysis, which is a qualitative technique used to focus on text. Content analysis included two components—mechanical and interpretative. The mechanical component allowed the researcher to organize the data collected into different topics while interpretative method allowed researcher to explore more on the content according to the research questions. Later, the data synthesized were reviewed by a three-peer group and the themes were identified. This peer review helped this research to get more clarity on the themes or research questions. Table 3 presents the items used to examine and collect the research papers.

TABLE 3: Factors used to identify the papers.

Geographical context	Educational context
Authors	Author of the study
Year	Year of publication
Type	Type of journal
Digital photography	Papers that record the digital photography Papers that record relationship between digital photography and big data Papers that record the need for digital photography in the modern world Papers that record advantages of digital photography

4. Findings and Discussion

This section will present the results and discussions related to the research questions. As the significance of Digital Photography is increasing nowadays across the industries, they have been encouraged to apply Digital Photography across the industries like medial, court, art, and archaeology. Past studies also confirmed that Digital Photography is widely applied in areas like entertainment, medical, engineering, training, design, business, education and conferencing, sales and marketing, museum and art design, mobile and gaming applications, sports applications, data visualization, military applications, architecture design, prototyping, planning and maintenance, science, astronomy, and operations in hazardous environment. Digital Photography and its application in the world are one of the promising research areas until next 30 to 40 years.

4.1. Characteristics of Digital Photography. Digital photography is much easier than film photography. In fact, digital cameras are easy to use and handle and are simple unlike advanced technologies used in film photography. Nevertheless, digital cameras would require complex computer technology to process their packages in its full swing. Films are used in film cameras, which come with detachable lens, and the films are sent for further developments. Cameras that are being used in films are not that expensive as compared with digital cameras [5]. Digital cameras, on the other hand, are quite expensive as it requires lens, memory cards, computer to retrieve images from camera, important software to make necessary changes in the images, printer to print the images, and lastly fees to access online. Digital cameras would need memory card to store the images, which are later transformed into a computer using the card. These cards can also store the images, unlike film cameras. Different software is used to manipulate the images [3, 4]. This entire package was relatively common in the past; however, recent cameras come with optional elements and hence are much advanced. Use of dark rooms is essential in photography and not in film photography.

4.2. Importance of Digital Photography in the Modern World. Past studies discussed on digital photography as the significant form of computer-mediated communication. Different professionals use digital photography as a tool for collecting data/information, collect data to maintain personal information, and so forth. People in general use a wide

range of images to examine different issues, along with the aid of computer-mediated technology. Photography is also used to represent the issues arising with regard to people, crimes, and other legal issues [1]. Digital photography is also used to examine the crime scenes and even legal aspects. Few other studies conducted research on digital photography and found that the use of digital photography and the tools across different organizations can lead to huge number of tensions. These studies also confirmed that digital photography is different from film photography.

Past studies proposed that the concept of digital photography and eventually sharing the images being photographed on websites and other networking sites can transform the lives of people [6, 7]. The definition of life would be different from what people carried in the past. These studies also stated that people would not find it weird to click pictures of mundane activities and post them on Internet, web, or social networking sites. One such study observed that photobloggers are highly interested in sharing their view of the world through their blogs. Also, they find it as a source of motivation and inspiration in this world. It was also found that photobloggers find it motivational to take pictures and post them regularly [9, 10]. Few other studies also found something similar to this, where people invest time in taking photographs, once they start using digital cameras in their lives. There has been a steep increase in the number of people who use cameras to click photographs and post them on social networking sites.

There is an extensive body of literature that stresses on photoblogging as a new research interest area. It was found that photoblogging is part of web 2.0. Generally speaking, photoblogging is considered as a social networking activity, which allows the users to post their photographs or images on the Internet or web. It also enables the users to share the images with other people [18, 21]. Photobloggers are of different types. Some of them would post the images on the Internet on a regular basis. Such people dedicate their time to websites and increase their followers. On the other hand, some of them are interested in sharing the photos than photoblogging. These kinds of people post and share the snapshots of friends, events, travel, family, and so on. In addition, these photo-sharers use Flickr than personal websites to share the images with others.

4.3. Advantages of Digital Photography. From the analysis of the existing literature, it was found that scientific digital photography is one of the developing areas where digital

TABLE 4: Type of photographers in the era of big data.

Type of photographer	Use of photography in the era of big data	Type
Photo blogging	Astronomy	Professional
Event photographer	Medicine	Professional
Wedding photographer	Science/biology	Professional
Photojournalists	Art	Professional
Advertising photographer	Media	Professional
Photo sharing	Court	Unprofessional

photography is predominantly used. Majority of the science projects consider photography as an integral part to document significant findings. Likewise, archaeologists also use digital photography techniques to document the wildlife, excavations, and others. Microbiologists use photography to track and identify the animals of various species. They also record images to identify the microscopic specimens. Astronomers use digital images to study the distant suns and galaxies. Medical field professionals use digital images or photographs to identify brain imaging and disorders of dermatology, document plastic surgery follow-ups, perform mammography, and obtain other forms of patient data. Only very limited literature is available on the usage of photography or digital photography and their consequences in the field of science [19, 21, 23]. Surprisingly, digital photography in this era of big data allows the police to prove the crime and abuse cases in an active manner. Traditional photography snapshots could be blurry and hence would require processing labs and later would be produced in the courtroom. However, digital photography technology enables the user to share the images in an electronic format, which can be later used as evidences in the legal court. This readiness factor of digital photography saved the life of people, who were having abuses. It also punished the abusers, who were uncooperative. Digital photography also permitted the concerned authorities to present the required evidence in the court against the crimes. Past studies also confirmed that digital photography, digital images, videos, and others ways of digital communication are been prominently adopted legally in the courts [6, 8, 25, 27]. Even courts and police stations have begun using software programs that allow them to retrieve digital images from the computer, modify them, and store the images or crime scenes for future references. By doing so, legal departments can have a database along with them, unlike the traditional legal system. Police departments also began using digital photography to transmit and store digital images, which could be crucial for the cases registered. Likewise, at crime scenes, digital images can be recorded and later can be sent to crime scene technicians who will be able to analyse the crime scene and provide further leads. To be precise, these images clicked by the photographer can be the duplication of what the photographer witnessed with his/her own eyes [10]. Key observations of the photographer will be recorded in the images and can be used for further discussions.

4.4. Relationship between Digital Photography and Big Data. From the analysis, it is understood that digital cameras play an important role in the new era of big data. The new technology makes use of video cameras, camera phones, and

small digital cameras in their daily lives with the aim of turning their lives more livelily. It was also found that digital cameras are also used to take snaps of pictures of crimes being committed. People find it interesting to record images or videos of crimes like abuse, murder, physical violence, and so forth and later disclose them on media or the Internet. There are several websites that have been set up to track the brutality, misconduct, and misbehaviour of the people. Therefore, to find out the crimes, catch the criminals, and identify the inappropriate behaviour of the people, digital photography plays an immense role. Use of digital photography in such instances can certainly help people have a peaceful life. Prior research discussed that casual photographers use digital technologies and photographic technologies in their daily life, especially in the era of big data. It was noted that such people found it difficult to take prints of all the photos, organize them in the albums, and then keep it safe. Hence, these people found a new way of sharing the images or pictures with others, either for professional or personal use. New ways of sharing, indexing, sending, and annotating photographs were identified in the past. Likewise, few other studies found that experts in the field of Digital photography are using only limited features of software namely date-based sorting and suing thumbnails on the screen. Advanced software features were not used by the users after their initial use. On the other hand, people who use camera phone had less interest in taking pictures and annotating photos. Such people also found it funny to comment on the images. Table 4 given below records the use of photography in the era of big data.

5. Conclusion

This study conducted a systematic literature review to have an in-depth understanding of the Digital Photography and examine the impact of Digital Photography in the era of big data. This paper also reviews the features of Digital Photography and its advantages across all the fields. Findings of the study state that Digital Photography enhances the experiences of those individuals who use photography as their profession. It enhances the experiences of photobloggers in terms of creativity and art. Digital Photography technology enhances the experiences of professionals across all the fields in this digital world. Results of the study state that Digital Photography can be used in the new world to deal with a lot of odds existing in the world by reducing the errors and lastly integrating new technologies to highlight art and human value. The needs of art can be better reflected through digital Photography, as the professional photographers have the

capability of reproducing or capturing the real world in a beautiful way. The findings of the study aid the practitioner, academicians, researchers, and others to identify the improvements that can be made in Digital Photography technology. However, it should be noted that the study has limitations. The findings of this study are inferences made from the existing literature. Thus, future researchers can conduct empirical tests to derive accurate results rather than mere inferences.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest or personal relationships that could have appeared to influence the work reported in this paper.

References

- [1] J. Baker, *War Photographer Warns of Censorship, Challenges*, p. 7, The Oregonian, 2003.
- [2] V. Bush, "As we may think," *ACM SIGPC Notes*, vol. 1, no. 4, pp. 36–44, 1979.
- [3] K. R. Cohen, "What does the photoblog want? Media," *Media, Culture & Society*, vol. 27, no. 6, pp. 883–901, 2005.
- [4] L. J. M. Daguerre, "Daguerreotype," in *Classic Essays on Photography*, A. Trachtenberg, Ed., pp. 11–13, Leete's Island Books, New Haven, CT, 1839/1980.
- [5] S. Fahmy and C. Z. Smith, "Photographers note digital's advantages, disadvantages," *Newspaper Research Journal*, vol. 24, no. 2, pp. 82–96, 2003.
- [6] K. Hansen, N. Paul, and B. Neibergall, "Survey of large newspapers studies information practices," *Newspaper Research Journal*, vol. 24, no. 4, pp. 36–48, 2003.
- [7] S. Kershaw, *Digital Photos Give the Police a New Edge in Abuse Cases*, New York Times, New York, NY, USA, 2002.
- [8] R. Kling, "What is social informatics and why does it matter?" *D-lib Magazine*, vol. 5, no. 1, 1999.
- [9] R. Kling, H. Rosenbaum, and S. Sawyer, *Understanding and Communicating Social Informatics: A Framework for Studying and Teaching the Human Contexts of Information and Communication Technologies*, Information Today, New Jersey, NJ, USA, 2005.
- [10] W. Lowrey and L. B. Becker, "The impact of technological skill on job-finding success in the mass communication labor market," *Journalism & Mass Communication Quarterly*, vol. 78, no. 4, pp. 754–770, 2001.
- [11] M. W. Marien, "Photography," *A Cultural History*, Pearson Prentice Hall, New Jersey, NJ, USA, 2nd edition, 2006.
- [12] M. N. M. Adam, M. N. M. Adam, A. A. A. Idris, A. S. M. Ali, and I. O. Khalid, "Evaluation of the effect of time of fixation and microwave treatment on quality of fatty tissue fixation in breast cancer specimens," *SPR*, vol. 2, no. 1, pp. 445–451, 2021.
- [13] T. Mshvidobadze, "Bioinformatics as emerging tool and pipeline frameworks," *SPR*, vol. 2, no. 1, pp. 361–365, 2021.
- [14] R. Dani, D. Juyal, and Y. S. Rawal, "A Critical analysis of the restaurant industry's effect on environment sustainability," *SPR*, vol. 2, no. 1, pp. 385–392, 2021.
- [15] E. G. Cruz and A. Lehmuskallio, *Digital Photography and Everyday Life*, Routledge, London, UK, 2016.
- [16] C. Loebbecke and A. Picot, "Reflections on societal and business model transformation arising from digitization and big data analytics: a research agenda," *The Journal of Strategic Information Systems*, vol. 24, no. 3, pp. 149–157, 2015.
- [17] S. Green, E. McKinney, K. Heppard, and L. Garcia, *Big Data, Digital Demand and Decision-Making*, International Journal of Accounting & Information Management, London, UK, 2018.
- [18] E. T. Meyer, *Socio-technical Perspectives on Digital Photography: Scientific Digital Photography Use by marine Mammal Researchers*, Unpublished doctoral dissertation, Indiana University, Minnesota, MIN, USA, 2007.
- [19] E. T. Meyer, N. Hara, and H. Rosenbaum, "How Photobloggers Are Framing a New Computerization Movement," *Paper presented at the Association of Internet Researchers*, (AoIR) Annual Meeting, Chicago, IL, USA, 2005.
- [20] W. J. Mitchell, "The reconfigured eye: visual truth in the post-photographic era," *Code of Ethics*, MIT Press. National Press Photographers Association, Cambridge, MA, 2001.
- [21] C. Norris, M. McCahill, and D. Wood, "Surveillance & Society Special Issue: The Politics of CCTV in Europe and beyond," 2004, <http://www.surveillanceand-society.org/cctv.htm>.
- [22] R. L. Parke, *Basic Evidence Photography (And My Case for "Going Digital")*, 2003, <https://story.news.yahoo.com/news?tmpl=story2&u=/usatoday/20050121>.
- [23] F. Ritchin, "Our Own Image: The Coming Revolution in Photography," Aperture Foundation, New York, NY, USA, 1999.
- [24] S. L. Star and J. R. Griesemer, "Institutional ecology, 'Translations' and boundary objects: amateurs and professionals in berkeley's museum of vertebrate zoology, 1907-39," *Social Studies of Science*, vol. 19, no. 3, pp. 387–420, 1989.
- [25] R. A. Stebbins, *Amateurs, Professionals and Serious Leisure*, McGillQueen's University Press, Montreal, Canada, 1992.
- [26] N. Van House and M. Davis, "The social life of camera phone images," in *Proceedings of the Pervasive Image Capture and Sharing: New Social Practices and Implications for Technology Workshop (PICS 2005) at the Seventh International Conference on Ubiquitous Computing (UbiComp 2005)*, Tokyo, Japan, 2005.
- [27] N. Van House, M. Davis, Y. Takhteyev, N. Good, A. Wilhelm, and M. Finn, *From "what?" to "why?": the social uses of personal photos*, ACM Publications, Chicago, IL, USA, 2004.
- [28] I. L. Chicago, D. Walker, "Brian Walski discusses his doctored photo [Electronic Version]," 2003, https://www.pdnonline.com/pdn/search/article_display.jsp?vnu_content_id=1000456607.