

Universitätscape: The relevance of environmental factors in student's perception

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Abstract

Purpose. Despite the increasing number of works investigating servicescape (Bitner, 1992), extant research does not adequately adapt the construct to education field (Ng and Forbes, 2009). To address this gap, the aim of the paper is to propose the development of a Universityscape scale.

Methodology. By employing Churchill's (1979) procedure, exploratory factor analysis (EFA) is performed on a sample of 1154 Italian students attending upper secondary school in order to assess their perception of University environmental dimensions.

Findings. The factors obtained (atmospherics, livability, accessibility and signage) highlight the centrality of structural and symbolic components in orienting student's evaluation.

Practical implications. The findings of the study can encourage policy makers to improve: service offering by enhancing service quality, security and mobility; image and reputation of a given University by promoting its historical and cultural heritage and the overall quality of student's life.

Originality/value. The originality of the research lies in the application of servicescape to higher education sector. Moreover, results reveal the necessity to intend University as a supplier of culture at 360-degree aimed at satisfying student's needs for status and knowledge and at enhancing their well-being.

Keywords

Servicescape, Universityscape, higher education, service quality

1. Introduction

In current service era, the contextual features of consumption are acquiring increasing relevance by broadening the factors influencing customer's attitude and behavior to include the investigation of the psychological, social and environmental factors surrounding delivery.

Aimed at emphasizing the centrality of context in service provision, the notion of servicescape (Booms and Bitner, 1991; Bitner, 1992) refers to the attributes of the service setting in which users and providers interact by generating specific emotions or intentions (Kotler, 1973; Berman and Evans, 1995). The widespread diffusion of the construct in different research areas led to the development of many variations of the phenomenon, such as winescape (Peters, 1997), shipscape (Kwortnik, 2008), musicscape (Oakes and North, 2008) and festivalscape (Lee et al., 2008).

However, the application of servicescape to the different kind of services has not always involved its proper contextualization to each specific sector. In particular, extant research on higher education service, whose offering is essentially based on the valorization of interactive and in-exchange dimensions as key drivers for satisfaction and effectiveness (Ng and Forbes, 2009), is characterized by a shortage of conceptual and empirical studies on the impact of environment on student's perception (Wells and Daunt, 2016). Further, these relatively new works do not take into account latest theoretical and practical servicescape advancements pertaining to the recognized impact of symbolic, social and collateral service features (Mason and Paggiaro, 2012; Quintal et al., 2015) on user's evaluations.

Based on these gaps, the current work attempts to respond to the following research questions:

RQ1: Is it possible to adapt servicescape key dimensions to measure the main context factors in higher education service?

RQ2: Which are the underlying dimensions of a measurement framework for Universityscape adopting an all-encompassing approach?

For this reason, this paper proposes the first steps for the elaboration of a measurement scale for Universityscape in higher education in an attempt to provide a holistic model composed of both material and immaterial, structural and symbolic characteristics of service setting.

Specifically, a sample of Italian students attending upper secondary school is investigated through exploratory factor analysis (EFA) in order to reveal the main dimensions orienting their evaluations of University contextual attributes.

By re-elaborating servicescape according to higher education peculiarities, this model theoretically proposes some advancements in service research. In the same way, the identification of the most relevant features in student's perception provides managers with a tool to enhance overall University attractiveness by employing a service marketing perspective (Ng and Forbes, 2009).

The work is structured as follows. In the next section a review on previous studies about servicescape in general and in higher education is conducted. Then, based on the gaps emerged from literature, the measurement framework for Universityscape is presented. Furthermore, the sample, the method and technique adopted in the empirical research are introduced, as well as the results of factor analysis. Finally, the theoretical and managerial implications and the limitations of the study are discussed and suggestions for future research are proposed.

2. Theoretical background. The main environmental dimensions in Universityscape

The interactive dimension, which act as the basis of exchanges in service delivery, performs a central role in higher education, since education service outcome is “built” exclusively through the joint production of value (essentially knowledge) between users and providers. This kind of service, in fact, derives from the accomplishment of intangible actions in a continuous delivery process in which students and teachers co-create core and supplementary services (Ng and Forbes, 2009).

Since service encounter takes place in a given social and economic context, servicescape can foster or constrain resource integration and can have an impact on value creation outcomes (Nillsson and Ballantyne, 2014). It follows that the investigation of the different elements of servicescape shaping student’s perception and learning experiences is relevant in observing service effectiveness and the role of contextual features in influencing user’s behavior as a whole. For this reason, a brief overview on the main dimensions of servicescape in general is conducted (par. 2.1); then, extant research on the role of servicescape in education sector is analyzed (par. 2.2).

2.1. *Servicescape and beyond: toward a holistic approach*

The importance of the atmosphere in buyers’ choices led to the introduction of *servicescape* (Booms and Bitner, 1991), a term which combines service with landscape (Barker, 1968). The notion, which derives from environmental psychology field, refers to the dimensions of the “physical surroundings (of a service environment) that can be controlled by the firm to enhance (or constrain) employee and customer actions” (Bitner, 1992, p. 65).

Over the course of time, the study of this concept has gradually evolved from the adoption of a restricted approach, strictly centered on functional environmental characteristics of service setting, to a holistic approach broadening the view in order to include social and cultural factors of the “scape”.

In the first perspective, servicescape is mainly intended as a set of physical elements (functional and aesthetic factors such as store exterior, general interior, layout and design, point-of-purchase and decoration variables) that need to be managed in order to influence to facilitate customers’ exploration consumer behavior (Berman and Evans, 1995; Wakefield and Blodgett, 1994). Starting from environmental psychology studies, Turley and Milliman (2002) add a fifth category, human variable, by considering for the first human resources as an essential driver for effective service outcome.

The second viewpoint takes into account the symbolic and social factors involved in service context. By proposing social servicescape, Tombs and McColl- Kennedy (2002, p.1462) stress the role of human aspects in influencing buyers’ behavior as a result of direct and indirect interactions with other subjects.

In line with this optics, one of the most popular reelaborations of servicescape is *festivalscape* (Lee et al., 2008), composed of both structural (program content, facility, convenience, food) and symbolic features (souvenir, staff, information) influencing user’s attitude, emotion and satisfaction (Lee et al., 2008; Mason and Paggiaro, 2012). In this research stream, the immaterial and symbolic features of a destination are emphasized, especially by observing customer’s experience and emotional reaction to service environment. What is more, also the relevance of cultural dimensions and collateral events beyond the only core offering are is evaluated (Anil, 2012).

Lastly, in wine sector, Quintal et al. (2015) propose a winescape scale that highlights the centrality of wineries scenery (setting, atmospherics) and introduces a new dimension concerning complementary product (in terms of cultural events and/or exhibition or local food

offering) that, together with staff, is the most influential winescape attributes in affecting attitude and behavioral intention.

Table 1 summarizes the state-of-the-art of local festivalscape’s empirical studies resulting from the brief literature review above conducted and in line with the categorization into two approaches.

Table 1. The main contributions on servicescape and further reelaborations

Approach	Sector	Authors	Servicescape attributes	Focus
Restricted approach (environmental structural features)	Servicescape (environmental psychology; consumer behavior)	Wakefield and Blodgett (1994); Berman and Evans (1995);	-Store exterior, -store interior: cleanliness, décor, seating comfort, navigation layout.	Functional and aesthetic factors of servicescape influence customers’ mood and emotions.
		Turley and Milliman (2002)	-Store exterior -store interior -human variable	Addition of human component
Holistic approach (cultural, social and symbolic features)	Service marketing	Tombs and McColl-Kennedy (2002)	-Social density -displayed emotions of others -susceptibility to emotional contagion	Interactions shape service outcome
	Festivalscape	Lee et al. (2008); Anil (2012); Mason and Paggiaro (2012)	-Program content -food quality -facility -convenience	Impact of core environmental factors and of symbolic and collateral services on attitude, experience and satisfaction
			-Information -souvenirs -staff -festival area	
Winescape	Quintal et al. (2015)	-Setting -atmospherics -wine quality -wine value -Complementary product -signage -staff	Importance of complementary product and staff in influencing user’s attitude	

Source: author’s elaboration

The brief overview conducted above highlights the necessity of an integrated approach balancing structural (facility, core service, convenience, etc.) and symbolic (signage, staff, complementary products, events, etc.) servicescape attributes, in line with recent developments in festivalscape and winescape research (Lee et al., 2008; Quintal et al., 2015).

Moreover, from an empirical point of view, to ensure a greater accuracy in the construction of a measurement scale for servicescape, this concept should be contextualized within a particular service sector. For this reason, in the following paragraph, an overview on previous studies analyzing the role of environmental features in education sector is performed.

2. 2. *Servicescape in higher education: from service quality to context*

The relevance of interactive and *in-context* dimension involved in value co-creation processes (Vargo and Lusch, 2008) aimed at producing education service implies the need to investigate servicescape in this field. Particularly, higher education services are grounded on the offering of an overall learning experience overcoming the only provision of instruction pertaining to a given issue. So, this sector can be suitable for analyzing the most relevant features of service setting (according to users) through a proper valorization of interactive, cultural and social features of consumption.

Extant research on student's perception of service in higher education ranges from an initial focus on the influence of user's motivations and attitudes on buying decisions to the investigation of service quality. The first research area refers to a series of studies employing motivational and behavioral models (intrinsic and extrinsic motivations, Deci et al., 1999; self-efficacy theory or achievement goal theory, Ames, 1992; Wolters, 2004) for progressively taking into account the influence of subjective aims on active engagement in learning processes (Pajares, 2003; Weiler, 2004). Even if environment is considered as a sub-dimension of motivations, these studies are still grounded on a behavioral and performance-oriented approach.

However, the willingness to go beyond a mere behavioral approach to explore the "objective" components preceding learning experience led to the necessity to measure and assess service quality. This is especially true in sector inextricably based on the predominance of intangible factors, so more unstable, difficult to manage and in which changing consumer's needs should constantly be monitored (Yarmohammadian et al., 2008) for gaining distinctiveness and competitive advantage (Zeithaml, 2000).

The first contributions on service quality in higher education understand the concept as one of the sub-dimensions of the wider customer satisfaction (Betz et al., 1970; Wiers-Jenssen et al., 2002). Even if some environmental elements are included as antecedents of satisfaction or perceived value, only structural characteristics, such as program content, administration and facilities (Navarro et al. 2005; Dehghan et al 2013) are investigated.

Simultaneously, starting from the assumption that quality can be measured by observing the gap between user's expectations and perceptions of performance (Parasuraman et al., 1988), service quality in education is also examined through the adoption of SERVQUAL model (Hampton, 1993; Hill, 1995). This framework has been applied to higher education to manage students' expectations in order to align them with service offering and consequently service quality (Abari et al. 2011).

Some studies report that tangible dimensions (course content, facilities, etc.) have the most negative service quality gap (Tan and Kek, 2004; Yousapronpaiboon, 2014) whereas others reveal that intangibles have the largest gap (promptness, empathy, reliability, security, etc., De Oliveira and Ferreira, 2009).

The results obtained by the majority of SERVQUAL studies in higher education (the negative gap expectations/perceptions) stress the need to include user's opinion, interaction and feedback in the elaboration of research models for identifying the real elements influencing student's evaluation and consequently satisfaction. The research stream, in fact, gives birth to the adoption of a broader managerial approach for studying student's perception, characterized by the addition of symbolic and social dimensions (beyond individual or functional factors) in the sub-dimensions composing customer's evaluation of service offerings. Specifically, these elements are variables such as social climate (Elliot and Healy, 2001), country of origin (Arambewela and Hall, 2006), image and reputation (Nesset and Helgesen, 2009) or aesthetic aspects of physical infrastructure (Wiers-Jenssen et al. 2002).

Starting from this widening of perspective, the contextual dimension of higher education service emerges as an autonomous construct influencing perception and deriving from some key concepts introduced initially in service quality research. However, in current hypercompetitive markets, a simple gap analysis does not fully take into account the real environmental elements perceived by customers. Additionally, the core education service is emergent, uncertain and not predetermined: it is difficult to predict expectations or to exactly assess performance. What is more, current customers' expectations are not static. Higher education, in effect, should be a marketing-oriented sector (Ng and Forbes 2009; Chalcraft et al., 2015) embracing a holistic managerial approach observing material and immaterial determinants of perception and including interactive, cultural and social dimension of analysis.

At the beginning, the role of higher education context (as an autonomous construct) is investigated exclusively from a structural point of view. On the basis of Reimer and Kuehn (2005)- the first study in which service setting is defined as "servicescape"- there are a series of studies not explicitly mentioning educationscape which explore the key environmental elements influencing student's perception. Paswan and Ganesha (2009) reveal that the physical components of education services (e.g. campus housing amenities, recreation facilities and classroom environment) correlate with consumers' perceptions of service quality. In this first approach, contextual factors are mainly functional and can be subdivided into three main groups: ambient; facilities; design. Lavanya (2012) identifies three dimensions of education scape, exterior design, interior design and other tangibles, and shows that interior design is the most relevant in student's evaluations. In addition, Farrell (2014) based on Bitner's (1992) servicescape dimensions, also finds that structural factors (décor, transportation, administration) influence participants' experiences.

The most recent contributions attempt to develop a measurement scale for education servicescape. Goi and Kalidas (2015) assess and validate a multidimensional scale consisting of the following sub-dimensions: interior, service quality, wellbeing, location, exterior, layout and facility, human value, employee and value and product assortment. In a successive research (Goi and Kalidas, 2016), the authors employ Mehrabian and Russell's (1974) model to examine the effect of education servicescape attributes on mood, emotion and experience through the use of structural equation modelling. According to stimulus-organism-response (S-O-R) paradigm, ambient factors represent the stimuli determining user's evaluation, emotion or behavioral response in general (Tai and Fung 1991). Findings show that human value and product value (intangible and tangible components) have a positive effect on emotion, mood, and experience. The viewpoint adopted in the study is in line with the above discussed first perspective in extant higher education research, being focused on expectations that is viewed as a sub-dimension of servicescape (included in human value factor) rather than its antecedent.

Lastly, Wells and Daunt (2016) propose an Eduscape model for observing the effects of emotions and servicescape factors in higher education settings by considering students as customers. The variables incorporated into the scale (temperature and humidity, comfort, cleanliness, comfort, functionality and design and acoustics and visual features) all have an effect on student's pleasure, except for cleanliness. Even if the authors concretely measure education servicescape, the work embraces environmental psychology approach which- according to previous paragraph- can be intended as a restricted framework not fully representing symbolic and immaterial aspects of servicescape.

Table 2 recaps the different research areas in higher education research herein described in order to pinpoint the main attributes of education servicescape.

Table 2. Extant research on environment in higher education service: from service quality to servicescape

Areas	Authors	Approach	Role of context	Main dimensions- Servicescape attributes	Main assumptions- results
Motivations	Ames, 1992; Deci et al., 1999; Pajares, 2003; Walters, 2004; Weiler, 2004	Behavioral Performance-approach	Environmental factors as a sub-dimension	-Motivations (intrinsic/extrinsic) -learning strategies -achievement <u>-classroom environment</u>	Motivations and attitude influence student's behavior and general learning process
Service quality (sub-dimension of satisfaction)	Wiers-Jenssen et al., 2002; Navarro et al., 2005; Dehghan et al., 2013	Quality measurement	Environmental factors as a sub-dimension of quality	-Academic quality -teaching staff -facilities -leisure activities -student's centeredness <u>-campus climate</u> <u>-social climate</u>	Relevance of service quality structural factors
SERVQUAL	Tan and Kek, 2004; De Oliveira and Ferreira, 2009; Abari et al., 2011	Expectations/ performances gap	Environmental factors as a sub-dimension	-Course content (reliability) -accessibility (security) -facilities (tangibles) -learning (Responsibility) -communication (sympathy)	Both tangible and intangible dimensions show negative service quality gap
Service education context	Elliot and Healy, 2001; Arambewela and Hall, 2006; Nettet and Helgesen, 2009	Managerial approach for investigating the most relevant contextual dimensions in user's perception	Environmental factors is an autonomous construct	-Teaching quality -aesthetics -accessibility -information -image -social climate	Service setting is composed of both structural and aesthetics- social-symbolic features
Servicescape	Reimer and Kuehn, 2005; Paswan and Ganesh, 2009; Lavanya, 2012; Farrell, 2014; Goi and Kalidas, 2015, 2016; Wells and Daunt, 2016	Measurement (scale) of higher education servicescape	Environmental factors is an autonomous construct <i>Higher education servicescape/ Eduscape</i>	-Ambient -comfort -layout and facility -cleanliness -functionality -visual features -interior -exterior -service quality -wellbeing -human value -employee -product value	Contextual material-physical and immaterial-symbolic factors influence student's (considered as customers) perception, mood and behavior

Source: author's elaboration

2.3. From servicescape to universityscape

So, based on the overview above conducted, it can be noticed that the role of environmental factors in influencing student's perception in higher education has significantly evolved over the course of time. Contextual factors, in fact, initially considered as a sub-dimension of motivations and then of service quality, have gradually been taken into account as an autonomous and multidimensional construct and lastly have been incorporated into servicescape model.

Nevertheless, despite the increasing number of works investigating servicescape (Bitner, 1992), extant research does not adequately adapt the construct to education field (Ng and Forbes, 2009) by employing a holistic view evaluating both material and immaterial/structural and symbolic dimensions of service education setting. It follows that current research lacks a shared operationalization of the construct and creates ambiguity on the nature of the concept and on its semantic facets.

In fact, from the analysis of previous contributions on the subject two gaps arise: 1) the lack of models properly balancing servicescape material and immaterial, structural and symbolic features (Servicescape literature, par. 2.1); 2) the adoption of a behavioral and restricted approach to the study of servicescape in higher education (higher education literature, par. 2.2).

Therefore, Universityscape should be analyzed from a service marketing perspective in order to provide an in-depth understanding of how students value universities' offerings toward the adoption of a marketing management orientation (Wells and Daunt, 2016; Goi and Kalidas, 2015).

In line with the recognized need for the elaboration of a broader framework, a dimensioning of the key features identified in current review on servicescape and higher education literature reveals that some common macro-areas of Universityscape can be identified. In particular, as Table 3 shows, through a recognition of main underlying dimensions in the different frameworks proposed in servicescape research and higher education research (in its latest developments), the model herein introduced contemplates seven structural (facilities, comfort, accessibility) and symbolic (atmospherics, complementary services, signage, collateral events) dimensions. These factors are obtained from a semantic reelaboration of the main structural and symbolic characteristics analyzed in extant research.

Hence, the present paper aims at elaborating an all-embracing conceptualization of servicescape to the peculiarities of education sector, by contemplating tangible and intangible features and starting in particular from the readaptation of Quintal et al.'s (2015) and Lee et al.'s (2008) models.

Table 3. From servicescape to universityscape

Servicescape main dimensions	Eduscape main dimensions	Universityscape attributes
Ambient	Location	→ Atmospherics
Facilities	Interior/exterior	→ Facilities
Convenience	Well-being	→ Comfort
Layout	Layout	→ Accessibility
Complementary product		→ Complementary services
Signage		→ Signage
		→ Collateral events
Staff	Human value	

Source: author's elaboration

3. Methodology

3. 1. Research design

In line with the main aim of the research to develop a scale that measures Universityscape, the procedure suggested by Churchill (1979) seems to be suitable for the current study.

Churchill's (1979) procedure considers the following steps: specification of the domain of construct, generation of a sample of items, pretesting and purification of the measure, assessment of reliability and validity, detailed item analysis.

Starting from a review of relevant literature, a set of 74 measurement items was generated by 4 researchers. An experience survey to 5 academics, having a deep knowledge of servicescape literature, was conducted to pre-test the preliminary list of items.

Testing the items allowed us to obtain comments about the initial pool of items, to increase our knowledge about the investigated construct and to reduce the number of the items representing each dimension. Finally, 32 items were eliminated, reaching a total of 42 items selected to represent the Universityscape.

A survey instrument was created, then a pilot sample was conducted on 10 upper secondary education students. Finally, a pen and paper self-administered Likert-style questionnaire was conducted: for all of the items, a seven-point Likert scale was applied, ranging from strongly disagree (1) and strongly agree (7) scale. As Sproull and Kiesler (1986) say, questionnaire method offers advantages both for respondents, as it allows to remain anonymous, and for researchers, as they can collect data quickly in a cheap way.

3. 2. Data analysis

Since Universityscape is a composite and immaterial concept, to extract the dimensions that make up the construct, data collected were analyzed through an exploratory factor analysis (EFA) and a reliability analysis using SPSS 22.0.

The EFA allows to statistically analyze the structure of the variables to define the number of latent factors underlying the investigated construct and to exclude the variables which are not consistent with the latent structure.

Reliability analysis permits to identify items that well represent the investigated construct from a semantic point of view, by evaluating how each item relates to its own construct. To assess reliability and to measure the internal consistency of the set of items, alpha coefficient is used, as it can be seen in next paragraph.

Data analysis starts from the identification of 7 factors in Universityscape scale which were further refined and tested for reliability and validity and reduced to 4 factors. Finally, we obtained and utilised a final 4 factor model, consisting of 14 items, as Table 5 shows.

3. 3. Study context and sample

Since the goal of the work is to develop a comprehensive model to assess and measure student's perception of contextual factors in University choice, we tested our scale in the education sector.

1540 students agreed to participate in the study but only 1350 students responded to the questionnaire. Every questionnaire with more than 10 missing answers was eliminated. Missing data were replaced with mean scores. The final number of usable surveys was 1154 with a response rate of 75% and a percentage of usable responses of 85%. Data for this study were collected during the 12th UnisaOrienta edition, the annual event organized by the University of Salerno dedicated to students and teachers of the Higher Education Institutes in which orientation courses are taught. The event lasts about 12 days per year, engages about 700 professors who help students choosing university curriculum, hosts about 14.000 students. A convenience sampling approach was adopted, since the researchers randomly contacted the students visiting the University between February 18th and March 1st, 2016.

4. Results

4.1. Profile of respondents

The sample socio-demographic characteristics are reported in Table 4.

Among 1154 respondent, 653 were females (56.6%) and 501 males (43.4%). All respondents attended last years of upper secondary education, therefore most respondents (69.6%) were 18 years of age. Students attended lyceums¹ accounted for 77.2% of the sample, followed by respondents who attended technical institute (17.3%), then respondents who attended professional institute (5.5%). More than half of all respondents (63.7%) plan to enroll to University, on the contrary, 31.3% reported not to have the intention to enroll to University, 5.0% is uncertain.

Table 4. Sample Summary Characteristics

Description		N.	%
Sample		1154	
Gender	Male	501	43.4
	Female	653	56.6
	tot	1154	
Age	16	7	0.6
	17	145	12.6
	18	803	69.6
	19	151	13.1
	>19	48	4.2
	tot	1154	
Attended school	Lyceum (classical, scientific, human sciences, linguistic and art & design)	891	77.2
	Technical Institute	200	17.3
	Professional Institute	63	5.5
	tot	1154	100
Are you going to enroll to University?	Yes	735	63.7
	No	361	31.3
	I don't know	58	5.0
	tot	1154	100

Source: author's elaboration.

4.2. Measures

The Universityscape dimensions were extracted using EFA, carried out through principal components analysis. The 42 scale items were examined using a Promax rotation.

Items have been included according to two criteria, which are as follows: eigenvalues greater than 1; factor loadings value higher than 0.50. The iterative sequence of analysis was repeated several times, leading to the elimination of many items that did not meet these two criteria. The final solution, as shown in Table 5, consists of 14 items, representing 4 dimensions.

¹ In Italian education system, high schools are subdivided into three kind of institutes characterized by different specializations: 1) lyceum, comprising 5 distinct high schools: classical, scientific, human sciences, linguistic, art & design; 2) technical institutes; 3) professional institutes.

Starting from the original 7 dimensions (facilities, comfort, complementary services, atmospheric, accessibility, signage, collateral event), one dimension (collateral event) disappeared whereas facilities, comfort and complementary services are merged into the same factor. The 4 factors obtained are: atmospheric, livability, accessibility, signage. In the final list atmospheric is operationalized with 4 items, livability with 5 items, accessibility with 3 items, signage with 2 items.

More specifically, atmospheric, which initially included items both related to environmental factors (Wakefield and Blodgett, 1994) (such as for example “Adequate presence of green areas”, “Climatic conditions of the city”) and figurative elements (Quintal et al., 2015), linked to the heritage and to the historical significance of the University, maintains only this second meaning. Livability comes out from the aggregation of 5 items belonging to 3 different dimensions (comfort, complementary services, facilities). The aggregation of these 5 items gives rise to a new dimension, semantically near the concept of comfort as intended by Mason and Paggiaro (2012), but it gives more emphasis to quality of life, therefore we renamed it livability. Accessibility (Mason and Paggiaro, 2012), which included 6 items, loses 3 items but remains essentially the same construct. Finally, signage maintains 2 items out of 4.

The solution based on the 4 components offers good results, reporting a variance rate of 63.48%. In particular, the first component totaled 33.42%, the second 14.92%, the third 8.47%, the fourth 6.65%.

No significant cross-loadings are shown in the factorial coefficient matrix, so it means that items belonging to the same latent component well correlated among them.

Lastly, in order to assess the reliability of the measurement scale for Universityscape scale, Cronbach alpha has been used to validate the internal consistency of items within a subscale (Nunnally and Bernstein, 1994). Alpha coefficients for all dimensions are above 0.70 ranging from 0.74 to 0.83. Seeing as a value of 0.70 or more usually indicates an adequate scale reliability, these results show an excellent reliability.

Table 5. Results of factor analysis

Factors and items	Factor loading	Variance explained (%)	Cronbach's Alpha
F1:Atmospheric		33.42	.834
Historical relevance of the city where the University is located	.815		
Historical relevance of the buildings	.749		
Presence of artistic and architectural works within the University	.716		
Historical prestige of the University	.700		
F3:Livability		14.92	.787
Security within the University	.774		
Functionality of the equipment in classrooms	.672		
Presence of an emergency room	.656		
Quality of residence halls	.571		
Cleanliness of University spaces	.550		
F2:Accessibility		8.47	.742
Ease of movement within the University	.830		
Easy access to the University with its own means of transport	.691		
Adequacy of transport services to and from the University	.520		

F4:Signage		6.65	.788
Entrance signage is clear	.826		
Entrance signage is adequate	.754		

Source: author's elaboration.

5. Discussion

In line with the main goal of this work to introduce Universityscape scale, the study emphasizes the role of contextual factors within the University, by identifying the most important context variables as perceived by students.

Although the results of the empirical analysis do not completely confirm the original theoretical model (1 out of the 7 initial dimensions disappears), however, the study identified 4 dimensions representing Universityscape elements.

The factors obtained (atmospherics, livability, accessibility and signage) highlight the centrality of structural and symbolic components in orienting student's evaluation. Particularly, accessibility is related to structural and material components, while atmospherics, livability and signage are linked to symbolic and immaterial elements.

We focus on these three latter intangible dimensions, which have new hints compared to previous studies. Specifically, atmospherics dimension, attributable to cultural factors and local heritage, as Quintal et al. (2015) intends, is completely neglected in previous studies applied in University context, as it can see in the review paragraph. Regarding livability dimension, it combines items about security and the presence of an emergency room within the University, the functionality of equipment in the classroom, the quality of residence halls and the cleanliness of University spaces so it is related to the quality of life. This dimension indicates the importance given by students to tranquility and security in the place where they are, that could be in line with recent historical events related to terrorist attack. Lastly, signage, usually intended in literature as a symbolic dimension (Bitner, 1992), is herein preserved as an autonomous factor, but the semantical facet confirmed concerns entrance signage, which can be considered as a more structural and functional feature of the construct, related to accessibility to University.

The idea of the University as a place wherein historical prestige and the security count emerges. Finally, the results show that symbolic components, such as atmospherics and livability as well as structural contextual elements, such as accessibility and signage (herein intended as functional in line with the results obtained), play a crucial role in student's perception of University.

6. Conclusion, implications and future research

This work proposes the first steps for elaborating a measurement scale in higher education in line with an approach aimed at highlighting the social and cultural dimension involved in education service. A framework for measuring Universityscape can enhance current research on servicescape and higher education and simultaneously can help managers to identify the drivers for increasing the competitiveness of Universities intended as destinations. So, the study entails both theoretical and managerial implications.

From a theoretical viewpoint, the operationalization of Universityscape and the identification of its main dimensions promote the general advancement of the servicescape research and eduscape research by broadening and deepening the current understanding of the

role played by tangible and intangible, structural and symbolic attributes in student's perception and evaluations.

Secondly, the application of the general servicescape scale to the specific context of education in the light of a holistic approach can fill the gap in previous research that fails to properly contextualize Bitner's (1992) general model to a particular service setting. In addition, as results show, the relevance on the socio-cultural and heritage dimension perfectly highlights the all-encompassing nature of education service which provides students not with only instruction, but also knowledge, skills, experience and well-being.

With regard to managerial implications, the identification of the drivers of student's choices encourages managers to increase the attractiveness of Universities as real destinations, which can thus help to pinpoint the key factors needed to: strengthen student's satisfaction, loyalty and sense of belonging; foster the creation of talented future workforce; heighten territorial development in terms of employment and economic development.

Moreover, the identification of the factors orienting student's perception helps managers to develop strategies and tactics for the efficient management of courses and universities in order to improve general University image and reputation.

In addition, decision-makers can implement actions for the establishment of stable relationships with the stakeholders (actual and potential students, graduate and postgraduate students, institutions, firms, etc.). They should develop cultural events that provide unique experiences not only for students but also for civil society as a whole, for instance by boosting relations with local or national firms to offer a service that enhances knowledge but also fosters quality of life. In addition, the relevance of structural dimension (accessibility, facilities, etc.) suggests the necessity for managers to constantly monitor performance by conducting field research on users.

So, university can be viewed as a destination according to a market orientation (Ng and Forbes, 2009) in which managers should understand how students can value service offerings and should work simultaneously on the service provided and on marketing strategies around the service. They can engage student's in the development and design of the offering itself and at the same time can promote university reputation and image by acting on the recognized importance of cultural heritage.

However, the findings reported above should be interpreted carefully because of the limitations of this research, which requires the development of future research to resolve these gaps.

First of all, the study context is limited to a single University located in Southern Italy and the sample adopted is derived from a convenience sampling design not allowing for a generalization of results. Future studies should administer the survey to students from other Universities or develop cross-cultural studies in different geographical locations or with regard to other events to extend the results to a wider population.

In the second place, another limitation of the work concerns its preliminary nature. In particular, the generation of items, EFA and the assessment of reliability represent only a first step in Churchill's (1979) procedure for developing measurement scales that need to be empirically validated to check construct and nomological validity. So, the model herein introduced should be broadened in order to test the relationships between Universityscape and other variables such as satisfaction, loyalty, behavioral intention or image.

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