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Dedication

It is our pleasure and great privilege to present the forty-second issue of the Academic Journal of Research and Scientific Publishing to all researchers and doctors who published their research in the issue, and we thanks and appreciate to all contributors and supporters of the academic journal and those involved in the production of this scientific knowledge edifice.

Academic Journal of Research and Scientific Publishing

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Customer Perceptions of Overall Service Quality (Low-cost Carriers in Saudi Arabia)

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Abstract

The civilized and industrial development in The Kingdom of Saudi Arabia, through achieving the 2030 vision and creating a suitable environment for business, has attracted a lot of investments, businesses, and enterprises, which have created a highly competitive environment. This competitive environment has led company managers to search for ways to ensure continuity and superiority over their competitors. This research aims to assist people with interest in low-cost carriers (LCCs) in Saudi Arabia such as managers of LCCs and other stakeholders by providing them with information on the travelers' perceptions that might be overlooked and could help to find solutions that lead to increase customer satisfaction and improve performance of the firm, or to abolish activities that could damage the reputation and performance. Survey questionnaires were distributed to 111 participants in The Kingdom of Saudi Arabia to assess their perceptions of overall service quality via applying modified SERQUAL model on LCCs (LCCSQUAL). Data were analyzed using SPSS software; it was found that there are several SERQUAL dimensions that need to be improved especially those items with the lowest scores. The research concludes with providing some proposals that may assist managers and interested readers in achieving their goals towards sustainability.

Keywords: Service quality, Customer satisfaction, Customer perception, Total quality management, Aviation industry, Low- cost carriers, Saudi Arabia, Flynas, Flyadeal

Introduction

The commercial airline industry is one of the largest industries in the world, that has grown rapidly since the early decade of the 19th century (Mattos & Guerreiro Fregnani, 2015, p. 2). The airline industry has played a significant role in the economic development of many countries by opening up their markets to both local and foreign investors (Perovic, 2013). Relatively, low-cost carriers (LCCs) have played a significant role in the development of the industry; indeed, LCCs have achieved a rate of passenger growth that was about one and a half times the rate of the world's total average passenger growth (ICAO). One of these LCCs is Flynas, found in 2007, to be one of two first-LCCs in Saudi Arabia. The World Travel Awards named Flynas as the Middle East's leading low-cost carrier from 2015 to 2019 (Flynas.com). This was a sign that the market was promising; thus, major airlines such as Saudi Arabian Airline founded it as an opportunity for strategic move to enter the LLC market by developing a subsidiary unit, Flyadeal, in 2016 (Flyadeal.com).

The Saudi Arabian market seems to be auspicious for many businesses such as LCCs, for several reasons. First, companies seek to be market leaders, because they see it as an opportunity to gain more profits (Yannopoulos, 2011, p. 31) and to help ensure continuity in today's dynamic markets and competitive environment (Alotaibi, 2015; Alsini, 2017, p. 468; Nadiri et al., 2008; Nwaogbe et al., 2017). Another reason is related to the Saudi Arabia Vision 2030, which anticipated that many opportunities would be created. In fact, Saudi Arabia Vision 2030 promised to enhance the growth of the industry sector as well as the growth of the airline industry through making the Kingdom a pioneer in the fields of business and tourism (Saudi Arabia Vision 2030, 2017). The third reason is that the demographic data indicate that approximately 38% of the population of the Kingdom of Saudi Arabia is from the millennials group, comprising people born between 1980 and 2000 (General Authority of Statistics, 2016). This generation is more educated than previous generations and chooses their purchases carefully and cautiously. In addition to that, more than half of them stick to budgets and make purchase decisions first based on price followed by quality and then other available options (SG, 2019). Therefore, the LCC industry seems attractive and can satisfy the needs of those who are looking for low-priced travel options.

However, low price does not mean receiving low quality; several studies have found that quality- and safety-related factors are highly considered by travelers (Chu & Choi, 1999; Heung & Chu,

2000; Seddighi & Theocharous, 2002; Zhang et al., 2004). Holtbrugge et al. (2006) believed that many air carriers focus on delivering a high level of service quality to increase customer satisfaction and to improve their efficiency to displace the generic reputation of LCCs as providing no-frill and low-fare benefits. Although LCC travelers are more concerned about changes because price is the driving factor of the travelers' demands, Li et al. (2010) found that service quality represents the second largest effect. As a result, it is important that the air carriers should diligently improve service quality to attract more travelers.

Travelers in Saudi Arabia had never experienced low-cost carriers before Flynas and Sama were launched in 2007 due to the only presence of Saudi Airlines (Sobie, B; Reed Business Information Limited, 2007); therefore, there are a limited the number of studies conducted on studying the quality of low-cost aviation in the Kingdom of Saudi Arabia. The purpose of the study is to recognize travelers' perceptions of overall service quality provided by LCCs in Saudi Arabia to help the airlines achieve an expected level of customer satisfaction which in turn increase LCC profitability and performance. This study will focus on realizing travelers' perceptions of the overall service quality offered by LCCs, including LCCs in Saudi Arabia such as Flynas, Flyadeal, and others, through using the five dimensions of SERVQUAL which is modified and verified to be applicable for LCCs or as known as LCCSQUAL model. Our methods include administering survey questionnaires to potential customers to measure their perception of the in-flight services of low-cost carriers.

The objectives of the thesis were identified as follows:

- To review definitions of customer perceptions, customer expectations, customer satisfaction, and SERVQUAL.
- To determine the shortage of research in the LCCs industry in Saudi Arabia
- To develop survey questionnaires from SERVQUAL dimensions, based on previous research which has been already verified to be used for low-cost carriers or general airlines.
- To measure and assess the level of quality perceived by travelers of low-cost carriers in Saudi Arabia.
- To analyze the results of survey questionnaires.
- To suggest and develop recommendations based on results of the analysis.

Those objectives set out to answer the following questions:

- What is the scientific gap in the field of low-cost aviation that this study contributes to fill?
- Could we apply dimensions of SERVQUAL to LLCs in Saudi Arabia?
- What is the impact of customer perception of overall service quality on customer satisfaction in low- cost carries?
- What is the customer perception of overall service quality of low- cost carries in Saudi Arabia?
- What are recommendations that could be useful for LCC management?

Literature Review

Service industries are a significant contributor to gross domestic product and employment in various countries. Thus, the delivery of high service quality has become a marketing priority for these organizations. Different clients have varying expectations based on their knowledge concerning products and services, and organizations need to have this knowledge to ensure profit maximization and increased sales. Therefore, this section will briefly review the extant literature on service quality in the low-cost airline industry, including definitions and explanations of customer perceptions, customer expectations, and customer satisfaction, in addition to revealing relationships and differences between them. Furthermore, the literature review consists of simply a summary of crucial sources that clarify SERVQUAL model, SERVQUAL dimensions, and the gap model. Some of those sources have been assessed and verified and are intended to be used to develop the methodology of this research.

Recent Research

There are many studies focused on service quality in the services sector, but there is still a need for studies on the quality of services in the aviation sector. Research carried out across the Middle East on LCCs service quality are very limited (Hasan et al., 2019, p. 86).

In Saudi Arabia, although there is existing research conducted on service quality in the services sector (D'Silva, 2015), as well as general aviation services. However, there have been studies on LCCs, but they generally have been conducted in the Middle East and Asia (some presented in Table 1).

Because no study has been found regarding LCCs in Saudi Arabia, this thesis will attempt to fill the gap of shortage of research on LLCs service quality in Saudi Arabia.

Table 1: Several previous studies and research related to aviation in Saudi Arabia. In addition to studies and research related to LCCs in Middle East, and Asia.

Research	Periods	Methodology	Regions of study
Investigating Effects of Perceived Service Quality on Overall Services Quality and customer Satisfaction: Case of Saudi Airlines	Established in The study comprised between February and May 2016.	800 questionnaires were distributed. 740 questionnaires were returned, of which 712 were suitable for analysis, representing 89% response rate.	Saudi Arabia (Saudi Airlines)
Evaluation of “AIRQUAL” scale for measuring airline service quality and its effect on customer satisfaction and loyalty	Established in 2015 Academic Year 2010 – 2015	Qualitative: Data collection, data analysis, findings Qualification/confirmation of the instrument Quantitative: Data collection, analysis; and overall results and interpretation	Mainly Saudi Arabia (Saudi Airlines) and the USA
Level of Satisfaction of Passengers About the Quality Level of In-Flight Services Provided by Saudi Arabian Airline: Case Study Domestic	Established in 2015 The survey was conducted between February 10 and February 25, 2014.	130 questionnaires distributed, 25 were incomplete and thus eliminated from the study. 105 questionnaires were accepted for the purpose of final analysis, representing	Saudi Arabia (Hail Airport, Saudi Airlines)

Airways Between Hail-Jeddah- Riyadh		a response rate of 77%	
Investigating Passenger Satisfaction: A Model for Measuring Service Quality of Low Cost Carriers	Established on October 2015	Questionnaire, observation, interviews, and statistical and non-statistical techniques	Middle East
Service Quality and Customer Satisfaction in Low Cost Airlines: A Critical Review of Extant Literature	Established on March 2019 The review covers other research from 2000-2016	180 research papers related to the study were accessed and only 84 papers were found to be relevant.	India

Customer Perceptions

Customer perception refers to the awareness of the customer and their impressions about a business, products, or a certain brand. Customer perception is often shaped by different variables and this often includes both direct as well as indirect interactions with the different products and services that a company offers (Gupta & Stewart, 2010). Boamah et al. (2020) also state that in addition to the awareness, impression, and consciousness concerning the organization and its services, customer perception summarizes what the client feels about the brand, including every indirect and direct experience they had with it. Furthermore, the authors indicate that perception can be defined as how the brain comprehends the sensation it receives, and its development entails various components like expectation, attitude, motivation, and expectation (Boamah et al., 2020). Knowledge and remembrance help in creating perception as well as the first impressions that tend to influence attitudes (Boamah et al., 2020).

Customer Expectations

Gebremichael and Singh (2019) describe consumer expectations as their anticipation of future consequences based on current circumstances, previous experience, or other information sources. Additionally, these are formed before the clients use the service and may also occur when actively involved in its delivery. Expectations also serve as a comparison standard to judge the performance of service delivery, and apart from these, consumers use various sources of information, which include expert opinions, word of mouth, publicity, and previous exposure to competitive services that lead to clients anticipating future service encounters with a particular company (Gebremichael & Singh, 2019). Consequently, the difference between customer expectations and perceptions is that the former is based on beliefs concerning service delivery that act as points of reference against which the performance of services of a company is judged, while the latter entails the developed awareness and impression about the offerings.

Customer Satisfaction

Based on Kalaiarasan et al. (2015), the airline industry is a highly competitive environment where high-quality services are provided to travelers in the core competitive advantage for sustained growth and profitability. Thus, most organizations focus on customer satisfaction, which determines their ability to increase their client base and overall loyalty. The authors define customer satisfaction as a fulfillment response whereby a consumption objective is known (Kalaiarasan et al., 2015). Further, they indicate that this aspect impacts the retention of clients in the service industry. The article also argues that customer satisfaction is linked to factors such as reliability, assurance, responsiveness, assurance, and empathy (Kalaiarasan et al., 2015). On the other hand, Snyder and Tai (2014) assess the various influence factors on customer satisfaction and identify its levels with services that customers obtain from the low-cost carrier industry (Snyder & Tai, 2014). Further, they argue that it is a holistic concept that represents the emotional response of clients after they consume a service, and its level can range from dissatisfaction to satisfaction (Snyder & Tai, 2014). Customer satisfaction is a vital factor of competitive advantage and assists in creating success for low-cost carriers. Thus, some of the strategies to be taken to improve this are enhancing the training of front-line employees who communicate directly with clients to improve service performance, communication, ability to tackle challenges, and behavior attitude, including implementing fair prices.

The Relations between Customer Perception, Customer Expectation, and Customer Satisfaction

Service quality refers to the ratio between the performance of a firm perceived by customers and their expectations (Parasuraman et al, 1988). Al-Msallam (2014) discusses the impact of customer expectation and perceived service quality on the satisfaction of clients. The author states that while the expectations of clients are their pretrial beliefs about service while service quality refers to its features and characteristics that bear on its ability to satisfy the stated and implied needs. Additionally, service quality can be measured as the difference between expected and perceived service to identify areas that require improvement (Al-Msallam, 2015). The aim of providing quality is to satisfy customers. Its components include personal behavior with regard to the serving staff, professional judgment on the side of the employees, and physical facilities, procedures, and processes that the company is providing (Al-Msallam, 2015).

According to Gebremichael and Singh (2019), satisfaction among customers is developed by ensuring quality in service delivery, and this is linked to their perceptions and expectations. Consumer expectations and perceptions of the service quality of an organization, directly and indirectly, affect their satisfaction (Gebremichael & Singh, 2019). Yusof et al. (2017), state that satisfaction refers to comparing expectations before the actual service performance and results from a service perceived performance being higher than the standards. However, dissatisfaction happens when service performance is lower than anticipated (Yusof et al., 2017). The authors also argue that the best instrument used to measure service quality is SERVQUAL, which is a scale of perceived quality that focuses on the intention of the client and their judgment (Yusof et al., 2017). The tool is based on the gap model that emphasizes past experiences, word of mouth communication, and the needs of consumers.

Theory No.1: Gap Model

Based on Guergis (2018), the gap model is a marketing method used to evaluate perception in relation to expectation, and the five gaps entail the difference between the expectations of consumers about service provision and the perceptions of management about the expectations, the discrepancy between delivered service quality and service quality expectations, variations in internal organization quality standards, perception of services received and whether promises match delivery.

The SEVQUAL model was added to the gap model to measure the perception of consumers about the quality of service (Guergis, 2018). However, despite the enhancements to the SEVQUAL scale, it has been challenging to identify a universal method of measuring customer satisfaction towards the services provided by an organization. Moreover, service quality perceptions may be significantly influenced by external factors.

Service Quality Model

According to Budianto (2019), service quality is a multidimensional concept built on assessing the construction of various service-related attributes and has a significant impact on customer loyalty. The quality model of client service perceived quality consists of two dimensions: technical quality associated with the quality of consumer perceived service output and functional quality associated with the quality-of-service delivery (Budianto, 2019). Other factors include professionalism and skills to solve consumer problems, attitudes and behaviors, accessibility and flexibility in customizing their desires and requests, reliability and trustworthiness, service recovery and reputation and credibility (Budianto, 2019). Similarly, Cheng and Lin (2014) define service quality as the subjective assessments of consumers towards different services offered by a company based on their perceptions and personal experiences. Some of its dimensions include corporate quality based on the evaluation of the organizational image, interactive quality as the interaction with customers, and physical quality (Cheng & Lin, 2014). The loyalty of a client to a service is dependent on the development of the interpersonal relationship (Cheng & Lin, 2014). Service quality is essential in revealing strategic profits on both returns on investment and market share and can reduce production cost while effectively enhancing organizational performance.

Kar (2018) discusses the SERVQUAL model, which he argues is shaped by the service process, customer, employees, and management. The author states that the model provides a measure of the service quality experienced by customers, and Leonard Berry and Valarie Parasuraman developed it. Further, it can be used to expose the shortcomings in service and address them (Kar, 2016). Naik and Gantasala (2010) argue that service quality is linked to concepts of expectation and perceptions. The latter results from a comparison of before-service anticipations with the actual service experience.

SERVQUAL Dimensions

SERVQUAL is essential in gathering customer perceptions related to its dimensions, including reliability, tangibles, assurance, responsiveness, assurance, and empathy (Naik & Gantasala, 2010). Tangibles refer to the appearance of physical equipment, facilities, written materials, and personnel. while reliability refers to the ability to perform the expected service accurately and dependably (Naik & Gantasala, 2010). According to research conducted by Park et al. (2005) physical facilities such as, on-board comfort, seating arrangements, leg room, and quality of food are fully compatible to tangibles- dimensions in LCCs. Furthermore, it could include variables that are considered in other service industries such as spaces, comfortability, cleanliness, and hygiene (Blešić et al. 2011; Zakaria et al. 2010). A research conducted in India by Prabakaran et al. (2008) states that SERVQUAL's tangibles was found a mediating factor for the service quality and affecting domestic tourism the most. Additionally, it has also been considered significant for the growth of sustainable tourism in India. On the other hand, reliability ensures that the organization keeps its promises made to consumers about billing accuracy, accurate record keeping and service performance at the appointed time. (Parasuraman et al. 1985). If the same was extended to the airline industry, the ability to perform correctly and consistently in terms of safety primarily through the performance of cockpit crew, will be the most significant reliability variable. The key attraction of LCCs is on-time performance, thus, customers will be loyal to a carrier that gives priority to this variable and finds the service quality of such a carrier to be high.

Responsiveness is the willingness to assist clients and offer prompt service (Naik & Gantasala, 2010). It also refers to employees' ability or readiness to provide a service. (Parasuraman et al., 1985). Responsiveness in the aviation industry means the ability of all ground personnel and flight crew to support passengers and provide timely service. Regardless of what he or she has paid for the service obtained, every passenger wants to be treated as a person. The client assumes that care and attention will be given anytime he/she needs assistance, not only as a duty or obligation. In fact, Huang (2009) used importance performance analysis (IPA) to find that that responsiveness is the most important airline service quality attribute in passengers as they valued efficient check-in, baggage handling service, quality of the reservation services, employees' willingness to help, employee behavior to delayed passengers.

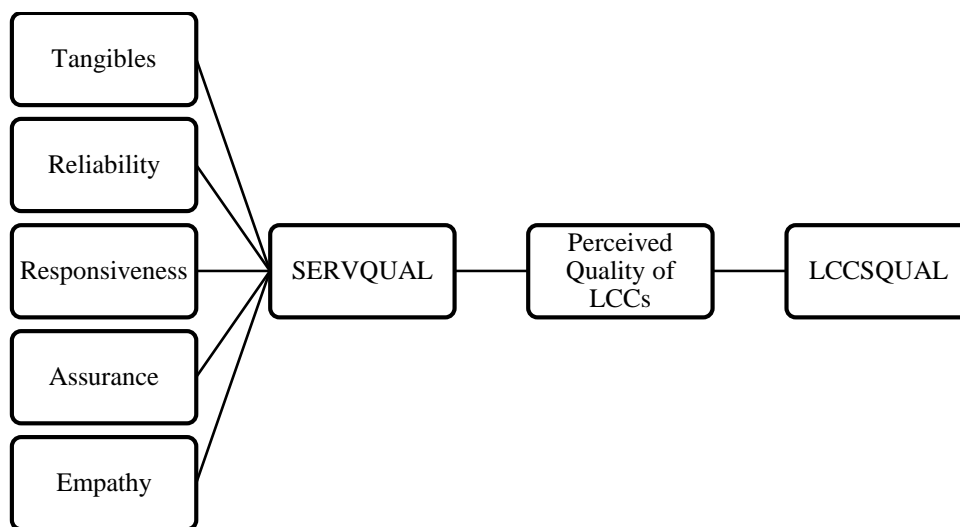
Assurance is linked to the knowledge of employees, courtesy, and their ability to ensure trust and confidence (Naik & Gantasala, 2010). A study conducted in Thailand on airline service quality affecting post purchase behavioral intention by Lerrthaitrakul and Panjakajornsak (2014), highlighted that assurance dimension referring to customers' feeling of security.

Empathy refers to individualized attention, care, good communication, and easy access provided to clients (Naik & Gantasala, 2010). The empathy dimension is also about giving customers individual attention and care. (Somwang, 2008). In some countries, being courteous to customers is part of the culture; customers would avoid dealing with the company. Customers prefer to feel more relaxed and comfortable in the business of friendly workers and systems. A study in established and conducted by Degirmenci et al. (2012) on Turkish airlines considered behavior in needs and employee actions in unforeseen conditions concludes that empathy dimension was the third highest customer satisfaction with SERVQUAL score -0.658.

Low-Cost Carrier Service Quality (LCCSQUAL) Model

This initial model used for this research was the SERVQUAL model, developed by Parasuraman et al. (1988) for assessing LCC service quality. Although SERVQUAL dimensions appear to be suitable for the context of this research, other sub-dimensions needed to be designed to match industry-specific requirements (Ekiz and Bavik, 2008; Ladhari, 2008). Dabholkar et al. (1996) argues that the traditional industry measures of service quality are not feasible; thus, future service quality research should develop industry-specific measures of service quality. A modified SERVQUAL model, named "Low-Cost Carrier Service Quality" (LCCSQUAL), has been developed by (D'Silva, 2015) based on the findings of qualitative and quantitative data analysis (Diagram 1). Moreover, the LCCSQUAL model was implemented and tested in the Middle East, of which the Kingdom of Saudi Arabia is considered as part of its cultural context. D'Silva claims, "This study is the first of its kind in the Middle East region and the first of its kind in the LCC market worldwide. The five dimensions and twenty-five variables were tested with the help of Confirmatory Factor Analysis" (D'Silva, 2015).

Diagram (1) illustrates the evolution of Low-Cost Carrier Service Quality (LCCSQUAL)



Method

The modified SERVQUAL model or LCCSQUAL, which will be used in this study, has been tested as a reliable method to measure customer perceptions and service quality expectation in the airline industry and LCCs (D'Silva, 2015; Parasuraman et al., 1985, 1988). In addition, according to Grönroos (1993), measuring passenger experiences in airline service quality has been found to be a theoretically valid method for assessing perceived quality.

Customers in the airline industry strive for consistency. It should be noted that a key element of customer perception is that it reflects what consumers think as well as feel about a certain brand. Consistency is one of the elements that consumers desire in a brand. If a consumer feels that a certain brand is consistent with its messaging and that there are no contradictory messages that come from the brand, they are more likely to be satisfied with the brand. This is especially in the case in the aviation industry where consistency is key. Consumers that perceive a brand to be consistent are often satisfied in that they feel that the company from the first brand interaction to the consumer journey was smooth as well as pleasant (Mahmud & Kamaruzaman, 2013). Most of the decisions that consumers make are often as a result of emotional triggers. Therefore, if a consumer perceives a certain brand to be homely and reliable, they often create an emotional connection with the brand, which not only helps to shape the customer's perception regarding the brand but also leads to increased customer satisfaction.

Research has showed that consumers in the airline industry that have an emotional bond with company have a 310% higher lifetime value and have a 75% chance of recommending the airline to a friend (Cheung, 2016). This is compared to the average rate of 45% where the customer does not have an emotional connection with the company (Cheung, 2016). By recommending the company to friends as well as having a higher lifetime value, it means that the consumers are highly satisfied with the brand. This consequently shows definitively that good customer perception often leads to improved customer satisfaction.

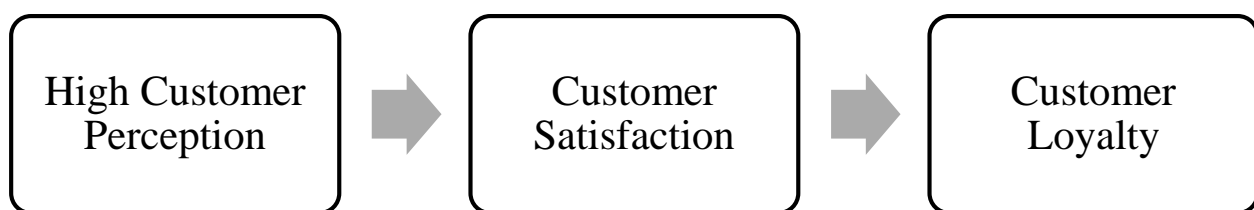
Furthermore, Curry and Gao (2012) argue that perceived service quality is the direction and degree of discrepancy between the expectations and perceptions and entails all activities undertaken by the employees and management. Thus, if the perception is higher than the expectation, the service is considered high quality (Curry & Gao, 2012), and vice versa, if the expectation is higher than the perception, the service is of low quality. Furthermore, the authors argue that organizations that identify the most effective ways to include the best service processes and methods are likely to achieve favorable long-term customer perceptions (Curry & Gao, 2012). Therefore, a customer perception is directly related to service quality and customer expectation is inversely related to service quality.

Theory No.2: Total Quality Management

Elsewhere, Golmohammadi et al. (2014), state that implementing total quality management in an organization can improve the satisfaction of customers. Furthermore, they indicate that there has been an emphasis on maintaining quality and innovation in service provision industries (Golmohammadi et al., 2014). Total quality management refers to continuous methods for the sustenance of customer satisfaction, and several organizations apply these practices to improve their competitive advantage. Therefore, when consumers are satisfied by the services of a low-cost carrier, they remain loyal, recruited other clients through word of mouth, thus increasing sales and the market share. For this reason, there has been a focus on customer perception in the aviation industry as a way of increasing a company's competitive advantage as well as increasing customer satisfaction, which in turn leads to loyalty. Research has consistently showed that customer experience has overtaken both product and price as one of the key brand differentiators (Gupta & Stewart, 2010). This means that the customer's perception of a brand is extremely important as it is what determines the customer experience.

If a customer feels that a certain airline is well managed and communication with it is easier, the customer is highly likely to be satisfied with the airline and recommend it to others (Diagram 2).

Diagram (2) explained the relation between customer perception, customer satisfaction, and customer loyalty based on TQM and other arguments by Curry & Gao (2012), D'Silva (2015), Mahmud & Kamaruzaman (2013), and Cheung (2016), Golmohammadi et al. (2014), Gupta & Stewart (2010), and Grönroos (1993):



Hypotheses

Seven hypotheses were developed for this study based on Curry & Gao (2012), D'Silva (2015), Parasuraman et al (1985, 1988), Mahmud & Kamaruzaman (2013), and Cheung (2016), Golmohammadi et al. (2014), Gupta & Stewart (2010), and Grönroos (1993) arguments as follow:

H1: High degree of perceived LCCSQUAL tangibles- related services will result in high overall service quality.

H2: High degree of perceived LCCSQUAL reliability- related services will result in high overall service quality.

H3: High degree of perceived LCCSQUAL responsiveness- related services will result in high overall service quality.

H4: High degree of perceived LCCSQUAL assurance- related services will result in high overall service quality.

H5: High degree of perceived LCCSQUAL empathy- related services will result in high overall service quality.

H6: High overall service quality means customer is satisfied.

H7: Customer satisfaction increases customer loyalty

Variables

The variables used in the questionnaire under each dimension will be particular to the LCC industry and derived from a variety of sources, predominantly from those mentioned in the literature review. The dimensions and variables shall be:

Dimension one: TANGIBLES

1. Safe and reliable aircraft
2. Leg space
3. Noise level on-board
4. Toilet cleanliness
5. Comfortable seats
6. Catering (on board or on sale)
7. Entertainment (magazines, TV, and/or music)
8. Clear information (policies, timing, offers, and any changes).
9. Aircraft safety and security equipment
10. Hygiene and cleanliness on-board
11. Company (logos, designs, pilots, cabin crew, and ground staff) appearance and professionalism

Dimension two: RELIABILITY

1. Keeping promises
2. Safety and security procedures in case of pandemic and crisis
3. Prioritization of on-time performance
4. Correct performance of duties by airline employees
5. Helpful website
6. On-time and problem-free arrival of luggage

Dimension Three: RESPONSIVENESS

1. Sincere efforts in solving traveler issues
2. High level of skills and knowledge to answer traveler questions

3. Services provided to travelers with special needs or special preferences like elderly or disabled travelers or families with infants
4. Average response time
5. Good value for money (VFM) compared to full-fare carriers

Dimension four: ASSURANCE

1. Friendly, polite, courteous, and helpful airline employees
2. Employees that inspire confidence in travelers

Dimension five: EMPATHY

1. Immediate contact with travelers in case of any issues or delays
2. Perceived trustworthiness of employees
3. Positive attitudes of employees toward customers
4. Personal attention to each passenger with no discrimination

Therefore, the LCCSQUAL model will be used through survey questionnaires to collect data for analysis (Liou et al., 2010). Participants will be asked to indicate their level of agreement using a 5-point Likert scale (Likert, 1932); with “1” being “strongly disagree” and “5” being “strongly agree.” The results will be analyzed using SPSS 26.0 software for Windows. Descriptive analyses including means, standard deviations, and frequencies will be calculated.

Reliability of survey questions was tested via SPSS 26 by obtaining a coefficient Cronbach's alpha. Table (2) shows that the coefficient of consistency for the survey is 0.946, which confirms that the survey is reliable, and the alpha coefficient was determined to be 0.948, based on standardized items.

Table (2)

		N	%
Cases	Valid	110	100.0
	Excluded ^a	0	.0
	Total	110	100.0

a. Listwise deletion based on all variables in the procedure.

Cronbach's alpha	Cronbach's alpha based on standardized items	N of Items
0.946	0.948	28

Results

Participants' Low-Cost Carrier Awareness

After the questionnaire was distributed through social media, 111 participants were involved in this survey, 99 of whom answered that they are familiar with low-cost carriers. Of the 111, 102 realized the difference between traditional carriers and low-cost carriers. Several participants had traveled with a couple of LCCs inside or outside of Saudi Arabia, while others had flown with only one LCC, and a few had other experiences or had never experienced flying with LCCs. Specifically, Flynas was selected by 76 participants, Flyadeal was selected by 49 participants, LCCs from outside Saudi Arabia were selected by 33 participants, Nesma Airline was selected by 11 participants, Saudi Gulf was selected by 10 participants, and only one participant had never travelled with LCCs before and was excluded as being unsuitable for the study.

Participants' Demographic Characteristics

Table (3) explains the frequency and percentage of each item of participants' demographic results:

Items	Frequency	Percentage
Nationality		
Saudi	106	95.5%
Saudi resident	4	3.6%
Other	1	0.9%
Gender		
Male	76	68.5%
Female	35	31.5%
Age		
10 - 20 years	5	4.5%
20 - 30 years	31	27.9%
30 - 40 years	31	27.9%
40 - 50 years	26	23.5%
50 - 60 years	17	15.3%
Over 60 years	1	0.9%
Job		

Student	17	15.3%
Employee	68	61.3%
Businessman	3	2.7%
Other	23	20.7%
Qualification		
High school	17	15.3%
Diploma	14	12.6%
Bachelor's degree	50	45.1%
Master's degree	23	20.7%
PhD	4	3.6%
Other	3	2.7%

Analysis of Customer Perceptions

The questionnaire contained 27 questions on participants' perceptions of LCCs. Using a Likert scale of 1 equals "strongly agree" to 5 equals "strongly disagree", the participants were asked to select the most appropriate choice according to their understanding. They were clearly notified that there were no right or wrong answers. The following sections will focus on analyzing each dimension and previously identified variables to suit the industry-specific variables to measure LCC service quality in Saudi Arabia.

Tangibility

Tangibles were the first dimension tested in the LCC service quality survey questionnaire and the variables included in this dimension were addressed in the table. The table presents the mean scores and the standard deviations for each variable (item of the scale). The means scores of the variables were used to assess the perception regarding tangibility-related services provided by LLC in Saudi Arabia.

The general mean of the scale is 3.34. This indicates that the respondents tended to be neutral (neither satisfied nor unsatisfied) regarding the tangibility-related services provided. Furthermore, it mentions that catering (on board or on sale) and entertainment (magazines, TV, and/or music) represent the lowest mean (2.65), whereas aircraft safety and security equipment represents the highest (4.17).

Descriptive statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Safe and reliable aircraft	110	1	5	3.57	1.169
Leg space	110	1	5	2.89	1.288
Noise level on board	110	1	5	3.21	1.235
Toilet cleanliness	110	1	5	3.37	1.195
Comfortable seats	110	1	5	2.93	1.232
Catering (on board or on sale)	110	1	5	2.65	1.130
Entertainment (magazines, TV, and/or music)	110	1	5	2.65	1.253
Clear information (policies, timing, offers, and any changes).	110	1	5	3.41	1.128
Aircraft safety and security equipment	110	1	5	4.17	.866
Hygiene and cleanliness on board	110	1	5	3.79	1.024
Company (logos, designs, pilots, cabin crew, and ground staff) appearance and professionalism	110	1	5	4.10	1.031
Valid N (listwise)	110	Average		3.34	

Reliability

The reliability variables are important for LCC travelers because negative experiences in one or more variables in this dimension may lead to dissatisfaction. The table below shows analysis of reliability dimension variables and their mean scores and standard deviations. Those mean scores were used to measure the perception regarding reliability-related services provided by LLCs in Saudi Arabia. The average mean of the scale is 3.76. This means that the participants tended to be satisfied by the tangibility-related services provided.

Moreover, the analysis states that on-time and problem-free arrival of luggage scores the least mean (3.33), whereas safety and security procedure scores the highest (4.07).

Descriptive statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Airline's promises	110	1	5	3.37	1.188
Safety and security procedures	110	1	5	4.07	.916
On time (departures and arrivals)	110	1	5	3.39	1.220
Correct duties	110	1	5	3.89	1.112
Website	110	1	5	4.00	1.092
Luggage	110	1	5	3.33	1.235
Valid N (listwise)	110	Average		3.76	

Responsiveness

Five variables were tested under the responsiveness dimension to determine if there were any gaps in the responsiveness of LCCs and their staff. The results are shown in the table below, with the average mean of the scale at 3.57. This means that the participants tended to be satisfied by the responsiveness-related services provided. In addition, the analysis shows that the least mean (3.40) refers to “average response time”, whereas “services of special needs or special preferences” is the highest mean (3.85).

Descriptive statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Efforts in solving problems	110	1	5	3.43	1.200
Skill and knowledge demonstrated by the staff	110	1	5	3.65	1.062
Average response time	110	1	5	3.40	1.205
Services of special needs or special preferences	110	1	5	3.85	1.024
(VFM) compared to full-fare airlines	110	1	5	3.52	1.081
Valid N (listwise)	110	Average		3.57	

Assurance

Two variables were tested in this dimension to measure LCC staff behavior toward travelers, as the table below shows. “Friendly, polite, courteous, and helpful employees” scores the least mean (3.91). The other variable is a little higher (3.92), which gives an average of 3.915, which indicates that participants tend to be satisfied.

Descriptive statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Friendly, polite, courteous, and helpful employees	110	1	5	3.91	1.000
Employees inspire confidence in travelers	110	1	5	3.92	.959
Valid N (listwise)	110	Average		3.915	

Empathy

The empathy dimension concerns how empathetic LLCs and their employees should be toward travelers, according to participants. Four variables were tested, as explained in the table. The average score is 3.66. The least mean of 3.43 refers to “immediate contact with travelers in case of any issues or delays”, and “positive attitudes of employees toward customers” being the highest (3.84).

Descriptive statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Immediate contact with travelers in case of any issues or delays	110	1	5	3.43	1.215
Perceived trustworthiness of employees	110	1	5	3.69	1.090
Positive attitudes of employees toward customers	110	1	5	3.84	1.071
Personal attention to each passenger with no discrimination	110	1	5	3.67	1.182
Valid N (listwise)	110	Average		3.66	

Discussion

The findings of a survey of 110 participants indicate that low-cost carriers (LCCs) have acceptable reputations. Mean scores show that all perceived quality dimensions — airline tangibles, reliability, responsiveness, empathy, and assurance — range from "neutral" to "good," with satisfaction as "satisfied" and/or "neutral." Overall, this study suggests that people who flew with low-cost carriers perceived these aspects neither strongly positively nor negatively. Therefore, there is still room to improve in order to highly satisfy or delight their travelers. This, in fact, requires LCC managers to find and develop strategies to guarantee quality services to passengers. Moreover, this study measured dimension of SERVQAUL that affect the traveler satisfaction, which can offer practical insights for LCC managers on how to improve airline service quality. The following paragraphs will discuss each dimension individually to explain what variables achieved the lowest scores. These will be followed by some management contributions and useful recommendations.

First, we will begin with the tangibles-dimension which proved to be statistically significant and had remarkable effects on the overall service quality dimension as per Ekiz, Hussain and Bavik (2006). Ekiz, Bavik and Arasli (2009) and Nadiri et al. (2008) state that airline tangibles had the most significant relationship with overall service quality. Unfortunately, in this study, the mean score of the tangible dimension was the lowest among all dimensions. As a result, LCCs must pay special attention to the tangible aspects, especially catering (on-board or on sale) and entertainment (magazines, TV, and/or music). They could also improve the quality of supplies by firstly improving the quality and increasing the variety of food provided to passengers, secondly, creating several creative ways to make it easier for travelers to order food and reduce their costs. For example, some carriers such as Ryanair reward their travelers if they bring their own food onboard from the terminal. Others try to help their travelers by providing them with an app to pre-order food, which saves time and money for both travelers and the carrier (Kollau, 2019). To improve entertainment offerings, LCCs can provide travelers with in-flight Wi-Fi. Also, Virgin American and JetBlue offer their travelers streaming Netflix and Amazon Prime content onboard (Future Travel Experience & Ghee, 2015).

Second, the lowest reliability dimension findings were for “on-time and problem-free arrival of luggage” and “keeping promises.” Being on time and receiving effective and efficient assistance

are two of the most important priorities of many travelers; therefore, LCCs must be careful about delivering promises to their travelers; otherwise, they will choose a more reliable carrier. In addition to that, reliability is very important in term of safety, security measures and procedures taken by a carrier. This aspect can affect travelers' decisions on the best means of transport (D'Silva, 2015). However, LCCs achieve good scores regarding safety and security aspects, so they should maintain this pace.

Third, the responsiveness items scored fairly well, and were close to the average score of 3.57. This indicates that LCCs still have room for future improvement, so carriers should put more of their efforts into training their employees' skills and knowledge, as well as developing facilities and amenities to better address travelers' needs effectively and efficiently. Pakdil and Aydin (2007), in their SERVQUAL analysis of airline service quality at a Turkish airline, found that the responsiveness dimension was more significant than the availability dimension for passengers.

Finally, unlike knowledge and skills, which should be periodically enhanced, staff attitudes towards travelers require more constant maintenance for competency. From this standpoint, assurance and empathy dimensions measure the attitudes and behaviors of LCC staff as perceived by travelers. Those aspects scored more than 3.5, except for "Immediate contact with travelers in case of any issues or delays," which scored 3.43. According to D'Silva (2015), LCC employees' attitudes should be especially considerate to Arab females and elderly travelers, suggesting that LCC employees must be better aware of traveler needs, understanding their culture, and reaching them in case of emergency or other changes, such as changes to boarding gates. Travelers must be provided with timely information about any delays or changes in flight schedules. LCCs need to be careful in hiring and recruiting new employees, through evaluating their attitudes and ability to understand traveler cultures and needs. This is because attitudes and perceptions are much harder to change than trained knowledge and skills (Kantane et al., 2015, p. 231).

Conclusion

In conclusion, the aviation industry overall, as well as the LCC industry, are extremely competitive, so it is a necessity for different carriers to differentiate themselves from their competitors. However, given that they offer the same service, this means that functional attributes are difficult to distinguish; it is thus of significant importance for all LCC management to improve their domestic in-flight service quality through understanding traveler needs and evaluating their

perceptions about the service provided in order to earn more profit, gain market share, get a competitive advantage, and achieve sustainability.

Limitations of the Thesis

This thesis was applied to a limited geographical scope — namely, the Kingdom of Saudi Arabia — and a limited demographic — mainly people from Riyadh and Jeddah, which are among the most homogenous populations. Also, due to the requirements of the study and the time, the survey was conducted over a relatively short two-month period on 113 respondents.

This thesis was conducted during the COVID-19 pandemic period, which limited the use of apparatus to technology-based methods, whether for virtual meetings to discuss research, or the use of electronic forms for collecting responses.

In addition to the stated objectives of the thesis, this paper was also one of the scientific theses conducted to fulfill the graduation requirements for obtaining a master's degree in business administration.

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Interactive Documentaries (Representing Reality)

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Abstract

By analysing three interactive documentaries chosen as models and highlighting other international i-docs, this article explores the forms of storytelling used to create an interactive documentary on digital platforms by examining the prospects for employing its elements (contents, interactivity, mechanism and weaknesses and strengths). I determine to what extent interactive documentaries can affect representation. To understand this question, I focus on exploring and discussing some critical points: Does the interactive documentary make users/viewers pay more attention to the representation than traditional films? Does it motivate them to explore it as an artefact or an object? Does the representation process change users' moods and attitudes to express their engagement, interaction, experiences and understanding of the subject?

The problem revolves around revealing and knowing the methods of employing digital media in interactive documentaries. At the same time, the importance of this article comes from the scarcity of media studies concerned with interactive documentaries. This article aims to attract the filmmakers to the various issues that interactive documentaries represent and take advantage of them—further, the influential power of the i-docs on public opinion. Additionally, the method used is descriptive and analytical of phenomena of the i-doc, the content analysis as a tool for data collection.

Keywords: Interactive documentary, Storytelling, Digital platforms, Interaction, content, User, Representation.

Introduction

This section presents the narrative, contents, interactivity, creativity, and user interaction. Additionally, this section presents related works in this field while creating distinctions between the interactivity and contents of the case studies. It also determines the need for this process of non-linear as it has come from the literature and discusses aesthetics as content and interactivity methods. 'This first decade of interactive cultural media is reminiscent of the first years of the cinema when the cinema to graphic language had yet to be defined. The novelty of the image in movement from that time to the search for authors and viewers is similar to the novelty of today's interaction, and the consideration of the first cinema as being vulgar entertainment is also similar to that received by electronic games' (Berenguer, 2007, p.121). We are witnessing a broad change in interactive species production's traditional roles. It translates into new practices that have begun generating innovative business models in these sectors and for an interactive and non-fiction approach. The i-doc provides the audience with unique experiences outside the traditional documentary context. However, it is still a young field that has not been fully explored. (López-García et al.) Sums up that 'Formal and technological innovation has led to the appearance of novel journalistic narrative forms, and therefore media focus its efforts on developing new and innovative ways to present, produce and tell the information. In this regard, and during the last years, society has attended to the arrival of new journalistic narrative forms as the result of the diverse and manifold possibilities opened by the novel technological features, such as Virtual Reality and 360-degree video, interactive documentary or Web-Doc' (p.51).

Adopting the language of interactive documentary in information transmission expands more options because of its potential to experiment and create new ways to tell/show what is happening in communities and pass it on to the user. Manovich (2002) argues that the computer age came after two periods: the era of cinema, the rich narrative as a vital form of cultural expression; secondly, and the novel generation. Hence, the new media in the digital era introduces its corresponding 'database' as an artistic form. He asserts that 'New media artworks have more traditional "experiential" or aesthetic dimensions, which justify their status as art rather than information design' (ibid, p. 83).

The feature that identifies the two fields of a documentary (linear and non-linear) is exact: We move from the beginning point to the endpoint in the linear principle. While in non-linear, we begin with a suggested point.

Gaudenzi (2013) writes that the interactive documentary concept has not yet been determined because it is an emerging field. Scholars who define the term treated the i-doc as developing the documentary linear convergence within digital convergence. Gaudenzi approaches Whitelaw's position, saying that the i-doc does not need to re-run traditional linear documentaries and display its ways of dealing with reality. This new narrative form of reality within the digital environment relies on interactive narration that is based on the employment of all forms of multimedia and its applications; To provide us with interactive privacy of use that makes the user a participant in the narrative or in determining its path.

Many scholars like (Miller, 2001; Aston and Gaudenzi, 2012; Berenguer, 2007; Gaudenzi, 2013; Nash, 2012; Harris, 2017) tried to present the definition of the interactive documentary and treated this term based on their vision of it as an evolution of the documentary. Aston and Gaudenzi (2012) state that a web documentary is a form of reality narration and not just a development of documentaries. Therefore, web documentaries are a new form and not just an extension of linear documentary film. Miller (2001) defined an interactive documentary as an interactive non-fiction film where viewers can choose whatever material they want to watch in any order and multiple audio tracks. At the same time, Berenguer (2007) defines interactive documentary as a type of 'interactive narration' that appears alongside hypertext and video games. For him, the narration becomes interactive through new media. At the same time, Nash (2012) argues that the web documentary is a new vision of an old concept that contains a documentary discourse that includes a contemporary structure that works within a specific function and approaches a particular context. While Harris (2017) sums up that 'Broadly defined by 'nonlinear' spatiotemporal organisation, their interactive capacities enable multiple pathways through documentary footage and materials. It is often suggested that this nonlinearity is politicised by i-Docs to enable polyvocality and the destabilisation of dominant narratives' (p. 25).

Since this article seeks to identify i-doc/web-doc within the digital environment, its types and functions, and its components, to what extent does the narrative correspond to its interactive patterns? Therefore, understanding the interface, narrative, creativity, contents, and user and user interaction is essential. The user interface is very much on the "screen", just like electronic games or virtual stores on the web. It is a form of projection based on the re-representing reality on the screen within the graphic, interactive and logical hyperlink rules.

Gaudenzi (2013) describes that hyperlink capabilities provide photographs, texts, maps, data, recorded sounds, video images, animation, graphics, and the so-called "infographics," i.e., graphics made by computer programs and on which specific data or information are placed.

The i-doc/web-doc is produced in a collaborative group setting, as Aston and Gaudenzi (2012) value the collective basis of web documentaries. They make it clear that it crosses the traditional narrative structure and pursues non-linear strategies thanks to the digital environment in which it is located. Therefore, these interactive documentaries are database-based and seek to build a different reality through new interactive cognitions. It is a multi-layered narrative (the layers here are the multiple forms of multimedia) and carries a global anthropological background because it manages to communicate between cultures and crosses the user's social, economic and cultural boundaries. Filmmakers utilise the cinematic form through the tools and symbols of the i-doc to aperient a relationship between the subject and users/viewers. Gaudenzi (2013) argues that in hypertext, a user has levels of interactivity with the content that will vary depending on the project. Many academic bodies showed their interest in web-doc/i-docs, which prompted them to establish a group of projects concerned with producing interactive documentaries.

The Purpose/Aims:

This article aims to attract the filmmakers to the various issues that interactive documentaries represent and take advantage of them—further, the influential power of the i-docs on public opinion to capitalise in the subsequent films.

The importance:

The importance of this article comes from the scarcity of media studies concerned with interactive documentaries and analysing the methods of employing digital media. Further, the benefit from the successful experiences of other filmmakers in adopting interactive documentaries.

The problem:

The problem revolves around revealing and knowing the methods of employing digital media in interactive documentaries and identifying their nature, size, and artistic and technical values that govern them. It is through examining to what extent interactive documentaries can affect the representation of people and places.

The Methodology

The method used is descriptive and analytical of phenomena of the i-doc, the content analysis as a tool for data collection of the three case studies.

Users Level

The i-docs/web-docs are a new form of narration of reality through non-linear paths that allow the user to interact directly and functionally in real time. Since then, i-docs have allowed filmmakers to relinquish some control, so this will enable viewers to participate in the experience and contribute content that influences the show. The story can therefore develop in real time due to the nature of the web. In addition, interactions in the web medium can elicit a specific intellectual and emotional response from the user. However, it takes intuition and experience to know which interactions to use at the exact moment to create a comprehensive story experience with other ready-made options that can complement and support meaning. Nogueira states that 'The diversity and multiform interactive structures contribute to a varied presentation of the interactor's subjectivity, positioned as internal representations, such as sensations, perceptions and affections. In this perspective, through different ways of affection (2020, p. 65).

The essential elements determining the methods of employing visual elements in interactive documentaries are the effective use of the feature of choice, interactivity and clickability of the contents. They are the essence of the attractiveness of the i-doc to keep the audience engaged for a long time by providing the technical possibility to load videos and contents more quickly for smoother playback. Nogueira (2020) puts it 'The more open the documentary structure is, the higher the degree of sense of control that will likely be generated in the interactors' (p. 65).

Further, not expanding options that lead to dead ends in the continuation of the interactive display, as viewers/users want to be able to make meaningful decisions that affect the story. Regarding the sense of presence, Nogueira (2020) argues that 'While interacting with digital objects, the awareness of the physical self is replaced by the sense of being surrounded by the diegetic world of the interactive documentary, since the experience allows interactors to virtually visit, inhabit and interact with those worlds' (p. 54). The user experience is the most crucial point after use, so the first technical challenge is providing users with an efficient delivery mechanism. The next challenge is to provide enhanced experiences.

Narration within the interactive documentary

The experience of the traditional documentary is limited to the narrative value presented by the filmmaker. The function of a documentary, in general, is to provide information and documents in varying proportions. However, the process of the interactive narration stimulates the user experience more procedurally, as the i-doc and new technological systems embody the actual meaning of the experience because they contain multiple pillars and constantly evolve and improve that enhancement. Through its interactive narration, the i-doc arranges the narrative structure; then, the role comes up upon the users' narrative and what is the degree of their presence within this interactive narrative. Berenguer (2007) states that 'Interactive media require complicity to discover, choose, reflect, participate and even create. They, therefore, bear no relation to the ruling audio-visual tendencies, whose aim seems to be the complete mental paralysis of the viewer. Instead, they constitute a prolongation of this audio-visual media, a new twist to ambition – first literary and then cinematographic – of discovering common or fantasised reality, which is more than just colour and sound is, precisely, interactive. The viewers of this new medium – now called interactors – benefit in terms of presence and identification, intervene in the audio-visual experience and, at the same time, share it with others' (p.121).

Interactivity within the interactive documentary

The i-doc is tested based on the signs and methods of navigation and interaction, which shift until users' cooperation and involvement are desirable. Gaudenzi comments that the notion of interactivity exists in products that offer any exchange; Physical: the body's business through the mouse or different devices to encourage the user to share. So can define it as a speech that tries to convey a confirmed kind of knowledge associated with reality. On the other hand, Nash (2012) explains how to interact and communicate with the audience in distinctive ways through the i-doc. Concepts intersect to build the meaning of interaction within web documentaries, especially in the face of the development of technologies and tools of simulation and representation that have created many alternative modes of interaction. Initially, because the documentary is a narrative of reality, then we are faced with the concept of interactive reality narration. According to Aston and Gaudenzi (2012), there are different modes of interactive documentaries: hyperlink mode, conversational mode, and participative mode.

Some international interactive documentaries will be a highlight to learn about the different shapes and structures used to give the reader a brief idea of these formations and details. Still, the next section of the article I devoted to an in-depth analysis of three interactive documentaries ____ *Pirate Fishing* (2014), *Fukushima* (2016) and *Refugee Republic* (2014) ____ and what could benefit them for the future work of filmmakers and those interested in the genre. Moreover, for a broader understanding of the new controversial relations of the narrative interactive technical environment, it is worth knowing that the users interact as a cognitive, functional or explicit interaction with projects of the i-docs. They might be semi-closed, like in the *Welcome to Pine Point* (2011), semi-open interaction, like in the *Brèves de Trottoir* (2010), or entirely open interaction. It is somewhat a mixture of traditional linear narration and branching structure. Parallel formatting means that viewers are presented with their choices in the story, and although these decisions change the path they take, they return. The main narrative chain of the pivotal moments is always more complex and interactive; the users can choose their own story or events through your creation of the actual event.

The i-doc/web-doc *Journey to the End of Coal* (2008) falls into the semi-open level; it is an interactive way that guides the users/audience into the depths of China's coal mines, and it provides an opportunity and the possibility for the viewer to choose the film's direction. The viewer can even go further by asking questions to the miners, thus collecting additional information in the text and speech and throwing even the backup shots. Here the work maker presents a message with the depth of the world and the societies facing the consequences of an economic crisis that is still intensifying. Moreover, *The Prison Valley* (2010) is another semi-open-level interaction that shows and revolves around the idea that the local economy depends on some prisons in a specific city in America. The viewers/users are asked to log in with social media to experience the story. Further, *Soul Patron* (2010) is also semi-open, where the journey begins at Kuma Koro Temple and travels through Tokyo and Osaka to Kyoto.

Analysis of the case studies

There are some ideas from the three case studies (*Pirate Fishing* (2014), *Fukushima* (2016) and *Refugee Republic* (2014) that filmmakers can utilise. In *Pirate Fishing* (2014), the interface represents the city and invitation text, and the content includes interviews, photos, images and text through a Hyperlinks mode. To *Fukushima* (2016), the interface consists of a video about the city,

and the content includes more interviews, texts, maps and images. While the Refugee Republic (2014) features more interviews with the refugees and shows their camp, there is also more clickability in this i-doc as it is rich in stories and events inside the centre.

Interest in the narrative was evident in the case studies; the realism presented in the case studies is the contributory reality between the filmmakers and the users. The truth gives the user choices in physical interaction through many different interaction levels and realistic imagination. The interactive documentary narrative is more interesting than the traditional documentary. Because it contains facts, it creates more interest in the subject. The interactive narrative has positively impacted me as a user and made it easy to change the mood, which allowed a greater expression and understanding of the matters raised. The narrative in the case studies represents reality as it challenges the narrative unity that dominates the traditional film.

The use of images and maps also helps to immerse and represent reality. The diversity of content encourages the users to change the story according to their vision and desire. Interviewing some people and showing their experiences and stories has added to representing reality. The case studies' variability in describing the different countries' details through time and space made them more realistic ___ representations of fact.

The interactions in the case studies improve decision-making, as most interactions develop specific exchange strategies. It helps the user to understand the reality represented through interaction and participation in decision-making. Gaudenzi states that the i-docs, as a creative format, request some user interaction. It transcends the cerebral action to recognise authentic reality and potential new self-patterns (2013). The processability of the interactive documentary to subtract and address social values influences public opinion, encourages social change and is a model for coordinating awareness and unifying visions. It also moves the viewers/users from collective understanding to changing the issues represented. It also can help marginalised communities and support their issues by communicating with other communities and representing their authentic reality.

The case studies have fragmented the content into separate parts to facilitate the stories' journey using the hyperlink mode (Aston & Gaudenzi, 2012). Using this hyperlink mode, filmmakers might emulate the essential functions of their works, such as the specific component of the stories and fragment the content into some distinct parts/elements. Hence, users can go everywhere.

The users can access the content and develop the narrative. They can choose which video to play and which content to create their own story. Therefore, the degree is non-linear with multiple branches (closed database). According to the Gaudenzi structure model, I summarised the analysis parameters for the case studies in a table in the next section.

Analysis parameters for the case studies: an i-docs

(Table-1) Analysis parameters for the case studies.

CATEGORY	PIRATE FISHING	FUKUSHIMA
Producing	2014, Al-Jazeera English Chanel-Qatar, Julianna Ruhfus. URL: https://interactive.aljazeera.com/aje/2014/piratefishingdoc/	IRSN with the support of NRPA, 2016-Project leaders/François Rollinger & Valérie Marchal (IRSN). URL: http://www.fukushima-dialogues.com/
The Interface *	Image of one of the trawlers/ the title shaped as a big fish/ mailbox message to interact and track the pirate's trawler.	The image from the city represents there is no human life.
Target audience	Young people who love the games.	Adults play a role in discourse/attention in the target audience rather than technical or technological innovation
Interactivity *	High level of interaction	Browsing & clicking
The User/Participant *	Participates in several ways/different stages	Browsing & clicking
The Content *	Graphics and simulations are very immersive, Interviews, images, maps	Immersive maps, images, graphics, interviews, timeline, texts/diversity of content drives the user to change the story.

The Narrative/power	Traditional documentary with some interactive/ It is linear.	It's non-linear/the users can go everywhere/create their own story.
Modes*	Hypertext mode. The user chooses hyperlinks to create paths to access the contents.	Hypertext mode/the Hitchhiking mode
Images	Drag the images to the notebook/get points.	Image is merged with full text/ select image to read the text.
Text	The presence of the text has been reduced.	Used the text very widely, which gave the user a sense of boredom.
Distinction/Uniqueness	i-docs aspects & features take us deep into world reality through this uniqueness/There is a lack of statistical data and information.	I-docs features/more realistic/maps and timelines contain statistical data.
Reality/Experience	Marine-Life Adventure/engaged in an "Investigative Adventure"/researcher/reporter.	Journey to discover the earthquake/repercussions.
Inspirational	<ul style="list-style-type: none"> • Provide tools/Give the narrative more attention. • Problems embedded/representing and condemning the many issues that concern communities. 	<ul style="list-style-type: none"> . Connect and integrate/stimulate and generate sufficient impact on public opinion/represents a way to confront and provide solutions. . Supporter in social change.

	<ul style="list-style-type: none"> • Representation of reality/through the resources of the interactive environment illustrates actual actions in the world. • Wide global audience/leave local to the world/raise awareness or challenge. 	<ul style="list-style-type: none"> . Ideally, accomplish this by encouraging/participating/improving/building. . Helps marginalised people/know their reality closely/supports their case/validates their values and their lives will improve.
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- By using Gaudenzi's structure model.

Conclusion

The inspiration from the genre of the i-doc is because it provides tools to better understand the subject by dividing the story into different parts to become more exciting. Also, it provides a comprehensive picture of the matter that gives the narrative more attention by connecting and integrating various areas such as creativity, audio-visual, digital and interaction with participants to stimulate and generate sufficient impact on public opinion. This representation of reality is not limited to arousing only the point of view. The interactive and content environment resources illustrate actual actions in the world represented to confront and provide solutions.

People who are socially marginalised can communicate with others through the virtual world; this leads to support for their case that validates their values. The possibility of socially marginalised communities seeing their problems embedded in the digital environment reinforces the feeling that their voices will eventually be heard. They will gradually be accepted among people, knowing their authenticity closely. The i-doc represents and condemns the many issues that concern socially marginalised communities; it becomes a partner or supporter in social change by favouring those affected. 'Integrating key points about representation through these three interrelated concepts—numerical representation, quality of representation, and centrality of representation—allows us to understand the totality of marginalisation' (Erigha, 2015, p. 80). Interactive documentaries would ideally encourage the participation and improvement of public discourse while considering building a global audience and raising awareness.

The interactive nature, content, and some narrative elements became inspiring to narrate filmmakers' projects. They can utilise some of these features to validate the social values represented in their projects. I would conclude that relying on the interactive documentary as a shared benefits project is necessary by relying on the representation that reflects the reality—seeking to confront the reality of marginalisation and poverty misrepresented to some people. 'Of great concern to marginalised groups is the precise quantity that constitutes adequate representation in media' (Erigha, 2015, p. 79).

Significantly, it will consider critical points to promote and support other projects, such as the social values in the three case studies. It represents and condemns the many issues that concern the communities. The case studies use the mode of clickability, and a significant presence of the observational way through a simulation and the illustrative method is present. It has connected and integrated various creative, audio-visual, digital, and interactive areas with participants to stimulate and generate sufficient impact on public opinion; it has represented a way to confront and provide solutions. Furthermore, after getting to know the people depicted, the possibility of seeing their history embedded in the digital environment reinforces the feeling that eventually, they will hear their voice through the i-docs that disseminate information.

Generally, thanks to the tremendous technological development, documentary films can invest in digital media within the logic of competition to achieve the most significant percentage of follow-up and viewing. The use of new media technology increases the power of the interactive documentary as it is linked to global networks, allowing complete access to interact and learn. It also facilitates spreading expansive archives of information, photos, media, and opinions that more traditional forms cannot intake. This wealth of different data is expertly researched and organised by the contribution of the filmmaker by placing it within a non-linear framework that encourages the viewer/user to build meanings and their level of involvement actively. Future extensions of these interactive documentaries could explore other not-covered features after obtaining promising representation indicators. 'These transpositions will clarify a current trend [...] to give learners a direct and transparent access to the real' (Sébastien and Ibanez-Bueno, 2017, p. 1). As such, due to the significant features of the i-doc: the use of a hyperlink that provides the user rich experience, the use of multiple media formats and interactions, navigation strategies, and user interaction,

The i-doc is an appropriate format for representation. Interaction features may present new possibilities for user engagement and immersion, affecting presentation.

Recommendations

- Encourage and support researchers to research and practice in the field of interactive documentaries by considering the proposed ideas and hypotheses in this area.
- Draw attention to the i-docs and clarify the potential for development and improvement in their employment.
- Filmmakers have to collaborate with people and companies with experience in programming and applications to create and produce i-docs with severe and valuable content and ideas of both form and content.
- Establish festivals to encourage filmmakers to do more productions of the i-docs/Web-docs.

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