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Gender differences in the perception of the Quality of College Life in Spanish University

Abstract: Through the current research, we intend to analyze how students differ in their levels of Quality of College Life (QCL) according to gender, and how this relates to overall Quality of Life (QoL) and loyalty (measured by Identification and Word of Mouth [WoM]) to their specific university. The survey included 243 students attending public university in Spain. The results obtained through the analysis of data allows affirming that there are differences between women and men both in the configuration of the Quality of their College Life and in its effect on the loyalty shown towards the college. This paper contributes towards an improved comprehension regarding the differences between the students according to their gender, so that managers can develop strategies better adapted to students.

Keywords: Quality of College Life (QCL), Student Satisfaction, Installations Satisfaction, Education Satisfaction, Social Satisfaction, Quality of Life (QoL), Positive Word of Mouth (WoM), Identification, Gender Differences, The Effect of Gender, University.
1. Introduction

For universities in the current very competitive environment for students, they face enormous challenges in their efforts to increase student enrolment. To cope with this issue, universities can introduce improvements in how they function, and follow up these steps with quality control analysis, but measurements of quality cannot remain limited only to traditional measures of academic success; they must also include student satisfaction. Client satisfaction, as one of the key potential competitive advantages for companies, can be fundamental for student retention as well as a factor influencing overall life satisfaction (Sirgy et al., 2010).

Student satisfaction with their educational experience (Marimon et al., 2019) results from a combination of factors. Sirgy et al. (2007) developed a model that identified academic, social, and facility factors as having an important effect on increasing student satisfaction. Subsequent papers have used this model to identify relevant elements affecting student satisfaction in different countries and contexts. However, few papers have sought to identify differences in overall student satisfaction based on gender (Ciftci Aridag et al., 2017; Jereb et al., 2018).

The Quality of College Life (QCL) scale can provide crucial insight into the relative competitive effectiveness of a university’s functioning at the national and international market levels (Arslan and Akkas, 2014). QCL captures the overall satisfaction with college life, as perceived by customers—students, and the influence of that satisfaction on their school loyalty and Quality of Life (QoL) (Arslan and Akkas, 2014; Blazquez et al., 2013; Sirgy et al., 2007; Sirgy et al., 2010; Yu and Lee, 2008).

The purpose of this research, then, is to measure student Quality of College Life (QCL), Quality of Life (QoL) and loyalty—as measured by the by Identification and Word of Mouth (WoM) scale—according to gender. To date, the few studies that have investigated the effect of gender on student satisfaction (Ciftci Aridag et al., 2017; Tessema et al., 2012) or service quality (Ilias et al., 2009) have shown inconsistent findings. For example, Tessema et al. (2012, p. 1) found that ‘gender has a significant effect on students’ satisfaction’. Ciftci Aridag et. al. (2017) also found statistically significant differences for gender on Faculty Life Quality Scale scores.
2. Quality of College Life (QCL)

The Quality of College Life (QCL) measures the satisfaction students report for their typical activity at a university (Yu and Lee, 2008, p. 269). QCL is one of the Quality of Life (QoL) variables (Sirgy et al., 2007), which measures life satisfaction as a whole. Sirgy et al. (2007, p. 346) defined QCL as an overall feeling of student satisfaction experienced with university life. Therefore, QCL affords university administrations a significant indicator for correctable elements of university life (i.e., university services or programs) based on how students indicate satisfaction (Sirgy et al., 2010).

2.1 Satisfaction with College Services

Student satisfaction with university life (Badzińska and Gołąb-Andrzejak, 2015; Blazquez-Resino and Gołąb-Andrzejak, 2017, s. 21), as simply one part of a students’ life overall, can be measured through a university life perspective (Bini and Masserini, 2016; Douglas et al., 2015). In general, services provided by a university influence student satisfaction with college life (Liu et al., 2017; Meštrović and Zugic, 2018; Yu and Lee, 2008). Sirgy et al. (2007; 2010) carried out research showing that QCL is determined by two major kinds of student college experience: academic satisfaction and satisfaction with the social aspects of the university. The researchers adopted the premise that satisfaction with the services and university facilities (Han et al., 2018; Weerasinghe and Fernando, 2018) have an influence on academic (Nhantumbo et al., 2018) and social aspects. Specifically, Yu and Lee (2008, p. 274) established that satisfaction with university services involved three main factors: facilities, administrative services, and educational resources. Results from their research indicated that satisfaction with educational services and facilities significantly influenced QCL.

2.2 Effects of Quality of College of Life (QCL)

Sirgy et al. (2010) presented an extended model of the relationship between QCL and QoL using spill-over theory (Sirgy, 2001, 2002). On this view, satisfaction with each of life’s dimensions affects the satisfaction of life generally (Sirgy et al. 2010). While life satisfaction perceived as QoL is at the top of the satisfaction hierarchy, QCL shows an important effect on the quality of satisfaction of life as well (Yu and Lee, 2008).
However, identification is an additional consequence of QCL. That is, as student QCL increases, they are more willing to identify positively with their college (Henning-Thurau et al., 2001). Yu and Lee (2008) similarly found that increased student QCL associated with students favourably identifying their university as an attractive environment to be in, thereby strengthening their overall identification with the college. This also has shown a positive effect on their commitment to the university (Henning-Thurau et al., 2001).

Additionally, Word of Mouth (WoM) - or interpersonal communication between members of an opinion-forming group (Assael, 2004; Yu and Lee, 2008) - reflects another consequence of QCL (Meštrović and Zugic, 2018). For example, consumers, based on their experience, will communicate negative or positive opinions by WoM. From Yu and Lee (2008), this suggests that QCL would positively influence student WoM. That is, in cases where students are satisfied with their college lives, they will be willing to speak positively to others about their university.

3. Gender in Satisfaction and Quality

Limited research on the role of gender on student satisfaction (Cabras and Mondo, 2018; Jereb et al., 2018) has shown inconsistent results. Some researchers found a significant influence of gender on students satisfaction (e.g. Perry et al., 2003; Rienzi et al., 1993; Sax et al., 2005; Umbach and Porter, 2002), while other studies failed to discover significant differences between male and female students in this regard (e.g. Carey et al., 2002; Corts et al., 2000; Dirkin et al., 2005; Ilias et al., 2009; Mupinga et al., 2006; Rosenthal et al., 2000; Strayhorn and Saddler, 2009; Witowski, 2008). Within the research that did find a significant influence from gender, the results also generated contradictory conclusions. Some research found women less satisfied than men (e.g. Rienzi et al., 1993; Tessema et al., 2012, Umbach and Porter, 2002) or vice versa (e.g. Ciftci Aridag et al., 2017; Perry et al., 2003).

A similar picture emerges from satisfaction with university service quality and gender (Ciftci Aridag et al., 2017). Soutar and McNeil (1996) found that women were less satisfied than men with service quality, while Joseph and Joseph (1998) found no significant difference between females and males. Ansary et al. (2014) reached a similar conclusion. Ham and Hayduk (2003) found women less satisfied than men but questioned whether gender is actually important for the perception of service quality, similarly to Ilias et al. (2009, p. 134). As generally, these variable findings suggest the situation is ambiguous.
3.1. **QCL Conceptual Model**

Figure 1 summarizes the conceptual model used in this study, where the main constructs include: satisfaction with different features of college life (including Facilities and Services/Installations, Academic Life/Education, and Social Life), Quality of College Life (QCL), Quality of Life (QoL), Word of Mouth (WoM) and Identification. Our hypothesis rests on the notion QCL is significantly determined by two types of student experiences at the university: educational satisfaction and satisfaction with the social environment. Moreover, both level of satisfaction with the university's academic aspects, as well as its social aspects, will be influenced by university facility and services satisfaction as well (Sirgy et al., 2007, p. 345). Simultaneously, QCL will affect Quality of Life (QoL), Identification, and Word of Mouth (WoM).

3.2. **Hypotheses**

From the theoretical analysis above (Soutar and McNeil, 1996), we hypothesize that gender significantly affects satisfaction and that men will be more satisfied than women (Arbaugh et al., 2010, p. 394). Concurrently, the effect (dependence) of QCL on QoL, Identification, and WoM will be higher for male than for female students. Accordingly, this generates the following hypotheses:

H1. Male students have higher satisfaction with installations (facilities and services), which in turn leads to higher satisfaction with the education provided by the college compared to female students.

H2. Male students have higher satisfaction with installations (facilities and services), which in turn leads to higher satisfaction with the social aspects of the college compared to female students.

H3. Male students have higher satisfaction with the educational aspects of the college, which leads to a more positive perception of QCL compared to female students.

H4. Male students have higher satisfaction with the social aspects of the college, which leads to a more positive perception of QCL compared to female students.

H5. Male students have a more positive perception of QCL, which in turn leads to a more favourable perception of QoL compared to female students.
H6. Male students have a more positive perception of QCL, which leads to them more strongly identifying with the college compared to female students.

H7. Male students have a more positive perception of QCL, which in turn leads to a more favourable impact on their positive word of mouth (WoM) about the college compared to female students.

4. Methodology

For this quantitative research, the primary data collection tools (questionnaires) were developed from scales used in previous, similar work (Blazquez et al., 2013; Sirgy et al., 2007; Yu and Lee, 2008) and reviewed in light of more recent articles (e.g. Arslan and Akkas, 2014; Stephenson and Yerger, 2015) and adapted to measure the latent variables considered in this research. Seven constructs were identified: Quality of College Life (QCL), three antecedents (Installations Satisfaction, Education Satisfaction, and Social Satisfaction), and three consequences (Quality of Life, Identification, and Word of Mouth). A seven-point Likert-type scale, from 1 (strongly disagree) to 7 (strongly agree), was used to collect student answers. In addition, we collected sociodemographic information (including age, gender, degree path, and grade). Preliminary questionnaire drafts were tested on a student sample and corrected to enhance content validity. Only minimal revisions were needed.

Quota sampling was used to select survey participants among students seeking degrees in Business Administration, Social Work, or Social Education at the Faculty of Social Science at the University of Castilla-La Mancha (Spain) in during the 2016-2017 academic year. Data collection occurred from April to May 2017 and resulted in 243 completed and validated questionnaires. We used G*Power 3.1.9.2 to identify the optimal sample size based on statistical power (Faul et al., 2009). Utilizing a standard error of 0.05 and an effect size of 0.15, the results show that the statistical power of the sample is acceptable.

For analysis, the Structural Equation Model (SEM) was selected for completing the research. SEM is a statistical process that supports the analysis of complex relationships, offering a direct approach to multiple relationships and dependence with unobservable concepts that is statistically efficient (Sarstedt et al., 2017). SEM allows us to verify the measurement of functional hypotheses, both predictive and causal, applied in behavioural and social sciences, as well as management and health (Bagozzi and Yi, 1988). In particular, the research model was tested using
partial least squares (PLS-SEM), which is an SEM system based on variance (Roldan and Sanchez-Franco, 2012).

PLS-SEM was the most appropriate analysis method to approach this research for several reasons. First, PLS-SEM is preferred over the techniques based on covariance when the study objective is oriented towards a causal-predictive investigation rather than for testing theories (Hair et al., 2014). Second, PLS-SEM allows researchers to consider in a more flexible way the different elements included in the model (Sarstedt et al., 2014). In addition, since the connection between the constructs in the model corresponds to a composite measurement model, previous studies, including both empirical simulation studies (Becker et al., 2013) and theoretical (Henseler et al., 2014), recommend the use of PLS-SEM. Finally, nonparametric SEM techniques are suitable for Multi-group Analysis (Hair et al., 2014, Henseler et al., 2016a). We used SmartPLS version 3.2.7 software (Ringle et al., 2015) to carry out the PLS-SEM analysis.

Data analysis applied a three-step approach. First, we estimated and analysed each individual model, as PLS-SEM uses a two-step estimation process (Hair et al., 2014; Roldan and Sanchez-Franco, 2012). Initially, the measurement model is evaluated, which involves studying the relationship between the indicators and the latent variable. The structural model then allows determining the relationship between the different latent variables by evaluating the path coefficients and their level of significance. Third, to determine if there are differences between the path coefficients of the two groups according to gender, we performed a Multi-Group Analysis (MGA).

5. Results

Demographically, the study sample consisted of undergraduate students between 18 and 32 years old, with 40% men and 60% women. In terms of academic progression, 26.7% were in their first year, 30.5% in the second, 30% in the third year, and 12.8% in the fourth year. By degree, 32.1% of the respondents were in Social Education, 37.4% Business Administration, and 30.5% Social Work.

5.1. Assessment of the measurement model

Evaluation of a measurement model involves the study of the reliability and validity of the latent variables via an analysis of the relationship with their associated items. The evaluation of reflexive measures in PLS-SEM is established by the analysis of the reliability of the individual items,
construct reliability, convergent validity, and discriminant validity (Roldan and Sánchez-Franco, 2012). For assessment of individual reliability, it is necessary to determine the factor load of each indicator on its associated latent variable and compare it with a threshold value. To be considered acceptable, the loading of each indicator should be higher than 0.7 (Hair et al., 2011). The results of the assessment of reliability analysis showed that the loadings of all indicators were above 0.757 (see Table 1), which affirms that the individual item reliability is adequate for the two groups.

To assess construct reliability, Composite Reliability above a 0.7 threshold was used (Nunnally and Bernstein, 1994) (see Table 1). To evaluate the convergent validity of the measurement model, we calculated the Average Variance Extracted (AVE). For convergent validity to be acceptable, the AVE value of the constructs must be greater than 0.5 (Hair et al., 2011). For both models, all constructs showed convergent validity, as AVE values exceed level 0.5 (Table 1).

Finally, the discriminant validity was determined. The discriminant validity determines the degree to which a construct diverges empirically from the rest of the constructs of the model. Previous research used the Fornell and Larcker (1981) criterion to establish discriminant validity in PLS-SEM (Hair et al., 2014). This method establishes that the root of the AVE for each construct should be higher than the correlations between constructs and the other constructs in the model to affirm discriminant validity. Table 2 summarises the data that confirms this.

In addition to the assessment of the discriminant validity in this study, the proposed heterotrait–heteromethod (HTMT) ratio was employed (Henseler et al., 2015). The HTMT index, established as a superior criterion, is the average of the heterotrait–heteromethod correlations relative to the average monotrait–heteromethod correlations. Previous studies have suggested construct thresholds of 0.9 for HTMT to establish discriminant validity (Henseler et al., 2015). Table 3 shows the results of the discriminant validity assessment using the HTMT ratio. All values are less than 0.9, indicating that each of the models used in the research has an acceptable discriminant validity.
5.2. Assessment of the structural model

Having established the validity and reliability of the measurement model, we identified the relationships between the constructs included in the study. To assess the structural model, it is necessary to evaluate the sign, size, and significance of the structural path coefficients, as well as the $R^2$ values and the model fit values. Correspondingly, those path coefficients, and by extension the hypotheses proposed, that are significant according to a students’ $t$ distribution are accepted. Consistent with Hair et al. (2017), bootstrapping (5000 resamples) allowed us to evaluate the coefficients’ statistical significance. On the other hand, $R^2$ values of the endogenous constructs were calculated to assess the models’ explanatory power. This follows the Falk and Miller (1992) approach, which states that the $R^2$ value of the endogenous constructs must exceed the value of 0.1 for the model to be considered as having sufficient predictive capacity. The results obtained for the two models analysed are shown in Figure 2 and Figure 3.

[FIGURE 2]

The results showed that male students’ satisfaction with the facilities affects to a similar degree their satisfaction with education ($\beta=0.643$, $p<0.01$) as well as their social environment ($\beta=0.653$, $p<0.01$). In terms of QCL, satisfaction with the educational aspects proved more significant ($\beta=0.482$, $p<0.01$) than social satisfaction ($\beta=0.298$, $p<0.01$). Finally, the Quality of College Life of a male student had a substantial effect on WoM ($\beta=0.764$, $p<0.01$), Identification ($\beta=0.616$, $p<0.01$) and Quality of Life ($\beta=0.427$, $p<0.01$).

[FIGURE 3]

The results for female students revealed the significance of satisfaction with installations in terms of academic ($\beta=0.444$, $p<0.01$) and social satisfaction ($\beta=0.404$, $p<0.01$). However, social satisfaction did not demonstrate a significant influence on QCL. Finally, the impact of QCL significantly influenced WoM ($\beta=0.543$, $p<0.01$), Identification ($\beta=0.425$, $p<0.01$) and QoL ($\beta=0.371$, $p<0.01$).

Moreover, the $R^2$ values of all the endogenous constructs surpass the limit established by Falk and Miller (1992) in both models, showing the predictive capacity of the model. In contrast, since the $R^2$ value measures the amount of variance of the explained construct, the results show
Title

Differences between both groups. The model regarding female students has lower $R^2$ values, which demonstrates that QCL is determined to a lesser extent by the antecedents established in the model and, in turn, has a more minor effect on the three variables considered as results. In addition, the values of the standardized root mean square residual (SRMR) were calculated for the two groups, as an approximate model fit for PLS-SEM. The results revealed that the SRMR values of 0.063 for male and 0.058 for female students are considered acceptable since they are lower than the thresholds of 0.08 (Henseler et al., 2016a).

5.3. Multigroup Analysis (MGA)

To assess if the differences are statistically significant, this study employed two advanced analysis techniques for performing multi-group analysis (MGA): Henseler’s MGA (Henseler et al., 2009) and the Permutation Test (Hair et al., 2018). Prior to performing a multi-group analysis, however, Henseler et al. (2016b) advocates testing the measurement invariance via the Measurement Invariance of Composites Models (MICOM) approach, suitable for PLS-SEM.

The MICOM procedure offers a way to study invariance through a three-step process involving: (a) evaluation of the configuration invariance (i.e., the same estimation method); (b) determination of the invariance evaluation of the composition (i.e., same weights of the indicators); and (c) evaluation of equality of means and variances. If it is possible to identify the invariance of the configuration and the composition, then the partial invariance of the measurements can be established, allowing the path coefficient estimates to be compared across the groups. In accordance with the MICOM procedure, the results showed a partial measurement invariance (see Table 4). Since configural and compositional invariance is a requirement to continue with the multi-group analysis, this result allowed comparing and interpreting the path coefficients between the samples from male and female students.

[TABLE 4]

Once the measurement invariance was confirmed, the multi-group analysis was performed using the methods of Henseler’s MGA and the permutation test. Henseler’s MGA develops a comparison of the estimated bootstrap values for each of the two samples studied. Based on the values obtained according to this method, a p value of less than 0.05 or greater than 0.95 shows 5% of significant differences between the path types (Henseler et al., 2009). In contrast, permutation tests analyse the differences between
the weights of the indicators used to measure each construct, as well as the relationships between the latent variables across the groups.

Table 5 shows the results of both methods. Both methods used confirm the significance of the differences between male and female students in the influence of installation satisfaction on education and social satisfaction, and the impact of QCL on identification and WoM. The effects of installation satisfaction on education and social satisfaction was much higher for male than female students. In the same way, the effects of QCL on Identification and WoM was lower for female than for male students.

6. Conclusions

Quality must be a fundamental element for all organizations, including those public administrations dedicated to education. To improve quality, it is important to include mechanisms to measure quality from the perspective of students. In this way, the improvement of quality standards will be facilitated through a continuous improvement of the system.

In this sense, understanding the complexity of student Quality of Life measures has become crucial from the standpoints of university management and market competition (Arslan and Akkas, 2014). For the university, it is important to build a reputation to attract candidates such that they enrol. It is crucial that the university improve its Quality of College Life (QCL) measures and, as a result, student loyalty (determined by Identification and Word of Mouth) (Pedro et al., 2018). This also contributes to building a positive image of the university through students’ Identification with it and positive Word of Mouth (WoM) reports.

On the other hand, the development of strategies aimed at enhancing satisfaction among students must consider the differences between sociodemographic characteristics. Such differences have often provided fundamental segmentation criteria when establishing various strategic in strategies. Organizations continuously develop different products and services based on age, social category, and gender. The present work brings that basic segmentation to an analysis of differences in the measurement of Quality of University Life (QCL).

The results of this study have shown that student perception of QCL is dependent on gender, in all cases with higher male satisfaction than female. Moreover, multigroup analysis indicates that satisfaction with the university facilities and the effect of QCL on Identification and Word of Mouth is significantly different for males compared to females. Similarly, Arslan and Akkas (2014, p. 869) find that if university managers want to increase the level of academic satisfaction among students, they should
first focus on improving student satisfaction with social life and only then focus on improving the university infrastructure and services. While results from this study confirm this contention, improving social aspects for gender are indicated in our research as well.

This study is useful for the university administration to help in the systematic assessment of student satisfaction and the related improvement of programs and services. On the one hand, universities must show greater attention to the resources on which they base their educational activity. The importance of having excellent facilities will allow students to achieve a stronger sense of the university’s resources. More significantly, however, greater attention must be paid to the social aspects of university life, extra-curricular activities, since these not only have an important effect on the overall perception of satisfaction with university life but also a more important one.

Moreover, strategies aimed at improving student satisfaction on campus should not be developed in an undifferentiated way. Segmentation criteria should be established based on student characteristics, particularly gender. Understanding why women feel consistently less satisfied with university life needs addressing as well. Answering these issues, the reputation of the university stands potentially to improve while also enhancing its appeal in the eyes of potential students. This in turn will strengthen the university position within a competitive market for students.

References


Title


Figures

Figure 1 Quality of College life Conceptual Model
Figure 2 – Male Students Structural Model Results

Notes: *p < 0.01; **p < 0.001
Figure 3 – Female Students Structural Model Results

Notes: ⋅ *p < 0.01; ⋅ ⋅ *p < 0.001
### Tables

#### Table 1. Assessment Results of the Measurement Model.

<table>
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<tr>
<th>Construct/Associated Items</th>
<th>Loading Male</th>
<th>Loading Female</th>
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<th>Composite Reliability Female</th>
<th>Average Variance Extracted (AVE) Male</th>
<th>Average Variance Extracted (AVE) Female</th>
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<td>Ident3</td>
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<td>Ident5</td>
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<td>Ident6</td>
<td>0.843</td>
<td>0.859</td>
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</tr>
<tr>
<td>WoM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WoM1</td>
<td>0.945</td>
<td>0.941</td>
<td></td>
<td></td>
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<tr>
<td>WoM2</td>
<td>0.922</td>
<td>0.875</td>
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<tr>
<td>WoM3</td>
<td>0.941</td>
<td>0.930</td>
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</table>
Table 2. Discriminant Validity (Fornell–Larcker Criterion).

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I.S.</td>
<td>S.A.</td>
</tr>
<tr>
<td>I.S.</td>
<td>0.931</td>
<td></td>
</tr>
<tr>
<td>E.S</td>
<td>0.643</td>
<td>0.925</td>
</tr>
<tr>
<td>S.S.</td>
<td>0.653</td>
<td>0.803</td>
</tr>
<tr>
<td>QCL</td>
<td>0.455</td>
<td>0.721</td>
</tr>
<tr>
<td>QoL</td>
<td>0.344</td>
<td>0.485</td>
</tr>
<tr>
<td>ID</td>
<td>0.565</td>
<td>0.627</td>
</tr>
<tr>
<td>WoM</td>
<td>0.488</td>
<td>0.765</td>
</tr>
</tbody>
</table>

Notes: I.S: Installations Satisfaction; E.S: Education Satisfaction; S.S: Social Satisfaction; QCL: Quality of College life; QoL: Quality of Life; ID: Identification; WoM: Word of Mouth. The square root of AVEs are shown diagonally in bold.
Table 3. Discriminant Validity (HTMT Criterion).

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I.S.</td>
<td>S.A.</td>
</tr>
<tr>
<td>E.S</td>
<td>0.700</td>
<td>0.480</td>
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<tr>
<td>S.S.</td>
<td>0.706</td>
<td>0.873</td>
</tr>
<tr>
<td>QCL</td>
<td>0.505</td>
<td>0.805</td>
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<tr>
<td>QoL</td>
<td>0.368</td>
<td>0.525</td>
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<tr>
<td>ID</td>
<td>0.613</td>
<td>0.684</td>
</tr>
<tr>
<td>WoM</td>
<td>0.524</td>
<td>0.825</td>
</tr>
</tbody>
</table>

Notes: I.S: Installations Satisfaction; E.S: Education Satisfaction; S.S: Social Satisfaction; QCL: Quality of College life; QoL: Quality of Life; ID: Identification; WoM: Word of Mouth.
Table 4. Results of Invariance Measurement Testing Using Permutation.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Configural Invariance</th>
<th>Composition Invariance (Correlation = 1)</th>
<th>Partial Measurement Invariance Established</th>
<th>Equal Mean Assessment</th>
<th>Equal Variance Assessment</th>
<th>Full Measurement Invariance Established</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.S.</td>
<td>Yes</td>
<td>1.000</td>
<td>Yes</td>
<td>-0.099</td>
<td>[-0.213 – 0.219]</td>
<td>Yes</td>
</tr>
<tr>
<td>E.S</td>
<td>Yes</td>
<td>1.000</td>
<td>Yes</td>
<td>-0.553</td>
<td>[-0.218 – 0.222]</td>
<td>No</td>
</tr>
<tr>
<td>S.S.</td>
<td>Yes</td>
<td>1.000</td>
<td>Yes</td>
<td>-0.580</td>
<td>[-0.220 – 0.228]</td>
<td>No</td>
</tr>
<tr>
<td>QCL</td>
<td>Yes</td>
<td>1.000</td>
<td>Yes</td>
<td>-0.496</td>
<td>[-0.214 – 0.223]</td>
<td>No</td>
</tr>
<tr>
<td>QoL</td>
<td>Yes</td>
<td>1.000</td>
<td>Yes</td>
<td>-0.317</td>
<td>[-0.227 – 0.224]</td>
<td>No</td>
</tr>
<tr>
<td>ID</td>
<td>Yes</td>
<td>0.999</td>
<td>Yes</td>
<td>-0.323</td>
<td>[-0.220 – 0.224]</td>
<td>No</td>
</tr>
<tr>
<td>WoM</td>
<td>Yes</td>
<td>0.999</td>
<td>Yes</td>
<td>-0.574</td>
<td>[-0.219 – 0.216]</td>
<td>No</td>
</tr>
</tbody>
</table>
Table 5. Results of Multigroup Analysis

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Path Coefficient</th>
<th>Confidence Interval (95%)</th>
<th>Path Coefficient Difference</th>
<th>p-Value Difference (One-Tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>I.S. → E.S.</td>
<td>0.643**</td>
<td>0.444**</td>
<td>[0.518, 0.758]</td>
<td>[0.283, 0.588]</td>
</tr>
<tr>
<td>I.S. → S.S.</td>
<td>0.653**</td>
<td>0.404**</td>
<td>[0.515, 0.770]</td>
<td>[0.252, 0.547]</td>
</tr>
<tr>
<td>E.S. → QCL</td>
<td>0.482**</td>
<td>0.446**</td>
<td>[0.236, 0.694]</td>
<td>[0.257, 0.617]</td>
</tr>
<tr>
<td>S.S. → QCL</td>
<td>0.298**</td>
<td>0.176</td>
<td>[0.083, 0.539]</td>
<td>[-0.002, 0.363]</td>
</tr>
<tr>
<td>QCL → QoL</td>
<td>0.427**</td>
<td>0.371**</td>
<td>[0.243, 0.602]</td>
<td>[0.229, 0.520]</td>
</tr>
<tr>
<td>QCL → ID.</td>
<td>0.616**</td>
<td>0.425**</td>
<td>[0.453, 0.758]</td>
<td>[0.279, 0.572]</td>
</tr>
<tr>
<td>QCL → WoM</td>
<td>0.764**</td>
<td>0.543**</td>
<td>[0.657, 0.850]</td>
<td>[0.392, 0.677]</td>
</tr>
</tbody>
</table>