

SYSTEMATIC REVIEW OF E-SERVICESCAPE

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ABSTRACT

This paper aims to systematically review the development of the literature on e-servicescape conceptualization and its impacts on customers. It also aims to analyze the research gap and future direction of e-servicescape studies. A systematic review and analysis were conducted on 38 e-servicescape studies published between 2004 and 2021. It presented the description and analysis of the context and dimensions of e-servicescape, research methods and theories of e-servicescape studies, and impacts on customers by e-servicescape perspectives. The future development of the conceptualization of e-servicescape is also presented. This paper is the first systematic review of the concept of e-servicescape. It aims to stimulate researchers to explore more dimensions of the e-servicescape for emerging topics and involve more digital and virtual atmospherics.

INTRODUCTION

For the service company, the physical environment is very important because the service's surroundings act as a package to produce and consume the service simultaneously. Bitner uses the term servicescape to refer to carefully designed and controlled elements of the service environment (Bitner, 1992). Since its inception in 1992, the concept of servicescape has evolved extensively, which has extended into the electronic and virtual service environment. Based on Bitner's

classification of traditional servicescape, Harris and Goode (2010) initiated the classification of e-servicescape into three dimensions: Aesthetic appeal, layout and functionality, and financial security (Harris & Goode, 2010). They established a scale of e-servicescape, which has been accepted and recognized by many scholars. Since this is a new concept, the scholars aim to create a conceptual framework for the research on the topic.

Web atmospherics is defined as 'the conscious designing of web environments to create positive effects in users to increase favorable consumer responses (Mari & Poggesi, 2013). The demand for mobile commerce is growing very fast, and website is less important for e-commerce than before. Mobile shops are creating more kinds of environments for the consumer; however, the current e-servicescape could not explain the new social and entertainment environment enough, and scholars have discussed more dimensions after Harris & Goode. Research on e-servicescape was mainly based on cognitive psychology and environmental psychology theories and focused on different e-servicescape dimensions' direct and indirect impacts on customer attitudes, satisfaction, purchase intention, etc.

However, the development of e-servicescape has not been thoroughly reviewed thus far. Therefore, this paper aims to systematically review the evolution of the e-servicescape concept, we tend to review:

- 1) The development of the e-servicescape concept and dimensions?
- 2) The evolution of literature both conceptual and empirical research studying e-servicescape/virtual servicescape?
- 3) The context and field of research that is the subject of empirical investigations.
- 4) The variables have been addressed to the e-servicescape concept?
- 5) The methodological perspectives have e-servicescape been approached?
- 6) The underpinning theories established for the research of e-servicescape?

LITERATURE REVIEW

E-servicescape concept

Service environment research used the term "servicescape" to describe the physical environment elements designed and controlled (Bitner, 1992). Since 2003 e-servicescape has been studied in different terms. "Escape" plays the role of a communication channel for providing information to offline companies (Koenig 2003). Online retailers could manipulate the visual cues to affect shoppers' reactions under the "online shopping atmospherics" (Eroglu, Machleit, and Davis, 2003). Compare to the physical environments, consumers could search for and evaluate more information than traditional distribution in "cyberscape", which could be designed and planned to induce consumers' positive approach behaviors (Williams and Dargel, 2004). The design of the website, which has been analyzed in two dimensions, aesthetic and symbolism, is the "virtual servicescape" that consumers encounter in the e-service (Vilnai-Yavetz and Rafaeli, 2006). "E-servicescape" proposed to convey the organizations' Web site appearance and structure that could be managed to influence the consumer experience and response (Hopkins et al., 2009; Jeon & Jeong, 2009).

E-servicescape is defined as all the environmental factors in the delivery of virtual services from pre-purchase to post-purchase (Harris and Goode, 2010), which has been accepted and recognized by many scholars afterward. A conceptual model of the relationship between e-servicescape and trust and purchase intention are based on the stimulus-organism-response (S-O-R) paradigm. Based on Harris and Goode's conceptual model, scholars built many different frameworks with trust, e-loyalty, etc., as a mediate internal cognitive, emotional, or physiological response, and influence consumer behavior and consumer behavior's intention, such as purchase intention, or e-WOM, as the behavioral responses.

“Smart servicescape” and “online live streaming perceived servicescape” are in the particular electronic context, which is the smart retail landscape and real-time online live streaming video and interactions (Roy et al., 2019; Chen, et al., 2020) in order to conceptualise smart experience co-creation (SEC). Moreover, other new e-servicescape concepts are expected in the context of progressive developing vertical industries supported by the next-generation mobile network, such as IoT (Internet of Things), wearable technology, smart homes, and new digital media (Chen, et al., 2020), in the future studies.

METHODOLOGY

To develop this systematic review paper, we established a set of criteria, parameters, and study quality assessment to develop the review protocol (Kitchenham, 2004). The established set of criteria is as follows:

1) This study searched keywords of “e-servicescape” and “virtual servicescape” through Google Scholar and Researchgate.com to collect literature on the topic.

2) To control the quality of literature, this study only chose journal articles and published conference papers as the research database. That means books, chapters in books, other unpublished papers, or a thesis are not included.

3) To ensure the relevant context of the topic by reading all the abstracts of the displayed articles from (1), 38 papers had chosen for this systematic literature review research.

Python program has been utilized to get word clouds in this review, which present the highly frequent keywords of the abstracts in the database.

FINDINGS

Figure 1 shows the number of publications of e-servicescape research from the year of 2004 to the year of 2021. As Figure 1 shows, the number of papers on the e-servicescape

topic has significantly increased last five years, which is 66% of the total number of selected papers.

Context

Online shopping is the majority type of context of e-servicescape research, which is 58% of the total number in the database. As technology improves and the pandemic situation worldwide, people shop online for better sales and work and study online. Therefore, scholars have started to focus on the new context of e-servicescape research, such as education, mobile app, and banking, as Table 1 shows.

Method

The research method of each research shows how researchers conducted their studies differently. As Table 2 shows, there are 4 conceptual pieces of research on e-servicescape to build their e-servicescape model (Williams & Dargel, 2004; Jeon & Jeong, 2009; Lee & Jeong, 2012; Ballantyne & Nilsson, 2017). And there are 31 papers, 82% of the total papers, approach their conclusion by the quantitative method using the instrument of survey or online survey (Hopkins et al., 2009; Harris & Goode, 2010; L, 2010; Tran, et al., 2012; Abarbanel, 2013; Lai et al., 2014, 2015; Hakim & Deswindi, 2015; Kühn, et al., 2015; Cho, et al., 2015; Sreejesh & Ponnamm, 2017; Bateman, et al., 2017; Wu, et al., 2017; Bulut & Onaran, 2017; Sunarsono, et al., 2018; Tankovic & Benazic, 2018; Teng, et al., 2018; Roy et al., 2019; Tran & Strutton, 2019; Dassanayake & Senevirathne, 2019; Ihsan & Kurniawati, 2020; Parwati, 2020; Yadav & Mahara, 2020; Chen, et al., 2020; Dutta, 2020; Amer, 2021; Huang et al., 2021; Izaak, et al., 2021; Kim, 2021; Andriani et al., 2021; Tri Kurniawati & Yadi Yaakop, 2021; Yeo, Moh & Low, 2021; Boukabiya, 2021). Three studies constructed their e-servicescape dimensions by qualitative research method with the instrument of in-depth interview (Chen et al., 2020), and two utilized the theory of the Means-End Chain (Lai et al., 2014, 2015).

Dimensions

As web technology changing quickly in recent years, the dimensions of e-servicescape are also changing and extending. From Bitner's servicescape dimensions, which many scholars studied when the e-servicescape concept just came up, to Harris and Goode's e-servicescape dimensions, and still evolving these years. Some of the research took the sub-dimensions of Bitner's model or Harris and Goode's model as their dimensions, as Table 3 shows.

At the early stage of the e-servicescape concept, scholars successfully applied Bitner's traditional servicescape model, which has three dimensions: ambient conditions, Spatial Layout and functionalities, and Signs, symbols, and artifacts, to the virtual environment effectively (Williams & Dargel, 2004; Hopkins et al., 2009). When the concept of e-servicescape first emerged, the study objects were usually websites or portals of the service company. Those studies explored the dimension of website e-servicescape as the company's brand image to increase customer intention (Hopkins et al., 2009).

Scholars tried to apply Bitner's traditional servicescape dimensions to the online environment and transformed them into e-servicescape dimensions. For example, the "ambient conditions", one of Bitner's traditional servicescape dimensions, is the physical environment transformed to the virtual environment aspects directly with the sub-dimensions such as quality photos, colors, animation effects, and music/sound, etc. (Jeon & Jeong, 2009; Lai et al., 2014; Hakim & Deswindi, 2015). Scholars analyzed the different significance of the dimension of "Space/function" in their e-servicescape model on the nature of online service than brick-and-mortar (Williams & Dargel, 2004; Hopkins et al., 2009; Cho et al., 2015; Dutta, 2020). Other researchers who applied Bitner's model transformed the dimension of "Space/function" into "Design aspects", "Search aids and slogans", or "Functional aspects" to adapt

online features and to identify the consumer-friendly shopping interfaces (Jeon & Jeong, 2009; L, 2010; Lee and Jeong, 2012; Lai et al., 2014; Hakim & Deswindi, 2015; Aprianti & Rachmawati, 2020; Parwati, 2020).

The new dimensions of e-servicescape models developed by Bitner's servicescape model are subsequently differentiated in different research contexts. The B&B website e-servicescapemodel has been investigated with four dimensions and fourteen sub-dimensions, which are ambient conditions (color/quality photos/virtual tour/music and sound effects/animation effects), design aspects (overall structure and layout/use of space), search aids and slogans (keywords/meta-tag/slogans), and functional aspects (interaction with website owner or keeper/saved time/convenience/information adequacy) (Jeon & Jeong, 2009). The hospital website e-servicescape model has been studied with the same four dimensions as the B&B website but different sub-dimensions, which are ambient conditions (color/quality photos/animation effects), design aspects (overall structure/use of space), search aids and slogans (keywords/slogans), and functional aspects (interactive/information adequacy/navigation structure) (Hakim & Deswindi, 2015).

E-servicescape dimensions proposed by Harris and Goode are aesthetic appeal, layout and functionality, and financial security. They integrated the ambient conditions and space/function from the traditional servicescape to the aesthetic appeal, layout, and functionality. And they proposed three sub-dimensions for aesthetic appeal, visual appeal, originality of design, and entertainment value of aesthetic appeal to measure how the virtual environment is appealing or attractive to the consumer. Usability, relevance of information, customization/personalization, and interactivity are the four sub-dimensions of layout and functionality. A new dimension different from the traditional one, financial security, was introduced because the consumption process is done online (Harris and Goode, 2010). And Financial security has

two sub-dimensions: ease of payment and perceived security. Therefore, the Harris and Goode e-servicescape framework has three dimensions and nine sub-dimensions.

After Harris and Goode proposed their e-servicescape model, many scholars started to confirm the three dimensions through positivism paradigms. The same model has been validated further in the field of travel and tourism (Kühn et al., 2015; Sreejesh & Ponnampalani, 2017; Huang et al., 2021). Empirical evidence has been found of Harris and Goode's e-servicescape model in the context of e-shopping experience (Bulut & Onaran, 2017; Wu, Quyen & Rivas, 2017; Tankovic & Benazic, 2018; Yadav & Mahara, 2020).

In recent years, scholars have begun introducing more dimensions to the extant e-servicescape construct. Some of the research use the sub-dimensions of Harris and Goode's as the dimensions to construct their models, adding or replacing more or less of the original dimensions to match the context of their research (Bulut & Onaran, 2017; Andriani et al., 2021; Boukabiya, 2021; Kim, 2021).

As a rich content environment provided by the current social media, live streaming channels, and wearable devices, the dimension of social presence has proposed the e-servicescape model to expand the social influence online on the virtual environment (Chen et al., 2020; Kim, 2021). The educational online environment also emphasizes the social presence as a significant dimension of e-servicescape to the students' engagement (Dassanayake & Senevirathne, 2019). Customer reviews have been extended to the dimensions or the sub-dimensions of the e-servicescape model to capture the current online shopping websites and wearable device characters more sufficiently (Bulut & Onaran, 2017; Tran & Strutton, 2019).

Theories

Different theories have built the conceptual framework of each research to analyze the relationship between independent and dependent variables. Harris and Goode forwarded a conceptual model of the relationship between e-servicescape and trust and purchase intention based on the stimulus-organism-response (S-O-R) paradigm. Based on Harris and Goode's conceptual model, scholars built many different e-servicescape frameworks with trust, e-loyalty, etc., as a mediate internal cognitive, emotional, or physiological response and influence consumer behavior and consumer behavior' s intention, such as purchase intention, or e-WOM, as the behavior responses under the S-O-R theory (Williams & Dargel, 2004; Lee & Jeong, 2012; Abarbanel, 2013; Wu et al., 2017; Tankovic & Benazic, 2018; Tran & Strutton, 2019; Roy et al., 2019; Yadav & Mahara, 2020; Aprianti & Rachmawati, 2020; Chen, et al., 2020; Parwati, 2020; Amer, 2021; Yeo, Moh & Low, 2021; Andriani et al., 2021; Boukabiya, 2021; Huang et al., 2021). And 44% of studies adopted S-O-R (Stimulate-Organism-Response) theory to analyze how e-servicescape as the stimulate independent variable impacts the consumer's behavior or intention response by the mediating variables like trust or other emotion and cognition as the organism.

In the other research on e-servicescape, scholars introduced various theories, such as environmental psychology, cognitive psychology, customer engagement, media richness, media engagement, etc., into the exploration of the model of e-servicescape. And the e-servicescape model became not only for marketing research but also an interdisciplinary and multi-angle research proposition. Some researchers do not have mediating variables and study the direct impact of e-servicescape on the dependent variables. And other researchers identify their model by other theoretical frameworks, as Table 4 shows.

E-servicescape impacts on consumer

Scholars have explored the impact of e-servicescape on customers' emotions, perceptions, and behaviors in different contexts. Some of the researchers have moderating variables, and some do not; tTable5 considers the moderating variables and other dependent variables that directly or indirectly impact e-servicescape.

Word clouds are a visual presentation of formalized text that visually highlights high-frequency keywords in lengthy text messages, using the text's color, size, and form to control the text's importance in the visual interface, thus allowing users to observe the key content easily. All 38 papers' abstracts were entered in a text file, while some meaningless repeated words have been deleted, such as "research", "study", "customer", and "consumer". After running Python programming, as Figure 2 shows, the important repeated text in the scholars' abstracts can be seen in Figure 3. Besides the words e-servicescape or dimensions correlated, such as "e-servicescape", "online", and "website", the words "purchase intentions", "trust", "e-WOM", "loyalty", "perceived" are frequently used concepts related to the customers' impacts of e-servicescape, which is consistent in table 5. And these concepts are the most discussed impacts of e-servicescape on customers of all the e-servicescape research.

Trust is the most important factor in encouraging customers to make deals online (Harris & Goode, 2010). Therefore, most of the scholars took online trust as a mediating role in the research models to influence consumer behavior or behavior intention (Harris & Goode, 2010; Tran et al., 2012; Bateman et al., 2017; Tran and Strutton, 2019; Aprianti & Rachmawati, 2020; Chen et al., 2020; Yadav & Mahara, 2020; Amer, 2021; Andriani et al., 2021). Other scholars' empirical results indicated that the e-servicescape dimensions significantly affect customers' online trust without other dependent variables (Kühn et al., 2015; Tri Kurniawati & Yadi Yaakop, 2021).

Customers will take reviews and recommendations from other users more important than the marketer's product information. The influence of Word of Mouth online is more effective than traditional marketing communication (Tran & Strutton, 2019). Electronic word of mouth (E-WOM) can be easily accessed with no geographic or time limits. Both companies and customers could benefit from the interactive opportunity and co-create the virtual value, E-WOM, of the products or services. And it has been studied as the response to e-servicescape when trust is an intervening variable within the S-O-R framework (Wu et al., 2017; Tran & Strutton, 2019; Andriani et al., 2021).

While scholars demonstrated the strong relationship between trust and purchase intention offline, the linkage between online trust and online purchase intention has been supported by empirical evidence in the model of S-O-R (Harris & Goode, 2010; Wu et al., 2017; Aprianti & Rachmawati, 2020; Yadav & Mahara, 2020; Amer, 2021). Other than trust, service provider evaluation, flow experience, satisfaction, and perceived value or quality have been analyzed to be the moderating variables to purchase or behavior intention in the e-servicescape environments (Hopkins et al., 2009; Jeon & Jeong, 2009; Tankovic & Benazic, 2018; Parwati, 2020; Boukabiya, 2021; Huang et al., 2021; Kim, 2021; Yeo, Moh & Low, 2021). How heavy or light internet users' purchase intentions are affected by different e-servicescape dimensions has been demonstrated as well (Teng et al., 2018).

E-loyalty, customers' behavior-related outcomes, enhanced by e-servicescape in the context of Travel and Tourism websites (Sreejesh & Ponnamp, 2017). Loyalty could also be the customer's response to the e-servicescape stimulus in the S-O-R framework along with the e-WOM response or by itself (Tankovic & Benazic, 2018; Tran & Strutton, 2019). During COVID-19 Pandemic, online university education has become a context of e-servicescape research. The e-servicescape of

online university education has been studied, and students' loyalty intention is significantly impacted by e-servicescape when university students' study online (Izaak et al., 2021).

Future agenda

Many of the e-servicescape studies tested and evaluated Harris and Goode's e-servicescape model which was heavily developed by offline servicescape. In terms of the development of the online environment, future studies may explore and test alternative e-servicescape model conceptualizations which are less grounded from offline contexts by involving more digital and virtual atmospherics. (Harris & Goode, 2010; Tran et al., 2012; Ballantyne & Nilsson, 2017; Andriani et al., 2021) trust, and e-servicescape that presents online physical environments as comprising three dimensions. It aims to develop and extend existing research into physical service environments through proposing, operationalizing, and testing a model of online servicescape. Design/methodology/approach: The study utilizes a survey approach to gather data regarding consumers' perceptions of online servicescape. Surveys were administered to 257 respondents regarding a broad range of web sites. Findings: A measure of e-servicescape is evaluated that comprises three dimensions and 52 items while relationships between the dimensions of e-servicescape, trust, and purchase intentions are described. Research limitations/implications: The first contribution of this study stems from the successful operationalization of a comprehensive multi-item (in total 52 items. More dimensions of e-servicescape related to the product itself, the perceived image of the retailer, video, engagement, and other control variables in different contexts should be included in future studies (Bateman et al., 2017; Tran & Strutton, 2019; Chen et al., 2020; Parwati, 2020; Yadav & Mahara, 2020) so does the importance of a website in a retailer's strategy. In this increasingly competitive environment, building customer loyalty and retaining customers is integral to achieving sustained profitability. While one stream of

literature has suggested that e-retailers should concentrate on improving quality, another has recommended the focus should be on building trust with customers. The objective of this study is to synthesise these streams, investigating how the interplay between three forms of quality (information, system, and service).

The validity may be improved by the investigation of a wider range of service constructs, such as satisfaction, perceived value, and loyalty (Harris & Goode, 2010; Hakim & Deswindi, 2015; Kühn et al., 2015; Amer, 2021; Tri Kurniawati & Yadi Yaakop, 2021) trust, and e-servicescape that presents online physical environments as comprising three dimensions. It aims to develop and extend existing research into physical service environments through proposing, operationalizing, and testing a model of online servicescape. Design/methodology/approach: The study utilizes a survey approach to gather data regarding consumers' perceptions of online servicescape. Surveys were administered to 257 respondents regarding a broad range of web sites. Findings: A measure of e-servicescape is evaluated that comprises three dimensions and 52 items while relationships between the dimensions of e-servicescape, trust, and purchase intentions are described. Research limitations/implications: The first contribution of this study stems from the successful operationalization of a comprehensive multi-item (in total 52 items. More potential moderating factors or mediators may be explored for future studies, such as a website or customer characteristics, customer involvement, cultural difference, and gender; Few research of e-servicescape employed a controlled experiment method (e.g. conjoint analysis), therefore future studies could benefit from this approach to test the effects, such as perceived risk, online service satisfaction, e-service quality, price perception, on and product quality, by manipulating different factors of e-servicescape (Harris & Goode, 2010; Lai et al., 2014; Tankovic & Benazic, 2018; Yeo et al., 2021) trust, and e-servicescape that presents online physical

environments as comprising three dimensions. It aims to develop and extend existing research into physical service environments through proposing, operationalizing, and testing a model of online servicescape. Design/methodology/approach: The study utilizes a survey approach to gather data regarding consumers' perceptions of online servicescape. Surveys were administered to 257 respondents regarding a broad range of web sites. Findings: A measure of e-servicescape is evaluated that comprises three dimensions and 52 items while relationships between the dimensions of e-servicescape, trust, and purchase intentions are described. Research limitations/implications: The first contribution of this study stems from the successful operationalization of a comprehensive multi-item (in total 52 items).

CONCLUSION

This study systematically reviewed the literature on e-servicescape, which was developed by the concept of servicescape, for the first time. We analyzed the academic stream of e-servicescape studies from 2004 to 2021 by using 38 selected papers. E-servicescape's context evolved from websites to mobile apps and to post COVID-19 pandemic. The dimensions of e-servicescape evolved from Bitner's servicescape dimensions in the online environment to add a few dimensions in terms of the different environments' scholars analyzed. From Harris and Goode's e-servicescape dimensions to an expanded version of theirs. Many scholars took e-servicescape as a stimulus of the S-O-R framework, and others also analyze the different impacts of e-servicescape on customers in their theoretical frameworks.

As mobile became an important part of people's life, website online shopping is changing to mobile shopping at the same

time. Meanwhile, different mobile shopping Apps could provide different functions for customers, such as social functions or live streaming functions, so the dimensions of e-servicescape in the context of online shopping are still enriching and will be enriched in the future. There will be more dimensions of e-servicescape expected in future studies while the technology developing and the virtual environment still changing.

The global issue, COVID-19 pandemic, accelerates the increase of online and e-commerce lifestyles. Besides the online shopping context of e-servicescape research, there are fewer contexts of e-servicescape about tourism studies, such as hotel and ticket booking websites. Meanwhile, university students have begun to study online, so it is important to analyze the impacts of the online education context of e-servicescape on how students complete their studies remotely (Izaak et al., 2021). The sale of home fitness products has been proven dramatically increased during the COVID-19 pandemic (Kim, 2021), e-servicescape of smart home context and wearable devices are expected to be investigated in the future.

Although some of the scholars did not apply the S-O-R model in their study, they still analyzed the similar impacts or influences of e-servicescape on customers such as behavioral intentions, satisfaction, engagement, etc. Some of those also identified the customers' cognition, emotion, or experience of e-servicescape to mediate the impacts. Customers are more involved in every stage of e-commerce than before, and Apps on mobile and wearable devices are more socially and emotionally perceived by the customers. As the virtual environment is changing, the organism and response to the e-servicescape stimulus will be changed and studied in the future.

Tables and Figures

Table 1 Contexts of E-servicescape Studies

Context	Number of Papers
Online shopping	22
Tourism and Hospitality	5
Education	3
Mobile app	2
Entertainment	2
Transportation	1
Live streaming	1
Banking	1

Table 2 Research methods of e-servicescape studies

Research Method	Method	Number of Papers
Conceptual		4
Qualitative	In-depth interview	2
	Case study	1
Quantitative	Experiment	1
	Survey	31

Table 3 Dimensions and sub-dimensions of e-servicescape studies

Dimension	Sub-dimension	Number of Papers
Ambient conditions	Color	9
	Quality photos	
	Virtual tour	
	Music/sound effects	
	Animation effects	
Spatial Layout and Functionalities		4
Signs, symbols, and artifacts	Company logo	6
Search aids & slogans	Keywords	3
	Slogans	
	Meta-tag	
Aesthetics appeal	Originality of Design	23
	Visual Appeal	
	Entertainment Value	
Layout and functionality	Usability	21
	Relevance of Information	
	Customization	
	Interactivity	
	Customer reviews	
Financial security	Perceived Security	21
	Ease of Payment	

Design factors	Categorization	9
	Simple Arrangement	
	Navigation Bar	
	Overall Structure	
	Use of Space	
Visual appeal		5
Entertainment value		4
Interactivity		7
Usability		5
Customization/Personalization		4
Relevance of information		5
Originality of design		4
Ease of payment		3
Interaction	Price information	1
	Confirmation mail	
Quality photograph		1
Navigation bar		1
Price information		1
Confirmation mail		1
Company logo		1
Customer reviews		1
Social factors		3
Social presence		1
Privacy		1

Table 4 Theories in e-servicescape studies

Theory	Number of Papers
S-O-R (Stimulate-Organism-Response)	16
MEC (Means-End Chain)	2
AST (Spreading Activation Theory)	1
HVM (Hierarchical value map)	1
TPB (Theory of planned behavior)	1
DMH (Dual Mediation Hypothesis)	1

Table 5 Dependent variables of e-servicescape studies

Dependent variables	number
Trust	10
Purchase intension	16
Flow experience	3
E-WOM	5
Perceived value or quality	7
Attitude	3
Satisfaction	5
Cognition	2
Emotion	3
Loyalty	3

Figure 1 Number of e-servicescape studies (2004-2021)

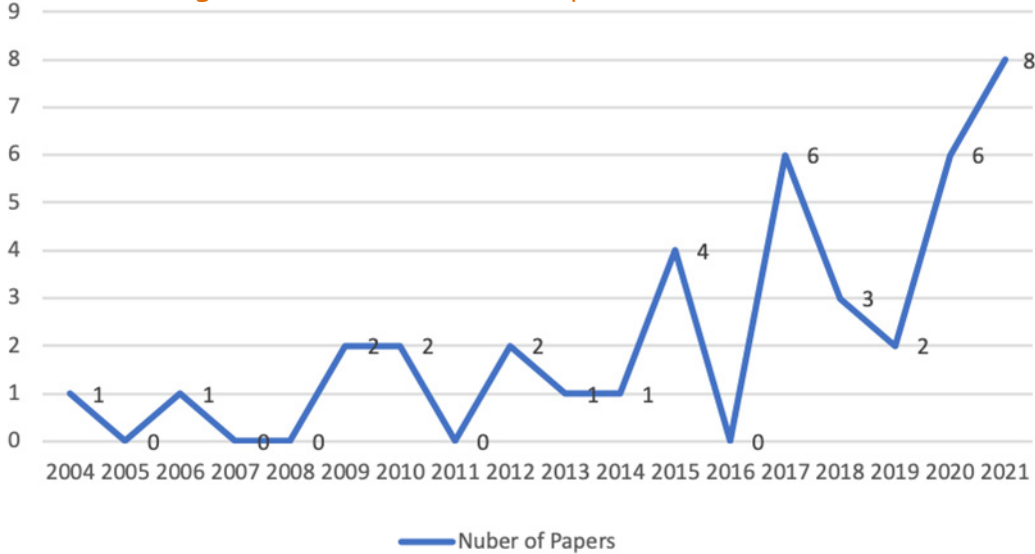


Figure 2 Python programming for Word clouds

```

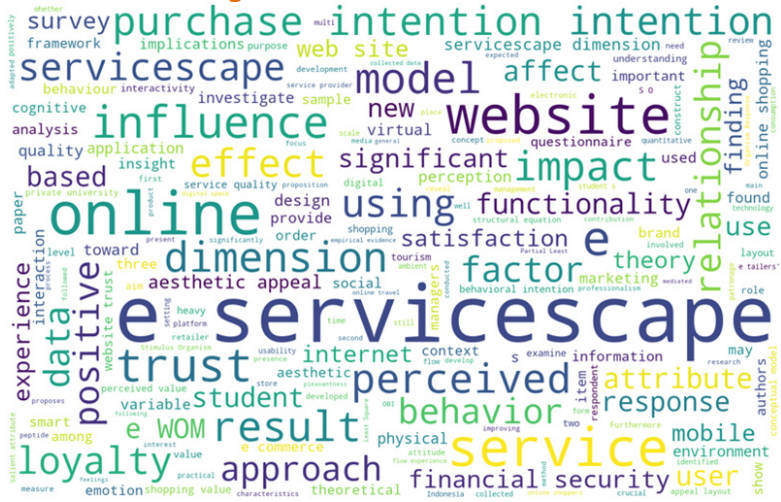
import jieba
import os
import matplotlib.pyplot as plt
from wordcloud import WordCloud, ImageColorGenerator

f=open('myword.txt', 'r', encoding='utf-8').read()

wordcloud = WordCloud(
    background_color="white",
    width=1500,
    height=960,
    margin=10
).generate(f)

plt.imshow(wordcloud)
plt.axis("off")
plt.show()
wordcloud.to_file('mytext.png')
    
```

Figure 3 Word clouds outcome



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