



# Customer eXperience in Valparaíso Hostels: Analyzing Tourists' Opinions

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**Abstract.** Customer eXperience is one of the key concepts in Service Science, an interdisciplinary research field oriented to the systematic innovation of services. The Tourist eXperience, as customer of specific services, is strongly related to the quality of the services that are offered. Online travel agencies generate online communities, where tourists can quantitatively (scores) and qualitatively (reviews) evaluate the services they received. Their opinions offer information for other fellow travelers when they are choosing tourism-related services. They also offer valuable information for decision makers in tourism entities. Tourist opinions express in fact their experiences as customers. Many researches focus on qualitative tourists' comments, evaluating their reviews with big data and natural language processing techniques. However, we focused our work on quantitative data. The paper presents a quantitative study on the opinions of the tourists that used accommodation services offered through the online travel agency HostelWorld, in hostels from Valparaíso, Chile. We used descriptive statistics to analyze tourists' profile, and inferential statistics to analyze tourists' opinions.

**Keywords:** Tourist eXperience · Customer eXperience · Service Science · Online travel agency

## 1 Introduction

Service Science is an interdisciplinary research field oriented to the systematic innovation of services. One of the key concepts in Service Science is Customer eXperience (CX). There is no consensus over the CX definition. A broad definition was proposed by Laming and Mason, which consider that CX includes “the physical and emotional experiences occurring through the interactions with the product and/or service offering of a brand from point of first direct, conscious contact, through the total journey to the post-consumption stage” [1].

CX is achieved through a sequence of interactions between the customer and the company (or companies), in all “touch-points” [2, 3]. CX evaluation is challenging [4, 5]. It should be done in each touch-point, it should attend all products/systems/services that the customer interacts with, and it should capture the touch-point specific nature.

CX and Service Science are particularly relevant in tourism. The tourism (and associated) services offer is rapidly growing. Traditional channels for promotion/sales/feedback are replaced by virtual channels: online travel agencies, virtual museums, touristic attractions websites etc. CX includes interactions with software systems (websites), customer service (face-to-face, by phone, by email), as well as other tourists’ opinion (shared in specialized websites, social networks, personalized surveys etc.). The Tourist eXperience, as customer of specific services, is strongly related to the quality of the services that are offered [6, 7].

Over the years our work focused on evaluating the User eXperience (UX) of tourism – related websites: online travel agencies, virtual museum, national parks. We used an interdisciplinary approach, focusing on application area (tourism), but also on the specificity of the products involved (software systems).

Online travel agencies generate online communities, where tourists can quantitatively (scores) and qualitatively (reviews) evaluate the services they received. Their opinions (1) offer information for other fellow travelers when they are choosing tourism-related services, and (2) offer valuable information for decision makers in tourism entities. Tourist opinions express in fact their experiences as customers.

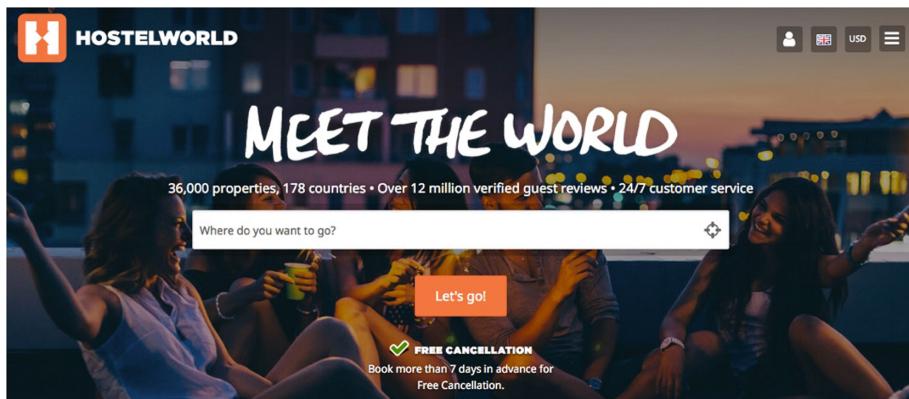
Many researches focus on qualitative tourists’ comments, evaluating their reviews with big data and natural language processing techniques. However, we focused our work on quantitative data. In previous studies we analyzed quantitative data on travelers’ opinion, available at two online travel agencies’ websites: [www.tripadvisor.cl](http://www.tripadvisor.cl) and [www.hotelclub.com](http://www.hotelclub.com) [8, 9]. Data relationships and trends were identified.

The paper presents a quantitative study on the opinions of the tourists that used accommodation services offered through the online travel agency *HostelWorld* [10], in hostels from Valparaíso, Chile. Section 2 presents the case study. Section 3 discusses the results of our study. Section 4 highlights conclusions and future work.

## 2 Case Study: HostelWorld

HostelWorld is an online travel agency that offers accommodation in hostels worldwide. As stated at [www.hostelworld.com](http://www.hostelworld.com), it works with around 36,000 properties in 178 countries (see Fig. 1). As declares, the website also offers over 12 million verified guest reviews. Reviews are both qualitative (guests’ opinion on the hostel) and quantitative. The quantitative evaluation includes guests’ perception on 7 dimensions, which represents variables of service quality:

- *Value for money,*
- *Location,*
- *Atmosphere,*
- *Facilities,*
- *Security,*
- *Staff,*
- *Cleanliness.*



**Fig. 1.** HostelWorld homepage, indicating their presence and number of reviews worldwide.

Each dimension is qualified in a scale from 1 (worst) to 10 (best). An overall evaluation is also available, as the average scores of the 7 dimensions. The overall score is also associated to a conceptual evaluation, being “Superb” the best one, associated to overall scores from 9.0 to 10.

The website offers an overview of the guests reviews that includes (see Fig. 2):

- The overall score and the associated conceptual evaluation,
- The conceptual evaluation on 3 dimensions: Location, Staff, and Cleanliness,
- The total number of guests’ reviews available for the hostel.

As the 3 above mentioned dimensions scores are indicated at first hand, it seems that they have a special meaning for travelers, in HostelWorld’s view.

**Fig. 2.** Guests reviews overview, located in the main presentation of a hostel.

When accessing property’s details, one can get access to:

- Scores on all 7 dimensions, as well as overall score and the associated conceptual evaluation (see Fig. 3),

- Overall score and the associated conceptual evaluation of each reviewer (see Fig. 4).

Moreover, each review is also providing:

- Guest “name” (or “Anonymous” instead),
- Guest(s)’ country of residence,
- Type of guest(s),
- Age group,
- Number of reviews that the guest(s) has/have made, and the associated level of “expertise”, being “Globetrotter” the highest one,
- Review date.

Reviews can be sorted by several criteria: “Top Rated”, “Lowest Rated”, “Newest”, “Oldest”, and “Age Group”. User may choose to display all available reviews, or only English reviews. The level of detail, especially the guest’s “expertise”, as well as the flexibility in filtering and sorting reviews show the relevance that guests’ opinion have.

## Reviews & Ratings

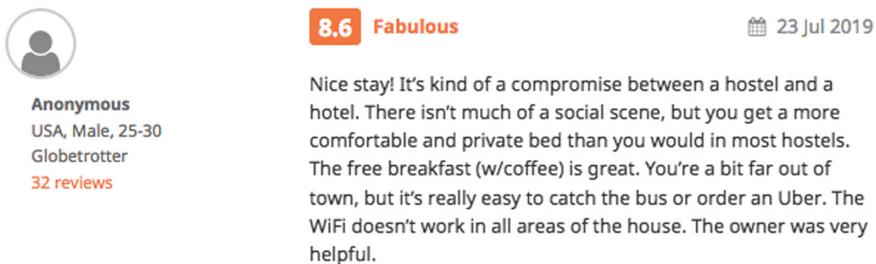


100% genuine reviews from real hostel travellers like you!

[Read our review guidelines](#)



**Fig. 3.** Detailed scores on 7 dimensions, overall score and conceptual evaluation.



**Fig. 4.** A guest review frame.

### 3 Results and Discussion

We extracted all reviews associated to hostels in Valparaíso, Chile, available in late December 2016. We obtained a total of 3,035 reviews.

HostelWorld classifies travelers in the 6 categories, as follows (the number of reviews is indicated for each category):

- Female: 1129 reviews (37.3%),
- Male: 1012 reviews (33.3%),
- Couple: 604 reviews (19.9%),
- All Female Group: 98 reviews (3.2%),
- All Male Group: 40 reviews (1.3%),
- Mixed Group: 152 reviews (5%).

It worth mentioning that most of the reviews are made by solo travelers (70.6%), followed by couples (19.9%), and groups of travelers (9.5%). Not all travelers reviewed the hostels where they were guests; however, it seems that solo travelers are the most frequent guests in hostels.

By age group, as classified by HostelWorld, the amount of reviews is as follows:

- 18–24: 877 reviews (28.9%),
- 25–30: 1409 reviews (46.5%),
- 31–40: 584 reviews (19.2%),
- 41+: 165 reviews (5.4%).

The largest amount of reviews was done by guests of ages from 25 to 30. Hostels seem to be preferred by young people, as 75.4% of the reviews were done by people up to 30 y/o.

By country of origin, most of the reviews were done by foreign travelers:

- 2,924 reviews were done by foreign travelers (96.3%),
- 111 reviews were done by Chilean travelers (3.7%).

Analyzing the country of origin of travelers, most of them come from USA (489 reviews, 16.1%), followed by England (380 reviews, 12.5%), Germany (308 reviews, 10.1%), Australia (284 reviews, 9.4%), France (199 reviews, 6.6%), and Brazil (155 reviews, 5.1%). All other countries represent less than 5% of the travelers.

We also grouped travelers by geographic region, as defined by the World Tourism Organization (UNWTO). By region, the number of reviews is as follows (1 review does not fit into any geographic region):

- Europe: 1491 reviews (49.1%),
- Americas: 1112 reviews (36.6%),
- Asia and Pacific: 401 reviews (13.2%),
- Middle East: 16 reviews (0.5%),
- Africa: 14 reviews, (0.5%).

We check the normality of all 7 dimensions, using the Kolmogorow-Smirnow K-S test (with p-value  $\leq 0.05$  as decision rule). We checked the hypothesis:

- $H_0$ : the variable has a normal distribution,
- $H_1$ : the variable does not have a normal distribution.

As Table 1 shows, none of the variables have a normal distribution. Therefore we used nonparametric statistic tests to analyze data. In all tests p-value  $\leq 0.05$  was used as decision rule.

**Table 1.** Kolmogorow-Smirnow K-S test for checking a normal distribution.

	Value for money	Location	Atmosphere	Facilities	Security	Staff	Cleanliness
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000

We used Kruskal-Wallis H tests to check the hypothesis:

- $H_0$ : there are no significant differences between the opinions of different type of travelers,
- $H_1$ : there are significant differences between the opinions of different type of travelers.

As Table 2 shows, there are no significant differences between the opinions of different type of travelers, regarding 3 dimensions: Location, Atmosphere, and Facilities. Significant differences occur in 4 dimensions: Value for money, Security, Staff, and Cleanliness.

**Table 2.** Kruskal-Wallis H tests by type of travelers.

	Value for money	Location	Atmosphere	Facilities	Security	Staff	Cleanliness
p-value	<b>0.013</b>	0.531	0.091	0.245	<b>0.005</b>	<b>0.002</b>	<b>0.004</b>

We also used Kruskal–Wallis H tests to check the hypothesis:

- $H_0$ : there are no significant differences between the opinions of travelers belonging to different age groups,
- $H_1$ : there are significant differences between the opinions of travelers belonging to different age groups.

As Table 3 shows, there are no significant differences between the opinions of travelers belonging to different age groups, in none of the 7 dimensions.

**Table 3.** Kruskal–Wallis H tests by age group.

	Value for money	Location	Atmosphere	Facilities	Security	Staff	Cleanliness
p-value	0.729	0.460	0.723	0.664	0.370	0.170	0.455

We used Mann–Whitney U tests to check the hypothesis:

- $H_0$ : there are no significant differences between the opinions of Chilean and foreign travelers,
- $H_1$ : there are significant differences between the opinions of Chilean and foreign travelers.

As Table 4 indicates, there are significant differences between the opinions of Chilean and foreign travelers in all 7 dimensions.

**Table 4.** Mann–Whitney U tests by travelers' origin (domestic vs. international travelers).

	Value for money	Location	Atmosphere	Facilities	Security	Staff	Cleanliness
p-value	0.003	0.000	0.000	0.000	0.001	0.000	0.000

We used Kruskal–Wallis H tests to check the hypothesis:

- $H_0$ : there are no significant differences between the opinions of travelers belonging to different geographic region,
- $H_1$ : there are significant differences between the opinions of travelers belonging to different geographic region.

As Table 5 shows, there are significant differences between the opinions of travelers belonging to different geographical regions in all 7 dimensions.

**Table 5.** Kruskal–Wallis H tests by geographic region.

	Value for money	Location	Atmosphere	Facilities	Security	Staff	Cleanliness
p-value	0.015	0.002	0.004	0.004	0.006	0.004	0.000

Table 6 presents the average scores by dimensions, as well as the general overall score.

**Table 6.** Average scores by dimensions.

Categories	Value for money	Location	Atmosphere	Facilities	Security	Staff	Cleanliness	Overall score
<i>By type of travelers:</i>								
Female	8.45	9.03	8.37	7.96	8.62	8.65	8.01	8.44
Male	8.71	9.11	8.52	8.14	8.83	8.96	8.38	8.67
Couple	8.52	9.03	8.32	8.07	8.88	8.72	8.31	8.55
All female group	8.57	9.06	8.41	7.98	8.55	8.65	8.18	8.49
All male group	8.60	8.75	8.70	8.00	8.70	8.95	8.05	8.53
Mixed group	8.61	9.09	8.41	7.92	8.83	8.91	8.17	8.56
<i>By age group:</i>								
18–24	8.52	9.06	8.35	8.01	8.67	8.66	8.16	8.49
25–30	8.57	9.05	8.41	8.05	8.80	8.80	8.19	8.55
31–40	8.61	9.11	8.49	8.09	8.75	8.87	8.33	8.60
41+	8.59	8.97	8.55	8.00	8.80	9.04	8.17	8.59
<i>By origin:</i>								
Domestic (Chilean)	8.95	9.50	9.03	8.85	9.15	9.28	8.77	9.08
International (foreigners)	8.55	9.04	8.39	8.01	8.74	8.77	8.19	8.53
<i>By geographic region:</i>								
Europe	8.51	9.00	8.37	7.96	8.69	8.71	8.06	8.47
Americas	8.67	9.17	8.54	8.19	8.86	8.92	8.39	8.68
Asia and Pacific	8.51	8.95	8.25	7.97	8.74	8.70	8.27	8.49
Middle East	8.00	8.88	7.75	7.88	8.25	8.50	8.50	8.25
Africa	8.29	9.14	8.14	7.86	8.43	8.71	7.86	8.35
All guests	8.56	9.06	8.42	8.04	8.75	8.79	8.21	8.55

Averages scores by groups are quite homogeneous. In all 7 dimensions, differences are less than 1 point, in a 10 points scale, in almost all cases. Facilities scores the lowest score in all cases, excepting Middle East travelers; in their opinion Atmosphere got the lowest score.

We performed Spearman  $\rho$  tests to check the hypothesis:

- $H_0: \rho = 0$ , two dimensions are independent,
- $H_1: \rho \neq 0$ , two dimensions are dependent.

**Table 7.** Spearman  $\rho$  test for the 7 dimensions.

	Value for money	Location	Atmosphere	Facilities	Security	Staff	Cleanliness
Value for money	1	0.393	0.613	0.641	0.483	0.570	0.606
Location		1	0.358	0.355	0.418	0.368	0.374
Atmosphere			1	0.570	0.401	0.623	0.519
Facilities				1	0.492	0.514	0.643
Security					1	0.438	0.506
Staff						1	0.485
Cleanliness							1

As Table 7 shows, all dimensions are correlated (weakly, moderately or strongly). There are 4 strong correlations:

- “Value for money” is strongly correlated with “Atmosphere”, “Facilities” and “Cleanliness”; when travelers think they got a good value for what they paid, they also positively evaluate hostel’s atmosphere, facilities that it offers, and its cleanliness,
- “Facilities” is strongly correlated with “Cleanliness”; a positive evaluation of hostel’s facilities is accompanied by a positive evaluation of its cleanliness.

## 4 Conclusions

CX is a key concept in Service Science, but lately the HCI community shows a growing interest in the field. Tourist eXperience focuses on tourist of specific services. Evaluating Tourist eXperience is as challenging as evaluating CX in general.

Online travel agencies generate online communities, where tourists quantitatively (through scores) and qualitatively (through reviews) evaluate the services they received. Many researches focus on qualitative tourists’ comments, but we focused our work on quantitative data. We evaluated over 3,000 reviews of hostels located in Valparaíso, Chile, available at HostelWorld online travel agency.

Guests’ reviews seem to be particular important for HostelWorld. The agency offers reviews’ overview at first sight, but also detailed information on all available reviews, as well as on the level of expertise of the guests that made that reviews. It also offers options to sort and filter the reviews. 3 of the 7 dimensions assessed by guests seems to be particularly relevant in HostelWorld’ view: Location, Staff, and Cleanliness.

Not all travelers make reviews after there are staying in a hostel. However, the available reviews show that Valparaiso’s hostels are preferred by solo travelers (70.6% of the reviews), and by young travelers (75.4%). The gender balance is slightly in favor of female travelers. The majority of travelers are foreigners, only 3.7% travelers being Chileans. By geographic region, most of the travelers come from Europe (49.1%); by country of origin most of them come from USA (16.1%).

There are no significant differences between the opinions of travelers by age group, in none of the 7 dimensions. On the contrary, there are significant differences between the opinions of domestic and foreign travelers in all 7 dimensions. There are also significant differences in all 7 dimensions when analyzing travelers' opinion by geographic region. There are significant differences by type of traveler regarding 4 of the 7 dimensions: Value for money, Security, Staff, and Cleanliness.

Guests' opinions are rather homogeneous; in all 7 dimensions, differences are less than 1 point, in a 10 points scale, in almost all cases. Facilities score lowest in almost all cases. All dimensions are weakly, moderately, or strongly correlated.

As future work, we will extend our study to hostels from other cities. It would be particularly interesting to compare travelers' perception on hostels from Valparaíso and Viña del Mar, which are geographically located together, but are quite different in terms of what they offer as tourism attractions.

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