

# VALIDITY AND RELIABILITY OF THE STUDENTSURVEY.IE QUESTIONNAIRE

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DR. STEPHEN ERSKINE, MR. DAVID HARMON, PROF. MYRA O'REGAN

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## 1. Introduction and Background

This report examines the reliability and validity of the StudentSurvey.ie 2023 national survey of students. Since 2013, there has been a regular national survey of first and final-year undergraduate students, and taught postgraduates.

This report is the third of its kind for StudentSurvey.ie. The first looked at the validity and reliability of the 2016 survey to undergraduate and taught postgraduate students. The second was in 2018 which examined the reliability and validity of the pilot survey for postgraduate research students. This report follows a similar structure to the earlier iterations by providing a detailed statistical assessment of the questions and the responses obtained to this survey, to ensure that the survey instrument is performing the task for which it was designed.

### 1.1. Initial Observations

The following observations are made about the structure of the data:

- The questionnaire categorises questions into general topics. These general topics have been utilised to create the indicators used in the analysis. Table 1.1 below outlines the topics and questions included in these indicators.
- The ten engagement indicators are derived from 52 individual items.
- With one exception (QI – Quality of Interactions) 4-point scales were used.
- A seven-point scale is used for the QI (Quality of Interactions) indicator with point 1 being labelled “Poor” and point 7 being labelled “Excellent”. The interpretation of the meaning of the points within this range is left up to the respondents. There is an option for respondents to indicate that a particular item within this indicator is “not applicable”. This has implications for the analysis as only responses from 1 to 7 are considered valid.
- All the scales used in the model are in the same direction from left to right with the left end indicating a negative response and the right end a positive response.
- The response data file contained a weight used to extrapolate to the population of students. This weight was not used (or required) during this analysis.

- The assumption underlying much of the analysis below, is that the distance between categories is not as variable as one may presume, and as such, the scales can be treated as interval where distances between categories are fixed, for example, the distance between ‘agree’ and ‘strongly agree’ is the same as the distance between ‘agree’ and ‘neither agree nor disagree’. Analysis of interval variables has greater empirical weight than analysis of ordinal variables, so is often preferred. However, treating ordinal variables as if they are interval in the absence of evidence to support this can undermine the validity of the entire approach.
- As such, rather than take this assumption as a given, preliminary analysis was conducted on the assumption that the variables are ordinal, and then as interval-level. If the results for each approach differed significantly then it would have been highly likely that statistical techniques that necessitate interval-level variables would be unsuitable for use here. However, the ordinal-level analysis was very similar to that of the interval-level analysis. As such, the assumption of fixed distances between categories appears to be supported and means that using interval-level statistical techniques has validity. This is discussed further below.
- Some outputs in this report are based on a transformed indicator score instead of the original scale. This transformation is necessary and enables results across indicators to be compared on a common scale. The construction of the common scale is described in Appendix E.

Table 1.1: List of indicators with response categories

| Code | Indicator                            | Response Categories                       | No of Items |
|------|--------------------------------------|---|-------------|
| HO   | Higher Order Learning                | Very little, some, quite a bit, very much | 4           |
| RI   | Reflective and Integrative Learning  | Never, sometimes, often, very often       | 7           |
| QR   | Quantitative Reasoning               | Never, sometimes, often, very often       | 3           |
| LS   | Learning Strategies                  | Never, sometimes, often, very often       | 3           |
| CL   | Collaborative Learning               | Never, sometimes, often, very often       | 4           |
| SF   | Student-Faculty Interaction          | Never, sometimes, often, very often       | 4           |
| ET   | Effective Teaching Practices         | Very little, some, quite a bit, very much | 5           |
| QI   | Quality of Interactions              | Poor, -, -, -, -, Excellent               | 5           |
| SE   | Supportive Environment               | Very little, some, quite a bit, very much | 8           |
| LC   | Learning, Creative and Social Skills | Very little, some, quite a bit, very much | 9           |

- In addition to the standard questionnaire, individual HEIs were given a choice to use one of five topical modules to administer to their students. The selection of an additional module was voluntary. These topical modules and their response categories are outlined in Table 1.2. As such, this means that students as a whole, did not see every topical module. Instead, the topical module viewed by students was determined by their HEI.

Table 1.2: List of Topical Modules with response categories

| Code | Module Topic                                | Response Categories   | No of Items |
|------|---|---|-------------|
| TM1  | Career and Workforce Preparation            | - Very little, some, quite a bit, very much<br>- Have not decided, do not plan to, plan to do, done or in progress  | 13          |
| TM2  | Civic Engagement                            | Very little, some, quite a bit, very much   | 7           |
| TM3  | Experiences with Online Learning            | - Not at all comfortable, somewhat comfortable; very comfortable<br>- Not at all important, somewhat important, important, very important<br>- Strongly disagree, disagree, agree, strongly agree | 19          |
| TM4  | Inclusiveness and Engagement with Diversity | - Very little, some, quite a bit, very much<br>- Never, sometimes, often, very often  | 12          |
| TM5  | Academic Integrity                          | - Very little, some, quite a bit, very much<br>- Strongly disagree, disagree, agree, strongly agree   | 15          |

The choice of topical modules across HEIs is presented in Table 1.3.

Table 1.3: List of HEIs and their Topical Modules

| Code         | Number of Selections |
|--------------|----------------------|
| TM1          | 3                    |
| TM2          | 1                    |
| TM3          | 3                    |
| TM4          | 3                    |
| TM5          | 7                    |
| <b>Total</b> | <b>17</b>            |

- Topical Module 5 (Academic Integrity) was the most popular selection with seven HEIs asking their students to complete this set of additional questions.
- Topical Module 2 (Civic Engagement) was only selected for inclusion by one HEI.
- Four HEI's did not administer any topical module to their students (inclusion was optional).

## 1.2. Meta-Level Analysis

Appendix A presents the frequencies of each item contained within each indicator. It also shows the percentage of students who did not provide a valid response to the item. As much of the following analysis is based on correlations, it is important to examine the frequency of each item. Interestingly, the percentage of missing data for the questions used to create the indicators ranges from approximately four to 40 percent with the percentage of missing responses generally increasing from the beginning to the end of the questionnaire. Overall, the proportion of missing values is relatively low, with an average of approximately 20 percent.

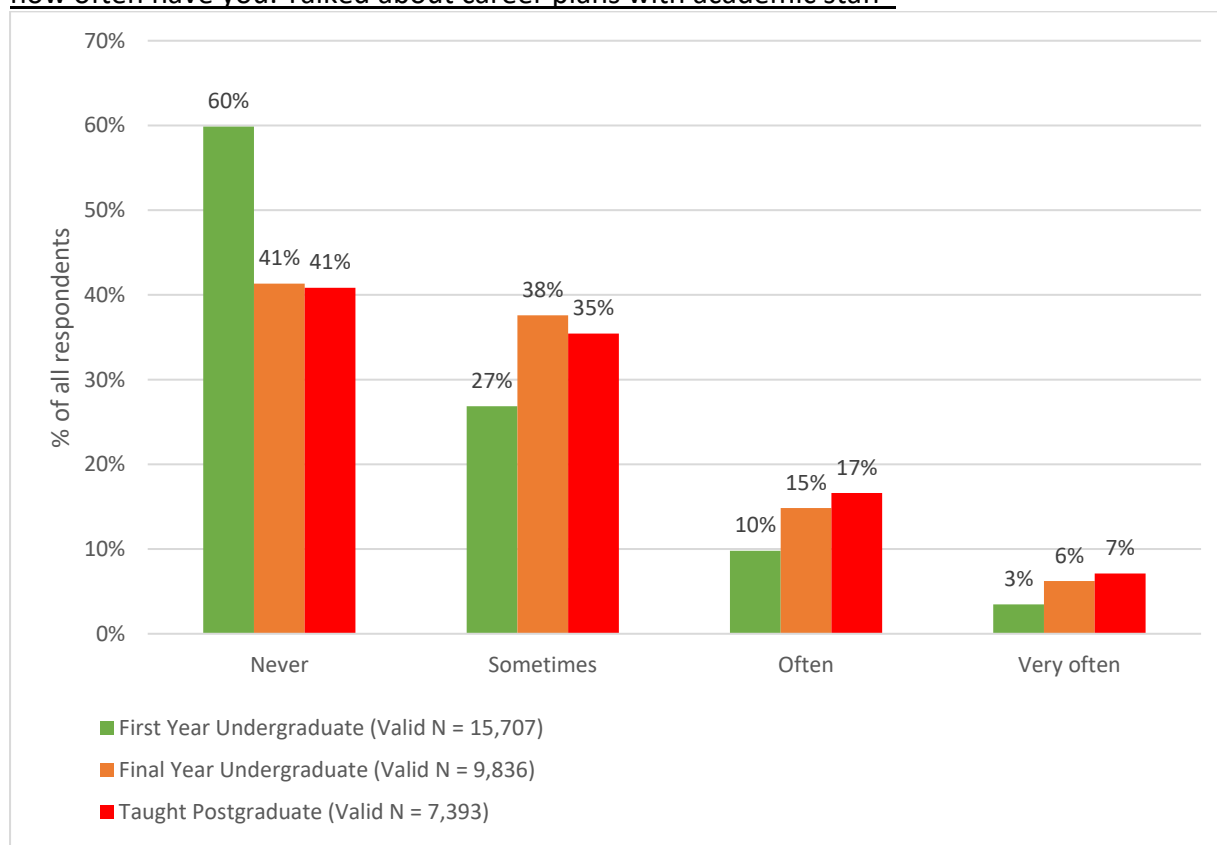
However, there are a number of items where the data has been labelled as missing but are more correctly 'not applicable' responses. Questions within the Quality of Interactions (QI) indicator have the option to select 'not applicable' if students do not have any interactions with any of the options, and this results in a larger than normal proportion of non-valid data (as they may not have had an interaction with some of the choices offered). However, these responses have been combined with the missing category, which are students who skipped these questions entirely. It would be good coding practice going forward to be able to distinguish the missing data from "not applicable" responses so that the proportion of missing data can be accurately compared across items.

Missing data could also be a problem if it indicated an underlying problem with the structure of certain questions. For example, if we saw particularly high levels of non-response for certain questions, then this could indicate that these questions were not being understood or were ambiguous. This does not appear to be the case here as the gradual upward trend is more symptomatic of a natural fatigue with the length of the survey, and within indicators, there does not appear to be any particular questions that have significantly more missing data than the other questions used in the construction of the same indicator (with the exception of Quality of Interactions (QI) indicator where the percentage of missing values ranged from approximately 27 percent to 40 percent depending on their possible interactions with selected individuals).

Even with all of the above taken into account, missing data still has implications for the statistical analysis undertaken in this report, as listwise deletion of cases is used which means that the total number of eligible cases for analysis is reduced because entire cases are removed when there is missing data for one of the responses. In contrast to the above, the missing data on the topical modules is much more substantial because students were only presented with one (or no) module. As a result of this, the missing data ranges from approximately 85 percent to 98 percent. This has severe implications on what is possible through statistical analysis.

There were three study groups in the analysis: first year undergraduates, final year undergraduates, and taught postgraduates. Each item was examined by this grouping variable to see if the groups responded differently. Largely the difference across groups was negligible. However, some differences were found between the groups when differences would be expected, thereby providing corroborative evidence that the questions are capturing what we would want them to capture. Figures 1.1 & 1.2 show examples of these expected differences.

Figure 1.1: Responses by cohort to the Question: “During the current academic year, about how often have you: Talked about career plans with academic staff”



From Figure 1.1, final year undergraduate and taught postgraduate students are more likely to spoken to academic staff about their career plans than first year undergraduates.

Figure 1.2: Responses by cohort to the Question: “How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?: Acquiring job- or work-related knowledge and skills

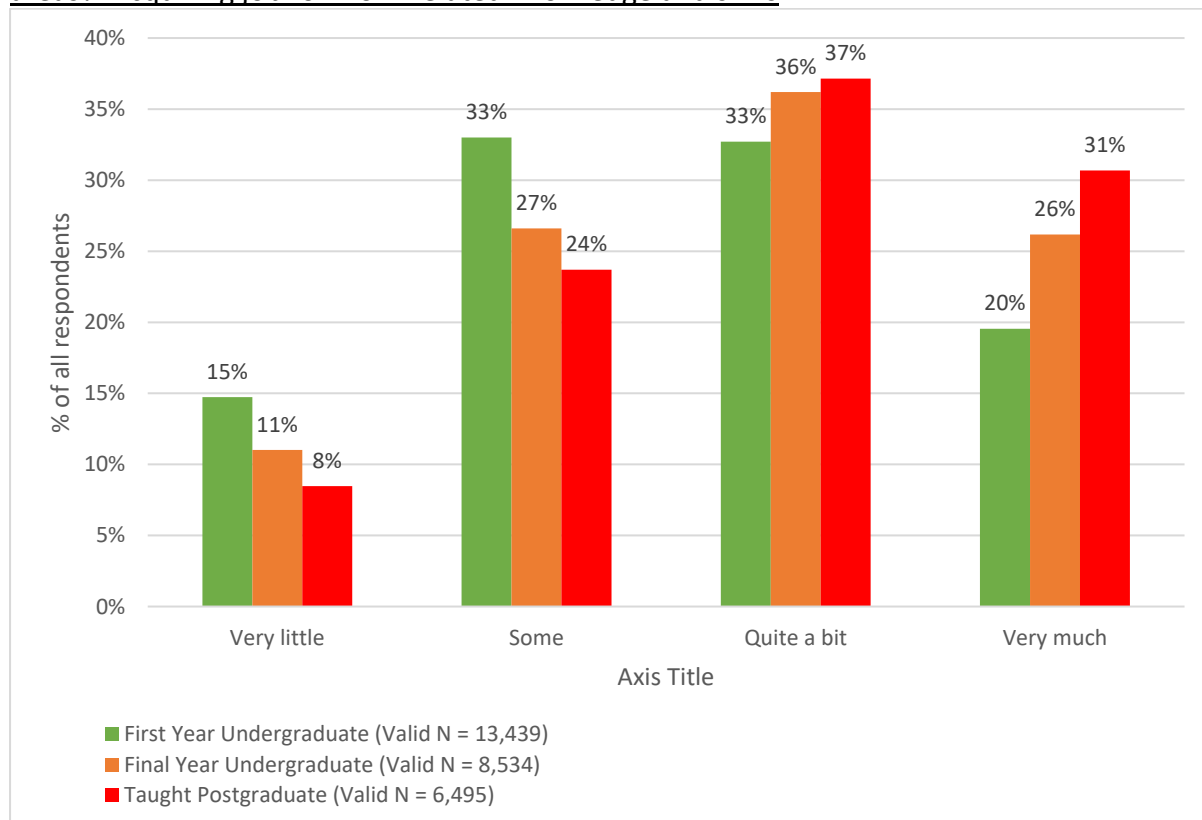


Figure 1.2 shows a similar pattern in that final year undergraduate and taught postgraduate students tend to think that their institution has contributed to their knowledge, skills and personal development. These are areas which require time to develop, and as such it is not surprising that first year undergraduates are less likely to agree with this statement.

Figure 1.1 and Figure 1.2 are examples of known group validity within the data as the results conform to prior expectations.

As discussed above, each of the questions are assigned within the questionnaire to one of ten indicators (as outlined in the appendices). The remainder of this report details the analysis conducted on the ten indicators through examination of:

- The correlation among the 52 individual items, and within the topical modules
- The reliability of each of the indicators
- The distribution of the total median scores of the indicators (and study groups)

- The correlation among the indicators
- How well the proposed ten-factor structure fits the data.

These topics are covered individually in each of the next sections.

## 2. Correlation (Items)

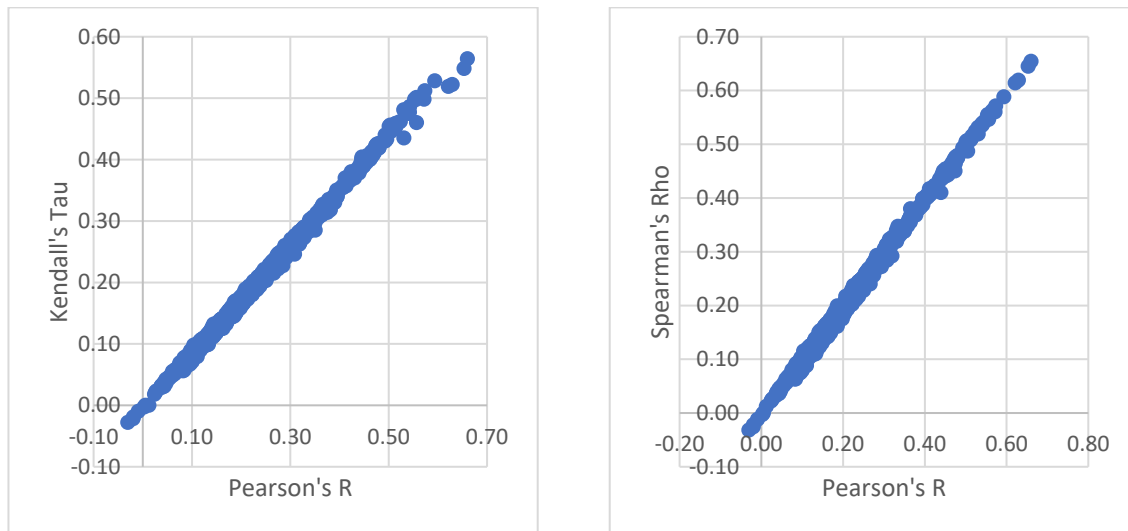
Correlation is a method of bivariate analysis that measures the strength of linear association between two variables, and the direction of the relationship. In terms of the strength of relationship, the value of a correlation coefficient varies between +1 and -1. A value of 1 (or minus 1) indicates a perfect degree of association between the two variables. As the correlation coefficient value goes towards 0, the relationship between the two variables is weaker.

The correlations between all 52 items were computed at an overall level. Correlation coefficients can be calculated in a variety of ways based upon the structure of the data and the assumptions underpinning the analysis. As discussed in Section 1.1, although the variables in question are ordinal, they have been examined *as if* they were interval-level. The Pearson R correlation statistic is the most widely used method of measuring association between two interval-level variables, and the correlation matrix presented in Appendix B shows these results.

To examine the assumption that the data could be treated as interval-level, we also calculated correlation coefficients calculated using Spearman's Rho and Kendall's Tau. These methods are non-parametric, in that they do not carry any assumptions about the structure or distribution of the data, and are an appropriate method when variables are at least ordinal.

Figure 2.1 plots these non-parametric correlation coefficients against the Pearson's R correlation coefficients, and it is striking how strong the association between each method of calculating the correlation coefficients. As such, the high degree of association between each of the correlation calculations lends support to the assumption that the variables can be examined as if they were interval-level.

Figure 2.1: Scatterplots of Kendall's Tau and Spearman's Rho against Pearson's R correlation coefficients



The matrix in Appendix B provides a correlation between each individual item used in the questionnaire. It uses colours to indicate the strength of the relationship with high values indicated by green (stronger relationships) and low values by red (weaker relationships). Ideally, items within an indicator should be highly correlated (green), while items should not be correlated with items in other indicators. In general, this appears to be the case, as correlations between items within the same indicator are high (green) and correlations between items in different indicators are low (yellow, orange or red).

The most notable exceptions are the items contained in *lc\_analyse* which asked if students had analysed data using numerical and statistical information and *qr\_conclude*, *qr\_problem*, and *qr\_evaluate*, which asked if students had reached conclusions based on analysis of numerical information, used numerical information to examine a real-world problem or issue, or evaluated what others have concluded from numerical information. The correlation between these items is positive, strong, and consistent across the items. Though as these items relate to analysing data, the overarching thematic similarity between these components mean that we should not be too surprised that they are strongly correlated.

As noted above, students only saw one topical module, if they saw one at all, which as a result means that we only ever have responses within one module and never across all five. This means we are unable to look at the correlations across the topical modules. However, we are still able to examine the within-group correlations. These are presented in Appendix C.

Much like the correlation matrix in Appendix B, colours are used to indicate the strength of the correlations with high values indicated by green and low values by red. Ideally, items within an indicator should be highly correlated, and this appears to be mostly the case in each matrix. The notable exceptions are in Topical Modules 3 and 5 when a bank of questions in each are relatively uncorrelated or negatively correlated. For example, in Topical Module 5, the bank of questions on academic integrity and students' experiences of cheating tend to elicit strong negative responses compared against the rest of the questions in the module.

### 3. Reliability (Indicators)

The reliability of each indicator was assessed by calculating Cronbach's Alpha, which is a measure of internal consistency of all items within an indicator, i.e. how well items *hang* together. Cronbach's Alpha was computed for the overall group for each indicator and also for each study group. The results are displayed in Table 3.1.

Table 3.1: Cronbach's Alpha for each indicator overall and by study group

| Description                          | No of Items | Overall     | First year undergraduates | Final year undergraduates | Taught postgraduates |
|--------------------------------------|-------------|-------------|---------------------------|---------------------------|----------------------|
| Higher Order Learning                | 4           | <b>0.80</b> | 0.77                      | 0.82                      | 0.86                 |
| Reflective and Integrative Learning  | 7           | <b>0.78</b> | 0.75                      | 0.78                      | 0.80                 |
| Quantitative Reasoning               | 3           | <b>0.74</b> | 0.71                      | 0.74                      | 0.78                 |
| Learning Strategies                  | 3           | <b>0.66</b> | 0.64                      | 0.65                      | 0.68                 |
| Collaborative Learning               | 4           | <b>0.70</b> | 0.67                      | 0.71                      | 0.73                 |
| Student-Faculty Interaction          | 4           | <b>0.77</b> | 0.76                      | 0.77                      | 0.80                 |
| Effective Teaching Practices         | 5           | <b>0.79</b> | 0.76                      | 0.79                      | 0.84                 |
| Quality of Interactions              | 5           | <b>0.84</b> | 0.84                      | 0.82                      | 0.86                 |
| Supportive Environment               | 8           | <b>0.88</b> | 0.87                      | 0.88                      | 0.90                 |
| Learning, Creative and Social Skills | 9           | <b>0.87</b> | 0.84                      | 0.87                      | 0.90                 |

The value of Cronbach's Alpha was similar for each indicator across the groups. Although the Cronbach's Alpha values were generally high, the indicator for Learning Strategies is somewhat lower than the other indicators (0.66). Cronbach's Alpha is affected by the number of items and the strength of the inter-correlations between them. For Learning Strategies, the indicator consists of only 3 items and the inter-item correlations are relatively low.

In addition to there being only three items in this indicator, the low Cronbach's Alphas is understandable as the individual items are asking different things, not about aspects of the same thing. For example, the first component asks if students have 'identified key information from recommended reading materials', the second component asks if students have 'reviewed your notes after class, tutorials, labs or studios', and the third asks if students have 'summarised what you learned in class, tutorials, labs or studios, or from course materials. It can be argued that these questions are examining subtly different things rather than aspects of a larger thing, as is the case in the other indicators which hold together much more substantially.

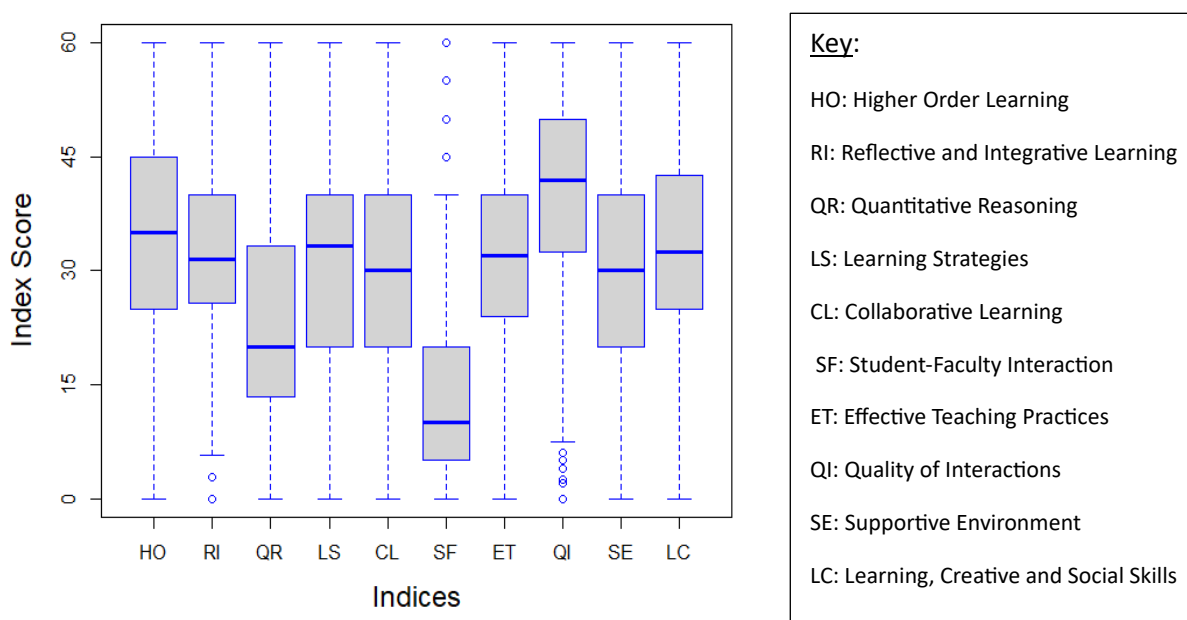
Appendix D provides further information on the reliability analysis for the overall group, in particular, it shows what happens to the Cronbach's Alpha when an item is deleted. For the vast majority (51 out of 52) of cases, the value for Cronbach's Alpha decreases for each variable indicating that the item concerned is making a positive contribution to the indicator.

Regarding the topical modules, the questions asked are not attempting to capture an underlying variable, rather they are attempting to understand a number of disparate topics. As such, Cronbach's Alpha has not been calculated for these questions.

## 4. Transformed Median Scores (Indicators)

A transformed score was computed for each student for each of the ten indicators. The responses were transformed to a common scale enabling comparisons to be quickly and easily made across indicators (with a Maximum score of 60 for each indicator). Appendix E provides a description of how scores were transformed. Figure 4.1 shows the distribution of the transformed median score for each indicator where a higher score is generally more positive.

Figure 4.1: Distribution of the median scores for (transformed) indicators



The boxplots in Figure 4.1 illustrate that the level of agreement with statements contained in each indicator is relatively high with the exception Quantitative Reasoning and Student-Faculty Interaction. This is shown through the median value for each indicator, and the interquartile range. As the median is the central value across the distribution of responses, it is evident that the general level of agreement is quite high as no median value is (barring the above two mentioned cases) is below the midpoint on this scale. The boxes around the median show the interquartile range and illustrate where fifty percent of all responses are located along the scale. As these boxes are relatively narrow, we can see that the distribution of most responses cluster around the median. The median scores for the indicators SF

(Student-Faculty Interaction) and QR (Quantitative Reasoning) are notably lower than the other indicators. However, this is consistent with what was expected and with previous research on the topics and matches what was seen in the 2016 iteration of this report. The Median (transformed) scores for each of the indicators at overall level and for each of the student cohorts is provided in Appendix F.

Figure 4.2: Median (transformed) scores for each indicator by study group

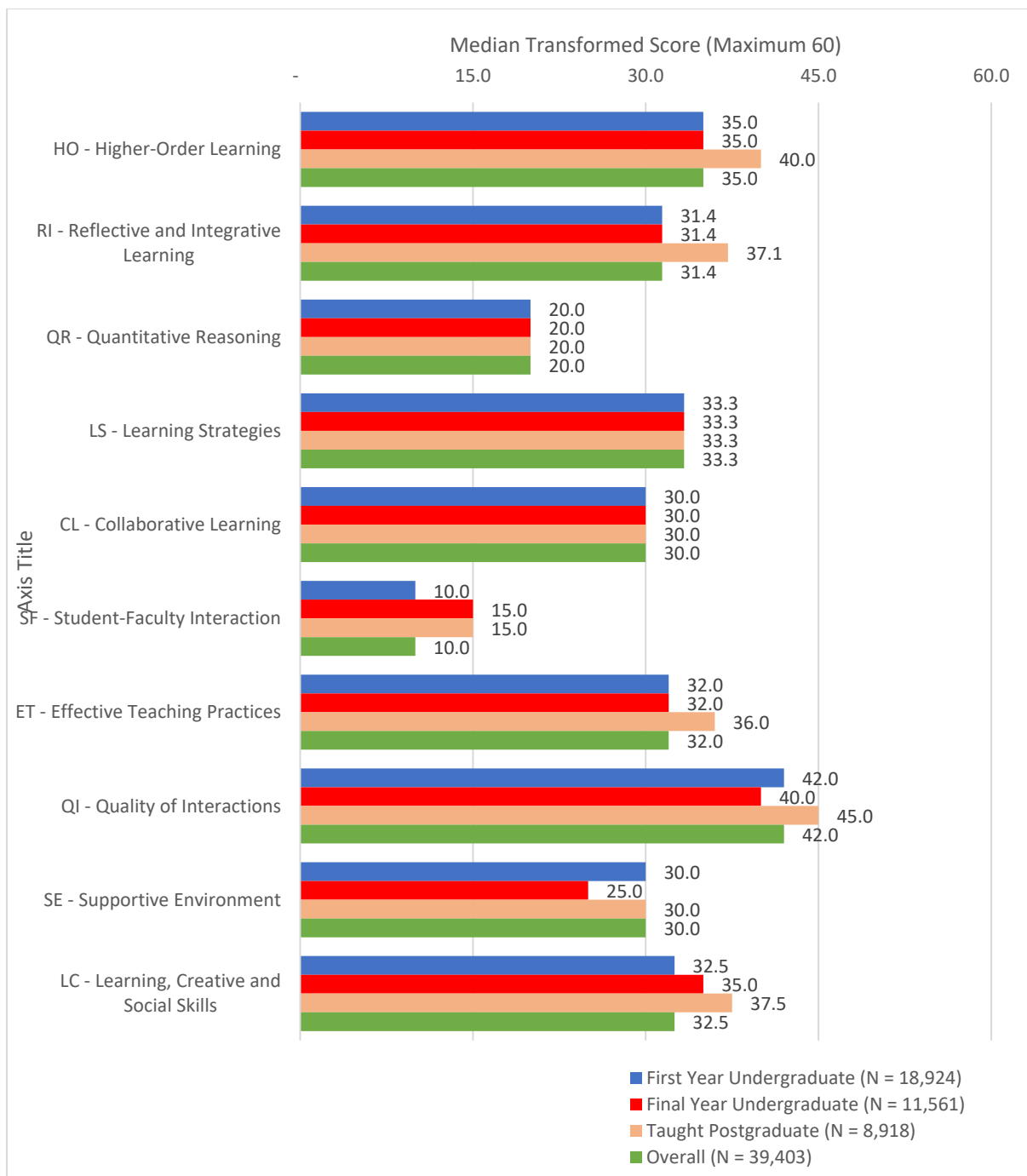


Figure 4.2 presents the transformed median scores for each indicator for all respondents and by study group. This chart shows that, like Figure 4.1, the average score across each indicator is quite high. Furthermore, when we examine the mean score across study group, we see that there is not much variation across groups which suggests that levels of agreement within indicators are very similar when we compare across study groups. We note a lower median score for Student-Faculty Interaction, though the median score increases for students who have spent more time in higher education, i.e. final year undergraduates and taught postgraduates. Much like the pattern seen in Figure 1.2, these differences are not surprising as again these are areas which require time to develop, and as such, first year undergraduates are less likely to have developed high levels of interaction with Faculty members.

## 5. Correlation (Indicators)

As discussed in Section 2, three methods of examining correlations were conducted and the similarity between of the non-parametric methods to the parametric Pearson’s R method supports the assumption that these data can be treated as interval-level data. Figures 5.1 presents the Pearson’s R correlations among the ten indicators at the aggregate level. The correlation for each of the study groups are shown in Appendix G.

Figure 5.1: Correlation between the indicators [Pearson’s R]

|                                      | Higher-Order Learning | Reflective and Integrative Learning | Quantitative Reasoning | Learning Strategies | Collaborative Learning | Student-Faculty Interaction | Effective Teaching Practices | Quality of Interactions | Supportive Environment | Learning, Creative and Social Skills |
|--------------------------------------|-----------------------|-------------------------------------|------------------------|---------------------|------------------------|-----------------------------|------------------------------|-------------------------|------------------------|--------------------------------------|
| Higher-Order Learning                | 1.00                  |                                     |                        |                     |                        |                             |                              |                         |                        |                                      |
| Reflective and Integrative Learning  | 0.54                  | 1.00                                |                        |                     |                        |                             |                              |                         |                        |                                      |
| Quantitative Reasoning               | 0.36                  | 0.35                                | 1.00                   |                     |                        |                             |                              |                         |                        |                                      |
| Learning Strategies                  | 0.46                  | 0.46                                | 0.37                   | 1.00                |                        |                             |                              |                         |                        |                                      |
| Collaborative Learning               | 0.21                  | 0.34                                | 0.32                   | 0.24                | 1.00                   |                             |                              |                         |                        |                                      |
| Student-Faculty Interaction          | 0.26                  | 0.36                                | 0.40                   | 0.34                | 0.32                   | 1.00                        |                              |                         |                        |                                      |
| Effective Teaching Practices         | 0.42                  | 0.34                                | 0.23                   | 0.36                | 0.13                   | 0.32                        | 1.00                         |                         |                        |                                      |
| Quality of Interactions              | 0.32                  | 0.27                                | 0.18                   | 0.27                | 0.13                   | 0.27                        | 0.47                         | 1.00                    |                        |                                      |
| Supportive Environment               | 0.33                  | 0.30                                | 0.25                   | 0.30                | 0.19                   | 0.28                        | 0.47                         | 0.49                    | 1.00                   |                                      |
| Learning, Creative and Social Skills | 0.51                  | 0.47                                | 0.39                   | 0.42                | 0.30                   | 0.36                        | 0.52                         | 0.46                    | 0.54                   | 1.00                                 |

Looking at these figures, the correlations are all positive and the correlation matrices for each study group (including those in Appendix G) are quite similar. With regard to the matrix presented above, the correlations range between 0.13 for Effective Teaching Practices and Collaborative Learning, and 0.54 for ‘Higher Order Learning’ and ‘Reflective and Integrative Learning’ and ‘Learning, Creative and Social Skills’ and ‘Supportive Environment’. The strength and direction of these correlations is largely what would be expected. The weak correlation between ‘Collaborative Learning’ and ‘Effective Teaching Practice’, ‘Quality of Interactions’ and ‘Supportive Environment’, are understandable as these are rather disparate. Likewise, it would have been surprising if there was not a strong correlation between ‘Higher Order Learning’ and ‘Reflective and Integrative Learning’, as these areas overlap quite considerably.

## 6. Confirmatory Factor Analysis

In this section, indicators are referred to as factors, and a confirmatory factor analysis was undertaken to assess the fit of the ten factors proposed. The aim of this analysis is to reproduce the correlation matrix between the original items by describing the correlation with a simpler underlying model. Only students with complete data across the 52 items were used, i.e. 18,444 students (which represented approximately 47% of all the student responses).

The analysis was implemented using the R package *lavaan*<sup>1</sup> (Rosseel, 2012). This R package was designed to implement structural equation modelling of which Confirmatory Factor Analysis is a subset of this technique.

The model used by the Factor Analysis technique consists of the ten (predetermined) factors as described above and allows for correlation between factors with independent errors. This model provides a reasonable fit to the data. A range of measures of fit were applied to the model with the following results:

1. **Standard Root Mean Square Residual (SRMR).** The SRMR is the square root of the average of the sum of the squares of the correlations. It ranges in value from 0.0 to 1.0 with 0 indicating a perfect fit. For this example, it is 0.021 which can be considered a good fit.
2. **Root Mean Square Error of Approximation (RMSEA).** It is suggested that values below 0.05 indicate a reasonable fit. In this model a value of 0.020 was obtained. The 90% Confidence Interval is often quoted here and ranges from 0.019 to 0.020 (the confidence interval here is narrow because of the large sample size).
3. **Comparative Fit Index (CFI).** This index compares the model to a baseline model of independence and a score of 0.94 was observed which indicates a reasonable fit.
4. **Tucker Lewis Index (TLI).** The index score was calculated as 0.93, another indication that the model was a good fit.

All of the above goodness of fit measures indicate that the model, and the underlying indicators provide a good fit to the data.<sup>2</sup>

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<sup>1</sup> Rosseel, Y. Lavaan: An R package for Structural Equation Modelling, Journal of the Statistical Software, May 2012, Volume 48, Issue 2.

<sup>2</sup> A Confirmatory Factor Analysis was also run on nine factors, i.e. excluding the Quality of Interaction factor which had some variables with a relatively high percentage of missing values, yielding similar results.

## 7. Conclusion

This report provides a detailed statistical assessment of the questions and the responses obtained to the 2023 StudentSurvey.ie survey. This section summarises our findings.

High levels of non-response or missing data would have indicated potential problems with the wording, or that respondents are unable to comprehend the question. At an overall level, the degree of non-response to questions follow what we would expect to see from a survey of this length. Although the general trend was to see higher levels of non-response as the survey progressed, there were no questions that had a markedly higher level of non-response with the exception of questions within the Quality of Interaction indicator (discussed further below).

Questions where a 'not applicable' is offered, i.e. the Quality of Interaction indicator, should be coded separately to actual missing data as this can make certain questions appear like it has higher levels of non-response. Also, as not all students may have experienced an interaction with 'Support Services' or 'Academic Staff' based simply on their length of their tenure, this also inflates the missing/not applicable rate and affects the availability of data for subsequent statistical analysis.

The correlation between items within indicators is generally high, indicating their suitability for being joined together in their respective sections, and this corresponds to lower levels of correlation between items across indicators.

The reliability of the indicators is also generally very high as demonstrated by the Cronbach's Alpha values. These show that individual items are positively contributing to the overall indicator, and as such these indicators are holding together very well.

The final section utilised Confirmatory Factor Analysis to examine the fit of the ten predetermined indicators to the overall data, and it was found that these indicators fit the data well. This assessment did not change when utilised on a subset of the data where the Quality of Interaction indicator was omitted. In summary, the survey appears to be a good instrument for measuring students' opinions about their experiences.

## Appendix A: Indicator Profiles

### Higher Order Learning

#### Applying facts, theories, or methods to practical problems or new situations

| ho_apply      | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 2213        | 8948 | 11882       | 7244      | 30287 | 9116    | 39403 |
| Percent       | 5.6         | 22.7 | 30.2        | 18.4      | 76.9  | 23.1    | 100.0 |
| Valid Percent | 7.3         | 29.5 | 39.2        | 23.9      | 100.0 |         |       |

#### Analysing an idea, experience, or line of reasoning in depth by examining its parts

| ho_evaluat<br>e | Very little | Some  | Quite a bit | Very much | Total | Missing | Total |
|-----------------|-------------|-------|-------------|-----------|-------|---------|-------|
| Frequency       | 2701        | 10180 | 11420       | 5992      | 30293 | 9110    | 39403 |
| Percent         | 6.9         | 25.8  | 29.0        | 15.2      | 76.9  | 23.1    | 100.0 |
| Valid Percent   | 8.9         | 33.6  | 37.7        | 19.8      | 100.0 |         |       |

#### Evaluating a point of view, decision, or information source

| ho_evaluat<br>e | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|-----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency       | 2427        | 9535 | 12079       | 6254      | 30295 | 9108    | 39403 |
| Percent         | 6.2         | 24.2 | 30.7        | 15.9      | 76.9  | 23.1    | 100.0 |
| Valid Percent   | 8.0         | 31.5 | 39.9        | 20.6      | 100.0 |         |       |

#### Forming an understanding or new idea from various pieces of information

| ho_form       | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 1559        | 8732 | 12988       | 7009      | 30288 | 9115    | 39403 |
| Percent       | 4.0         | 22.2 | 33.0        | 17.8      | 76.9  | 23.1    | 100.0 |
| Valid Percent | 5.1         | 28.8 | 42.9        | 23.1      | 100.0 |         |       |

### Reflective and Integrative Learning

#### Combined ideas from different subjects / modules when completing assignments

| ri_integrat<br>e | Never | Sometimes | Often | Very often | Total | Missing | Total |
|------------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency        | 1964  | 12940     | 15322 | 7697       | 37923 | 1480    | 39403 |
| Percent          | 5.0   | 32.8      | 38.9  | 19.5       | 96.2  | 3.8     | 100.0 |
| Valid Percent    | 5.2   | 34.1      | 40.4  | 20.3       | 100.0 |         |       |

#### Connected your learning to problems or issues in society

| ri_societal   | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 5738  | 14371     | 11598 | 6218       | 37925 | 1478    | 39403 |
| Percent       | 14.6  | 36.5      | 29.4  | 15.8       | 96.2  | 3.8     | 100.0 |
| Valid Percent | 15.1  | 37.9      | 30.6  | 16.4       | 100.0 |         |       |

**Included diverse perspectives (political, religious, racial, ethnic, gender, etc.) in discussions or assignments**

| ri_diverse    | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 10457 | 13907     | 9131  | 4442       | 37937 | 1466    | 39403 |
| Percent       | 26.5  | 35.3      | 23.2  | 11.3       | 96.3  | 3.7     | 100.0 |
| Valid Percent | 27.6  | 36.7      | 24.1  | 11.7       | 100.0 |         |       |

**Examined the strengths and weaknesses of your own views on a topic or issue**

| ri_ownview    | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 3649  | 14749     | 14297 | 5248       | 37943 | 1460    | 39403 |
| Percent       | 9.3   | 37.4      | 36.3  | 13.3       | 96.3  | 3.7     | 100.0 |
| Valid Percent | 9.6   | 38.9      | 37.7  | 13.8       | 100.0 |         |       |

**Tried to better understand someone else's views by imagining how an issue looks from their perspective**

| ri_perspect   | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 2459  | 13294     | 15087 | 7123       | 37963 | 1440    | 39403 |
| Percent       | 6.2   | 33.7      | 38.3  | 18.1       | 96.3  | 3.7     | 100.0 |
| Valid Percent | 6.5   | 35.0      | 39.7  | 18.8       | 100.0 |         |       |

**Learned something that changed the way you understand an issue or concept**

| ri_newview    | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 1440  | 12750     | 16525 | 7215       | 37930 | 1473    | 39403 |
| Percent       | 3.7   | 32.4      | 41.9  | 18.3       | 96.3  | 3.7     | 100.0 |
| Valid Percent | 3.8   | 33.6      | 43.6  | 19.0       | 100.0 |         |       |

**Connected ideas from your subjects / modules to your prior experiences and knowledge**

| ri_connect    | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 1059  | 10660     | 16271 | 9955       | 37945 | 1458    | 39403 |
| Percent       | 2.7   | 27.1      | 41.3  | 25.3       | 96.3  | 3.7     | 100.0 |
| Valid Percent | 2.8   | 28.1      | 42.9  | 26.2       | 100.0 |         |       |

**Quantitative Reasoning**

**Reached conclusions based on your analysis of numerical information (numbers, graphs, statistics, etc.)**

| qr_conclude   | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 7955  | 12901     | 8506  | 3557       | 32919 | 6484    | 39403 |
| Percent       | 20.2  | 32.7      | 21.6  | 9.0        | 83.5  | 16.5    | 100.0 |
| Valid Percent | 24.2  | 39.2      | 25.8  | 10.8       | 100.0 |         |       |

**Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)**

| qr_proble<br>m   | Never | Sometimes | Often | Very often | Total | Missing | Total |
|------------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency        | 10937 | 12699     | 6715  | 2585       | 32936 | 6467    | 39403 |
| Percent          | 27.8  | 32.2      | 17.0  | 6.6        | 83.6  | 16.4    | 100.0 |
| Valid<br>Percent | 33.2  | 38.6      | 20.4  | 7.8        | 100.0 |         |       |

**Evaluated what others have concluded from numerical information**

| qr_evaluat<br>e  | Never | Sometimes | Often | Very often | Total | Missing | Total |
|------------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency        | 11194 | 13744     | 6250  | 1711       | 32899 | 6504    | 39403 |
| Percent          | 28.4  | 34.9      | 15.9  | 4.3        | 83.5  | 16.5    | 100.0 |
| Valid<br>Percent | 34.0  | 41.8      | 19.0  | 5.2        | 100.0 |         |       |

**Learning Strategies**

**Identified key information from recommended reading materials**

| Is_reading       | Never | Sometimes | Often | Very often | Total | Missing | Total |
|------------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency        | 2960  | 12355     | 12569 | 5041       | 32925 | 6478    | 39403 |
| Percent          | 7.5   | 31.4      | 31.9  | 12.8       | 83.6  | 16.4    | 100.0 |
| Valid<br>Percent | 9.0   | 37.5      | 38.2  | 15.3       | 100.0 |         |       |

**Reviewed your notes after class, tutorials, labs or studios**

| Is_notes         | Never | Sometimes | Often | Very often | Total | Missing | Total |
|------------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency        | 2124  | 12139     | 12218 | 6454       | 32935 | 6468    | 39403 |
| Percent          | 5.4   | 30.8      | 31.0  | 16.4       | 83.6  | 16.4    | 100.0 |
| Valid<br>Percent | 6.4   | 36.9      | 37.1  | 19.6       | 100.0 |         |       |

**Summarised what you learned in class, tutorials, labs or studios, or from course materials**

| Is_summar<br>y   | Never | Sometimes | Often | Very often | Total | Missing | Total |
|------------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency        | 3124  | 13699     | 11412 | 4684       | 32919 | 6484    | 39403 |
| Percent          | 7.9   | 34.8      | 29.0  | 11.9       | 83.5  | 16.5    | 100.0 |
| Valid<br>Percent | 9.5   | 41.6      | 34.7  | 14.2       | 100.0 |         |       |

**Collaborative Learning**

**Asked another student to help you understand course material**

| cl_askhelp       | Never | Sometimes | Often | Very often | Total | Missing | Total |
|------------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency        | 4552  | 16271     | 11393 | 5761       | 37977 | 1426    | 39403 |
| Percent          | 11.6  | 41.3      | 28.9  | 14.6       | 96.4  | 3.6     | 100.0 |
| Valid<br>Percent | 12.0  | 42.8      | 30.0  | 15.2       | 100.0 |         |       |

**Explained course material to one or more students**

| cl_explain    | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 3158  | 16251     | 12595 | 5895       | 37899 | 1504    | 39403 |
| Percent       | 8.0   | 41.2      | 32.0  | 15.0       | 96.2  | 3.8     | 100.0 |
| Valid Percent | 8.3   | 42.9      | 33.2  | 15.6       | 100.0 |         |       |

**Prepared for exams by discussing or working through course material with other students**

| cl_study      | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 7060  | 13106     | 11228 | 6539       | 37933 | 1470    | 39403 |
| Percent       | 17.9  | 33.3      | 28.5  | 16.6       | 96.3  | 3.7     | 100.0 |
| Valid Percent | 18.6  | 34.6      | 29.6  | 17.2       | 100.0 |         |       |

**Worked with other students on projects or assignments**

| cl_project    | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 3996  | 12188     | 12285 | 9469       | 37938 | 1465    | 39403 |
| Percent       | 10.1  | 30.9      | 31.2  | 24.0       | 96.3  | 3.7     | 100.0 |
| Valid Percent | 10.5  | 32.1      | 32.4  | 25.0       | 100.0 |         |       |

**Student-Faculty Interaction**

**Talked about career plans with academic staff**

| sf_career     | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 16489 | 10536     | 4229  | 1682       | 32936 | 6467    | 39403 |
| Percent       | 41.8  | 26.7      | 10.7  | 4.3        | 83.6  | 16.4    | 100.0 |
| Valid Percent | 50.1  | 32.0      | 12.8  | 5.1        | 100.0 |         |       |

**Worked with academic staff on activities other than coursework (committees, student groups, etc.)**

| sf_otherwork  | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 21847 | 7121      | 2894  | 1047       | 32909 | 6494    | 39403 |
| Percent       | 55.4  | 18.1      | 7.3   | 2.7        | 83.5  | 16.5    | 100.0 |
| Valid Percent | 66.4  | 21.6      | 8.8   | 3.2        | 100.0 |         |       |

**Discussed course topics, ideas, or concepts with academic staff outside of scheduled class, tutorials, labs or studios**

| sf_discuss    | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 13873 | 11832     | 5357  | 1875       | 32937 | 6466    | 39403 |
| Percent       | 35.2  | 30.0      | 13.6  | 4.8        | 83.6  | 16.4    | 100.0 |
| Valid Percent | 42.1  | 35.9      | 16.3  | 5.7        | 100.0 |         |       |

**Discussed your performance with academic staff**

| sf_perform    | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 14160 | 12730     | 4629  | 1406       | 32925 | 6478    | 39403 |
| Percent       | 35.9  | 32.3      | 11.7  | 3.6        | 83.6  | 16.4    | 100.0 |
| Valid Percent | 43.0  | 38.7      | 14.1  | 4.3        | 100.0 |         |       |

## Effective Teaching Practices

### Clearly explained course goals and requirements

| et_goals      | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 1871        | 8135 | 11580       | 8078      | 29664 | 9739    | 39403 |
| Percent       | 4.7         | 20.6 | 29.4        | 20.5      | 75.3  | 24.7    | 100.0 |
| Valid Percent | 6.3         | 27.4 | 39.0        | 27.2      | 100.0 |         |       |

### Taught in an organised way

| et_organize   | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 1653        | 7831 | 12555       | 7595      | 29634 | 9769    | 39403 |
| Percent       | 4.2         | 19.9 | 31.9        | 19.3      | 75.2  | 24.8    | 100.0 |
| Valid Percent | 5.6         | 26.4 | 42.4        | 25.6      | 100.0 |         |       |

### Used examples or illustrations to explain difficult points

| et_example    | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 1876        | 7835 | 11685       | 8276      | 29672 | 9731    | 39403 |
| Percent       | 4.8         | 19.9 | 29.7        | 21.0      | 75.3  | 24.7    | 100.0 |
| Valid Percent | 6.3         | 26.4 | 39.4        | 27.9      | 100.0 |         |       |

### Provided feedback on a draft or work in progress

| et_draftfb    | Very little | Some  | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|-------|-------------|-----------|-------|---------|-------|
| Frequency     | 8011        | 10298 | 7394        | 3954      | 29657 | 9746    | 39403 |
| Percent       | 20.3        | 26.1  | 18.8        | 10.0      | 75.3  | 24.7    | 100.0 |
| Valid Percent | 27.0        | 34.7  | 24.9        | 13.3      | 100.0 |         |       |

### Provided prompt and detailed feedback on tests or completed assessments

| et_feedback   | Very little | Some  | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|-------|-------------|-----------|-------|---------|-------|
| Frequency     | 6256        | 10816 | 8248        | 4346      | 29666 | 9737    | 39403 |
| Percent       | 15.9        | 27.4  | 20.9        | 11.0      | 75.3  | 24.7    | 100.0 |
| Valid Percent | 21.1        | 36.5  | 27.8        | 14.6      | 100.0 |         |       |

## Quality of Interactions

### Students

| qi_student    | Poor | -   | -    | -    | -    | -    | Excellent | Total | Missing | Total |
|---------------|------|-----|------|------|------|------|-----------|-------|---------|-------|
| Frequency     | 481  | 582 | 1151 | 2504 | 5509 | 8320 | 10100     | 28647 | 10756   | 39403 |
| Percent       | 1.2  | 1.5 | 2.9  | 6.4  | 14.0 | 21.1 | 25.6      | 72.7  | 27.3    | 100.0 |
| Valid Percent | 1.7  | 2.0 | 4.0  | 8.7  | 19.2 | 29.0 | 35.3      | 100.0 |         |       |

### Academic advisors

| qi_advisor    | Poor | -    | -    | -    | -    | -    | Excellent | Total | Missing | Total |
|---------------|------|------|------|------|------|------|-----------|-------|---------|-------|
| Frequency     | 1714 | 1520 | 2214 | 3622 | 5355 | 4944 | 4473      | 23842 | 15561   | 39403 |
| Percent       | 4.3  | 3.9  | 5.6  | 9.2  | 13.6 | 12.5 | 11.4      | 60.5  | 39.5    | 100.0 |
| Valid Percent | 7.2  | 6.4  | 9.3  | 15.2 | 22.5 | 20.7 | 18.8      | 100.0 |         |       |

**Academic staff**

| qi_faculty    | Poor | -    | -    | -    | -    | -    | Excellent | Total | Missing | Total |
|---------------|------|------|------|------|------|------|-----------|-------|---------|-------|
| Frequency     | 776  | 1019 | 1847 | 3626 | 6875 | 8036 | 6422      | 28601 | 10802   | 39403 |
| Percent       | 2.0  | 2.6  | 4.7  | 9.2  | 17.4 | 20.4 | 16.3      | 72.6  | 27.4    | 100.0 |
| Valid Percent | 2.7  | 3.6  | 6.5  | 12.7 | 24.0 | 28.1 | 22.5      | 100.0 |         |       |

**Support services staff (career services, student activities, accommodation, etc.)**

| qi_staff      | Poor | -    | -    | -    | -    | -    | Excellent | Total | Missing | Total |
|---------------|------|------|------|------|------|------|-----------|-------|---------|-------|
| Frequency     | 1661 | 1689 | 2371 | 3642 | 5107 | 4966 | 4746      | 24182 | 15221   | 39403 |
| Percent       | 4.2  | 4.3  | 6.0  | 9.2  | 13.0 | 12.6 | 12.0      | 61.4  | 38.6    | 100.0 |
| Valid Percent | 6.9  | 7.0  | 9.8  | 15.1 | 21.1 | 20.5 | 19.6      | 100.0 |         |       |

**Other administrative staff and offices (registry, finance, etc.)**

| qi_admin      | Poor | -    | -    | -    | -    | -    | Excellent | Total | Missing | Total |
|---------------|------|------|------|------|------|------|-----------|-------|---------|-------|
| Frequency     | 1638 | 1764 | 2523 | 3956 | 5648 | 5655 | 4881      | 26065 | 13338   | 39403 |
| Percent       | 4.2  | 4.5  | 6.4  | 10.0 | 14.3 | 14.4 | 12.4      | 66.1  | 33.9    | 100.0 |
| Valid Percent | 6.3  | 6.8  | 9.7  | 15.2 | 21.7 | 21.7 | 18.7      | 100.0 |         |       |

**Supportive Environment**

**Providing support to help students succeed academically**

| se_academic   | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 2611        | 9250 | 11094       | 5990      | 28945 | 10458   | 39403 |
| Percent       | 6.6         | 23.5 | 28.2        | 15.2      | 73.5  | 26.5    | 100.0 |
| Valid Percent | 9.0         | 32.0 | 38.3        | 20.7      | 100.0 |         |       |

**Using learning support services (learning centre, computer centre, maths support, writing support etc.)**

| se_learnsupport | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|-----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency       | 3859        | 8415 | 10114       | 6561      | 28949 | 10454   | 39403 |
| Percent         | 9.8         | 21.4 | 25.7        | 16.7      | 73.5  | 26.5    | 100.0 |
| Valid Percent   | 13.3        | 29.1 | 34.9        | 22.7      | 100.0 |         |       |

**Contact among students from different backgrounds (social, racial, ethnic, religious, age-groups etc.)**

| se_diverse    | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 5489        | 9912 | 8696        | 4844      | 28941 | 10462   | 39403 |
| Percent       | 13.9        | 25.2 | 22.1        | 12.3      | 73.4  | 26.6    | 100.0 |
| Valid Percent | 19.0        | 34.2 | 30.0        | 16.7      | 100.0 |         |       |

**Providing opportunities to be involved socially**

| se_social     | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 3880        | 8763 | 10327       | 5978      | 28948 | 10455   | 39403 |
| Percent       | 9.8         | 22.2 | 26.2        | 15.2      | 73.5  | 26.5    | 100.0 |
| Valid Percent | 13.4        | 30.3 | 35.7        | 20.7      | 100.0 |         |       |

**Providing support for your overall well-being (recreation, health care, counselling, etc.)**

| se_wellness   | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 4178        | 9579 | 9803        | 5397      | 28957 | 10446   | 39403 |
| Percent       | 10.6        | 24.3 | 24.9        | 13.7      | 73.5  | 26.5    | 100.0 |
| Valid Percent | 14.4        | 33.1 | 33.9        | 18.6      | 100.0 |         |       |

**Helping you manage your non-academic responsibilities (work, family, etc.)**

| se_nonacad    | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 11470       | 9738 | 5465        | 2266      | 28939 | 10464   | 39403 |
| Percent       | 29.1        | 24.7 | 13.9        | 5.8       | 73.4  | 26.6    | 100.0 |
| Valid Percent | 39.6        | 33.7 | 18.9        | 7.8       | 100.0 |         |       |

**Attending events that address important social, economic, or political issues**

| se_activities | Very little | Some  | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|-------|-------------|-----------|-------|---------|-------|
| Frequency     | 6465        | 10390 | 8304        | 3796      | 28955 | 10448   | 39403 |
| Percent       | 16.4        | 26.4  | 21.1        | 9.6       | 73.5  | 26.5    | 100.0 |
| Valid Percent | 22.3        | 35.9  | 28.7        | 13.1      | 100.0 |         |       |

**Attending activities and events (special speakers, cultural performances, sporting events, etc.) organised by your institution**

| se_events     | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 4586        | 9299 | 9774        | 5300      | 28959 | 10444   | 39403 |
| Percent       | 11.6        | 23.6 | 24.8        | 13.5      | 73.5  | 26.5    | 100.0 |
| Valid Percent | 15.8        | 32.1 | 33.8        | 18.3      | 100.0 |         |       |

**Learning, Creative and Social Skills**

**Writing clearly and effectively**

| lc_write      | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 2740        | 8069 | 10877       | 6764      | 28450 | 10953   | 39403 |
| Percent       | 7.0         | 20.5 | 27.6        | 17.2      | 72.2  | 27.8    | 100.0 |
| Valid Percent | 9.6         | 28.4 | 38.2        | 23.8      | 100.0 |         |       |

**Speaking effectively**

| lc_speak      | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 4102        | 9041 | 9838        | 5445      | 28426 | 10977   | 39403 |
| Percent       | 10.4        | 22.9 | 25.0        | 13.8      | 72.1  | 27.9    | 100.0 |
| Valid Percent | 14.4        | 31.8 | 34.6        | 19.2      | 100.0 |         |       |

**Thinking critically and analytically**

| lc_think         | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency        | 1247        | 6257 | 11704       | 9240      | 28448 | 10955   | 39403 |
| Percent          | 3.2         | 15.9 | 29.7        | 23.4      | 72.2  | 27.8    | 100.0 |
| Valid<br>Percent | 4.4         | 22.0 | 41.1        | 32.5      | 100.0 |         |       |

**Analysing numerical and statistical information**

| lc_analyse       | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency        | 5697        | 8779 | 8736        | 5232      | 28444 | 10959   | 39403 |
| Percent          | 14.5        | 22.3 | 22.2        | 13.3      | 72.2  | 27.8    | 100.0 |
| Valid<br>Percent | 20.0        | 30.9 | 30.7        | 18.4      | 100.0 |         |       |

**Acquiring job- or work-related knowledge and skills**

| lc_work          | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency        | 3471        | 8245 | 9898        | 6854      | 28468 | 10935   | 39403 |
| Percent          | 8.8         | 20.9 | 25.1        | 17.4      | 72.2  | 27.8    | 100.0 |
| Valid<br>Percent | 12.2        | 29.0 | 34.8        | 24.1      | 100.0 |         |       |

**Working effectively with others**

| lc_others        | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency        | 2079        | 7081 | 11476       | 7814      | 28450 | 10953   | 39403 |
| Percent          | 5.3         | 18.0 | 29.1        | 19.8      | 72.2  | 27.8    | 100.0 |
| Valid<br>Percent | 7.3         | 24.9 | 40.3        | 27.5      | 100.0 |         |       |

**Solving complex real-world problems**

| lc_probsolve     | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency        | 3909        | 9473 | 9685        | 5379      | 28446 | 10957   | 39403 |
| Percent          | 9.9         | 24.0 | 24.6        | 13.7      | 72.2  | 27.8    | 100.0 |
| Valid<br>Percent | 13.7        | 33.3 | 34.0        | 18.9      | 100.0 |         |       |

**Being an informed and active citizen (societal / political / community)**

| lc_citizen       | Very little | Some  | Quite a bit | Very much | Total | Missing | Total |
|------------------|-------------|-------|-------------|-----------|-------|---------|-------|
| Frequency        | 5668        | 10089 | 8322        | 4383      | 28462 | 10941   | 39403 |
| Percent          | 14.4        | 25.6  | 21.1        | 11.1      | 72.2  | 27.8    | 100.0 |
| Valid<br>Percent | 19.9        | 35.4  | 29.2        | 15.4      | 100.0 |         |       |

**Being innovative and creative**

| lc_creative      | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency        | 2985        | 8974 | 10159       | 6326      | 28444 | 10959   | 39403 |
| Percent          | 7.6         | 22.8 | 25.8        | 16.1      | 72.2  | 27.8    | 100.0 |
| Valid<br>Percent | 10.5        | 31.5 | 35.7        | 22.2      | 100.0 |         |       |

**Topical Module 1: Career and Workforce Preparation**

**Your experience at this institution has helped clarify your career plans**

| t1_career1    | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 832         | 1657 | 1590        | 953       | 5032  | 34371   | 39403 |
| Percent       | 2.1         | 4.2  | 4.0         | 2.4       | 12.8  | 87.2    | 100.0 |
| Valid Percent | 16.5        | 32.9 | 31.6        | 18.9      | 100.0 |         |       |

**You have received supportive feedback from faculty, career advisers or other advisers about your career plans**

| t1_career2    | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 1807        | 1616 | 1014        | 588       | 5025  | 34378   | 39403 |
| Percent       | 4.6         | 4.1  | 2.6         | 1.5       | 12.8  | 87.2    | 100.0 |
| Valid Percent | 36.0        | 32.2 | 20.2        | 11.7      | 100.0 |         |       |

**Demonstrate effective work habits (punctuality, working productively with others, time and workload management, etc.)**

| t1_confidence1 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency      | 246         | 1050 | 1954        | 1714      | 4964  | 34439   | 39403 |
| Percent        | 0.6         | 2.7  | 5.0         | 4.3       | 12.6  | 87.4    | 100.0 |
| Valid Percent  | 5.0         | 21.2 | 39.4        | 34.5      | 100.0 |         |       |

**Network with alumni or professionals to make potential career connections**

| t1_confidence2 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency      | 1226        | 1709 | 1342        | 684       | 4961  | 34442   | 39403 |
| Percent        | 3.1         | 4.3  | 3.4         | 1.7       | 12.6  | 87.4    | 100.0 |
| Valid Percent  | 24.7        | 34.4 | 27.1        | 13.8      | 100.0 |         |       |

**Communicate your knowledge, skills, and experiences to potential employers**

| t1_confidence3 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency      | 496         | 1452 | 1903        | 1112      | 4963  | 34440   | 39403 |
| Percent        | 1.3         | 3.7  | 4.8         | 2.8       | 12.6  | 87.4    | 100.0 |
| Valid Percent  | 10.0        | 29.3 | 38.3        | 22.4      | 100.0 |         |       |

**Use career-specific technology (devices, programs, or tools used by those in the field)**

| t1_confidence4 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency      | 528         | 1493 | 1828        | 1118      | 4967  | 34436   | 39403 |
| Percent        | 1.3         | 3.8  | 4.6         | 2.8       | 12.6  | 87.4    | 100.0 |
| Valid Percent  | 10.6        | 30.1 | 36.8        | 22.5      | 100.0 |         |       |

**Work effectively with people of other backgrounds (economic, racial, ethnic, political, religious, etc.)**

| t1_confidence5 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency      | 265         | 883  | 1744        | 2077      | 4969  | 34434   | 39403 |
| Percent        | 0.7         | 2.2  | 4.4         | 5.3       | 12.6  | 87.4    | 100.0 |
| Valid Percent  | 5.3         | 17.8 | 35.1        | 41.8      | 100.0 |         |       |

**Take a career exploration, planning, or development course**

| t1_plan1      | Have not decided | Do not plan to do | Plan to do | Done or in progress | Total | Missing | Total |
|---------------|------------------|-------------------|------------|---------------------|-------|---------|-------|
| Frequency     | 1481             | 1248              | 1748       | 425                 | 4902  | 34501   | 39403 |
| Percent       | 3.8              | 3.2               | 4.4        | 1.1                 | 12.4  | 87.6    | 100.0 |
| Valid Percent | 30.2             | 25.5              | 35.7       | 8.7                 | 100.0 |         |       |

**Attend a talk, panel discussion, or workshop about careers**

| t1_plan2      | Have not decided | Do not plan to do | Plan to do | Done or in progress | Total | Missing | Total |
|---------------|------------------|-------------------|------------|---------------------|-------|---------|-------|
| Frequency     | 1116             | 941               | 2132       | 713                 | 4902  | 34501   | 39403 |
| Percent       | 2.8              | 2.4               | 5.4        | 1.8                 | 12.4  | 87.6    | 100.0 |
| Valid Percent | 22.8             | 19.2              | 43.5       | 14.5                | 100.0 |         |       |

**Interview, shadow or network with someone in a career that you are considering**

| t1_plan3      | Have not decided | Do not plan to do | Plan to do | Done or in progress | Total | Missing | Total |
|---------------|------------------|-------------------|------------|---------------------|-------|---------|-------|
| Frequency     | 1196             | 964               | 2085       | 659                 | 4904  | 34499   | 39403 |
| Percent       | 3.0              | 2.4               | 5.3        | 1.7                 | 12.4  | 87.6    | 100.0 |
| Valid Percent | 24.4             | 19.7              | 42.5       | 13.4                | 100.0 |         |       |

**Participate in a career-related co-curricular activity**

| t1_plan4      | Have not decided | Do not plan to do | Plan to do | Done or in progress | Total | Missing | Total |
|---------------|------------------|-------------------|------------|---------------------|-------|---------|-------|
| Frequency     | 1438             | 1261              | 1697       | 512                 | 4908  | 34495   | 39403 |
| Percent       | 3.6              | 3.2               | 4.3        | 1.3                 | 12.5  | 87.5    | 100.0 |
| Valid Percent | 29.3             | 25.7              | 34.6       | 10.4                | 100.0 |         |       |

**Use resources and information from career services**

| t1_plan5      | Have not decided | Do not plan to do | Plan to do | Done or in progress | Total | Missing | Total |
|---------------|------------------|-------------------|------------|---------------------|-------|---------|-------|
| Frequency     | 1086             | 849               | 2148       | 830                 | 4913  | 34490   | 39403 |
| Percent       | 2.8              | 2.2               | 5.5        | 2.1                 | 12.5  | 87.5    | 100.0 |
| Valid Percent | 22.1             | 17.3              | 43.7       | 16.9                | 100.0 |         |       |

**Meet with career services staff to explore your interests and future plans**

| t1_plan6      | Have not decided | Do not plan to do | Plan to do | Done or in progress | Total | Missing | Total |
|---------------|------------------|-------------------|------------|---------------------|-------|---------|-------|
| Frequency     | 1252             | 998               | 2165       | 489                 | 4904  | 34499   | 39403 |
| Percent       | 3.2              | 2.5               | 5.5        | 1.2                 | 12.4  | 87.6    | 100.0 |
| Valid Percent | 25.5             | 20.4              | 44.1       | 10.0                | 100.0 |         |       |

**Topical Module 2: Civic Engagement**

**Discussing important social, economic, or political issues with others**

| t2_emphasise1 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 324         | 687  | 658         | 390       | 2059  | 37344   | 39403 |
| Percent       | 0.8         | 1.7  | 1.7         | 1.0       | 5.2   | 94.8    | 100.0 |
| Valid Percent | 15.7        | 33.4 | 32.0        | 18.9      | 100.0 |         |       |

**Being involved in an organisation or group focused on important social, economic, or political issues**

| t2_emphasise2 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 401         | 751  | 607         | 303       | 2062  | 37341   | 39403 |
| Percent       | 1.0         | 1.9  | 1.5         | 0.8       | 5.2   | 94.8    | 100.0 |
| Valid Percent | 19.4        | 36.4 | 29.4        | 14.7      | 100.0 |         |       |

**Voting in campus, local, or national elections**

| t2_emphasise3 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 314         | 550  | 663         | 533       | 2060  | 37343   | 39403 |
| Percent       | 0.8         | 1.4  | 1.7         | 1.4       | 5.2   | 94.8    | 100.0 |
| Valid Percent | 15.2        | 26.7 | 32.2        | 25.9      | 100.0 |         |       |

**Encouraging free speech and expression**

| t2_emphasise4 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 203         | 582  | 752         | 523       | 2060  | 37343   | 39403 |
| Percent       | 0.5         | 1.5  | 1.9         | 1.3       | 5.2   | 94.8    | 100.0 |
| Valid Percent | 9.9         | 28.3 | 36.5        | 25.4      | 100.0 |         |       |

**In course assignments**

| t2_important1 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 503         | 590  | 578         | 383       | 2054  | 37349   | 39403 |
| Percent       | 1.3         | 1.5  | 1.5         | 1.0       | 5.2   | 94.8    | 100.0 |
| Valid Percent | 24.5        | 28.7 | 28.1        | 18.6      | 100.0 |         |       |

**In course discussions**

| t2_import ant2 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency      | 475         | 613  | 588         | 381       | 2057  | 37346   | 39403 |
| Percent        | 1.2         | 1.6  | 1.5         | 1.0       | 5.2   | 94.8    | 100.0 |
| Valid Percent  | 23.1        | 29.8 | 28.6        | 18.5      | 100.0 |         |       |

**Outside of class**

| t2_import ant3 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency      | 363         | 647  | 675         | 371       | 2056  | 37347   | 39403 |
| Percent        | 0.9         | 1.6  | 1.7         | 0.9       | 5.2   | 94.8    | 100.0 |
| Valid Percent  | 17.7        | 31.5 | 32.8        | 18.0      | 100.0 |         |       |

**Topical Module 3: Experiences with Online Learning**

**Participating in online discussion boards, forums, or other discussion tools**

| t3_comfortable1 | Not at all comfortable | Somewhat comfortable | Very comfortable | Total | Missing | Total |
|-----------------|------------------------|----------------------|------------------|-------|---------|-------|
| Frequency       | 579                    | 1339                 | 1121             | 3039  | 36364   | 39403 |
| Percent         | 1.5                    | 3.4                  | 2.8              | 7.7   | 92.3    | 100.0 |
| Valid Percent   | 19.1                   | 44.1                 | 36.9             | 100.0 |         |       |

**Participating in live course discussions online**

| t3_comfortable2 | Not at all comfortable | Somewhat comfortable | Very comfortable | Total | Missing | Total |
|-----------------|------------------------|----------------------|------------------|-------|---------|-------|
| Frequency       | 694                    | 1254                 | 1099             | 3047  | 36356   | 39403 |
| Percent         | 1.8                    | 3.2                  | 2.8              | 7.7   | 92.3    | 100.0 |
| Valid Percent   | 22.8                   | 41.2                 | 36.1             | 100.0 |         |       |

**Taking proctored (invigilated/ monitored) online exams**

| t3_comfortable3 | Not at all comfortable | Somewhat comfortable | Very comfortable | Total | Missing | Total |
|-----------------|------------------------|----------------------|------------------|-------|---------|-------|
| Frequency       | 373                    | 940                  | 1379             | 2692  | 36711   | 39403 |
| Percent         | 0.9                    | 2.4                  | 3.5              | 6.8   | 93.2    | 100.0 |
| Valid Percent   | 13.9                   | 34.9                 | 51.2             | 100.0 |         |       |

**Interacting with other students in the course online**

| t3_comfortable4 | Not at all comfortable | Somewhat comfortable | Very comfortable | Total | Missing | Total |
|-----------------|------------------------|----------------------|------------------|-------|---------|-------|
| Frequency       | 360                    | 1215                 | 1630             | 3205  | 36198   | 39403 |
| Percent         | 0.9                    | 3.1                  | 4.1              | 8.1   | 91.9    | 100.0 |
| Valid Percent   | 11.2                   | 37.9                 | 50.9             | 100.0 |         |       |

**Interacting with your lecturer/ teaching staff to discuss course topics, ideas, or concepts online**

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| t3_comfortable5 | Not at all comfortable | Somewhat comfortable | Very comfortable | Total | Missing | Total |
|-----------------|------------------------|----------------------|------------------|-------|---------|-------|
| Frequency       | 385                    | 1388                 | 1503             | 3276  | 36127   | 39403 |
| Percent         | 1.0                    | 3.5                  | 3.8              | 8.3   | 91.7    | 100.0 |
| Valid Percent   | 11.8                   | 42.4                 | 45.9             | 100.0 |         |       |

**Using learning support services (tutoring services, writing centre, etc.) online**

| t3_comfortable6 | Not at all comfortable | Somewhat comfortable | Very comfortable | Total | Missing | Total |
|-----------------|------------------------|----------------------|------------------|-------|---------|-------|
| Frequency       | 469                    | 1275                 | 1197             | 2941  | 36462   | 39403 |
| Percent         | 1.2                    | 3.2                  | 3.0              | 7.5   | 92.5    | 100.0 |
| Valid Percent   | 15.9                   | 43.4                 | 40.7             | 100.0 |         |       |

**Seeking feedback and guidance from your lecturer/ teaching staff online**

| t3_comfortable7 | Not at all comfortable | Somewhat comfortable | Very comfortable | Total | Missing | Total |
|-----------------|------------------------|----------------------|------------------|-------|---------|-------|
| Frequency       | 403                    | 1429                 | 1478             | 3310  | 36093   | 39403 |
| Percent         | 1.0                    | 3.6                  | 3.8              | 8.4   | 91.6    | 100.0 |
| Valid Percent   | 12.2                   | 43.2                 | 44.7             | 100.0 |         |       |

**Turning camera on while online**

| t3_comfortable8 | Not at all comfortable | Somewhat comfortable | Very comfortable | Total | Missing | Total |
|-----------------|------------------------|----------------------|------------------|-------|---------|-------|
| Frequency       | 1021                   | 1122                 | 958              | 3101  | 36302   | 39403 |
| Percent         | 2.6                    | 2.8                  | 2.4              | 7.9   | 92.1    | 100.0 |
| Valid Percent   | 32.9                   | 36.2                 | 30.9             | 100.0 |         |       |

**Increase interactions between students**

| t3_improve1   | Not at all important | Somewhat important | Important | Very important | Total | Missing | Total |
|---------------|----------------------|--------------------|-----------|----------------|-------|---------|-------|
| Frequency     | 220                  | 917                | 1435      | 1111           | 3683  | 35720   | 39403 |
| Percent       | 0.6                  | 2.3                | 3.6       | 2.8            | 9.3   | 90.7    | 100.0 |
| Valid Percent | 6.0                  | 24.9               | 39.0      | 30.2           | 100.0 |         |       |

**Increase interactions with lecturer/ teaching staff**

| t3_improve2   | Not at all important | Somewhat important | Important | Very important | Total | Missing | Total |
|---------------|----------------------|--------------------|-----------|----------------|-------|---------|-------|
| Frequency     | 133                  | 804                | 1581      | 1166           | 3684  | 35719   | 39403 |
| Percent       | 0.3                  | 2.0                | 4.0       | 3.0            | 9.3   | 90.7    | 100.0 |
| Valid Percent | 3.6                  | 21.8               | 42.9      | 31.7           | 100.0 |         |       |

**Improve responsiveness of lecturer/ teaching staff**

| t3_improve3   | Not at all important | Somewhat important | Important | Very important | Total | Missing | Total |
|---------------|----------------------|--------------------|-----------|----------------|-------|---------|-------|
| Frequency     | 149                  | 829                | 1424      | 1286           | 3688  | 35715   | 39403 |
| Percent       | 0.4                  | 2.1                | 3.6       | 3.3            | 9.4   | 90.6    | 100.0 |
| Valid Percent | 4.0                  | 22.5               | 38.6      | 34.9           | 100.0 |         |       |

**Improve online tools for student collaboration**

| t3_improve4   | Not at all important | Somewhat important | Important | Very important | Total | Missing | Total |
|---------------|----------------------|--------------------|-----------|----------------|-------|---------|-------|
| Frequency     | 171                  | 887                | 1473      | 1153           | 3684  | 35719   | 39403 |
| Percent       | 0.4                  | 2.3                | 3.7       | 2.9            | 9.3   | 90.7    | 100.0 |
| Valid Percent | 4.6                  | 24.1               | 40.0      | 31.3           | 100.0 |         |       |

**Provide more online learning support services (tutoring services, writing centre, etc.)**

| t3_improve5   | Not at all important | Somewhat important | Important | Very important | Total | Missing | Total |
|---------------|----------------------|--------------------|-----------|----------------|-------|---------|-------|
| Frequency     | 228                  | 1056               | 1388      | 1017           | 3689  | 35714   | 39403 |
| Percent       | 0.6                  | 2.7                | 3.5       | 2.6            | 9.4   | 90.6    | 100.0 |
| Valid Percent | 6.2                  | 28.6               | 37.6      | 27.6           | 100.0 |         |       |

**Increase availability of recorded lectures**

| t3_improve6   | Not at all important | Somewhat important | Important | Very important | Total | Missing | Total |
|---------------|----------------------|--------------------|-----------|----------------|-------|---------|-------|
| Frequency     | 147                  | 543                | 1199      | 1793           | 3682  | 35721   | 39403 |
| Percent       | 0.4                  | 1.4                | 3.0       | 4.6            | 9.3   | 90.7    | 100.0 |
| Valid Percent | 4.0                  | 14.7               | 32.6      | 48.7           | 100.0 |         |       |

**Internet service (availability, speed, reliability, etc.) where you live has been sufficient to participate in the course.**

| t3_experience1 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 185               | 465      | 2000  | 985            | 3635  | 35768   | 39403 |
| Percent        | 0.5               | 1.2      | 5.1   | 2.5            | 9.2   | 90.8    | 100.0 |
| Valid Percent  | 5.1               | 12.8     | 55.0  | 27.1           | 100.0 |         |       |

**The hardware (computer, tablet, mobile phone, printer) and software where you live have been sufficient to participate in the course.**

| t3_experience2 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 118               | 410      | 2097  | 1006           | 3631  | 35772   | 39403 |
| Percent        | 0.3               | 1.0      | 5.3   | 2.6            | 9.2   | 90.8    | 100.0 |
| Valid Percent  | 3.2               | 11.3     | 57.8  | 27.7           | 100.0 |         |       |

**Study spaces where you live have been sufficient for your needs.**

| t3_experience3 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 272               | 637      | 1938  | 784            | 3631  | 35772   | 39403 |
| Percent        | 0.7               | 1.6      | 4.9   | 2.0            | 9.2   | 90.8    | 100.0 |
| Valid Percent  | 7.5               | 17.5     | 53.4  | 21.6           | 100.0 |         |       |

**Technology support has been available.**

| t3_experience4 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 159               | 568      | 2199  | 698            | 3624  | 35779   | 39403 |
| Percent        | 0.4               | 1.4      | 5.6   | 1.8            | 9.2   | 90.8    | 100.0 |
| Valid Percent  | 4.4               | 15.7     | 60.7  | 19.3           | 100.0 |         |       |

**The online course platform has been user-friendly (available, easy to access and navigate).**

| t3_experience5 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 124               | 453      | 2277  | 776            | 3630  | 35773   | 39403 |
| Percent        | 0.3               | 1.1      | 5.8   | 2.0            | 9.2   | 90.8    | 100.0 |
| Valid Percent  | 3.4               | 12.5     | 62.7  | 21.4           | 100.0 |         |       |

**Topical Module 4: Inclusiveness and Engagement with Diversity**

**Developing the skills necessary to work effectively with people from various backgrounds**

| t4_coursework1 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency      | 800         | 1326 | 1350        | 955       | 4431  | 34972   | 39403 |
| Percent        | 2.0         | 3.4  | 3.4         | 2.4       | 11.2  | 88.8    | 100.0 |
| Valid Percent  | 18.1        | 29.9 | 30.5        | 21.6      | 100.0 |         |       |

**Recognising your own norms and biases**

| t4_coursework2 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency      | 766         | 1374 | 1380        | 906       | 4426  | 34977   | 39403 |
| Percent        | 1.9         | 3.5  | 3.5         | 2.3       | 11.2  | 88.8    | 100.0 |
| Valid Percent  | 17.3        | 31.0 | 31.2        | 20.5      | 100.0 |         |       |

**Learning about other cultures**

| t4_coursework3 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|----------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency      | 1206        | 1320 | 1065        | 835       | 4426  | 34977   | 39403 |
| Percent        | 3.1         | 3.3  | 2.7         | 2.1       | 11.2  | 88.8    | 100.0 |
| Valid Percent  | 27.2        | 29.8 | 24.1        | 18.9      | 100.0 |         |       |

**Respecting the expression of diverse ideas**

| t4_course<br>work4 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|--------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency          | 514         | 1196 | 1517        | 1202      | 4429  | 34974   | 39403 |
| Percent            | 1.3         | 3.0  | 3.8         | 3.1       | 11.2  | 88.8    | 100.0 |
| Valid<br>Percent   | 11.6        | 27.0 | 34.3        | 27.1      | 100.0 |         |       |

**Demonstrating a commitment to diversity**

| t4_instituti<br>on1 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency           | 355         | 1203 | 1591        | 1228      | 4377  | 35026   | 39403 |
| Percent             | 0.9         | 3.1  | 4.0         | 3.1       | 11.1  | 88.9    | 100.0 |
| Valid<br>Percent    | 8.1         | 27.5 | 36.3        | 28.1      | 100.0 |         |       |

**Providing students with the resources needed for success in a multicultural world**

| t4_instituti<br>on2 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency           | 576         | 1601 | 1350        | 851       | 4378  | 35025   | 39403 |
| Percent             | 1.5         | 4.1  | 3.4         | 2.2       | 11.1  | 88.9    | 100.0 |
| Valid<br>Percent    | 13.2        | 36.6 | 30.8        | 19.4      | 100.0 |         |       |

**Providing information about anti-discrimination and harassment policies**

| t4_instituti<br>on3 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency           | 534         | 1236 | 1415        | 1199      | 4384  | 35019   | 39403 |
| Percent             | 1.4         | 3.1  | 3.6         | 3.0       | 11.1  | 88.9    | 100.0 |
| Valid<br>Percent    | 12.2        | 28.2 | 32.3        | 27.3      | 100.0 |         |       |

**Taking allegations of discrimination or harassment seriously**

| t4_instituti<br>on4 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency           | 363         | 1126 | 1514        | 1355      | 4358  | 35045   | 39403 |
| Percent             | 0.9         | 2.9  | 3.8         | 3.4       | 11.1  | 88.9    | 100.0 |
| Valid<br>Percent    | 8.3         | 25.8 | 34.7        | 31.1      | 100.0 |         |       |

**Helping students develop the skills to confront discrimination and harassment**

| t4_instituti<br>on5 | Very little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency           | 717         | 1422 | 1307        | 929       | 4375  | 35028   | 39403 |
| Percent             | 1.8         | 3.6  | 3.3         | 2.4       | 11.1  | 88.9    | 100.0 |
| Valid<br>Percent    | 16.4        | 32.5 | 29.9        | 21.2      | 100.0 |         |       |

**Attended events, activities, or presentations (including online) that reflect an appreciation for diverse groups of people**

| t4_activity 1 | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 1956  | 1457      | 648   | 310        | 4371  | 35032   | 39403 |
| Percent       | 5.0   | 3.7       | 1.6   | 0.8        | 11.1  | 88.9    | 100.0 |
| Valid Percent | 44.7  | 33.3      | 14.8  | 7.1        | 100.0 |         |       |

**Participated in activities related to the inclusion of specific groups (racial, ethnic, LGBTQ+, religious, gender, age, socio-economic group, etc.)**

| t4_activity 2 | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 2318  | 1238      | 527   | 291        | 4374  | 35029   | 39403 |
| Percent       | 5.9   | 3.1       | 1.3   | 0.7        | 11.1  | 88.9    | 100.0 |
| Valid Percent | 53.0  | 28.3      | 12.0  | 6.7        | 100.0 |         |       |

**Participated in a demonstration for an inclusion-related cause (rally, protest, etc.)**

| t4_activity 3 | Never | Sometimes | Often | Very often | Total | Missing | Total |
|---------------|-------|-----------|-------|------------|-------|---------|-------|
| Frequency     | 2829  | 994       | 357   | 194        | 4374  | 35029   | 39403 |
| Percent       | 7.2   | 2.5       | 0.9   | 0.5        | 11.1  | 88.9    | 100.0 |
| Valid Percent | 64.7  | 22.7      | 8.2   | 4.4        | 100.0 |         |       |

**Topical Module 5: Academic Integrity**

**Upholding academic integrity and the importance of avoiding academic misconduct.**

| t5_support 1  | Very Little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 377         | 1414 | 2096        | 2173      | 6060  | 33343   | 39403 |
| Percent       | 1.0         | 3.6  | 5.3         | 5.5       | 15.4  | 84.6    | 100.0 |
| Valid Percent | 6.2         | 23.3 | 34.6        | 35.9      | 100.0 |         |       |

**Avoiding plagiarism by referencing correctly.**

| t5_support 2  | Very Little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 393         | 1122 | 1825        | 2725      | 6065  | 33338   | 39403 |
| Percent       | 1.0         | 2.8  | 4.6         | 6.9       | 15.4  | 84.6    | 100.0 |
| Valid Percent | 6.5         | 18.5 | 30.1        | 44.9      | 100.0 |         |       |

**Understanding the risks (e.g., blackmail, extortion) of engaging with individuals or companies offering cheating services.**

| t5_support 3  | Very Little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 1481        | 1460 | 1514        | 1601      | 6056  | 33347   | 39403 |
| Percent       | 3.8         | 3.7  | 3.8         | 4.1       | 15.4  | 84.6    | 100.0 |
| Valid Percent | 24.5        | 24.1 | 25.0        | 26.4      | 100.0 |         |       |

**Accessing useful resources and/ or assistance from professional staff to help you to behave ethically.**

| t5_support4   | Very Little | Some | Quite a bit | Very much | Total | Missing | Total |
|---------------|-------------|------|-------------|-----------|-------|---------|-------|
| Frequency     | 677         | 1748 | 1988        | 1645      | 6058  | 33345   | 39403 |
| Percent       | 1.7         | 4.4  | 5.0         | 4.2       | 15.4  | 84.6    | 100.0 |
| Valid Percent | 11.2        | 28.9 | 32.8        | 27.2      | 100.0 |         |       |

**I see other students engaging in academic misconduct and getting away with it.**

| t5_experience1 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 2184              | 2327     | 1059  | 393            | 5963  | 33440   | 39403 |
| Percent        | 5.5               | 5.9      | 2.7   | 1.0            | 15.1  | 84.9    | 100.0 |
| Valid Percent  | 36.6              | 39.0     | 17.8  | 6.6            | 100.0 |         |       |

**I will not be penalised for minor breaches of academic integrity such as copying a short text or omitting a reference in my institution.**

| t5_experience2 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 1564              | 2623     | 1396  | 370            | 5953  | 33450   | 39403 |
| Percent        | 4.0               | 6.7      | 3.5   | 0.9            | 15.1  | 84.9    | 100.0 |
| Valid Percent  | 26.3              | 44.1     | 23.5  | 6.2            | 100.0 |         |       |

**I do not see a problem sharing my completed assignments with others.**

| t5_experience3 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 1621              | 2588     | 1410  | 347            | 5966  | 33437   | 39403 |
| Percent        | 4.1               | 6.6      | 3.6   | 0.9            | 15.1  | 84.9    | 100.0 |
| Valid Percent  | 27.2              | 43.4     | 23.6  | 5.8            | 100.0 |         |       |

**At times, I have felt pressure to help other students cheat in their assessed assignments or exams.**

| t5_experience4 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 3635              | 1555     | 588   | 190            | 5968  | 33435   | 39403 |
| Percent        | 9.2               | 3.9      | 1.5   | 0.5            | 15.1  | 84.9    | 100.0 |
| Valid Percent  | 60.9              | 26.1     | 9.9   | 3.2            | 100.0 |         |       |

**I have been targeted (including being exposed to advertising) by an online cheating service.**

| t5_experience5 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 3354              | 1647     | 730   | 243            | 5974  | 33429   | 39403 |
| Percent        | 8.5               | 4.2      | 1.9   | 0.6            | 15.2  | 84.8    | 100.0 |
| Valid Percent  | 56.1              | 27.6     | 12.2  | 4.1            | 100.0 |         |       |

**If I am struggling to get assessed coursework completed, I know where and how I can avail of the support services in my institution.**

| t5_experience6 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 543               | 1574     | 2854  | 999            | 5970  | 33433   | 39403 |
| Percent        | 1.4               | 4.0      | 7.2   | 2.5            | 15.2  | 84.8    | 100.0 |
| Valid Percent  | 9.1               | 26.4     | 47.8  | 16.7           | 100.0 |         |       |

**I can discuss any problems I am having related to academic integrity with my lecturers or other staff.**

| t5_experience7 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 305               | 889      | 3431  | 1336           | 5961  | 33442   | 39403 |
| Percent        | 0.8               | 2.3      | 8.7   | 3.4            | 15.1  | 84.9    | 100.0 |
| Valid Percent  | 5.1               | 14.9     | 57.6  | 22.4           | 100.0 |         |       |

**My assignments and how they are assessed are designed to reduce the possibility of cheating.**

| t5_experience8 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 201               | 819      | 3592  | 1350           | 5962  | 33441   | 39403 |
| Percent        | 0.5               | 2.1      | 9.1   | 3.4            | 15.1  | 84.9    | 100.0 |
| Valid Percent  | 3.4               | 13.7     | 60.2  | 22.6           | 100.0 |         |       |

**My grades are a fair reflection of the work I put in and my level of understanding of the course material.**

| t5_experience9 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency      | 229               | 850      | 3294  | 1599           | 5972  | 33431   | 39403 |
| Percent        | 0.6               | 2.2      | 8.4   | 4.1            | 15.2  | 84.8    | 100.0 |
| Valid Percent  | 3.8               | 14.2     | 55.2  | 26.8           | 100.0 |         |       |

**I am confident that I would know if I was acting unethically in my studies.**

| t5_experience10 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|-----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency       | 99                | 463      | 3007  | 2398           | 5967  | 33436   | 39403 |
| Percent         | 0.3               | 1.2      | 7.6   | 6.1            | 15.1  | 84.9    | 100.0 |
| Valid Percent   | 1.7               | 7.8      | 50.4  | 40.2           | 100.0 |         |       |

**I understand the limits of providing help to others while behaving with academic integrity.**

| t5_experience11 | Strongly disagree | Disagree | Agree | Strongly agree | Total | Missing | Total |
|-----------------|-------------------|----------|-------|----------------|-------|---------|-------|
| Frequency       | 109               | 508      | 3621  | 1728           | 5966  | 33437   | 39403 |
| Percent         | 0.3               | 1.3      | 9.2   | 4.4            | 15.1  | 84.9    | 100.0 |
| Valid Percent   | 1.8               | 8.5      | 60.7  | 29.0           | 100.0 |         |       |

### Appendix B: Indicator Inter-Item Correlation Matrix

|              | ho_apply | ho_analyze | ho_evaluate | ho_form | ri_integrate | ri_societal | ri_diverse | ri_ownview | ri_perspect | ri_newview | ri_connect | qr_conclude | qr_problem | qr_evaluate | ls_reading | ls_notes | ls_summary | cl_askhelp | cl_explain | cl_study | cl_project | sf_career | sf_otherwork | sf_discuss | sf_perform | et_goals |  |
|--------------|----------|------------|-------------|---------|--------------|-------------|------------|------------|-------------|------------|------------|-------------|------------|-------------|------------|----------|------------|------------|------------|----------|------------|-----------|--------------|------------|------------|----------|--|
| ho_apply     |          |            |             |         |              |             |            |            |             |            |            |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ho_analyze   | 0.51     |            |             |         |              |             |            |            |             |            |            |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ho_evaluate  | 0.45     | 0.56       |             |         |              |             |            |            |             |            |            |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ho_form      | 0.50     | 0.55       | 0.53        |         |              |             |            |            |             |            |            |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ri_integrate | 0.29     | 0.28       | 0.27        | 0.29    |              |             |            |            |             |            |            |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ri_societal  | 0.27     | 0.30       | 0.33        | 0.29    | 0.33         |             |            |            |             |            |            |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ri_diverse   | 0.18     | 0.24       | 0.30        | 0.23    | 0.27         | 0.43        |            |            |             |            |            |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ri_ownview   | 0.25     | 0.30       | 0.31        | 0.29    | 0.32         | 0.36        | 0.33       |            |             |            |            |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ri_perspect  | 0.22     | 0.26       | 0.29        | 0.27    | 0.29         | 0.35        | 0.36       | 0.39       |             |            |            |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ri_newview   | 0.30     | 0.31       | 0.30        | 0.35    | 0.34         | 0.35        | 0.26       | 0.35       | 0.30        |            |            |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ri_connect   | 0.29     | 0.30       | 0.28        | 0.32    | 0.42         | 0.37        | 0.27       | 0.34       | 0.31        | 0.35       |            |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| qr_conclude  | 0.29     | 0.24       | 0.18        | 0.20    | 0.21         | 0.13        | 0.04       | 0.18       | 0.12        | 0.18       | 0.16       |             |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| qr_problem   | 0.28     | 0.26       | 0.25        | 0.23    | 0.23         | 0.30        | 0.22       | 0.23       | 0.20        | 0.21       | 0.20       | 0.48        |            |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| qr_evaluate  | 0.25     | 0.24       | 0.20        | 0.20    | 0.22         | 0.18        | 0.14       | 0.22       | 0.19        | 0.20       | 0.16       | 0.51        | 0.47       |             |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ls_reading   | 0.29     | 0.33       | 0.36        | 0.34    | 0.26         | 0.31        | 0.26       | 0.30       | 0.25        | 0.31       | 0.29       | 0.20        | 0.25       | 0.23        |            |          |            |            |            |          |            |           |              |            |            |          |  |
| ls_notes     | 0.24     | 0.23       | 0.22        | 0.25    | 0.20         | 0.16        | 0.11       | 0.21       | 0.17        | 0.24       | 0.21       | 0.21        | 0.19       | 0.20        | 0.34       |          |            |            |            |          |            |           |              |            |            |          |  |
| ls_summary   | 0.28     | 0.28       | 0.29        | 0.30    | 0.25         | 0.21        | 0.17       | 0.27       | 0.23        | 0.28       | 0.24       | 0.27        | 0.26       | 0.28        | 0.36       | 0.47     |            |            |            |          |            |           |              |            |            |          |  |
| cl_askhelp   | 0.09     | 0.05       | 0.04        | 0.06    | 0.15         | 0.07        | 0.09       | 0.10       | 0.15        | 0.14       | 0.08       | 0.13        | 0.12       | 0.18        | 0.03       | 0.07     | 0.11       |            |            |          |            |           |              |            |            |          |  |
| cl_explain   | 0.18     | 0.16       | 0.14        | 0.16    | 0.29         | 0.18        | 0.17       | 0.22       | 0.23        | 0.21       | 0.25       | 0.20        | 0.18       | 0.23        | 0.14       | 0.17     | 0.22       | 0.38       |            |          |            |           |              |            |            |          |  |
| cl_study     | 0.16     | 0.13       | 0.13        | 0.13    | 0.24         | 0.14        | 0.15       | 0.19       | 0.20        | 0.20       | 0.17       | 0.19        | 0.18       | 0.24        | 0.13       | 0.18     | 0.23       | 0.45       | 0.41       |          |            |           |              |            |            |          |  |
| cl_project   | 0.15     | 0.11       | 0.11        | 0.11    | 0.23         | 0.12        | 0.12       | 0.14       | 0.15        | 0.14       | 0.14       | 0.21        | 0.19       | 0.21        | 0.08       | 0.09     | 0.15       | 0.31       | 0.32       | 0.35     |            |           |              |            |            |          |  |
| sf_career    | 0.17     | 0.18       | 0.18        | 0.16    | 0.20         | 0.19        | 0.19       | 0.20       | 0.17        | 0.18       | 0.15       | 0.21        | 0.26       | 0.29        | 0.21       | 0.16     | 0.23       | 0.15       | 0.21       | 0.21     | 0.18       |           |              |            |            |          |  |
| sf_otherwork | 0.11     | 0.13       | 0.13        | 0.10    | 0.15         | 0.15        | 0.18       | 0.17       | 0.14        | 0.14       | 0.10       | 0.22        | 0.28       | 0.32        | 0.19       | 0.13     | 0.20       | 0.15       | 0.19       | 0.19     | 0.16       | 0.47      |              |            |            |          |  |
| sf_discuss   | 0.16     | 0.19       | 0.18        | 0.17    | 0.20         | 0.18        | 0.21       | 0.23       | 0.18        | 0.20       | 0.16       | 0.22        | 0.27       | 0.31        | 0.23       | 0.19     | 0.25       | 0.17       | 0.22       | 0.22     | 0.17       | 0.45      | 0.46         |            |            |          |  |
| sf_perform   | 0.15     | 0.20       | 0.19        | 0.17    | 0.20         | 0.19        | 0.20       | 0.23       | 0.19        | 0.19       | 0.17       | 0.18        | 0.24       | 0.27        | 0.24       | 0.18     | 0.24       | 0.15       | 0.20       | 0.19     | 0.14       | 0.51      | 0.44         | 0.48       |            |          |  |
| et_goals     | 0.27     | 0.27       | 0.28        | 0.30    | 0.18         | 0.18        | 0.12       | 0.18       | 0.15        | 0.25       | 0.20       | 0.12        | 0.13       | 0.12        | 0.26       | 0.20     | 0.22       | -0.01      | 0.05       | 0.08     | 0.07       | 0.15      | 0.09         | 0.13       | 0.15       |          |  |
| et_organize  | 0.25     | 0.25       | 0.25        | 0.27    | 0.16         | 0.17        | 0.11       | 0.16       | 0.12        | 0.23       | 0.19       | 0.10        | 0.11       | 0.10        | 0.24       | 0.20     | 0.20       | -0.03      | 0.04       | 0.07     | 0.05       | 0.12      | 0.08         | 0.10       | 0.12       | 0.54     |  |
| et_example   | 0.31     | 0.29       | 0.27        | 0.31    | 0.19         | 0.17        | 0.10       | 0.18       | 0.15        | 0.25       | 0.22       | 0.18        | 0.16       | 0.16        | 0.22       | 0.22     | 0.23       | 0.04       | 0.11       | 0.12     | 0.11       | 0.13      | 0.08         | 0.12       | 0.14       | 0.48     |  |
| et_draftfb   | 0.17     | 0.21       | 0.20        | 0.20    | 0.16         | 0.13        | 0.13       | 0.19       | 0.14        | 0.18       | 0.13       | 0.13        | 0.15       | 0.18        | 0.20       | 0.15     | 0.19       | 0.07       | 0.10       | 0.13     | 0.13       | 0.29      | 0.26         | 0.30       | 0.36       | 0.37     |  |
| et_feedback  | 0.20     | 0.23       | 0.23        | 0.23    | 0.16         | 0.15        | 0.14       | 0.19       | 0.15        | 0.21       | 0.15       | 0.12        | 0.15       | 0.16        | 0.23       | 0.18     | 0.20       | 0.03       | 0.07       | 0.11     | 0.07       | 0.24      | 0.21         | 0.24       | 0.30       | 0.44     |  |
| qi_student   | 0.17     | 0.15       | 0.14        | 0.15    | 0.14         | 0.09        | 0.09       | 0.10       | 0.12        | 0.14       | 0.14       | 0.09        | 0.07       | 0.09        | 0.11       | 0.12     | 0.13       | 0.19       | 0.18       | 0.23     | 0.16       | 0.10      | 0.06         | 0.09       | 0.08       | 0.17     |  |

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|            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| qi_advisor | 0.20 | 0.23 | 0.21 | 0.23 | 0.15 | 0.15 | 0.12 | 0.17 | 0.14 | 0.19 | 0.17 | 0.12 | 0.14 | 0.16 | 0.21 | 0.16 | 0.19 | 0.00 | 0.07 | 0.09 | 0.04 | 0.22 | 0.17 | 0.20 | 0.24 | 0.32 |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

|               | ho_apply | ho_analyze | ho_evaluate | ho_form | ri_integrate | ri_societal | ri_diverse | ri_ownview | ri_perspect | ri_newview | ri_connect | qr_conclude | qr_problem | qr_evaluate | ls_reading | ls_notes | ls_summary | cl_askhelp | cl_explain | cl_study | cl_project | sf_career | sf_otherwork | sf_discuss | sf_perform | et_goals |
|---------------|----------|------------|-------------|---------|--------------|-------------|------------|------------|-------------|------------|------------|-------------|------------|-------------|------------|----------|------------|------------|------------|----------|------------|-----------|--------------|------------|------------|----------|
| qi_faculty    | 0.22     | 0.23       | 0.23        | 0.25    | 0.17         | 0.16        | 0.12       | 0.18       | 0.14        | 0.22       | 0.20       | 0.10        | 0.11       | 0.11        | 0.22       | 0.16     | 0.18       | -0.02      | 0.07       | 0.08     | 0.04       | 0.21      | 0.14         | 0.19       | 0.23       | 0.39     |
| qi_staff      | 0.17     | 0.19       | 0.18        | 0.19    | 0.11         | 0.11        | 0.10       | 0.13       | 0.12        | 0.16       | 0.13       | 0.11        | 0.12       | 0.14        | 0.16       | 0.14     | 0.17       | 0.02       | 0.06       | 0.09     | 0.06       | 0.17      | 0.13         | 0.15       | 0.17       | 0.27     |
| qi_admin      | 0.16     | 0.17       | 0.17        | 0.18    | 0.11         | 0.10        | 0.07       | 0.13       | 0.11        | 0.14       | 0.12       | 0.10        | 0.10       | 0.11        | 0.16       | 0.13     | 0.15       | 0.01       | 0.04       | 0.07     | 0.04       | 0.14      | 0.11         | 0.13       | 0.14       | 0.27     |
| se_academic   | 0.24     | 0.23       | 0.23        | 0.26    | 0.17         | 0.14        | 0.11       | 0.16       | 0.15        | 0.22       | 0.18       | 0.13        | 0.14       | 0.14        | 0.20       | 0.18     | 0.21       | 0.04       | 0.09       | 0.12     | 0.10       | 0.16      | 0.12         | 0.14       | 0.16       | 0.37     |
| se_learnsup   | 0.21     | 0.20       | 0.19        | 0.21    | 0.13         | 0.11        | 0.08       | 0.13       | 0.11        | 0.17       | 0.14       | 0.15        | 0.13       | 0.14        | 0.15       | 0.16     | 0.18       | 0.05       | 0.08       | 0.11     | 0.09       | 0.12      | 0.09         | 0.10       | 0.11       | 0.28     |
| se_diverse    | 0.19     | 0.20       | 0.19        | 0.20    | 0.16         | 0.14        | 0.16       | 0.17       | 0.16        | 0.19       | 0.14       | 0.16        | 0.18       | 0.19        | 0.18       | 0.16     | 0.20       | 0.10       | 0.12       | 0.15     | 0.14       | 0.19      | 0.18         | 0.18       | 0.18       | 0.25     |
| se_social     | 0.19     | 0.19       | 0.20        | 0.21    | 0.14         | 0.13        | 0.13       | 0.14       | 0.13        | 0.18       | 0.14       | 0.12        | 0.13       | 0.14        | 0.16       | 0.15     | 0.18       | 0.10       | 0.11       | 0.14     | 0.13       | 0.15      | 0.13         | 0.13       | 0.12       | 0.26     |
| se_wellness   | 0.19     | 0.18       | 0.18        | 0.20    | 0.14         | 0.12        | 0.11       | 0.13       | 0.13        | 0.17       | 0.15       | 0.12        | 0.13       | 0.13        | 0.16       | 0.15     | 0.18       | 0.06       | 0.08       | 0.11     | 0.10       | 0.17      | 0.13         | 0.13       | 0.15       | 0.30     |
| se_nonacad    | 0.15     | 0.16       | 0.16        | 0.14    | 0.13         | 0.11        | 0.12       | 0.15       | 0.13        | 0.16       | 0.10       | 0.16        | 0.19       | 0.22        | 0.17       | 0.16     | 0.19       | 0.08       | 0.09       | 0.14     | 0.10       | 0.26      | 0.27         | 0.25       | 0.25       | 0.25     |
| se_activities | 0.18     | 0.21       | 0.21        | 0.21    | 0.15         | 0.17        | 0.18       | 0.16       | 0.16        | 0.19       | 0.14       | 0.13        | 0.18       | 0.17        | 0.18       | 0.14     | 0.18       | 0.07       | 0.09       | 0.11     | 0.10       | 0.17      | 0.17         | 0.17       | 0.16       | 0.24     |
| se_events     | 0.19     | 0.20       | 0.20        | 0.20    | 0.15         | 0.14        | 0.15       | 0.14       | 0.14        | 0.16       | 0.15       | 0.11        | 0.14       | 0.14        | 0.16       | 0.14     | 0.18       | 0.08       | 0.10       | 0.13     | 0.12       | 0.15      | 0.15         | 0.13       | 0.14       | 0.24     |
| lc_write      | 0.24     | 0.30       | 0.35        | 0.31    | 0.22         | 0.25        | 0.22       | 0.24       | 0.20        | 0.27       | 0.21       | 0.14        | 0.18       | 0.15        | 0.33       | 0.20     | 0.24       | 0.01       | 0.10       | 0.12     | 0.09       | 0.20      | 0.15         | 0.19       | 0.20       | 0.33     |
| lc_speak      | 0.24     | 0.26       | 0.29        | 0.26    | 0.23         | 0.23        | 0.22       | 0.23       | 0.21        | 0.26       | 0.20       | 0.14        | 0.20       | 0.19        | 0.26       | 0.19     | 0.25       | 0.11       | 0.18       | 0.20     | 0.21       | 0.28      | 0.22         | 0.25       | 0.27       | 0.29     |
| lc_think      | 0.37     | 0.38       | 0.36        | 0.39    | 0.27         | 0.26        | 0.19       | 0.25       | 0.21        | 0.33       | 0.28       | 0.21        | 0.20       | 0.18        | 0.30       | 0.22     | 0.25       | 0.05       | 0.14       | 0.15     | 0.11       | 0.16      | 0.09         | 0.16       | 0.16       | 0.34     |
| lc_analyse    | 0.31     | 0.24       | 0.17        | 0.21    | 0.17         | 0.08        | -0.02      | 0.12       | 0.08        | 0.17       | 0.13       | 0.52        | 0.37       | 0.40        | 0.14       | 0.19     | 0.22       | 0.10       | 0.15       | 0.18     | 0.18       | 0.16      | 0.15         | 0.15       | 0.11       | 0.21     |
| lc_work       | 0.32     | 0.24       | 0.23        | 0.26    | 0.22         | 0.20        | 0.10       | 0.18       | 0.16        | 0.25       | 0.22       | 0.18        | 0.19       | 0.19        | 0.23       | 0.21     | 0.24       | 0.08       | 0.13       | 0.18     | 0.16       | 0.26      | 0.16         | 0.19       | 0.20       | 0.30     |
| lc_others     | 0.28     | 0.23       | 0.24        | 0.26    | 0.23         | 0.17        | 0.15       | 0.18       | 0.20        | 0.24       | 0.19       | 0.17        | 0.17       | 0.19        | 0.21       | 0.19     | 0.23       | 0.20       | 0.21       | 0.27     | 0.35       | 0.22      | 0.15         | 0.19       | 0.19       | 0.28     |
| lc_probsolve  | 0.38     | 0.32       | 0.29        | 0.32    | 0.27         | 0.27        | 0.16       | 0.23       | 0.19        | 0.30       | 0.24       | 0.28        | 0.31       | 0.28        | 0.25       | 0.21     | 0.25       | 0.10       | 0.17       | 0.19     | 0.17       | 0.22      | 0.19         | 0.21       | 0.18       | 0.28     |
| lc_citizen    | 0.24     | 0.29       | 0.33        | 0.28    | 0.22         | 0.34        | 0.33       | 0.26       | 0.25        | 0.28       | 0.22       | 0.13        | 0.26       | 0.20        | 0.30       | 0.17     | 0.23       | 0.07       | 0.12       | 0.16     | 0.11       | 0.24      | 0.22         | 0.23       | 0.23       | 0.27     |
| lc_creative   | 0.26     | 0.29       | 0.28        | 0.31    | 0.25         | 0.21        | 0.20       | 0.24       | 0.21        | 0.28       | 0.23       | 0.13        | 0.17       | 0.17        | 0.25       | 0.17     | 0.22       | 0.10       | 0.17       | 0.18     | 0.19       | 0.24      | 0.20         | 0.24       | 0.27       | 0.29     |

VALIDITY AND RELIABILITY OF THE STUDENTSURVEY.IE QUESTIONNAIRE

|               | et_goals | et_organize | et_example | et_draftfb | et_feedback | qi_student | qi_advisor | qi_faculty | qi_staff | qi_admin | se_academic | se_learnsup | se_diverse | se_social | se_wellness | se_nonacad | se_activities | se_events | lc_write | lc_speak | lc_think | lc_analyse | lc_work | lc_others | lc_probsolve | lc_citizen | lc_creative |  |
|---------------|----------|-------------|------------|------------|-------------|------------|------------|------------|----------|----------|-------------|-------------|------------|-----------|-------------|------------|---------------|-----------|----------|----------|----------|------------|---------|-----------|--------------|------------|-------------|--|
| et_goals      |          |             |            |            |             |            |            |            |          |          |             |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| et_organize   | 0.54     |             |            |            |             |            |            |            |          |          |             |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| et_example    | 0.48     | 0.48        |            |            |             |            |            |            |          |          |             |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| et_draftfb    | 0.37     | 0.34        | 0.33       |            |             |            |            |            |          |          |             |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| et_feedback   | 0.44     | 0.43        | 0.38       | 0.57       |             |            |            |            |          |          |             |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| qi_student    | 0.17     | 0.17        | 0.19       | 0.13       | 0.13        |            |            |            |          |          |             |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| qi_advisor    | 0.32     | 0.31        | 0.28       | 0.32       | 0.33        | 0.31       |            |            |          |          |             |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| qi_faculty    | 0.39     | 0.40        | 0.35       | 0.33       | 0.37        | 0.35       | 0.66       |            |          |          |             |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| qi_staff      | 0.27     | 0.25        | 0.24       | 0.23       | 0.25        | 0.29       | 0.63       | 0.53       |          |          |             |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| qi_admin      | 0.27     | 0.26        | 0.24       | 0.23       | 0.25        | 0.28       | 0.62       | 0.56       | 0.65     |          |             |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| se_academic   | 0.37     | 0.36        | 0.33       | 0.29       | 0.34        | 0.22       | 0.38       | 0.39       | 0.38     | 0.34     |             |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| se_learnsup   | 0.28     | 0.26        | 0.26       | 0.20       | 0.24        | 0.16       | 0.28       | 0.27       | 0.33     | 0.29     | 0.55        |             |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| se_diverse    | 0.25     | 0.22        | 0.24       | 0.25       | 0.27        | 0.21       | 0.29       | 0.26       | 0.30     | 0.26     | 0.46        | 0.41        |            |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| se_social     | 0.26     | 0.24        | 0.25       | 0.20       | 0.24        | 0.25       | 0.28       | 0.26       | 0.32     | 0.27     | 0.51        | 0.47        | 0.50       |           |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| se_wellness   | 0.30     | 0.28        | 0.26       | 0.24       | 0.27        | 0.19       | 0.33       | 0.32       | 0.38     | 0.32     | 0.57        | 0.52        | 0.47       | 0.54      |             |            |               |           |          |          |          |            |         |           |              |            |             |  |
| se_nonacad    | 0.25     | 0.23        | 0.20       | 0.31       | 0.32        | 0.16       | 0.32       | 0.28       | 0.31     | 0.29     | 0.47        | 0.40        | 0.47       | 0.43      | 0.51        |            |               |           |          |          |          |            |         |           |              |            |             |  |
| se_activities | 0.24     | 0.21        | 0.22       | 0.23       | 0.25        | 0.17       | 0.27       | 0.24       | 0.29     | 0.25     | 0.46        | 0.45        | 0.48       | 0.54      | 0.49        | 0.46       |               |           |          |          |          |            |         |           |              |            |             |  |
| se_events     | 0.24     | 0.23        | 0.23       | 0.21       | 0.23        | 0.20       | 0.27       | 0.25       | 0.30     | 0.25     | 0.47        | 0.45        | 0.45       | 0.57      | 0.50        | 0.41       | 0.59          |           |          |          |          |            |         |           |              |            |             |  |
| lc_write      | 0.33     | 0.31        | 0.26       | 0.28       | 0.31        | 0.18       | 0.29       | 0.31       | 0.24     | 0.22     | 0.33        | 0.25        | 0.26       | 0.25      | 0.27        | 0.27       | 0.26          | 0.25      |          |          |          |            |         |           |              |            |             |  |
| lc_speak      | 0.29     | 0.27        | 0.25       | 0.32       | 0.30        | 0.24       | 0.28       | 0.31       | 0.24     | 0.23     | 0.32        | 0.24        | 0.31       | 0.27      | 0.29        | 0.31       | 0.28          | 0.26      | 0.52     |          |          |            |         |           |              |            |             |  |
| lc_think      | 0.34     | 0.32        | 0.32       | 0.23       | 0.27        | 0.23       | 0.29       | 0.32       | 0.25     | 0.23     | 0.35        | 0.29        | 0.27       | 0.28      | 0.28        | 0.21       | 0.27          | 0.27      | 0.50     | 0.44     |          |            |         |           |              |            |             |  |
| lc_analyse    | 0.21     | 0.19        | 0.24       | 0.17       | 0.18        | 0.14       | 0.21       | 0.19       | 0.20     | 0.19     | 0.26        | 0.26        | 0.25       | 0.22      | 0.22        | 0.25       | 0.22          | 0.20      | 0.28     | 0.28     | 0.40     |            |         |           |              |            |             |  |
| lc_work       | 0.30     | 0.28        | 0.28       | 0.24       | 0.25        | 0.22       | 0.29       | 0.30       | 0.26     | 0.24     | 0.32        | 0.24        | 0.26       | 0.25      | 0.28        | 0.29       | 0.22          | 0.23      | 0.38     | 0.44     | 0.42     | 0.33       |         |           |              |            |             |  |
| lc_others     | 0.28     | 0.26        | 0.27       | 0.26       | 0.25        | 0.34       | 0.26       | 0.28       | 0.24     | 0.22     | 0.33        | 0.26        | 0.31       | 0.31      | 0.30        | 0.28       | 0.25          | 0.27      | 0.41     | 0.54     | 0.45     | 0.32       | 0.45    |           |              |            |             |  |
| lc_probsolve  | 0.28     | 0.27        | 0.29       | 0.24       | 0.26        | 0.20       | 0.28       | 0.28       | 0.25     | 0.22     | 0.33        | 0.27        | 0.30       | 0.27      | 0.28        | 0.31       | 0.29          | 0.26      | 0.41     | 0.45     | 0.52     | 0.46       | 0.48    | 0.44      |              |            |             |  |
| lc_citizen    | 0.27     | 0.26        | 0.23       | 0.26       | 0.28        | 0.19       | 0.29       | 0.28       | 0.26     | 0.23     | 0.32        | 0.26        | 0.34       | 0.32      | 0.32        | 0.35       | 0.39          | 0.31      | 0.46     | 0.48     | 0.42     | 0.26       | 0.37    | 0.40      | 0.47         |            |             |  |
| lc_creative   | 0.29     | 0.26        | 0.27       | 0.34       | 0.31        | 0.23       | 0.30       | 0.32       | 0.25     | 0.24     | 0.34        | 0.25        | 0.32       | 0.29      | 0.30        | 0.31       | 0.29          | 0.29      | 0.45     | 0.51     | 0.48     | 0.27       | 0.41    | 0.49      | 0.46         | 0.45       |             |  |

## Appendix C: Topical Module Inter-Item Correlation Matrices

### Topical Module 1: Career and Workforce Preparation

|                | t1_career1 | t1_career2 | t1_confidence1 | t1_confidence2 | t1_confidence3 | t1_confidence4 | t1_confidence5 | t1_plan1 | t1_plan2 | t1_plan3 | t1_plan4 | t1_plan5 | t1_plan6 |
|----------------|------------|------------|----------------|----------------|----------------|----------------|----------------|----------|----------|----------|----------|----------|----------|
| t1_career1     |            |            |                |                |                |                |                |          |          |          |          |          |          |
| t1_career2     | 0.55       |            |                |                |                |                |                |          |          |          |          |          |          |
| t1_confidence1 | 0.30       | 0.19       |                |                |                |                |                |          |          |          |          |          |          |
| t1_confidence2 | 0.39       | 0.41       | 0.36           |                |                |                |                |          |          |          |          |          |          |
| t1_confidence3 | 0.38       | 0.32       | 0.51           | 0.55           |                |                |                |          |          |          |          |          |          |
| t1_confidence4 | 0.37       | 0.28       | 0.41           | 0.46           | 0.48           |                |                |          |          |          |          |          |          |
| t1_confidence5 | 0.25       | 0.14       | 0.51           | 0.32           | 0.44           | 0.36           |                |          |          |          |          |          |          |
| t1_plan1       | 0.22       | 0.27       | 0.10           | 0.27           | 0.20           | 0.19           | 0.08           |          |          |          |          |          |          |
| t1_plan2       | 0.22       | 0.24       | 0.14           | 0.22           | 0.18           | 0.17           | 0.15           | 0.42     |          |          |          |          |          |
| t1_plan3       | 0.29       | 0.27       | 0.16           | 0.26           | 0.23           | 0.22           | 0.15           | 0.42     | 0.40     |          |          |          |          |
| t1_plan4       | 0.26       | 0.29       | 0.14           | 0.26           | 0.21           | 0.22           | 0.13           | 0.48     | 0.43     | 0.45     |          |          |          |
| t1_plan5       | 0.23       | 0.28       | 0.18           | 0.22           | 0.21           | 0.23           | 0.16           | 0.41     | 0.40     | 0.39     | 0.41     |          |          |
| t1_plan6       | 0.21       | 0.29       | 0.11           | 0.21           | 0.17           | 0.14           | 0.11           | 0.44     | 0.45     | 0.41     | 0.42     | 0.43     |          |

### Topical Module 2: Civic Engagement

|               | t2_emphasise1 | t2_emphasise2 | t2_emphasise3 | t2_emphasise4 | t2_important1 | t2_important2 | t2_important3 |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| t2_emphasise1 |               |               |               |               |               |               |               |
| t2_emphasise2 | 0.69          |               |               |               |               |               |               |
| t2_emphasise3 | 0.51          | 0.57          |               |               |               |               |               |
| t2_emphasise4 | 0.58          | 0.55          | 0.47          |               |               |               |               |
| t2_important1 | 0.48          | 0.38          | 0.23          | 0.35          |               |               |               |
| t2_important2 | 0.48          | 0.39          | 0.25          | 0.37          | 0.77          |               |               |
| t2_important3 | 0.41          | 0.37          | 0.29          | 0.35          | 0.45          | 0.48          |               |

Topical Module 3: Experiences with Online Learning

|                 | t3_comfortable1 | t3_comfortable2 | t3_comfortable3 | t3_comfortable4 | t3_comfortable5 | t3_comfortable6 | t3_comfortable7 | t3_comfortable8 | t3_improve1 | t3_improve2 | t3_improve3 | t3_improve4 | t3_improve5 | t3_improve6 | t3_experience1 | t3_experience2 | t3_experience3 | t3_experience4 | t3_experience5 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|----------------|----------------|----------------|----------------|
| t3_comfortable1 |                 |                 |                 |                 |                 |                 |                 |                 |             |             |             |             |             |             |                |                |                |                |                |
| t3_comfortable2 | 0.60            |                 |                 |                 |                 |                 |                 |                 |             |             |             |             |             |             |                |                |                |                |                |
| t3_comfortable3 | 0.32            | 0.32            |                 |                 |                 |                 |                 |                 |             |             |             |             |             |             |                |                |                |                |                |
| t3_comfortable4 | 0.46            | 0.50            | 0.30            |                 |                 |                 |                 |                 |             |             |             |             |             |             |                |                |                |                |                |
| t3_comfortable5 | 0.51            | 0.55            | 0.31            | 0.49            |                 |                 |                 |                 |             |             |             |             |             |             |                |                |                |                |                |
| t3_comfortable6 | 0.43            | 0.45            | 0.38            | 0.36            | 0.41            |                 |                 |                 |             |             |             |             |             |             |                |                |                |                |                |
| t3_comfortable7 | 0.44            | 0.44            | 0.32            | 0.41            | 0.56            | 0.45            |                 |                 |             |             |             |             |             |             |                |                |                |                |                |
| t3_comfortable8 | 0.46            | 0.55            | 0.27            | 0.41            | 0.43            | 0.34            | 0.34            |                 |             |             |             |             |             |             |                |                |                |                |                |
| t3_improve1     | 0.09            | 0.10            | 0.10            | 0.13            | 0.11            | 0.08            | 0.09            | 0.11            |             |             |             |             |             |             |                |                |                |                |                |
| t3_improve2     | 0.08            | 0.08            | 0.08            | 0.08            | 0.08            | 0.06            | 0.06            | 0.06            | 0.54        |             |             |             |             |             |                |                |                |                |                |
| t3_improve3     | 0.03            | 0.03            | 0.08            | 0.08            | 0.05            | 0.03            | 0.06            | 0.02            | 0.46        | 0.62        |             |             |             |             |                |                |                |                |                |
| t3_improve4     | 0.10            | 0.11            | 0.11            | 0.14            | 0.14            | 0.11            | 0.09            | 0.10            | 0.50        | 0.52        | 0.49        |             |             |             |                |                |                |                |                |
| t3_improve5     | 0.10            | 0.07            | 0.09            | 0.11            | 0.12            | 0.12            | 0.10            | 0.07            | 0.43        | 0.50        | 0.50        | 0.53        |             |             |                |                |                |                |                |
| t3_improve6     | 0.01            | 0.00            | 0.09            | 0.05            | 0.02            | 0.04            | 0.02            | -0.05           | 0.34        | 0.41        | 0.44        | 0.44        | 0.44        |             |                |                |                |                |                |
| t3_experience1  | 0.13            | 0.18            | 0.19            | 0.16            | 0.16            | 0.16            | 0.17            | 0.14            | 0.09        | 0.10        | 0.09        | 0.09        | 0.07        | 0.11        |                |                |                |                |                |
| t3_experience2  | 0.12            | 0.15            | 0.18            | 0.16            | 0.14            | 0.16            | 0.13            | 0.13            | 0.08        | 0.12        | 0.12        | 0.10        | 0.08        | 0.14        | 0.56           |                |                |                |                |
| t3_experience3  | 0.19            | 0.21            | 0.21            | 0.21            | 0.18            | 0.20            | 0.19            | 0.20            | 0.06        | 0.06        | 0.05        | 0.06        | 0.06        | 0.07        | 0.47           | 0.47           |                |                |                |
| t3_experience4  | 0.16            | 0.21            | 0.18            | 0.17            | 0.22            | 0.27            | 0.22            | 0.16            | 0.11        | 0.08        | 0.05        | 0.11        | 0.10        | 0.06        | 0.43           | 0.44           | 0.42           |                |                |
| t3_experience5  | 0.21            | 0.21            | 0.24            | 0.21            | 0.21            | 0.25            | 0.22            | 0.16            | 0.13        | 0.10        | 0.09        | 0.11        | 0.11        | 0.14        | 0.43           | 0.43           | 0.41           | 0.44           |                |

Topical Module 4: Inclusiveness and Engagement with Diversity

|                 | t4_coursework1 | t4_coursework2 | t4_coursework3 | t4_coursework4 | t4_institution1 | t4_institution2 | t4_institution3 | t4_institution4 | t4_institution5 | t4_activity1 | t4_activity2 | t4_activity3 |
|-----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------|--------------|--------------|
| t4_coursework1  |                |                |                |                |                 |                 |                 |                 |                 |              |              |              |
| t4_coursework2  | 0.59           |                |                |                |                 |                 |                 |                 |                 |              |              |              |
| t4_coursework3  | 0.59           | 0.62           |                |                |                 |                 |                 |                 |                 |              |              |              |
| t4_coursework4  | 0.60           | 0.64           | 0.63           |                |                 |                 |                 |                 |                 |              |              |              |
| t4_institution1 | 0.40           | 0.37           | 0.37           | 0.42           |                 |                 |                 |                 |                 |              |              |              |
| t4_institution2 | 0.48           | 0.41           | 0.44           | 0.45           | 0.65            |                 |                 |                 |                 |              |              |              |
| t4_institution3 | 0.35           | 0.32           | 0.33           | 0.36           | 0.67            | 0.61            |                 |                 |                 |              |              |              |
| t4_institution4 | 0.31           | 0.29           | 0.28           | 0.35           | 0.64            | 0.56            | 0.67            |                 |                 |              |              |              |
| t4_institution5 | 0.39           | 0.36           | 0.35           | 0.38           | 0.65            | 0.66            | 0.72            | 0.66            |                 |              |              |              |
| t4_activity1    | 0.29           | 0.28           | 0.34           | 0.28           | 0.23            | 0.30            | 0.23            | 0.20            | 0.27            |              |              |              |
| t4_activity2    | 0.19           | 0.22           | 0.28           | 0.22           | 0.17            | 0.22            | 0.18            | 0.14            | 0.22            | 0.65         |              |              |
| t4_activity3    | 0.18           | 0.20           | 0.26           | 0.19           | 0.14            | 0.20            | 0.14            | 0.10            | 0.20            | 0.58         | 0.67         |              |

Topical Module 5: Academic Integrity

|                 | t5_support1 | t5_support2 | t5_support3 | t5_support4 | t5_experience1 | t5_experience2 | t5_experience3 | t5_experience4 | t5_experience5 | t5_experience6 | t5_experience7 | t5_experience8 | t5_experience9 | t5_experience10 | t5_experience11 |
|-----------------|-------------|-------------|-------------|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|
| t5_support1     |             |             |             |             |                |                |                |                |                |                |                |                |                |                 |                 |
| t5_support2     | 0.62        |             |             |             |                |                |                |                |                |                |                |                |                |                 |                 |
| t5_support3     | 0.54        | 0.44        |             |             |                |                |                |                |                |                |                |                |                |                 |                 |
| t5_support4     | 0.60        | 0.53        | 0.56        |             |                |                |                |                |                |                |                |                |                |                 |                 |
| t5_experience1  | -0.11       | -0.12       | -0.03       | -0.11       |                |                |                |                |                |                |                |                |                |                 |                 |
| t5_experience2  | -0.06       | -0.06       | -0.01       | -0.03       | 0.24           |                |                |                |                |                |                |                |                |                 |                 |
| t5_experience3  | -0.08       | -0.07       | -0.06       | -0.05       | 0.17           | 0.24           |                |                |                |                |                |                |                |                 |                 |
| t5_experience4  | -0.06       | -0.09       | 0.02        | -0.03       | 0.44           | 0.26           | 0.24           |                |                |                |                |                |                |                 |                 |
| t5_experience5  | -0.03       | -0.05       | 0.09        | 0.02        | 0.34           | 0.22           | 0.20           | 0.40           |                |                |                |                |                |                 |                 |
| t5_experience6  | 0.26        | 0.24        | 0.23        | 0.30        | -0.08          | 0.05           | 0.00           | 0.02           | 0.03           |                |                |                |                |                 |                 |
| t5_experience7  | 0.32        | 0.30        | 0.25        | 0.35        | -0.16          | 0.00           | -0.03          | -0.09          | -0.04          | 0.39           |                |                |                |                 |                 |
| t5_experience8  | 0.27        | 0.26        | 0.23        | 0.28        | -0.13          | -0.02          | -0.02          | -0.06          | -0.02          | 0.25           | 0.31           |                |                |                 |                 |
| t5_experience9  | 0.22        | 0.22        | 0.16        | 0.24        | -0.12          | -0.02          | -0.03          | -0.07          | -0.05          | 0.26           | 0.33           | 0.26           |                |                 |                 |
| t5_experience10 | 0.24        | 0.25        | 0.13        | 0.21        | -0.13          | -0.07          | -0.05          | -0.16          | -0.11          | 0.20           | 0.27           | 0.26           | 0.25           |                 |                 |
| t5_experience11 | 0.27        | 0.23        | 0.20        | 0.24        | -0.10          | -0.04          | -0.06          | -0.11          | -0.05          | 0.22           | 0.30           | 0.26           | 0.24           | 0.38            |                 |

## Appendix D: Correlation and Reliability by Indicators

Inter-Item Correlation Matrices (listwise deletion)

\* Cronbach's Alpha if item deleted

### Higher Order Learning (Cronbach's Alpha = 0.80)

| Ho_      | apply | analyze | evaluate | form | *    |
|----------|-------|---------|----------|------|------|
| apply    | 1.00  |         |          |      | 0.78 |
| analyze  | 0.51  | 1.00    |          |      | 0.74 |
| evaluate | 0.45  | 0.56    | 1.00     |      | 0.76 |
| form     | 0.50  | 0.55    | 0.53     | 1.00 | 0.75 |

### Reflective and Integrative Learning (Cronbach's Alpha = 0.78)

| Ri_       | integrate | societal | diverse | ownview | perspect | newview | connect | *    |
|-----------|-----------|----------|---------|---------|----------|---------|---------|------|
| integrate | 1.00      |          |         |         |          |         |         | 0.76 |
| societal  | 0.33      | 1.00     |         |         |          |         |         | 0.74 |
| diverse   | 0.27      | 0.43     | 1.00    |         |          |         |         | 0.76 |
| ownview   | 0.32      | 0.36     | 0.33    | 1.00    |          |         |         | 0.75 |
| perspect  | 0.29      | 0.35     | 0.36    | 0.39    | 1.00     |         |         | 0.75 |
| newview   | 0.34      | 0.35     | 0.26    | 0.35    | 0.30     | 1.00    |         | 0.76 |
| connect   | 0.42      | 0.37     | 0.27    | 0.34    | 0.31     | 0.35    | 1.00    | 0.75 |

### Quantitative Reasoning (Cronbach's Alpha = 0.74)

| Qr_      | conclude | problem | evaluate | *    |
|----------|----------|---------|----------|------|
| conclude | 1.00     |         |          | 0.64 |
| problem  | 0.48     | 1.00    |          | 0.68 |
| evaluate | 0.51     | 0.47    | 1.00     | 0.65 |

### Learning Strategies (Cronbach's Alpha = 0.66)

| Ls_     | reading | notes | summary | *    |
|---------|---------|-------|---------|------|
| reading | 1.00    |       |         | 0.64 |
| notes   | 0.34    | 1.00  |         | 0.54 |
| summary | 0.36    | 0.47  | 1.00    | 0.51 |

### Collaborative Learning (Cronbach's Alpha = 0.70)

| Cl_     | askhelp | explain | study | project | *    |
|---------|---------|---------|-------|---------|------|
| askhelp | 1.00    |         |       |         | 0.63 |
| explain | 0.38    | 1.00    |       |         | 0.64 |
| study   | 0.45    | 0.41    | 1.00  |         | 0.60 |
| project | 0.31    | 0.32    | 0.35  | 1.00    | 0.68 |

**Student-Faculty Interaction (Cronbach's Alpha = 0.77)**

| Sf_       | career | otherwork | discuss | perform | *    |
|-----------|--------|-----------|---------|---------|------|
| career    | 1.00   |           |         |         | 0.72 |
| otherwork | 0.47   | 1.00      |         |         | 0.73 |
| discuss   | 0.45   | 0.46      | 1.00    |         | 0.73 |
| perform   | 0.51   | 0.44      | 0.48    | 1.00    | 0.72 |

**Effective Teaching Practices (Cronbach's Alpha = 0.79)**

| Et_      | goals | organize | example | draftfb | feedback | *    |
|----------|-------|----------|---------|---------|----------|------|
| goals    | 1.00  |          |         |         |          | 0.75 |
| organize | 0.54  | 1.00     |         |         |          | 0.75 |
| example  | 0.48  | 0.48     | 1.00    |         |          | 0.76 |
| draftfb  | 0.37  | 0.34     | 0.33    | 1.00    |          | 0.77 |
| feedback | 0.44  | 0.43     | 0.38    | 0.57    | 1.00     | 0.74 |

**Quality of Interactions (Cronbach's Alpha = 0.84)**

| Qi_     | student | advisor | faculty | staff | admin | *    |
|---------|---------|---------|---------|-------|-------|------|
| student | 1.00    |         |         |       |       | 0.87 |
| advisor | 0.31    | 1.00    |         |       |       | 0.78 |
| faculty | 0.35    | 0.66    | 1.00    |       |       | 0.79 |
| staff   | 0.29    | 0.63    | 0.53    | 1.00  |       | 0.79 |
| admin   | 0.28    | 0.62    | 0.56    | 0.65  | 1.00  | 0.79 |

**Supportive Environment (Cronbach's Alpha = 0.88)**

| Se_        | academic | learnsup | diverse | social | wellness | nonacad | activities | events | *    |
|------------|----------|----------|---------|--------|----------|---------|------------|--------|------|
| academic   | 1.00     |          |         |        |          |         |            |        | 0.87 |
| learnsup   | 0.55     | 1.00     |         |        |          |         |            |        | 0.87 |
| diverse    | 0.46     | 0.41     | 1.00    |        |          |         |            |        | 0.87 |
| social     | 0.51     | 0.47     | 0.50    | 1.00   |          |         |            |        | 0.87 |
| wellness   | 0.57     | 0.52     | 0.47    | 0.54   | 1.00     |         |            |        | 0.86 |
| nonacad    | 0.47     | 0.40     | 0.47    | 0.43   | 0.51     | 1.00    |            |        | 0.87 |
| activities | 0.46     | 0.45     | 0.48    | 0.54   | 0.49     | 0.46    | 1.00       |        | 0.87 |
| events     | 0.47     | 0.45     | 0.45    | 0.57   | 0.50     | 0.41    | 0.59       | 1.00   | 0.87 |

**Learning, Creative and Social Skills (Cronbach's Alpha = 0.87)**

| Lc_       | write | speak | think | analyse | work | others | probsolve | citizen | creative | *    |
|-----------|-------|-------|-------|---------|------|--------|-----------|---------|----------|------|
| write     | 1.00  |       |       |         |      |        |           |         |          | 0.85 |
| speak     | 0.52  | 1.00  |       |         |      |        |           |         |          | 0.85 |
| think     | 0.50  | 0.44  | 1.00  |         |      |        |           |         |          | 0.85 |
| analyse   | 0.28  | 0.28  | 0.40  | 1.00    |      |        |           |         |          | 0.87 |
| work      | 0.38  | 0.44  | 0.42  | 0.33    | 1.00 |        |           |         |          | 0.86 |
| others    | 0.41  | 0.54  | 0.45  | 0.32    | 0.45 | 1.00   |           |         |          | 0.85 |
| probsolve | 0.41  | 0.45  | 0.52  | 0.46    | 0.48 | 0.44   | 1.00      |         |          | 0.85 |
| citizen   | 0.46  | 0.48  | 0.42  | 0.26    | 0.37 | 0.40   | 0.47      | 1.00    |          | 0.86 |
| creative  | 0.45  | 0.51  | 0.48  | 0.27    | 0.41 | 0.49   | 0.46      | 0.45    | 1.00     | 0.85 |

## Appendix E: Transformation and Mean Score

| Code | Indicator                            | No of Items | Minimum Items | Scale Categories |
|------|--------------------------------------|-------------|---------------|------------------|
| HO   | Higher Order Learning                | 4           | 4             | 4                |
| RI   | Reflective and Integrative Learning  | 7           | 6             | 4                |
| QR   | Quantitative Reasoning               | 3           | 3             | 4                |
| LS   | Learning Strategies                  | 3           | 3             | 4                |
| CL   | Collaborative Learning               | 4           | 4             | 4                |
| SF   | Student-Faculty Interaction          | 4           | 4             | 4                |
| ET   | Effective Teaching Practices         | 5           | 4             | 4                |
| QI   | Quality of Interactions              | 5           | 4             | 7                |
| SE   | Supportive Environment               | 8           | 7             | 4                |
| LC   | Learning, Creative and Social Skills | 9           | 8             | 4                |

From the above table;

- CL is the abbreviation for Collaborative Learning. There are four questions within CL and all four items need to be answered by a particular student before an overall indicator score is calculated. All four items within CL have a 4-point scale.
- RI is the abbreviation for Reflective and Integrative Learning. There are seven questions within RI and at least six items need to be answered by a particular student before an overall indicator score is calculated.
- The remaining eight indicators are described in the same manner.

When comparing results from items with a four-point scale to items with a seven-point scale it is necessary to transform the data into a common scale.

| Scale Point | Transformation Four-Point Scale | Transformation Seven-Point Scale |
|-------------|---------------------------------|----------------------------------|
| 1           | 0                               | 0                                |
| 2           | 20                              | 10                               |
| 3           | 40                              | 20                               |
| 4           | 60                              | 30                               |
| 5           |                                 | 40                               |
| 6           |                                 | 50                               |
| 7           |                                 | 60                               |

From the above, where a four-point scale is used each point is multiplied by the number in the second column. Where a seven-point scale is used each point is multiplied by the number in the third column.

## Appendix F: Summary Statistics for Transformed Data

| First Year Undergraduate                  |       |        |               |               |        |         |
|---|-------|--------|---------------|---------------|--------|---------|
|   | Mean  | Median | Percentile 25 | Percentile 75 | Count  | Valid N |
| HO - Higher-Order Learning                | 33.73 | 35     | 25            | 40            | 18,924 | 14,320  |
| RI - Reflective and Integrative Learning  | 30.76 | 31.43  | 22.86         | 37.14         | 18,924 | 18,329  |
| QR - Quantitative Reasoning               | 19.75 | 20     | 6.67          | 26.67         | 18,924 | 15,636  |
| LS - Learning Strategies                  | 31.23 | 33.33  | 20            | 40            | 18,924 | 15,634  |
| CL - Collaborative Learning               | 30.62 | 30     | 20            | 40            | 18,924 | 18,254  |
| SF - Student-Faculty Interaction          | 11.86 | 10     | 0             | 20            | 18,924 | 15,580  |
| ET - Effective Teaching Practices         | 32.28 | 32     | 24            | 40            | 18,924 | 14,077  |
| QI - Quality of Interactions              | 40.49 | 42     | 34            | 50            | 18,924 | 11,548  |
| SE - Supportive Environment               | 31.18 | 30     | 20            | 40            | 18,924 | 13,688  |
| LC - Learning, Creative and Social Skills | 31.89 | 32.5   | 22.5          | 40            | 18,924 | 13,434  |

| Final Year Undergraduate                  |       |        |               |               |        |         |
|---|-------|--------|---------------|---------------|--------|---------|
|   | Mean  | Median | Percentile 25 | Percentile 75 | Count  | Valid N |
| HO - Higher-Order Learning                | 35    | 35     | 25            | 45            | 11,561 | 9,001   |
| RI - Reflective and Integrative Learning  | 32.45 | 31.43  | 25.71         | 40            | 11,561 | 11,141  |
| QR - Quantitative Reasoning               | 21.92 | 20     | 13.33         | 33.33         | 11,561 | 9,771   |
| LS - Learning Strategies                  | 31.44 | 33.33  | 20            | 40            | 11,561 | 9,780   |
| CL - Collaborative Learning               | 32.06 | 30     | 25            | 40            | 11,561 | 11,088  |
| SF - Student-Faculty Interaction          | 15.93 | 15     | 5             | 25            | 11,561 | 9,776   |
| ET - Effective Teaching Practices         | 31.59 | 32     | 20            | 40            | 11,561 | 8,868   |
| QI - Quality of Interactions              | 38.99 | 40     | 30            | 48            | 11,561 | 7,656   |
| SE - Supportive Environment               | 26.54 | 25     | 17.5          | 35            | 11,561 | 8,663   |
| LC - Learning, Creative and Social Skills | 34.04 | 35     | 25            | 42.5          | 11,561 | 8,524   |

| Taught Postgraduate                       |       |        |               |               |       |         |
|---|-------|--------|---------------|---------------|-------|---------|
|   | Mean  | Median | Percentile 25 | Percentile 75 | Count | Valid N |
| HO - Higher-Order Learning                | 38.97 | 40     | 30            | 50            | 8,918 | 6,814   |
| RI - Reflective and Integrative Learning  | 36.48 | 37.14  | 28.57         | 45.71         | 8,918 | 8,344   |
| QR - Quantitative Reasoning               | 24.38 | 20     | 13.33         | 33.33         | 8,918 | 7,338   |
| LS - Learning Strategies                  | 35.35 | 33.33  | 26.67         | 46.67         | 8,918 | 7,338   |
| CL - Collaborative Learning               | 30.41 | 30     | 20            | 40            | 8,918 | 8,280   |
| SF - Student-Faculty Interaction          | 17.39 | 15     | 5             | 25            | 8,918 | 7,330   |
| ET - Effective Teaching Practices         | 36.31 | 36     | 24            | 48            | 8,918 | 6,725   |
| QI - Quality of Interactions              | 42.85 | 45     | 36            | 52            | 8,918 | 5,660   |
| SE - Supportive Environment               | 30.38 | 30     | 20            | 40            | 8,918 | 6,578   |
| LC - Learning, Creative and Social Skills | 36.07 | 37.5   | 27.5          | 45            | 8,918 | 6,480   |

| Overall                                   |       |        |               |               |        |         |
|---|-------|--------|---------------|---------------|--------|---------|
|   | Mean  | Median | Percentile 25 | Percentile 75 | Count  | Valid N |
| HO - Higher-Order Learning                | 35.29 | 35     | 25            | 45            | 39,403 | 30,135  |
| RI - Reflective and Integrative Learning  | 32.52 | 31.43  | 25.71         | 40            | 39,403 | 37,814  |
| QR - Quantitative Reasoning               | 21.43 | 20     | 13.33         | 33.33         | 39,403 | 32,745  |
| LS - Learning Strategies                  | 32.22 | 33.33  | 20            | 40            | 39,403 | 32,752  |
| CL - Collaborative Learning               | 31    | 30     | 20            | 40            | 39,403 | 37,622  |
| SF - Student-Faculty Interaction          | 14.32 | 10     | 5             | 20            | 39,403 | 32,686  |
| ET - Effective Teaching Practices         | 32.99 | 32     | 24            | 40            | 39,403 | 29,670  |
| QI - Quality of Interactions              | 40.57 | 42     | 32.5          | 50            | 39,403 | 24,864  |
| SE - Supportive Environment               | 29.61 | 30     | 20            | 40            | 39,403 | 28,929  |
| LC - Learning, Creative and Social Skills | 33.49 | 32.5   | 25            | 42.5          | 39,403 | 28,438  |

## Appendix G: Inter- Indicator Correlation Matrices

|                                      | Higher-Order Learning | Reflective and Integrative | Quantitative Reasoning | Learning Strategies | Collaborative Learning | Student-Faculty Interaction | Effective Teaching Practices | Quality of Interactions | Supportive Environment | Learning, Creative and Social Skills |
|--------------------------------------|-----------------------|----------------------------|------------------------|---------------------|------------------------|-----------------------------|------------------------------|-------------------------|------------------------|--------------------------------------|
| <b>First Year Undergraduate</b>      |                       |                            |                        |                     |                        |                             |                              |                         |                        |                                      |
| Higher-Order Learning                | 1.00                  |                            |                        |                     |                        |                             |                              |                         |                        |                                      |
| Reflective and Integrative Learning  | 0.51                  | 1.00                       |                        |                     |                        |                             |                              |                         |                        |                                      |
| Quantitative Reasoning               | 0.33                  | 0.33                       | 1.00                   |                     |                        |                             |                              |                         |                        |                                      |
| Learning Strategies                  | 0.42                  | 0.43                       | 0.34                   | 1.00                |                        |                             |                              |                         |                        |                                      |
| Collaborative Learning               | 0.20                  | 0.34                       | 0.30                   | 0.23                | 1.00                   |                             |                              |                         |                        |                                      |
| Student-Faculty Interaction          | 0.21                  | 0.30                       | 0.37                   | 0.28                | 0.27                   | 1.00                        |                              |                         |                        |                                      |
| Effective Teaching Practices         | 0.37                  | 0.30                       | 0.19                   | 0.33                | 0.13                   | 0.27                        | 1.00                         |                         |                        |                                      |
| Quality of Interactions              | 0.29                  | 0.25                       | 0.15                   | 0.24                | 0.13                   | 0.22                        | 0.42                         | 1.00                    |                        |                                      |
| Supportive Environment               | 0.34                  | 0.31                       | 0.23                   | 0.29                | 0.19                   | 0.23                        | 0.43                         | 0.45                    | 1.00                   |                                      |
| Learning, Creative and Social Skills | 0.48                  | 0.44                       | 0.37                   | 0.40                | 0.29                   | 0.32                        | 0.48                         | 0.40                    | 0.54                   | 1.00                                 |
| <b>Final Year Undergraduate</b>      |                       |                            |                        |                     |                        |                             |                              |                         |                        |                                      |
| Higher-Order Learning                | 1.00                  |                            |                        |                     |                        |                             |                              |                         |                        |                                      |
| Reflective and Integrative Learning  | 0.52                  | 1.00                       |                        |                     |                        |                             |                              |                         |                        |                                      |
| Quantitative Reasoning               | 0.38                  | 0.33                       | 1.00                   |                     |                        |                             |                              |                         |                        |                                      |
| Learning Strategies                  | 0.45                  | 0.45                       | 0.38                   | 1.00                |                        |                             |                              |                         |                        |                                      |
| Collaborative Learning               | 0.21                  | 0.35                       | 0.31                   | 0.25                | 1.00                   |                             |                              |                         |                        |                                      |
| Student-Faculty Interaction          | 0.27                  | 0.36                       | 0.37                   | 0.37                | 0.33                   | 1.00                        |                              |                         |                        |                                      |
| Effective Teaching Practices         | 0.40                  | 0.31                       | 0.22                   | 0.36                | 0.13                   | 0.34                        | 1.00                         |                         |                        |                                      |
| Quality of Interactions              | 0.30                  | 0.25                       | 0.18                   | 0.28                | 0.14                   | 0.30                        | 0.49                         | 1.00                    |                        |                                      |
| Supportive Environment               | 0.33                  | 0.29                       | 0.25                   | 0.31                | 0.18                   | 0.33                        | 0.49                         | 0.52                    | 1.00                   |                                      |
| Learning, Creative and Social Skills | 0.51                  | 0.46                       | 0.38                   | 0.40                | 0.28                   | 0.34                        | 0.50                         | 0.47                    | 0.54                   | 1.00                                 |
| <b>Taught Postgraduate</b>           |                       |                            |                        |                     |                        |                             |                              |                         |                        |                                      |
| Higher-Order Learning                | 1.00                  |                            |                        |                     |                        |                             |                              |                         |                        |                                      |
| Reflective and Integrative Learning  | 0.55                  | 1.00                       |                        |                     |                        |                             |                              |                         |                        |                                      |
| Quantitative Reasoning               | 0.36                  | 0.35                       | 1.00                   |                     |                        |                             |                              |                         |                        |                                      |
| Learning Strategies                  | 0.51                  | 0.49                       | 0.39                   | 1.00                |                        |                             |                              |                         |                        |                                      |
| Collaborative Learning               | 0.22                  | 0.38                       | 0.38                   | 0.26                | 1.00                   |                             |                              |                         |                        |                                      |
| Student-Faculty Interaction          | 0.29                  | 0.37                       | 0.46                   | 0.39                | 0.41                   | 1.00                        |                              |                         |                        |                                      |
| Effective Teaching Practices         | 0.47                  | 0.38                       | 0.27                   | 0.40                | 0.18                   | 0.36                        | 1.00                         |                         |                        |                                      |
| Quality of Interactions              | 0.37                  | 0.30                       | 0.22                   | 0.30                | 0.15                   | 0.31                        | 0.52                         | 1.00                    |                        |                                      |
| Supportive Environment               | 0.36                  | 0.32                       | 0.31                   | 0.32                | 0.24                   | 0.39                        | 0.51                         | 0.52                    | 1.00                   |                                      |
| Learning, Creative and Social Skills | 0.55                  | 0.47                       | 0.41                   | 0.44                | 0.33                   | 0.41                        | 0.58                         | 0.52                    | 0.60                   | 1.00                                 |