Relationships Between Student Characteristics and Perception of the Quality of Tourism, Hospitality and Leisure Courses According to the SERVQUAL Scale

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Abstract

This study sought to identify relationships between the characteristics of students and their perceptions of the quality of tourism, hospitality and leisure courses provided by the Federal Institute of Santa Catarina (FISC) at the Florianopolis-Mainland campus by using the SERVQUAL scale. The study's methodological approach is classified as a quantitative, descriptive survey in which regression analysis was used to assess relationships between the respondents' characteristics (independent variables) and perceived quality (dependent variables). The resulting data indicated that the respondents' characteristics are more related to the perceived quality than to their expectation of it. Still, it was also observed that the perceived quality was statistically significantly related to age, including the variables 'do not know/do not want to take another course at FISC' and 'intend to start a business'. These results will allow the managers to design strategies for maximisation of the quality of services on the basis of knowing that students who 'do not know/do not want to take another course at FISC', 'choose the course in the field in which they already work' and 'choose the course intending to open a business' have expectations and perceptions of the courses.

Keywords: SERVQUAL, demographic characteristics, tourism, hospitality, leisure

1. Introduction

The sector of tourism, which encompasses several activities such as leisure, hospitality, events and gastronomy, has been highlighted in the past years due to its economic representativeness in the world, as shown by surveys from the World Travel and Tourism Council. At least one out of every ten jobs is in the field of tourism, which has increased in the past five years as this sector accounts for one out of every five new jobs created. Exports of tourism services have been increasing more rapidly than the exports of goods for seven years consecutively, thus reducing the trade deficits in many countries (World Tourism Organisation, 2019).

In the Brazilian scenario, tourism does not differ so much from that worldwide, albeit evolving at a slower pace. Despite the recession faced by the national economy in view of the instabilities and oscillations occurred in the past years, resulting in a weaker growth, the sector of tourism has been showing force and resistance (Ministério do Turismo, 2019). Brazil is ranked 12nd among the countries contributing most to the worldwide GDP through tourism, accounting for an overall amount of 153 billion dollars (World Tourism Organisation, 2019).

Due to the economic impact and employability generated by the tourism, hospitality and leisure sector in Brazil, professional qualifications are essential for preparing workers to acquire skills for an environment where services are to be provided to the customer (Federal Institute of Santa Catarina, 2019). Therefore, it is understood that professional education is relevant to qualify these workers and raise their education level in order to mainly improve their quality of life (Rocha et al., 2010).

Also, education institutions can enable students to develop cognitively, vocationally, personally, socially and culturally by identifying their profile and characteristics (Schleich et al., 2006). Knowing this population's expectations and perceptions can help improve the quality of the services provided by the education institution, which consequently fosters the social and technological development of the country (Oliveira & Ferreira, 2018).

Therefore, observing possible relationships between student characteristics and perception of quality can become a strategic issue through which the institution can understand its public and identify aspects in order to improve the quality of its services, including developing future workers in tourism, hospitality and leisure locally and nationally, which is so important economically.

In this context and considering the information presented, one can ask the following question: Which are the relationships between student characteristics and perception of the quality of tourism, hospitality and leisure courses? In view of this question, the objective of the present study was to identify relationships between the characteristics of students and their perception of the quality of services provided in the tourism, hospitality and leisure courses at the FISC (Florianopolis-Mainland campus) by using the SERVQUAL scale. Based on the information obtained, the institution can develop actions and improve the quality of its courses.

2. Literature Review

Parasuraman et al. (1985), in their seminal study in which they propose a conceptual model for quality of services, state that this quality results from the difference between expectations and performance of the service. The authors identified ten 'determinants of service quality', which are categories encompassing similar judgement criteria highlighted by consumers for evaluation of the quality of service. The model proposed by the authors is better known as model of gaps.

Parasuraman et al. (1985) suggested exploring the use of consumer segmentation based on their expectations of the quality of service. The authors made this suggestion because they found that although consumers participating in focus groups have consistently revealed similar judgement criteria regarding the service quality, they differed on the relative importance of these criteria and on their individual expectations regarding them. The authors concluded that it is useful to include specific questions in the service quality assessment instrument to determine 'if' and 'how' the consumers' expectations vary.

From their previous results, Parasuraman et al. (1988) proposed a multi-item scale to measure the consumer's perception of the service quality, the so-called SERVQUAL scale. This instrument comprises 22 items grouped into five dimensions, namely, tangibility, reliability, responsiveness, assurance and empathy.

The concise definitions of these dimensions and the amount of items used to measure the service quality are the following:

Table 1. SERVQUAL's dimensions, number of items and precise definitions

Dimension	Itens	Definition
Tangibles	4	Physical facilities, equipment, and appearance of personnel
Reliability	5	Ability to perform the promised service dependably and accurately
Responsiveness	4	Willingness to help customers and provide prompt service
Assurance	4	Knowledge and courtesy of employees and their ability to inspire trust and confidence
Empathy	5	Caring, individualized attention the firm provides to its customers

Source: Parasuraman et al., 1988, p. 23.

Parasuraman et al. (1988) state that the SERVQUAL scale is reliable and validated so that it can be used to better understand the consumers' expectations and perceptions, consequently improving the provided service. The authors added that the instrument was designed to cover a wide spectrum of services, but it can be adapted or supplemented to fit specific characteristics or needs of certain organisations.

Nevertheless, Parasuraman et al. (1988) warn that the procedures used to ensure the instrument's reliability and validity for sound and stable psychometric properties, resulting in a final scale of 22 items, can have 'good' items excluded for some types of services, but not for all types of services. Additionally, the authors advise that although the original SERVQUAL scale can be used to assess and compare a wide range of services, its adaptation can be desirable when only one service is investigated.

The SERVQUAL scale has been adapted to different services, including those provided by education institutions. There are several studies which have recently used this instrument in its original or adapted form for assessing

bachelor's degree courses in higher education institutions. Some studies used samples of students from several courses, such as those by Aboubakr and Bayoumy (2022), Abu-Rumman and Qawasmeh (2022), Bwachele et al. (2023), Ganbold et al. (2022), Kinker et al. (2023), Malanga et al. (2022), Nojavan et al. (2021) and Sukardi et al. (2022).

Other studies used samples of students from specific bachelor's degree courses, such as public relations (Leonnard, 2018), engineering (Shurair & Pokharel, 2019; Goumairi et al., 2020), architecture (Saadoon et al., 2022), education (Neyra-Huamani et al., 2021) and economics (Li & Teh, 2021).

Still, there are studies using samples of post-graduate students from higher education institutions, especially master's degree courses (Gonzalez Aleu et al., 2021; Tsiligiris et al., 2022), doctor's degree courses (Gregory et al., 2019) and both (Abdullah Rozak et al., 2022; Bozbay et al., 2020; Kökalan et al., 2022; Sohail & Hasan, 2021; Toghroli et al., 2021). Some studies also focused on e-learning, such as Ivanaj et al. (2019), Tere et al. (2020) and Uppal et al. (2018).

There are a relatively small number of studies on technical and vocational education and training, such as Hsu and Chen (2021), Mason et al. (2018) and Patil et al. (2019).

2.1 Service Quality and Socio-Economic, Demographic Characteristics

A series of studies have sought to investigate the relationships between student characteristics and different levels of expectations, perceptions and quality. The most used variables in the studies with students are gender, age, household income, course (e.g., accounting, economics, nursing, etc.) or group of courses (e.g., business, engineering, etc.), year or semester of the course, level of the course (e.g., bachelor's, master's and doctor's degrees), nationality and intent to continue the study (e.g., entering a higher level course) (Aboubakr & Bayoumy, 2018; Min & Khoon, 2014; Soares et al., 2023).

Nevertheless, studies investigating the relationships between student characteristics and different levels of expectations, perceptions and quality reported controversial results regarding the courses.

The studies investigating the relationships between age and perceived quality found that younger students are more satisfied (Min & Khoon, 2014), that older students are more satisfied (Koni et al. 2013) and that there is no relationship between age and perceived quality (Mason et al., 2018; Palli & Mamilla, 2012). Therefore, the second hypothesis is the following:

H_1: There is a positive relationship between age and expectation/perception.

The effect of having previously studied at a public or private school was also investigated in the literature and the conclusions were controversial (Aboubakr & Bayoumy, 2018; Soares et al., 2023; Sorayaei et al. 2013). In this way, the fourth hypothesis is the following:

H_2: There is difference between semester/module of the course and expectation/perception.

Some authors concluded that women have higher expectations than men (Joseph et al., 2005), that women are more satisfied than men (Palli & Mamilla, 2012; Zafiropoulos & Vrana; 2008) and that men are more satisfied than women (Ghavimi et al., 2017; Min & Khoon, 2014; Sorayaei et al., 2013), whereas others reported that there is no relationship between gender and quality (Aboubakr & Bayoumy, 2018; Jusoh et al., 2004; Koni et al., 2013; Mason et al., 2018; Soares et al., 2023; Wilkins & Balakrishnan, 2013). Therefore, the first hypothesis to be tested is the following:

H_3: There is gender difference in expectation/perception.

The relationship between year/semester of the course and perceived quality was also investigated and rendered conflicting results, such as a positive relationship during the course (Tan & Kek, 2004), a negative relationship during the course (Aboubakr & Bayoumy, 2018; Jusoh et al., 2004; Soares et al., 2023; Zafiropoulos & Vrana, 2008) and both (Sorayaei et al., 2013). Therefore, the third hypothesis is the following:

H_4: There is difference between students who had previously studied at public/private schools regarding their expectation/perception.

The intent to continue the studies after completing the current course is related to a higher satisfaction (Palli & Mamilla, 2012) and the intent to enter a higher education institution is positively related to higher expectation and higher perception of the quality (Soares et al., 2023). The intent to pursue a career in the field of study is related to a higher satisfaction with the course (Soares et al. 2023). The relationships of service quality with ethnics, background, previously finished courses, prior professional qualifications and previous professional experience were also investigated (Mason et al., 2018; Soares et al., 2023; Tadle et al., 2021), but with no

consensus. Considering the experience of the authors of the present study, the following hypotheses were raised:

H_5: There is difference between students who perform remunerated activities regarding their expectation/perception.

H_6: There is difference between students who chose the course in order to start a business in the field of study and those who did not regarding their expectation/perception.

H_7: There is difference between students who chose the course because perform remunerated activities in the field of study regarding their expectation/perception.

H_8: There is difference between students who completed or did not complete another course at the FISC regarding their expectation/perception.

H_9: There is difference between students who intend to take another course at the FISC and those who do not regarding their expectation/perception.

H_{10}: There is difference between students who intend to take another course in the field and those who do not regarding their expectation/perception.

H_{11}: There is difference between students who worked in the field and those who did not regarding their expectation/perception.

H_{12}: There is difference between students who perform remunerated activities in the field regarding their expectation/perception.

H_{13}: There is difference between students who intend to work in the field in future and those who do not regarding their expectation/perception.

H_{14}: There is difference between students who receive student aid and those who do not regarding their expectation/perception.

3. Method

The present study is classified as a quantitative one regarding the approach of the problem, but its objective is descriptive in nature as it is aimed at identifying relationships between student characteristics and perception of the quality of service provided in the tourism, hospitality and leisure courses at the FISC by using the SERVQUAL scale.

With regard to the time horizon, the present study is categorised as cross-sectional as data were collected at a single moment in time. On the other hand, the study strategy is of a survey-type as it assesses the students' perception of the quality of the service provided. This type of procedure involves a quantitative or numeric description of the trends, attitudes or opinions of the students by analysing a sample of this population (Creswell & Creswell, 2022) Therefore, data were collected from a sample of students attending the technical and technological courses at the Florianopolis-Mainland campus of the FISC.

The Florianopolis-Mainland campus, which is object of the present study, was established in 2006 to integrate the Federal Institute of Santa Catarina (FISC) network, being the first campus exclusively aimed at graduation in tourism, hospitality and leisure.

The graduate route of the campus begins with professional qualification courses, technical courses in cooking and baking (PROEJA), other related technical courses (i.e., cooking, baking, confectionary, restaurant and bar, events, and national and regional tour guiding) and ending with courses in gastronomy, tourism management and hospitality (FISC, 2019).

Therefore, the study population consisted of 551 students and all were duly enrolled in the technical and technological courses at the date of data collection. Of this total, a sample of 209 students attending the courses in confectionary, cooking, events, gastronomy, tourism management, regional tour guiding, hospitality, baking and restaurant and bar were selected.

A self-administered questionnaire was used to collect data after being adapted from the SERVQUAL scale as proposed by Smania (2019). This proposed instrument was changed in order to adapt it to the object of study, that is, the education institution. Moreover, the original instrument had also been complemented with items divided into two parts: the first one containing SERVQUAL questions adapted to educational institutions and the second one containing questions on the characteristics of the respondents, aiming to trace their profile.

The original questionnaire has 44 items, all being maintained in the instrument used in the study and to be answered according to a 7-point scale, in which 1 is 'I fully disagree' and 7 is 'I fully agree'.

Prior to using the instrument definitely, the researchers tested it in a small sample of students in order to observe their attitudes and reactions as well as any type of failure or error in the questionnaire. The respondents had no doubt regarding the instrument, meaning that no adjustment or alteration was necessary in the questions. Appendix shows the SERVQUAL questions used in the instrument written in Portuguese.

Regression analysis was used to test the hypothesis of relationship between the respondent's characteristics and their level of perception or expectation of the service quality (Levin et al., 2003). Dependent variables were each one of the 44 items of the SERVQUAL scale, whereas independent variables were the socio-economic and demographic characteristics of the respondents. The significance levels used in the analyses were 0.1, 0.05, 0.01 and 0.001. These are levels commonly used in scientific research. (Devore, 2016; Gertler et al., 2014).

4. Results

The technique of regression analysis was used for assessment of the results. Each one of the 44 items of the SERVQUAL scale were used as dependent variables, whereas gender, type of secondary school, remunerated activity, factor influencing the choice of course, prior courses taken at the FISC, intent to take more courses in the field or at the FISC, intent to work in the field and beneficiary of student aid as independent variables.

It should be taken into consideration that all these variables were included in the model as dummy ones. The outputs of regression analysis presenting significant results are shown herein (for ANOVA with P-value < 0.05). Five of the 22 regressions regarding the student expectations were statistically significant at a level of 5%, as can be seen in Table 2.

Table 2. Regression coefficients for expectations on items of the Tangibility dimension

Variable	Tangibility							
	Model for Question 3				Model for Question 4			
	B	S.E.	Beta	Sig.	B	S.E.	Beta	Sig.
(Constant)	6.098	.357		.000	6.193	.343		.000
Age	.009	.007	.106	.170	-.002	.007	-.025	.745
Module/Semester	.063	.073	.064	.385	.321	.070	.334	.000****
Male	-.175	.159	-.077	.272	-.070	.153	-.032	.648
Private secondary school	.324	.195	.122	.098*	-.195	.187	-.076	.300
Mixed secondary school	.285	.198	.102	.152	.208	.190	.078	.275
Engaged in remunerated activity	-.269	.175	-.119	.127	-.049	.169	-.022	.773
Choice of course: intention of starting a business	-.064	.223	-.020	.776	-.247	.215	-.082	.251
Choice of course: already working in the field	.040	.264	.011	.880	.312	.254	.092	.220
Completed a course at FISC	-.055	.196	-.021	.779	-.318	.189	-.124	.093*
Did not complete a course at FISC	.223	.204	.077	.277	.155	.197	.056	.432
Not sure on other courses at FISC	-1.008	.234	-.392	.000****	-.206	.225	-.083	.360
Not sure on other courses in the field	.598	.240	.223	.014**	-.243	.231	-.094	.294
Did not work in the field	-.189	.167	-.089	.260	-.216	.161	-.105	.182
Worked in the field	-.164	.201	-.076	.415	-.159	.193	-.077	.410
Do not know if he or she will work in the field	.142	.196	.052	.471	-.091	.189	-.034	.632
Receiving no student aid	.230	.189	.084	.225	-.246	.182	-.093	.178

Note. * p < .1 **p < .05 ***p < .01 ****p < .001.

Item 3 (Question 3), which addresses the student's expectations of the personal care and appearance of faculty members and staff of excellent educational institutions, was the first one being statistically significant. Regression analysis revealed that there is statistical evidence that students who completed their secondary education at a private school have higher expectations (0.32) on the personal care and appearance of the institution's personnel than those who attended public schools. Still, as for this question, students who do not know or do not intend to take another courses at the FISC have lower expectations (-1.01) on the personal care and appearance of the institution's personnel than those interested in other courses. On the other hand, students who do not know if they will take other courses in the field of tourism, hospitality and leisure have higher expectations (0.60) regarding this aspect than those who intend to do so.

Item 4 (Question 4), which states that 'the library of excellent education institutions has enough textbooks and other materials in good conditions of use', also had a statistically significant regression coefficient at a level of 5%. It was found that students who completed the course at the FISC have lower expectations on this question (-0.32). On the other hand, students in more advanced semesters have higher expectations regarding the

institution's library than those who are just beginning the course (0.32), probably due to the fact that the former are closer to completing the course.

Table 3. Regression coefficients for expectations on items of the Reliability dimension

| | Reliability | | | |
| | Model for Question 5 | | | |
Variable	B	S.E.	Beta	Sig.
(Constant)	6.509	.363		.000
Age	.005	.007	.051	.518
Module/Semester	.048	.074	.049	.514
Male	-.259	.161	-.115	.110
Private secondary school	.062	.198	.024	.753
Mixed secondary school	.229	.201	.082	.257
Engaged in remunerated activity	-.140	.178	-.062	.435
Choice of course: intention of starting a business	-.515	.227	-.165	.024**
Choice of course: already working in the field	.292	.268	.083	.278
Completed a course at FISC	-.011	.200	-.004	.956
Did not complete a course at FISC	.358	.208	.125	.086*
Not sure on other courses at FISC	-.264	.237	-.103	.268
Not sure on other courses in the field	-.151	.244	-.056	.538
Did not work in the field	-.192	.170	-.090	.261
Worked in the field	-.579	.204	-.270	.005***
Do not know if he or she will work in the field	-.084	.200	-.031	.676
Receiving no student aid	.117	.192	.043	.543

Note. * $p < .1$ ** $p < .05$ *** $p < .01$ **** $p < .001$.

With regard to item 5 (Question 5), the variables 'factor of choice (intent to start a business)' and 'already working in the field' influenced negatively the expectations, whereas 'did not complete the course at FISC' influenced positively. Therefore, students who has the intent to start a business (-0.51) or who are already working in the field (-0.58) have lower expectations on completing the academic program or the schedule of subjects than those who do not intend to start a business or who do not work in the field. On the other hand, students who are studying or did not complete a course at the institution have higher expectations on this aspect (0.36).

Table 4. Regression coefficients for expectations on items of the responsiveness dimension

| | Responsiveness | | | |
| | Model for Question 10 | | | |
Variable	B	S.E.	Beta	Sig.
(Constant)	6.489	.353		.000
Age	-.004	.007	-.047	.551
Module/Semester	-.142	.072	-.147	.050**
Male	-.076	.157	-.035	.628
Private secondary school	.189	.193	.073	.328
Mixed secondary school	.299	.196	.111	.129
Engaged in remunerated activity	.456	.173	.209	.009***
Choice of course: intention of starting a business	-.374	.221	-.124	.092*
Choice of course: already working in the field	.302	.261	.088	.249
Completed a course at FISC	.082	.194	.032	.674
Did not complete a course at FISC	.336	.202	.120	.098*
Not sure on other courses at FISC	.415	.231	.167	.074*
Not sure on other courses in the field	-.343	.237	-.132	.150
Did not work in the field	-.149	.166	-.072	.368
Worked in the field	.220	.199	.106	.269
Do not know if he or she will work in the field	.165	.194	.062	.398
Receiving no student aid	.066	.187	.025	.725

Note. * $p < .1$ ** $p < .05$ *** $p < .01$ **** $p < .001$.

Item 10 also, which had a statistically significant regression coefficient at a level of 5%, is aimed at measuring the respondents' expectations regarding changes made by the courses and institutions to the schedule of subjects. T-test showed that coefficients for the variables 'module/semester' and 'engaged in remunerated activity', 'factor of choice (intent to start a business)', 'did not complete the course at FISC' and 'intent to take another course at FISC' influenced positively the respondents' expectations regarding this question.

Table 5. Regression coefficients for expectations on items of the Empathy dimension

Variable	Empathy Model for Question 19			
	B	S.E.	Beta	Sig.
(Constant)	6.843	.262		.000
Age	-.003	.005	-.050	.525
Module/Semester	-.003	.053	-.004	.958
Male	-.188	.117	-.115	.109
Private secondary school	.379	.143	.198	.009***
Mixed secondary school	.250	.146	.124	.088*
Engaged in remunerated activity	-.063	.129	-.038	.628
Choice of course: intention of starting a business	-.204	.164	-.091	.214
Choice of course: already working in the field	.347	.194	.136	.075*
Completed a course at FISC	-.176	.144	-.091	.225
Did not complete a course at FISC	.220	.150	.106	.145
Not sure on other courses at FISC	-.376	.172	-.203	.030**
Not sure on other courses in the field	-.016	.176	-.008	.929
Did not work in the field	-.076	.123	-.049	.536
Worked in the field	-.243	.148	-.157	.101
Do not know if he or she will work in the field	-.011	.144	-.006	.939
Receiving no student aid	.002	.139	.001	.987

Note. * p < .1 **p < .05 ***p < .01 ****p < .001.

Still, as for expectations, item 19 states that 'excellent education institutions have adequate working schedules for their students regarding classes, library services, canteen…', also having a statistically significant regression coefficient at a level of 5%. It was found that variables 'secondary education', 'factor of choice (already working in the field)' and 'intent to take another course at the FISC' exert influence on this question. Therefore, students who completed their secondary education at a private school have higher expectations than those who completed it at a public institution.

In this context, students who chose the course because they are already working in the field have higher expectations regarding adequate schedules. On the other hand, students who are not sure about taking another course at the FISC have lower expectations regarding question 19 than those who intend to do so.

The next items address the respondents' perception of their courses and institution. Table 6 lists a synthesis of items with statistical significance in the regression analysis.

Table 6. Regression coefficients for perceptions on the items of the tangibility dimension

Variable	Tangibles Model for Question 23			
	B	S.E.	Beta	Sig.
(Constant)	4.425	.442		.000
Age	.017	.009	.158	.045**
Module/Semester	.038	.090	.031	.673
Male	.443	.197	.161	.026**
Private secondary school	.066	.242	.020	.785
Mixed secondary school	-.304	.246	-.089	.218
Engaged in remunerated activity	.220	.218	.080	.313
Choice of course: intention of starting a business	-.707	.277	-.186	.011**
Choice of course: already working in the field	.421	.328	.098	.201
Completed a course at FISC	.052	.244	.016	.832
Did not complete a course at FISC	.276	.254	.079	.277
Not sure on other courses at FISC	-.484	.290	-.154	.097*
Not sure on other courses in the field	.102	.298	.031	.732
Did not work in the field	.138	.208	.053	.508
Worked in the field	.026	.249	.010	.916
Do not know if he or she will work in the field	.272	.244	.082	.265
Receiving no student aid	-.094	.235	-.028	.691

Note. * p < .1 **p < .05 ***p < .01 ****p < .001.

Item 23, which addresses the students' perception on the conditions of the equipment used in the course and their sufficiency, had statistical significance in the regression analysis. The variables 'age', 'gender', 'factor of choice (intent to start a business)' and 'intent to take another course at the FISC' exert influence on this question. It was found that being male is positively related to item 23, as well as the older the student is, the higher the perception of quality. However, having the intent to take other courses at the institution has a negative influence on the respondents' perceptions.

Table 7. Regression coefficients for perceptions on items of the Reliability dimension

Variable	Reliability Model for Question 27				Model for Question 30				Model for Question 31			
	B	S.E.	Beta	Sig.	B	S.E.	Beta	Sig.	B	S.E.	Beta	Sig.
(Constant)	5.852	.434		.000	6.127	.357		.000	5.427	.384		.000
Age	.019	.008	.176	.023**	.018	.007	.202	.011**	.023	.007	.234	.003***
Module/Semester	-.112	.088	-.092	.207	-.082	.073	-.084	.261	-.071	.078	-.066	.363
Male	-.109	.193	-.040	.571	.061	.159	.028	.699	-.074	.171	-.030	.666
Private secondary school	-.144	.237	-.045	.543	-.013	.195	-.005	.949	.216	.210	.075	.305
Mixed secondary school	-.118	.241	-.035	.626	-.039	.198	-.014	.845	-.240	.213	-.080	.262
Engaged in remunerated activity	.075	.213	.027	.727	-.139	.176	-.063	.429	.030	.189	.012	.873
Choice of course: intention of starting a business	-.565	.272	-.149	.039**	-.471	.223	-.153	.036**	-.288	.240	-.085	.232
Choice of course: already working in the field	.578	.321	.134	.074*	.416	.264	.120	.117	.952	.285	.249	.001***
Completed a course at FISC	-.005	.239	-.002	.984	-.368	.197	-.141	.063*	-.336	.211	-.117	.114
Did not complete a course at FISC	.144	.249	.041	.563	.059	.205	.021	.774	.005	.220	.002	.981
Not sure on other courses at FISC	-.411	.284	-.131	.150	-.427	.234	-.169	.069	-.156	.252	-.056	.537
Not sure on other courses in the field	.215	.292	.066	.462	.154	.240	.058	.523	.014	.259	.005	.958
Did not work in the field	-.031	.204	-.012	.877	-.076	.168	-.036	.651	.116	.180	.050	.520
Worked in the field	-.602	.244	-.230	.015**	-.244	.201	-.115	.227	-.415	.216	-.179	.056*
Do not know if he or she will work in the field	.033	.239	.010	.890	-.060	.197	-.022	.761	.103	.212	.035	.627
Receiving no student aid	.066	.230	.020	.776	.237	.190	.087	.212	.301	.204	.101	.142

Note. * p < .1 **p < .05 ***p < .01 ****p < .001.

As for item 27, regression analysis shows that there are four statistically significant coefficients for variables 'age', 'factor of choice (intent to start a business)', 'factor of choice (already working in the field) and 'worked in the field'. Students who are older or choose the course because they are already working in the field perceive a higher quality of the academic program and schedule of subjects. It was found, however, that there was a

negative influence on the quality perceived by respondents who choose the course because they intend to start a business or because they already work in the field.

Item 30, which also had a statistically significant coefficient in the regression model at a level of 5%, measures the perception of punctuality and assiduity of the institution's personnel. It was found that the variables 'age', 'factor of choice (intent to start a business)', 'completed a course at FISC' and 'intent to take other courses at FISC' have an influence on the students' perception. Therefore, older students have a higher perception of the quality, which is also positively related to the intent to take another course at the institution. On the other hand, students who took a course and completed other at the institution, as well as those who chose the course in order to start a business perceive negatively the punctuality and assiduity of the institution's personnel.

Item 31 was found to be statistically and positively related to three variables, namely, 'age', 'factor of choice (already working in the field)' and 'worked in the field'. Therefore, older respondents have a higher perception of the quality regarding data updating and lack of mistakes in the student registration process. In this way, students who already work in the field and those who chose the course for this reason have a higher perception than those who chose the course for other reasons or do not work in the field.

Table 8. Regression coefficients for perceptions on items of the Responsiveness dimension

	Responsiveness							
	Model for Question 32				Model for Question 33			
Variable	B	S.E.	Beta	Sig.	B	S.E.	Beta	Sig.
(Constant)	6.069	.420		.000	5.592	.339		.000
Age	.018	.008	.167	.027*	.015	.007	.181	.022**
Module/Semester	-.271	.086	-.225	.002**	.045	.069	.048	.520
Male	-.361	.187	-.132	.055*	.199	.151	.094	.189
Private secondary school	.048	.229	.015	.835	.044	.185	.017	.814
Mixed secondary school	.018	.233	.005	.937	.020	.188	.008	.914
Engaged in remunerated activity	.203	.207	.074	.326	.209	.167	.098	.212
Choice of course: intention of starting a business	-.560	.263	-.148	.034**	-.654	.212	-.222	.002***
Choice of course: already working in the field	.768	.311	.179	.014**	.274	.251	.082	.276
Completed a course at FISC	-.071	.231	-.022	.759	-.195	.187	-.078	.297
Did not complete a course at FISC	-.169	.241	-.048	.485	.151	.195	.056	.438
Not sure on other courses at FISC	-.090	.275	-.029	.743	-.516	.222	-.214	.021**
Not sure on other courses in the field	-.225	.283	-.070	.426	.230	.228	.091	.315
Did not work in the field	.040	.197	.015	.840	.178	.159	.089	.265
Worked in the field	-.244	.237	-.094	.303	-.042	.191	-.021	.828
Do not know if he or she will work in the field	.109	.231	.033	.640	-.305	.187	-.118	.105
Receiving no student aid	.118	.223	.035	.597	.041	.180	.016	.821

Note. * p < .1 **p < .05 ***p < .01 ****p < .001.

Item 32, which addresses information on changes in the schedule of subjects, had a statistically significant regression. The coefficients for variables 'gender', 'module/semester' and 'factor of choice (already working in the field)' influence negatively the perceptions, whereas the variables 'age' and 'factor of choice (already working in the field' are positively related to the respondents' perceptions.

The regression model for item 33, which addresses the respondents' perception of the readiness of the institution's personnel to provide service for them, was statistically significant. On the other hand, respondents who chose the course in order to start a business or those who do not know or do not intend to take another course at the FISC have a lower perception of the punctuality and assiduity of the institution's personnel.

Table 9. Regression coefficients for perceptions on items of the Assurance dimension

Variable	Assurance Model for Question 36				Model for Question 37			
	B	S.E.	Beta	Sig.	B	S.E.	Beta	Sig.
(Constant)	5.552	.336		.000	6.568	.263		.000
Age	.016	.006	.190	.016**	.008	.005	.121	.112
Module/Semester	.089	.068	.096	.197	-.007	.054	-.009	.903
Male	.043	.150	.020	.776	.102	.117	.060	.383
Private secondary school	-.056	.183	-.023	.761	-.126	.143	-.063	.381
Mixed secondary school	-.058	.186	-.023	.756	.120	.146	.058	.410
Engaged in remunerated activity	.247	.165	.119	.136	-.033	.129	-.020	.796
Choice of course: intention of starting a business	-.075	.210	-.026	.723	-.230	.164	-.098	.164
Choice of course: already working in the field	.491	.249	.150	.050**	.113	.194	.043	.561
Completed a course at FISC	-.132	.185	-.054	.477	-.044	.145	-.022	.761
Did not complete a course at FISC	-.012	.193	-.005	.948	-.191	.150	-.089	.205
Not sure on other courses at FISC	-.558	.220	-.235	.012**	-.419	.172	-.218	.016**
Not sure on other courses in the field	.176	.226	.071	.438	-.222	.177	-.110	.211
Did not work in the field	.073	.158	.037	.643	-.108	.123	-.068	.381
Worked in the field	-.085	.189	-.043	.652	-.263	.148	-.164	.076*
Do not know if he or she will work in the field	-.250	.185	-.099	.178	-.290	.145	-.142	.046**
Receiving no student aid	-.024	.178	-.009	.893	.022	.139	.010	.877

Note. * p < .1 **p < .05 ***p < .01 ****p < .001.

It was observed that the variables 'age' and 'factor of choice (already working in the field)' interfered with the respondents' perception of the item 36. Therefore, respondents who are older or who already work in the field have a higher perception of the assurance conveyed by the institution's personnel. On the other hand, students who do not know or who do not intend to take another course at the institution have a lower perception of the assurance than those who have the intent to do so.

Item 37 addressed the respondents' perception of the assurance conveyed by the education institution, which generated a statistically significant model. Students who do not intend to work in the same field they are studying have a higher perception of this question than those who intend to do so. On the other hand, students who work in the field have a lower perception of the assurance conveyed by the education institution than those who do not. Those respondents who do not know or do not intend to take other courses at the FISC also have a lower perception of the quality regarding this item.

Table 10. Regression coefficients for perceptions on items of the Empathy dimension

Variable	Empathy Model for Question 40				Model for Question 41				Model for Question 42			
	B	S.E.	Beta	Sig.	B	S.E.	Beta	Sig.	B	S.E.	Beta	Sig.
(Constant)	6.321	.344		.000	6.659	.274		.000	5.571	.386		.000
Age	.009	.007	.102	.190	.009	.005	.133	.085*	.024	.007	.249	.001***
Module/Semester	-.021	.070	-.023	.760	.039	.056	.050	.489	-.032	.079	-.030	.685
Male	.034	.153	.016	.823	-.048	.122	-.028	.694	.001	.172	.000	.996
Private secondary school	-.096	.188	-.038	.610	-.118	.150	-.058	.431	-.105	.211	-.036	.621
Mixed secondary school	.065	.191	.024	.734	.123	.152	.057	.419	.216	.214	.071	.315
Engaged in remunerated activity	-.056	.169	-.026	.742	-.054	.135	-.031	.691	-.055	.190	-.023	.771
Choice of course: intention of starting a business	-.506	.215	-.169	.020**	-.270	.172	-.112	.118	-.300	.242	-.088	.216
Choice of course: already working in the field	.416	.255	.123	.104	.074	.203	.027	.715	.419	.286	.109	.144
Completed a course at FISC	-.211	.189	-.083	.267	-.240	.151	-.117	.114	-.561	.213	-.194	.009***
Did not complete a course at FISC	-.197	.197	-.071	.319	-.168	.157	-.075	.287	-.129	.221	-.041	.561
Not sure on other courses at FISC	-.638	.225	-.260	.005***	-.544	.180	-.275	.003	-.380	.253	-.136	.135
Not sure on other courses in the field	.058	.231	.023	.801	.089	.184	.043	.629	-.186	.260	-.064	.474
Did not work in the field	.008	.161	.004	.962	-.276	.129	-.168	.033**	.028	.181	.012	.879
Worked in the field	-.203	.194	-.099	.297	-.416	.154	-.251	.008*	-.247	.218	-.106	.258
Do not know if he or she will work in the field	-.340	.189	-.130	.074*	-.207	.151	-.098	.173	-.262	.213	-.088	.220
Receiving no student aid	-.127	.183	-.048	.487	-.181	.146	-.085	.214	-.161	.205	-.054	.432

Note. * p < .1 **p < .05 ***p < .01 ****p < .001.

Item 40 addressed the respondents' perception of the attention given to the students by the institution. The respondents who do not intend to work in the field or who do not intend to take other courses at the FISC have a lower perception of this item than those who intend to work in the field or take other course at the institution.

The regression model for item 41 was also statistically significant. It is worth observing that this item addresses the adjustment made by the institution to the schedules of subjects. T-test showed that the regression coefficients for the variables 'age', 'intent to take other course at FISC' and ''engaged in remunerated activity' influenced the respondents' perception of this item at a level of 5%.

In this way, older students have a higher perception of the quality. However, those who do not know or do not intend to take other course at the FISC have a lower perception of the adjustment of the schedule of subjects according to the students' needs. Similarly, students who did not work or work in the field also have a lower perception of the quality regarding the item.

Item 42, which addresses whether 'the education institute meets the specific needs of its students' also had a statistically significant regression model. It was found that the coefficients for the variables 'age' and 'completed the course at FISC' influenced the respondents' perceptions of this item. In this way, one can highlight that being older or having completed the course at the FISC has a positive influence on the students' expectations.

Table 11. Regression coefficients for perceptions on items of the Empathy dimension

| | Empathy | | | | Empathy | | | |
| | Model for Question 43 | | | | Model for Question 44 | | | |
Variable	B	S.E.	Beta	Sig.	B	S.E.	Beta	Sig.
(Constant)	5.698	.375		.000	5.449	.371		.000
Age	.020	.007	.206	.007***	.026	.007	.271	.000****
Module/Semester	-.121	.076	-.114	.115	-.043	.076	-.040	.574
Male	.177	.167	.073	.289	-.007	.165	-.003	.965
Private secondary school	.102	.205	.036	.619	-.104	.203	-.037	.608
Mixed secondary school	.263	.208	.088	.208	-.093	.206	-.031	.653
Engaged in remunerated activity	.090	.184	.037	.627	.042	.183	.018	.818
Choice of course: intention of starting a business	-.605	.234	-.181	.011**	-.545	.232	-.164	.020***
Choice of course: already working in the field	.318	.277	.084	.253	.292	.275	.078	.290
Completed a course at FISC	-.330	.206	-.116	.111	-.148	.204	-.052	.471
Did not complete a course at FISC	.127	.215	.041	.556	.053	.213	.017	.803
Not sure on other courses at FISC	-.393	.245	-.143	.111	-.528	.243	-.193	.031**
Not sure on other courses in the field	-.291	.252	-.101	.250	-.012	.250	-.004	.962
Did not work in the field	.050	.176	.022	.775	-.001	.174	-.001	.994
Worked in the field	-.146	.211	-.064	.489	-.245	.209	-.107	.243
Do not know if he or she will work in the field	-.307	.206	-.105	.138	-.363	.204	-.125	.078*
Receiving no student aid	-.113	.199	-.038	.571	-.248	.197	-.085	.209

Note. * $p < .1$ **$p < .05$ ***$p < .01$ ****$p < .001$.

The regression model for item 43 shows that older students have a higher perception of the service provided by the institution regarding their objectives.

Lastly, item 44 measured the respondents' perceptions of whether their specific needs are met by the institution in which four regression coefficients were statistically significant. T-test showed identified that the variables 'age', 'factor of choice (intent to start a business)', 'intent to take other course at FISC' and 'engaged in remunerated activity' influenced the respondents' perception of this item at a level of 5%. Therefore, students who are older or who intend to start a business have a higher perception of how their specific needs are met. On the other hand, students who do not know, do not intend to take other course at the FISC or do not know whether they will work in the field have a lower perception of this item than those who intend to take other course at the institution or to work in the field.

Considering the results above, we reviewed the research hypotheses:

H_1: There is a positive relationship between age and expectation/perception. This was supported by items 23, 27, 30, 31, 36, 41, 42, 43 and 44.

H_2: There is difference between phase/module of the course and expectation/perception. This was supported by items 4, 10 and 32.

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H_3: There is gender difference in expectation/perception. This was supported by item 23 only.

H_4: There is difference between students who had previously studied at public/private schools regarding their expectation/perception. This was supported by items 3 and 19.

H_5: There is difference between students who perform remunerated activities regarding their expectation/perception. This was supported by item 10 only.

H_6: There is difference between students who chose the course in order to start a business in the field of study and those who did not regarding their expectation/perception. This was supported by items 5, 10, 23, 27, 30, 32, 33, 40, 43 and 44.

H_7: There is difference between students who chose the course because perform remunerated activities in the field of study regarding their expectation/perception. This was supported by items 19, 27, 31, 32 and 36.

H_8: There is difference between students who completed or did not complete another course at the FISC regarding their expectation/perception. This was supported by items 4, 30 and 42.

H_9: There is difference between students who intend to take another course at the FISC and those who do not regarding their expectation/perception. This was supported by items 3, 10, 19, 23, 33, 36, 37, 40 and 44.

H_{10}: There is difference between students who intend to take another course in the field and those who do not regarding their expectation/perception. This was supported by item 3 only.

H_{11}: There is difference between students who worked in the field and those who did not regarding their expectation/perception. This was supported by item 41 only.

H_{12}: There is difference between students who perform remunerated activities in the field regarding their expectation/perception. This was supported by item 5, 27, 31, 37 and 41.

H_{13}: There is difference between students who intend to work in the field in future and those who do not regarding their expectation/perception. This was supported by items 37, 40 and 44.

H_{14}: There is difference between students who receive student aid and those who do not regarding their expectation/perception. This was supported by no items.

Therefore, statistical evidence and the present findings indicate the existence of some relationships between student characteristics and perception of the quality of service provided at these courses.

5. Conclusion

The main objective of the present study was to identify relationships between student characteristics and perceptions of the quality of service provided at the tourism, hospitality and leisure courses provided by the FISC at the Florianopolis-Mainland campus, in which the SERVQUAL scale was used to do so.

By using regression analysis, it was possible to identify some variables which are significantly related to the students' expectations or perceptions of certain items of the SERVQUAL scale. The intent whether to take or not another course at the FISC is frequent in terms of expectation and perception of the courses and education institution. The resulting data suggest that there is a negative relationship between 'not knowing/not intending to take other course' and perceived quality (eight items). Evidence also indicates that age is significantly and positively related to perceived quality (eleven items).

According to the regression analysis, choosing a course with the intent to start a business also had statistically significant coefficients (items 4 and 10), which influenced negatively the students' expectations. This finding was also observed in other six items related to perception. Only one question (item 44) on such intent indicated evidence of a positive influence on the perception of quality. Moreover, one can highlight that choosing a course because one works in the field can influence positively the expectations (item 19) and perceptions of the service quality (five items).

Therefore, by identifying relationships between student characteristics and perceptions of the services provided at the tourism, hospitality and leisure courses of FISC at the Florianopolis-Mainland campus, it was observed that characteristics of the students are more related to the perception than to the expectation they have of the quality of services.

With regard to this study's limitations, one can highlight the time (period of end-of-semester examinations) when the questionnaire was completed, which affected the sample size. As pointed out by Smania (2019), the expectations of students who are already working in the field were also surveyed. Their experiences with the service and education institution can somehow affect the measurement of the initial expectations. As further

suggestions, we propose that differences and compatibilities in the expectations and perceptions of other levels of courses (i.e. technical and technological) should be assessed.

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Appendix A

Items from the questionnaire in Portuguese

Questões acerca das expectativas

1 Excelentes cursos técnico/tecnológico na área de Turismo, Hospitalidade e Lazer possuem equipamentos em bom estado e suficientes (lousas, carteiras, etc.).

2 As instalações físicas de excelentes cursos técnico/tecnológico na área de Turismo, Hospitalidade e Lazer, como salas de aula e laboratórios, são adequadas, arejadas, iluminadas e agradáveis.

3 Os professores e demais funcionários de excelentes instituições de ensino são bem apresentáveis e cuidam de sua aparência.

4 A biblioteca de excelentes instituições de ensino possui livros e outros materiais suficientes e em boas condições de uso.

5 Excelentes cursos técnico/tecnológico na área de Turismo, Hospitalidade e Lazer cumprem o calendário acadêmico e o cronograma das disciplinas.

6 Excelentes instituições de ensino possuem canais de atendimento ao aluno para a solução de problemas (como por exemplo, dificuldades de aprendizagem, procedimentos administrativos, etc.).

7 Excelentes cursos técnico/tecnológico na área de Turismo, Hospitalidade e Lazer alocam professores com domínio de conteúdo nas disciplinas do curso.

8 Excelentes cursos técnico/tecnológico na área de Turismo, Hospitalidade e Lazer possuem professores e demais funcionários pontuais e assíduos.

9 Excelentes instituições de ensino mantém os cadastros dos alunos atualizados e livres de erros.

10 Excelentes cursos técnico/tecnológico na área de Turismo, Hospitalidade e Lazer mantém os alunos informados sobre alterações de cronograma.

11 Os funcionários de excelentes instituições de ensino atendem prontamente aos alunos.

12 Os funcionários de excelentes instituições de ensino sempre estão dispostos a ajudar aos alunos.

13 Os funcionários de excelentes instituições de ensino não recusam atendimento ao aluno.

14 O comportamento de funcionários de excelentes instituições de ensino transmite confiança aos alunos.

15 Os estudantes de excelentes cursos técnico/tecnológico na área de Turismo, Hospitalidade e Lazer sentem confiança na instituição de ensino.

16 Os funcionários de excelentes instituições de ensino são sempre atenciosos com os alunos.

17 Os funcionários de excelentes instituições de ensino têm conhecimento para responder às perguntas dos alunos.

18 Instituições de ensino excelentes dão atenção adequada aos alunos.

19 Excelentes instituições de ensino têm horários de funcionamento adequados aos seus alunos (horários de aulas, serviços de biblioteca, cantina...).

20 Excelentes instituições de ensino precisam atender às demandas específicas de seus alunos.

21 Excelentes cursos técnico/tecnológico na área de Turismo, Hospitalidade e Lazer atendem aos diversos objetivos dos alunos.

22 Excelentes cursos técnico/tecnológico na área de Turismo, Hospitalidade e Lazer atendem às demandas específicas de seus alunos.

Questões acerca da qualidade percebida

23 O curso técnico/tecnológico na área de Turismo, Hospitalidade e Lazer que você cursa possui equipamentos em bom estado e suficientes (lousas, carteiras, etc.).

24 As instalações físicas do seu curso técnico/tecnológico na área de Turismo, Hospitalidade e Lazer, como salas de aula e laboratórios são adequadas, arejadas, iluminadas e agradáveis.

25 Os servidores (professores e demais funcionários) da sua instituição de ensino são bem apresentáveis e cuidam de sua aparência.

26 A biblioteca da sua instituição de ensino possui livros e outros materiais suficientes e em boas condições de uso.

27 O seu curso técnico/tecnológico na área de Turismo, Hospitalidade e Lazer cumpre o calendário acadêmico e o cronograma das disciplinas.

28 A sua instituição de ensino possui canais de atendimento ao aluno para a solução de problemas (como por exemplo, dificuldades de aprendizagem, procedimentos administrativos).

29 O seu curso técnico/tecnológico na área de Turismo, Hospitalidade e Lazer aloca professores com domínio de conteúdo nas disciplinas do curso.

30 O seu curso técnico/tecnológico na área de Turismo, Hospitalidade e Lazer possui servidores (professores e demais funcionários) pontuais e assíduos.

31 A sua instituição de ensino mantém os cadastros dos alunos atualizados e livres de erros.

32 O seu curso técnico/tecnológico na área de Turismo, Hospitalidade e Lazer mantém os alunos informados sobre alterações de cronograma.

33 Os servidores (professores e demais funcionários) da sua instituição de ensino atendem prontamente aos alunos.

34 Os servidores (professores e demais funcionários) da sua instituição de ensino sempre estão dispostos a ajudar os alunos.

35 Os servidores (professores e demais funcionários) da sua instituição de ensino não recusam atendimento ao aluno.

36 O comportamento dos servidores (professores e demais funcionários) da sua instituição de ensino transmite confiança aos alunos.

37 Você, como estudante curso técnico/tecnológico na área de Turismo, Hospitalidade e Lazer, sente confiança na instituição de ensino que oferece o curso.

38 Os funcionários da sua instituição de ensino são sempre atenciosos com os alunos.

39 Os funcionários da sua instituição de ensino têm conhecimento para responder às perguntas dos alunos.

40 A sua instituição de ensino dá atenção adequada aos alunos.

41 A sua instituição de ensino tem horários de funcionamento adequados aos seus alunos (horários de aulas, serviços de biblioteca, cantina...).

42 A sua instituição de ensino atende às demandas específicas de seus alunos.

43 O seu curso técnico/tecnológico na área de Turismo, Hospitalidade e Lazer atende aos diversos objetivos dos alunos.

44 O seu curso técnico/tecnológico na área de Turismo, Hospitalidade e Lazer atende às demandas específicas de seus alunos.

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